From:	"Simon Roberts" <simonroberts2@gmail.com></simonroberts2@gmail.com>	
Sent:	Tue, 31 May 2022 16:21:58 +1000	
То:	"Information Management" <hvc@huonvalley.tas.gov.au></hvc@huonvalley.tas.gov.au>	
Subject:	LPS submission Simon Roberts and Joanne Wheat LCZ	
Attachments:	Huon LPS submission Simon Roberts Joanne Wheat LCZ May 22.docx,	
Management Plan_SP_Roberts_TLC20052021.pdf, Management Plan_BOBG_Roberts_TLC21052021.pdf		

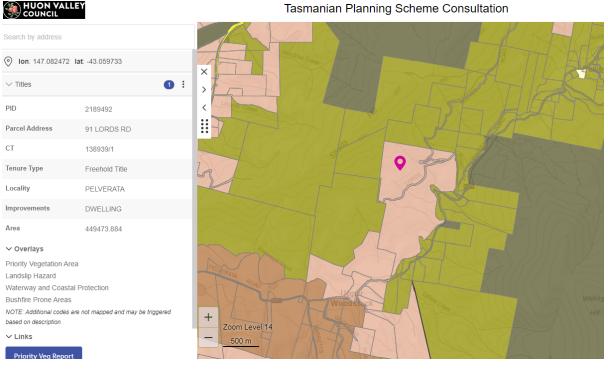
Please find attached our submission to the Huon Valley LPS regarding the Lanscape Conservation zoning with accompanying documents,

Regards, Simon Roberts & Joanne Wheat To: The General Manager, Huon Valley Council

Re: Draft Huon Valley Local Provisions Schedule

From: Simon Roberts and Joanne Wheat, 91 Lords Road, Pelverata. 7150

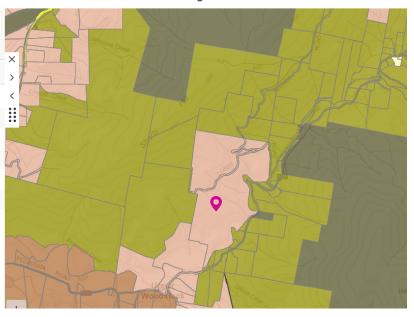
This representation is in relation to the proposed zoning of three land parcels we own (Title references; 138939/1, 135560/10 and 123202/1) and surrounding properties. Maps of the three properties we own, showing proposed zoning are below.



### HUON VALLEY

Search by address		
O lon: 147.083158 lat	: -43.066003	
$\checkmark$ Titles	1	
PID	2189492	
Parcel Address	91 LORDS RD	
СТ	138560/10	
Tenure Type	Freehold Title	
Locality	PELVERATA	
Improvements	DWELLING	
Area	789439.957	
∽ Overlays		
NOTE: Additional codes are not mapped and may be triggered based on description		
✓ Links		
Priority Veg Report		

Tasmanian Planning Scheme Consultation



HUON VALLEY Tasmanian Planning Scheme Consultation Ion: 147.07406 lat: -43.06569 × 1:  $\sim$  Titles > < PID 1763683 Parcel Address LORDS RD СТ 123202/1 Tenure Type Freehold Title Locality PELVERATA Improvements FENCING 0 Area 952537.192 ✓ Overlays Landslip Hazard Waterway and Coastal Protection Priority Vegetation Area Scenic Protection Area Bushfire Prone Areas +NOTE: Additional codes are not mapped and may be triggered Zoom Level 14 based on description 500 m ✓ Links

All the properties are currently zoned Rural Resource under the Interim Planning scheme with 138939/1 and 135560/10 proposed to be Rural and 123202/1 to proposed to be Landscape Conservation. Having reviewed the Guideline for LPS and the methodology used by the council to determine the transition for Rural Resource properties to the new zonings we are confident that all three properties should be zoned Landscape Conservation under the LPS.

### СТ 123202/1

The transition of 123202/1 to Landscape Conservation is appropriate as this property;

- Is primarily bushland, is part of a large area of native vegetation and forms part of an area of important scenic value (LCZ 1)
- Contains threatened native vegetation communities and threatened species habitat (LCZ 2)
- Has significant constraints on development through the application of the natural assets code, in particular the Priority Vegetation Area (LCZ 2)

This property has been recently assessed and accepted for an ecological covenant program for the protection of Swift Parrot breeding populations administered by NRM South and funded by the Australian Government National Landcare Program (see attached Swift Parrot management plan). A significant outcome of the on-ground assessment of the ecological values of this property by the Tasmanian Land Conservancy was the discovery of a much larger area of threatened vegetation communities than previously reported under TasVeg3 and TasVeg4. The area of *Eucalyptus ovata* (DOV) and *Eucalyptus globulus* (DGL) threatened vegetation communities where significantly expanded and additionally two stands of the recently listed *Eucalyptus viminalis* (WVI) threatened vegetation community where also mapped (see Map 1 of attached Swift Parrot management plan).

We would also submit that the Scenic Protection Code should be applied to all areas of this parcel of land above 100m as it is visually prominent from the Channel Highway, Huon Highway and Pelverata

Road and would be consistent with the adjoining properties to the east (CT 110997/3 and CT 172819/2).

### CT 138939/1 & 135560/10

The transition of 138939/1 and 135560/10 to Rural is not appropriate as these properties;

- Contain a substantial area of bushland, are part of a large area of native vegetation, and form part of an area of important scenic value (LCZ 1)
- Contains threatened native vegetation communities and threatened species habitat (LCZ 2)
- Have significant constraints on development through the application of the natural assets code, in particular the Priority Vegetation Area and the Landslip Hazard Code (LCZ 2)

Application of the Landscape Conservation zone has been determined by the council using a multistep procedure from existing broadscale data sets as well as some individual assessment of particular groups of properties. In general, we agree with the methodology used and are highly supportive of the process used and the outcomes appear to be consistent with the Zone Application Guidelines and the zone purpose. However, the method can only use existing information and as stated in the supporting report there are many areas of the municipal area that have limited sampling and are therefore likely to be data deficient. The methodology sets a number of standards for properties that are currently zoned Rural Living, Rural Resources and Significant Agricultural for potential transition to the Landscape Conservation zone if appropriate.

The first step was the determination of properties that are predominantly covered by native vegetation and form part of a large area of native vegetation (determined to be >20ha). After this iteration all properties with less than 80% native vegetation cover (as determined from TasVeg4) where excluded. Further steps determined if the potential LCZ properties where consistent with the zone application guidelines; an additional group of properties where automatically transitioned if they already had a registered conservation covenant.

Both 138939/1 and 135560/10 failed to be transitioned to LCZ even though they had all the attributes that the LCZ guidelines indicated should be considered when transitioning properties to this zone. The limitation of the council procedure is evident as both these properties have been recently assessed as part of a program for the protection of Black Gum Forest and have been accepted for inclusion in the program with more than 90% of each property being included within the proposed conservation covenants (see attached Black Gum Management Plan).

The limitation of the council process that excluded all properties that did not have at least 80% native vegetation cover appears two fold. Firstly, determining the percentage of native vegetation could be flawed as the mapping can often be out of date and many areas that may be mapped as agricultural land (FAG) may have transitioned to regenerating cleared land (FRG) or bracken fernland (FPP) both of which can be considered as native vegetation cover. The council does not detail which vegetation groups they used as determine the 80% native vegetation cover. The recent ecological assessment of both 138939/1 and 135560/10 determined that although up to 50% of these properties had been cleared in the past most of these areas are now considered as FRG or FPP with some areas having progressed to Lowland Grassland Complex (GCL). Less than 10% of the land area of 135560/10 was mapped as FAG and none of 138939/1 was assessed as FAG. Secondly, the application guidelines do not constrain the assessment of for LCZ to a lot-by-lot basis. The determination of "landscape values" should not be considered based on the artificial boundaries of

cadastral parcels. Similarly, when the guidelines refer to "bushland areas, large areas of native vegetation, or areas of important scenic values" this is not constrained by the relative percentage cover on each lot. Importantly many areas of high scenic or conservation value may form only a minor percentage of a lot but are connected to much larger areas with these values across common boundaries. This is clearly the case for 138939/1 and 135560/10 where they most of the northern and western boundaries are forested and connect to large areas of native vegetation in adjacent blocks. There are also important areas of threatened native vegetation communities that are contingent with properties zoned LCZ along the Kellaways Creek boundary of 135560/10. In cases where identified landscape values form a lower percentage of the lot than the 80% threshold a more nuanced assessment should have been triggered which considered potential other uses including constraints such as land capability and landslip hazards, against the significance of the retained landscape values to the area as a whole.

We would also submit that the Scenic Protection Code should be applied to all areas of the two parcel of land above 100m as it is visually prominent from the Channel Highway, Huon Highway and Pelverata Road and would be consistent with the adjoining properties to the east (CT 110997/3 and CT 172819/2). Consideration should also be given to apply the Scenic Protection Code to the rest of the Shorts Hill area and the corresponding slopes on the western side of the Kellaways Creek up to the Snug Tiers reserve as these areas are visually prominent from both sides of the Huon River.

### GENERAL CONTEXT OF LCZ APPLICATION IN THE PELVERATA, UPPER WOODSTOCK AREA

We agree with the general application of the LCZ across the Pelverata valley from Upper Woodstock to Vincents Road, this provides a much-needed protection to existing natural values that are under increasing pressure from residential development in this area. The Pelverata valley provides an important link between the Snug Tiers and Sherwood Hill reserves as well as to the Kaoota, Sandfly and Longley regions and ultimately to the Mt Wellington park.

As discussed above the application of the LCZ is a complex process balancing broadscale and local natural values against potential other uses. The agricultural mapping process has concluded that the majority of the area is unfit for high productivity agricultural use or is constrained by the current configuration of blocks, their value and the large proportion of residential use. Conversion of the previous Environmental Living zone and registered conservation covenants to LCZ is appropriate. In general, other properties previously zoned Rural Resource have transitioned to LCZ but a number have been retained as Rural. It is not clear why many of the properties where not considered for LCZ; see for instance the properties at the ends of Crosswells Road and Vincents Road that have substantial areas mapped as Priority Vegetation but have been transitioned to the Rural zone.

We are supportive of the application of the LCZ in total and in part to CT 110997/3, CT 126703/12 and PID 7177036 which provide additional protection of both scenic and ecological values present in the valley at the transition to productive agricultural or extractive uses. To this end we are supportive of the use of split zoning where a significant portion of a property has identified natural or landscape values and can be easily partitioned from more productive land by simple boundary conditions or natural features such as creek lines.

### CT 123202/2 AND CT 123202/3

As previously stated, our properties CT 123202/1 and CT 138560/10 are currently in the process of gaining conservation covenants. The ecological assessments identified a substantial stand of the threatened vegetation community DOV (*Eucalyptus ovata*) in the southern portion of CT 123202/1. This stand (light green stippled area) is now mapped on TasVeg Live and is shown in the context of the two adjoining properties to the south CT 123202/2 (Shaded light brown) and CT 123202/3 on the map below. In addition, a stand of *Eucalyptus viminalis* threatened vegetation community (WVI, shown as dark green diagonally hatched) straddles the boundary between CT 123202/2 and CT 123202/3 to the west of Kellaways creek. The map also shows the waterway and coastal protection zone (light blue lines) for Kellaways Creek and associated feeder streams.

Due to the significant conservation values present we propose that 123202/2 and CT 123202/3 be changed from Rural zoning to the Landscape Conservation zone as they:

- Are part of a large area of native vegetation which are not otherwise reserved but contains threatened native vegetation communities and threatened species (LCZ2)
- Contains threatened native vegetation communities and threatened species habitat (LCZ 2)
- Have significant constraints on development through the application of the natural assets code and the Landslip Hazard Code, in particular the Priority Vegetation Area (LCZ 2)





# Protecting Breeding Populations of Swift Parrot

# Management Plan for Lords Rd, Pelverata



Prepared by the Tasmanian Land Conservancy



# **OVERVIEW**

The swift parrot is one of Australia's most threatened bird species. It is a migratory species which only breeds in Tasmania. It nests in hollow-bearing trees and feeds on the nectar on Tasmanian blue gum and black gum. There are less than 2000 breeding pairs left, and recent studies indicate that the population is rapidly declining. The key threats to the swift parrot are habitat loss, predation by sugar gliders, and collision with man-made structures.

This Managament Plan has been prepared by the Tasmanian Land Conservancy to provide guidance to landholders on the management of habitat for the Critically Endangered swift parrot. It is part of the NRM South project 'Protecting Breeding Populations of Swift Parrot' and was funded through the Australian Government's National Landcare Program.

Information about the swift parrot is provided, including how to identify the species, its habitat requirements, and a summary of key threats and management issues. Specific management advice is provided to help maintain or improve the condition of the habitat for swift parrot on the property.

# **Conservation Covenant**

The 95 ha property is located on Lords Rd at Pelverata (Figure 1). It was selected for the program because of its high conservation value swift parrot habitat. A Conservation Covenant is being registered on the title to protect the conservation values in perpetuity. The Covenant protects more than 60 ha of high-quality foraging habitat for the swift parrot. It also supports 15 ha of old-growth forest, which provides potential nesting habitat for swift parrot. Four threatened vegetation communities are present, including black gum forest, which is listed as Critically Endangered under Commonwealth legislation. It provides habitat for other threatened species including Tasmanian devil, eastern quoll, spotted-tail quoll, wedge-tailed eagle, and masked owl.

# NATURAL VALUES

# Swift parrot (Lathamus discolor)

### Description

The swift parrot is a small, fast-flying parrot with a streamlined body and a long, pointed tail. The body is mostly bright green, with dark blue patches on the crown, cheeks and wings. It has distinctive patches of red on the throat, chin, face and forehead. It also has a red tail, and red on the shoulder and under the wings. They are noisy and active, with a very fast, direct flight. A distinctive call of 'kik-kik' is given when flying.

### **Similar Species**

It is a similar size to the musk lorikeet, but the prominent red patches under the wing, long red tail, and bright green body are distinctive, as is the flight call.

### **Breeding Habitat**

The swift parrot only breeds in Tasmania during the summer and migrates to mainland Australia for winter. The breeding range of the swift parrot is largely restricted to the east and south-east coast of Tasmania. The location of breeding areas is largely determined by the flowering patterns of Tasmanian

blue gum (*Eucalyptus globulus*) and black gum (*E. ovata*), which can vary dramatically from year to year.

Nest sites are usually located near the coast in old-growth dry forests on upper slopes and ridge tops. Swift parrots make their nests inside a hollow tree branch or trunk in very old or dead trees, and do not prefer a particular tree species for nesting. Dead or senescent trees tend to have far more hollows than live trees, and trees with numerous hollows are more likely to provide a suitable hollow for nesting. It is not unusual to find more than one pair of swift parrots nesting close to each other. Nest sites may be re-used but not necessarily in successive years. The use of a particular nest site depends on the heavy flowering of Tasmanian blue gum or black gum in that area.

After the breeding season, usually in February and March, the entire population flies north, dispersing throughout Victoria and NSW. On the mainland they are semi-nomadic, often flying around in large flocks, foraging on flowering eucalypts and lerps.

### Status

The swift parrot is listed as Critically Endangered on the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999*. It is also listed as endangered under the Tasmanian *Threatened Species Protection Act 1995*.

### Why is it a threatened species?

The swift parrot is listed as a threatened species because its numbers are very low there is growing evidence that its numbers may be continuing to decline. Previous population estimates suggest that there were fewer than 2000 breeding pairs, and recent research suggests that the current number is much lower than this. Predation by introduced sugar gliders is considered a major reason for this decline. Sugar gliders kill and eat adult female swift parrots while they are incubating their eggs, as well as the eggs and chicks. Up to half of the nesting parrots can be eaten by sugar gliders every year. Another reason for the swift parrot's threatened status is because that most of the blue gum habitat on which it depends occurs on unprotected land and continues to be cleared. Collision with man-made structures, especially windows and chain-mesh fences, is another major threat.

### Why are blue gums important?

The swift parrot mainly feeds on the nectar of blue gum and black gum flowers. Unfortunately, blue gum and black gum forests have been extensively cleared for agriculture and are continuing to be cleared. Loss of these forests means that there is less foraging habitat for the swift parrots during the breeding season. Protecting remaining areas of blue gum and black gum forest in eastern and south-eastern Tasmania, especially areas of old-growth forest with hollow-bearing trees, is urgently needed to conserve the swift parrot.

Overall, this property supports 62 ha of high-quality foraging habitat for swift parrot (43 ha of blue gum forests and 19 ha of black gum forest). There is also 15 ha of old-growth forest on the property, which supports large trees that are likely to contain hollows suitable for nesting. Swift parrots have been recorded on the adjoining property in Dec 2019, and have previously been recorded within 5 km based on NVA data. It is therefore highly possible that the property could provide breeding habitat for swift parrots.

# Black gum (Eucalyptus ovata) forest

Black gum forest (also known as swamp gum) is a threatened native vegetation community which occurs in the north and east of Tasmania. It typically occurs in low-lying, poorly drained areas, and is often associated with waterways and flood plains. Tasmanian forests dominated by Black Gum or Brookers Gum were recently listed as a Critically Endangered ecological community in Tasmania under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

There is a large patch of black gum forest on the property (refer to Map 1). It is classed as **Highest Quality (Category A2)** based on the condition thresholds for the ecological community. It is relatively large (18.5 ha) patch with good connectivity. The canopy is mixed with other eucalypts including white peppermint (*Eucalyptus pulchella*), stringybark (*E. obliqua*) and white gum (*E. viminalis*). The trees are mostly medium-sized (<60 cm DBH). Canopy health is good, with no evidence of dieback.

The understorey consists of native species, with very few weeds. There is a dense layer of native shrubs commonly found in damp forest and wet heath in the south-east of Tasmania. The ground layer is also dense with native sedges, grasses and sagg. Overall, the vegetation is in very good condition.

# Blue gum (Eucalyptus globulus) forest

Dry blue gum forest is listed as threatened vegetation community in Tasmania. It occurs on rocky hills in the east and south-east of Tasmania. It typicially has an open grassy understorey with a sparse layer of dry sclerophyll shrubs. There are several patches of this community on the property, mostly in the central area. The tree canopy is dominated by Tasmanian blue gum (*Eucalyptus globulus*) and the understorey is dense with sedges and grasses. The shrub layer is thick in some areas, including prickly box (*Bursaria spinosa*), prickly beauty (*Pultenaea juniperina*), and bitterpea (*Daviesia ulicifolia*).

The upper slopes and gullies on the property are mostly covered by wet blue gum forest. While this vegetation community is not listed as threatened, it is important foraging habitat for the swift parrot. The main difference between the two communities is in the understorey. Wet blue gum forest has an understorey of broad-leaf wet forest shrubs and a high cover of ground ferns.

Threatened Fauna		
Species	Status	Comments
<b>eastern quoll</b> Dasyurus viverrinus	Endangered AUS	Recorded on camera trap within the property. Site provides excellent foraging habitat and is contiguous with large area of suitable habitat. Potential denning habitat in rocky outcrops and hollow logs.
tasmanian devil Sarcophilus harrisii	Endangered TAS Endangered AUS	Recorded on camera trap within the property. Scats observed along tracks and clearings. Site provides excellent foraging habitat and is contiguous with a large area of suitable habitat. Potential denning habitat in rocky outcrops and hollow logs.

# Other threatened species observed on property

<b>grey goshawk</b> Accipiter novaehollandiae	Endangered TAS	Observed by landowners on adjoining property. No nest sites observed but potential in sheltered gullies and along creek.
mount mangana stag beetle Lissotes menalcas	Vulnerable TAS	Recorded on adjoining property and very likely to occur. Inhabits decaying logs in wet forest.
eastern barred bandicoot Perameles gunnii	Vulnerable AUS	Recorded on adjoining property. Mosaic of grassland and forest provides excellent habitat for bandicoots.
masked owl Tyto novaehollandiae	Endangered TAS Vulnerable TAS	Observed by landowner on adjoining property. Potential nesting habitat present in old-growth trees.
<b>spotted-tail quoll</b> Dasyurus maculatus subsp. maculatus	Rare TAS Vulnerable AUS	Potential to occur based on habitat but not observed. Site is contiguous with large area of suitable habitat.
tasmanian wedge-tailed eagle Aquila audax subsp. fleayi	Endangered TAS Endangered AUS	2 nest records within 1 km of property. Modelling suggests high likelihood of nesting habitat, especially in sheltered gullies, but no nests observed. Regularly observed flying over property.

## **Connectivity and landscape context**

The property is almost entirely covered by native vegetation and is part of a large continuous area of remnant vegetation. It adjoins two existing conservation covenants along the northern and northwestern boundaries. Beyond this lies Sherwood Hill Conservation Area (1 km to the north) and Snug Tiers Nature Recreation Area is situated within 1 km to the south-east.

There are other areas of potential swift parrot habitat in the surrounding landscape, including areas of blue gum forest on the slopes of Shorts Hill and Sherwood Hill, and patches of black gum forest along Kellaways Creek.

# MANAGEMENT ISSUES AND THREATS

## Threats to swift parrot

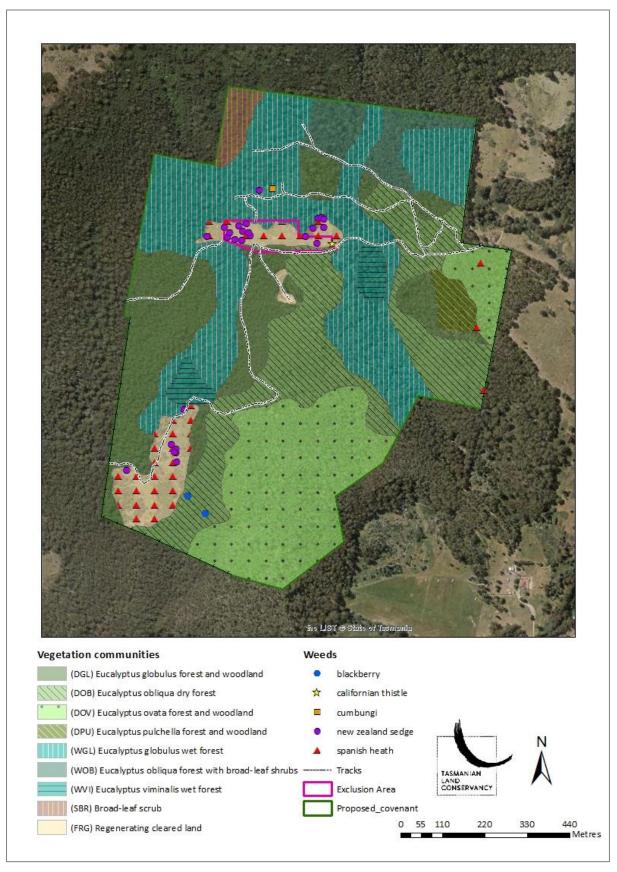
Loss of breeding habitat is the main reason for decline in swift parrot numbers. Clearance of blue gum and black gum forests in south east Tasmania has reduced the amount of foraging habitat for the species. Areas of old-growth forest which support hollow-bearing trees suitable for nesting are scarce and continue to be cleared. Illegal firewood collection in breeding areas is a major issue. Fires can also cause large trees to collapse, further reducing breeding habitat. Predation by introduced sugar gliders is another major threat to the species. Sugar gliders kill and eat adult female swift parrots while they are incubating their eggs, as well as the eggs and chicks. It is estimated that up to half of the nesting parrots can be eaten by sugar gliders every year.

Collision with man-made structures, especially windows and chain-mesh fences, is another major threat to the species.

## Other management issues

Weeds	<ul> <li>spanish heath (declared) – large infestations in the two clearings which the landowner is actively controlling. Isolated plants in the remnant vegetation including blue gum and black gum forests.</li> <li>weeping sedge (declared) – recorded in the clearing in the centre of property. This is an isolated occurrence of this weed in Tasmania and should be eradicated as a priority.</li> <li>californian thistle (declared) – recorded in cleared areas.</li> <li>blackberry (declared) – several patches along creek near southern boundary. Should be controlled to contain spread.</li> </ul>
Feral animals	Sugar gliders are likley to occur. Cats and rabbits also highly likely. Deer may occur in the area.
Fire management	Bushfire is a potential threat to the old-growth trees and threatened fauna on the property. Ecological burning is not required to maintain the condition of the vegetation, but could be considered in the future if deemed necessary.
Illegal access	Illegal access is unlikely. Illegal firewood collection has occurred in the past but no longer an issue.
Livestock	Not permitted.
Firewood collection	Not permitted within threatened vegetation (blue gum forest, black gum forest, or white gum forest). A limited amount can be collected elsewhere on property as per covenant conditions.

Refer to your Nature Conservation Plan for more information.



Map 1. Vegetation communities, weeds, and potential revegetation areas.

# **MANAGEMENT ADVICE**

## Protecting swift parrot habitat

Protecting breeding and foraging sites on private land under Conservation Covenants is a key action identified in the National Recovery Plan for the Swift Parrot. The conditions of the Covenant prevent the clearance of vegetation and restrict other activities that are deleterious to the natural values. Firewood collection is permitted within the Covenant but is limited to 5 tonnes per year, and is not to include blue gum, black gum, or large trees (including large dead trees).

Excluding fire from swift parrot habitat, especially old-growth forest, is recommended. Burning the vegetation on the property is highly risky and is likely to negatively impact on swift parrot habitat. Most of the vegetation appears to be 50-year-old regrowth from the 1967 bushfire. Pockets of old-growth forest have survived fires in the wet gullies and still support very large trees which provides potential breeding habitat for swift parrot. Tasmanian blue gums generally resprout from the base after fire, while the canopy is usually killed. There is a risk that large hollow trees can burn internally and collapse after fire.

Artificial nest boxes can be installed for swift parrots, but their use is largely dependent on the annual patterns of blue gum flowering. Sugar gliders can also invade the nest boxes and kill the female swift parrots, chicks and eat the eggs. Sugar glider exclusion trials are currently underway in key swift parrot breeding areas. Different exclusion methods are being assessed for effectiveness along with methods to directly reduce sugar gliders from key breeding areas through trapping and euthanising.

## Weed control

Weed control is recommended to maintain the condition of the vegetation. Weeds are generally restricted to the modified areas. There are isolated weeds in the native vegetation which should be controlled as a priority.

Some weeds like spanish heath and weeping sedge can resemble natives so it is important that you correctly identify weeds before controlling them.

It is important that weed control methods do not damage native flora and fauna. Techniques that minimise soil disturbance and herbicide use should always be used.

Avoid spray drift and use of herbicides that may damage native species. Use herbicides that are labelled as safe for frogs around waterways and avoid adding surfactants as these are often more toxic to wetland fauna than the herbicide.

Other general principles for weed control include starting in the least weed infested areas to the most infested areas. Focus on isolated weeds first before tackling widespread weeds.

Be careful not to spread weeds around on machinery and clothing. Always record the location of weeds that you treat so that you can check the area for re-emergence and undertake follow-up.

If weed control contractors are to be used, ensure that they are qualified to work in sensitive environments.

# Weed control priorities

Highest priority	<b>Spanish heath</b> – control isolated plants in native vegetation. Cut and paint or hand pull. Remove and bag seed heads. Foliar spraying is also an option, but care must be taken not to spray native vegetation.
	<b>weeping sedge</b> – control scattered plants in modified areas. This is a very restricted weed in Tasmania and should be eradicated as a priority. Dig out or foliar spray isolated plants. Do not slash as this will spread the seed. Remove and bag seed heads.
	<b>blackberry</b> – control isolated plants along creek line. Hand pull or cut and paint small plants. Foliar spray larger plants.
High priority	<b>Spanish heath and Californian thistle</b> – control larger infestations in modified areas. Foliar spray infestations of spanish heath and californian thistle. Slashing large infestations of spanish heath prior to flowering and spraying regrowth 1-2 months later can also be effective. Be careful not to spread seed on machinery.
	<b>All high-risk weeds</b> - Routinely check for new weed incursions in areas in native vegetation. Holly, montpellier broom and foxglove all occur on the adjoining property and could spread into this area.

For more information on the control of these weeds refer to <u>https://dpipwe.tas.gov.au/invasive-species/weeds-index/declared-weeds-index</u>

# **Restoration and revegetation**

Natural regeneration is occurring in the modified areas (mapped as FRG) and should be encouraged. Controlling spanish heath in these areas will help facilitate regeneration of native species. Keeping fallen branches and debris can help protect native seedlings and provides excellent habitat for fauna.

Planting scattered blue gums in the modified areas to assist natural regeneration could also be undertaken. Be careful not to plant blue gums near any potential future building areas (i.e. the Exclusion Area) as this could create a potential collision risk for swift parrot.

Plant some understorey species that naturally occur in the surrounding forest (refer to plant list). Include a high proportion of sedges and grasses. Plant in clumps, rather than evenly spaced rows.

When preparing sites for planting, try to retain native plants already present such as grasses, herbs, and sedges.

# Management for other threatened species

Eastern quoll	Quolls and devils nest in underground burrows, under rocks, or fallen logs. They
and Tasmanian	can also use made-made structures. Keep large fallen logs, rocks, and log piles
devil	for habitat. Maintain a mosaic of open grassy understorey along with areas of
	shrubby understorey for foraging habitat and cover.

Eastern-barred	The eastern barred bandicoot nests in tussock grasses, sagg and sedges and
bandicoot	forages in open grassy areas. Dense low shrubs also provide good cover and
	protection for bandicoots. Retain areas of sagg/sedge/tussock grasses and
	leave fallen timber and woody debris as habitat. A mosaic of open grassy
	understorey alongside areas of shrubby cover is ideal.

## What assistance is available?

Funding is available as part of the NRM South project to Protect Swift Parrot Breeding Habitat for management activities such as weed control and revegetation <u>https://nrmsouth.org.au/swift-parrot-project/</u>

Further support for Covenant landholders is provided by Tasmanian Land Conservancy through the Protected Areas Partnership Program <u>https://tasland.org.au/programs/protected-areas-on-private-land/</u>

Conservation Landholders Tasmania also provide support for Covenant landholders and hold regular field days <a href="http://www.clt.asn.au/">http://www.clt.asn.au/</a>

You can also get involved with Land for Wildlife <u>https://tasland.org.au/programs/land-for-wildlife/</u>

### **Other resources**

Birdlife Australia have an excellent identification guide for the swift parrot <u>https://www.birdlife.org.au/documents/WL-</u> A\_Guide\_to\_Identifying\_the\_Critically\_Endangered\_Swift\_Parrot.pdf

Threatened Species Link is a great resource for information on threatened species including swift parrot <u>https://www.threatenedspecieslink.tas.gov.au/Pages/Swift-Parrot.aspx</u>

More information on swift parrot can be found on the DPIPWE website <u>https://dpipwe.tas.gov.au/conservation/threatened-species-and-communities/lists-of-threatened-species/threatened-species-vertebrates/swift-parrot</u>

The National Recovery Plan for Swift Parrot and links to other information can be found on theAustralianGovernmentswebsite<a href="https://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon\_id=744">https://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon\_id=744</a>

Information about research on the swift parrot being undertaken by the Difficult Bird Research Group can be found here <u>https://www.difficultbirds.com/swift-parrot</u>

NRM South has a range of resources available for landholders on their website including Fact Sheets on Threatened Species, Invasive Species and Weeds <a href="https://nrmsouth.org.au/resources/">https://nrmsouth.org.au/resources/</a>

The Derwent Catchment Project has excellent information about weed control on their website <a href="https://www.derwentcatchment.org/weed-management.html">https://www.derwentcatchment.org/weed-management.html</a>

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# **Conservation tips for wildlife**

### Don't feed wildlife

Feeding wildlife can cause illnesses such as lumpy jaw. It can also encourage higher densities of animals than would naturally occur.

### Manage your weeds

Weeds crowd-out native plants and reduce the food available for wildlife but in places weeds provide the only shelter for native fauna. Bandicoots are known to benefit from gorse, blackberry and grass. It is important to stage your weed control, leave structure and cover and replace introduced plants with natives. Leave long grass in revegetation areas – weed around your plants but don't slash or spray areas between plants.

### Fire and debris management

Fire is an important part of the Australian landscape and can help to maintain the health of native woodlands and grasslands. But conducting a successful ecological burn is difficult and risky! Debris and litter removal may be desirable for fire risk reduction but remember that debris and litter maintain moisture in the soil and provides crucial habitat for a range of creatures and recruitment sites for plants – important for ecosystem function!

### Manage your livestock

Livestock impact understorey vegetation and prevent trees from regenerating. Fencing areas of native vegetation allows you to control access to that area. Give the bush a break from grazing every few years to allow native plants time to regenerate.

### Keep your pets in

Cats and dogs prey on and scare wildlife. They can also spread diseases such as toxoplasmosis. Bandicoots are highly vulnerable to predation and disease. Walk your dog on a leash, keep your cat indoors, especially at night.

### **Control feral animals**

Cats are widespread and prey on wildlife and controlling them is difficult. Talk to your local council about cat control options. Deer are increasing in the landscape, especially on large rural properties and threaten revegetation efforts with browsing. Talk to the Game Management Branch if you have a problem with deer. Take care of raptors and use electronic traps for rat and mouse control.

### **Restore habitat**

In areas where most of the native vegetation has been removed for agriculture, restoring habitat can be achieved by planting natives with a range of structure and diversity, and reintroducing or retaining woody debris and rocks to improve habitat for wildlife by providing food and shelter. Plant species native to your local area and gain advice for specific habitat plantings. Consider adding artificial burrows to your understorey for bandicoot refuge such as car tyres in long grass. Leave it messy and shaggy is a good policy for wildlife!

### Work together

A landscape-scale approach always works best. Talk to your neighbours about wildlife management issues. Get involved with a local environmental group such as the Tasmanian Land Conservancy, Land for Wildlife, NRM organisations or Landcare.

# **Plant list**

## List of typical understorey species found in blue gum forest

Tall shrubs	blackwood	Acacia melanoxylon
	silver wattle	Acacia dealbata
	silver banksia	Banksia marginata
	Tasmanian blanketleaf	Bedfordia salicina
	prickly box	Bursaria spinosa
	native currant	Coprosma quadrifida
Mid shrubs	common heath	Epacris impressa
	prickly beauty	Pultenaea juniperina
	heartleaf bushpea	Pultenaea daphnoides
	dollybush	Cassinia aculeata
	prickly moses	Acacia verticillata
	native primrose	Goodenia ovata
	viscid daisy-bush	Olearia viscosa
	spiky bitterpea	Daviesia ulicifolia
	guitar plant	Lomatia tinctoria
Ground layer	variable swordsedge	Lepidosperma laterale
	sagg	Lomandra longifolia
	white flag-iris	Diplarrena moraea
	forest flaxlily	Dianella tasmanica
	silver tussockgrass	Poa labillardierei
	weeping grass	Microlaena stipoides



# Protecting Black or Brookers Gum Forest

# Management Plan



# 91 Lords Rd, Pelverata

Prepared by the Tasmanian Land Conservancy for Simon Roberts and Joanne Wheat

# **OVERVIEW**

Tasmanian forests dominated by black gum (*Eucalyptus ovata*) or Brookers gum (*Eucalyptus brookeriana*) are listed as Critcially Endangered in Australia. This ecological community has undergone a very severe decline in extent due to land clearing, and is now restricted to small isolated areas. Most remaining patches occur on private land and are under threat from clearance, grazing, weeds, dam construction, forestry plantations, and wood harvesting.

This Management Plan has been prepared by the Tasmanian Land Conservancy to provide guidance to landholders for the management of the ecological community. It is part of the NRM South project 'Protecting Black or Brookers Gum Forest' funded through the Australia Government's National Landcare Program.

It describes the values of the ecological community on the property, and outlines key threats and management issues. Specific management actions are recommended to maintain or improve the condition of black gum forest.

# **Conservation Covenant**

The 124 ha property is located at 91 Lords Rd at Pelverata (Figure 1). It was selected for the program because it supports a relatively large area (11 ha) of black gum forest in good condition. A Conservation Covenant is being registered on the title to protect the conservation values in perpetuity. Other threatened communities within the Covenant include Tasmanian blue gum (*Eucalypus globulus*) forest which is listed as a threatened vegetation community in Tasmania. This vegetation provides habitat for the Critically Endanagered swift parrot which has previously been recorded on the property. It also provides habitat for other nationally threatened species including Tasmanian devil, eastern quoll, spotted-tail quoll, wedge-tailed eagle, and masked owl.

# NATURAL VALUES

# Black gum (Eucalyptus ovata) forest

### Description

Black gum forest (also known as swamp gum) occurs in the lowland areas of eastern Tasmania, including the Midlands and parts of the Central Highlands. It typically occurs in low-lying areas that are seasonally wet or water-logged, and is often associated with waterways and flood plains. It is characterised by a tree canopy dominated by black gum (*Eucalyptus ovata*) with shrubby or sedgy understorey.

Typical understorey shrubs include blackwood (*Acacia melanoxylon*), tea-tree (*Leptospermum* spp.), paperbark (*Melaleuca* spp.), and heath (*Epacris* spp.). The ground layer often contains sedges (*Lepidosperma* spp., Baumea spp.), sagg (*Lomandra longifolia*), cutting grass (Gahnia spp.), rushes (*Juncus* spp.) and tussock grasses (*Poa* spp.). The species in the understorey varies depending on location. Refer to the plant list in this plan for typical species on the property.

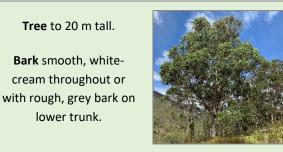
### **Status**

Tasmanian forests dominated by Black Gum or Brookers Gum were recently listed as a Critically Endangered ecological community under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999. Eucalyptus ovata forest and woodland is also listed as threatened under the Tasmanian Nature Conservation Act 2002.

### Why is it threatened?

Black gum forest has undergone a 90% decline in extent due to land clearing. The majority of patches are less than 5 ha in size, and only 2% are larger than 50 ha. It mostly occurs on private land, and old growth stands are extremely rare. Only about 20% of black gum forest is protected in formal conservation reserves. The key threats to black gum and Brookers gum forests include vegetation clearance, forestry, weed invasion, stock grazing, wood harvesting, dams, drains and water extraction.

## How to identify black gum



Flower buds in groups of 7, diamond-shaped. Flowers white.



**Juvenile leaves** opposite, oval or eggshaped.

Tree to 20 m tall.

Bark smooth, white-

cream throughout or

lower trunk.

Adult leaves alternate, lance or oval-shaped, undulating.



Fruits cone or funnelshaped, disc level or slightly raised, valves 3 or 4.



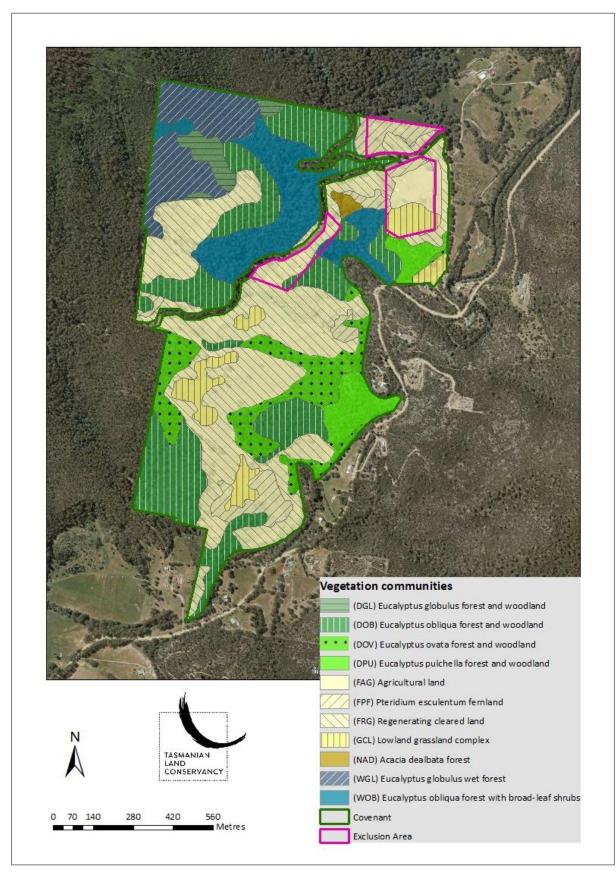
# Condition of black gum forest

There are several patches of black gum forest on the property (refer to Map 1). The larger patches are classed as Highest Quality (Category A1) based on the condition thresholds for the ecological community. They are relatively large (>2 ha) and have a healthy native understorey. The canopy is mixed with other eucalypts including white peppermint (Eucalyptus pulchella), stringybark (E. obliqua) and white gum (E. viminalis). The trees are mostly medium-sized (<60 cm DBH), although there are some scattered large trees (>4 large trees per ha). Seedling recruitment of *E. ovata* is occurring, especially around the edges of the patch. Canopy health is good, with no evidence of dieback.

The understorey consists of native species with very few weeds. There is a dense layer of native shrubs commonly found in damp heathy forests in the south-east of Tasmania (refer to plant list). The ground layer is dense with native sedges, sagg and grasses. Overall, the vegetation is in very good condition.

# Threatened species observed on property

Threatened Fauna		
Species	Status	Comments
<b>eastern quoll</b> Dasyurus viverrinus	Endangered AUS	Recorded on camera trap in regenerating cleared land in south of property. Site provides excellent foraging habitat and is contiguous with large area of suitable habitat. Potential denning habitat in rocky outcrops, cliffs and hollow logs.
<b>swift parrot</b> Lathamus discolor	Endangered TAS Critically Endangered AUS	Swift parrots were observed within in 2019. Large area of foraging habitat (blue gums and black gums) within property and on adjacent properties. Numerous old-growth trees with potential nesting hollows.
tasmanian devil Sarcophilus harrisii	Endangered TAS Endangered AUS	Frequently observed by landowners near house site and surrounds. Also recorded on camera traps. Site provides excellent foraging habitat and is contiguous with a large area of suitable habitat. Potential denning habitat in rocky outcrops, cliffs and hollow logs.
<b>grey goshawk</b> Accipiter novaehollandiae	Endangered TAS	Observed by landowners in south of property. No nest sites observed but potential in sheltered gullies and along creek.
mount mangana stag beetle Lissotes menalcas	Vulnerable TAS	Recorded by Jane Keble-Williams. Inhabits decaying logs in wet forest in the upper parts of the property.
eastern barred bandicoot Perameles gunnii	Vulnerable AUS	Recorded on camera trap in open cleared land in south of property. Mosaic of grassland and forest provides excellent habitat for bandicoots.
masked owl Tyto novaehollandiae	Endangered TAS Vulnerable TAS	Observed by landowner within property. Potential nesting habitat present in old-growth trees.
<b>spotted-tail quoll</b> Dasyurus maculatus subsp. maculatus	Rare TAS Vulnerable AUS	Potential to occur based on habitat but not observed. Site is contiguous with large area of suitable habitat.
tasmanian wedge-tailed eagle Aquila audax subsp. fleayi	Endangered TAS Endangered AUS	2 nest records within 1 km of property. Modelling suggests high likelihood of nesting habitat, especially in sheltered gullies, but no nests observed. Regularly observed flying over property.



Map 1: Vegetation types mapped within property showing extent of black gum forest.

# **Connectivity and landscape context**

The patches of black gum forest on this property are part of a large continuous area of native vegetation in the Pelverata valley. There are some areas of cleared land on the property, but these are regenerating with native vegetation, including black gum. The remnant vegetation on the property connects to the Snug Tiers to the south via Kellaways Creek. It also connects to a large area of remnant vegetation to the north across Shorts Hill and Sherwood Hill. There is also a large patch of black gum forest to the west on the adjacent property, owned by Simon Roberts.

# **MANAGEMENT ISSUES AND THREATS**

Weeds	<ul> <li>spanish heath (declared) – large infestation along Kellaways creek. Several occurrences in cleared land across the property which the landowner is actively controlling. Isolated plants in the remnant vegetation including black gum forest.</li> <li>weeping sedge (declared) – recorded in the clearing in the north-west of property. This is very restricted weed in Tasmania and should be eradicated as a priority.</li> <li>californian thistle (declared) – several large infestations in cleared land, especially along drainage lines and in wetter areas.</li> <li>blackberry (declared) – several patches along creek near southern boundary. Should be controlled to contain spread.</li> <li>crack willow (declared) – several trees along Kellaways creek. Should be eradicated to prevent spread.</li> </ul>
	<ul> <li>montpellier broom (declared) – isolated plants along Kellaways creek. Should be eradicated to prevent spread.</li> <li>holly (declared) – isolated plant in Kellaways Creek. Should be eradicated to prevent spread.</li> </ul>
Feral animals	Cats and rabbits highly likely, and deer may occur in the area. Sugar gliders also likely.
	incery.
Fire management	Bushfire is a potential threat to the old-growth trees and threatened fauna on the property. Ecological burning is not required to maintain the condition of the blackgum forest in the short-medium term, but could be considered in the future if deemed necessary.
Illegal access	Illegal access is unlikely. Illegal firewood collection has occurred in the past but no longer an issue.
Livestock	Not permitted.
Firewood collection	Not permitted within black gum forest, but can occur elsewhere on property.

Refer to your Nature Conservation Plan for more information.

# **MANAGEMENT ADVICE**

Protecting black gum and Brookers gum forests and supporting formal conservation agreements on private land are identified as a priority actions in the Commonwealth's Conservation Advice. The conditions of the Covenant for this property prevents the clearance of vegetation and restricts other activities that are deleterious to the natural values. For example, firewood collection is not permitted within the black gum forest.

Excluding fire from the black gum forest is recommended unless there is good evidence to suggest that an ecological burn is required. This may include a decline in species richness, an overabundance of certain understorey species, or lack of recruitment in fire-responsive shrub species. Burning is inherently risky and consideration must be given to potential impacts of fire on fauna, especially threatened species. This includes fauna habitat such as coarse woody debris which provides cover and nesting sites for bandicoots and quolls, and hollow bearing trees which provide nesting habitat for swift parrot. Burning for hazard management purposes should be avoided.

# Weed control

Weed control is a high priority in areas of black gum forest. It is extremely important that weed control methods do not damage native flora and fauna. Techniques that minimise soil disturbance and herbicide use should always be used.

Avoid spray drift and use of herbicides that may damage native species. Use herbicides that are labelled as safe for frogs around waterways and avoid adding surfactants as these are often more toxic to wetland fauna than the herbicide. Other general principles for weed control include starting in the least weed infested areas to the most infested areas. Focus on isolated weeds first before tackling widespread weeds.

Be careful not to spread weeds around on machinery and clothing. Always record the location of weeds that you treat so that you can check the area for re-emergence and undertake follow-up.

If weed control contractors are to be used, ensure that they are qualified to work in sensitive environments.

# Weed control priorities

Highest priority	<b>Spanish heath</b> – control isolated plants in black gum forest. Cut and paint or foliar spray mature plants. Remove and bag seed heads. Seedling can be hand-pulled. Do not slash when flowering as this will spread the seed.
	<b>weeping sedge</b> – control scattered plants in surrounding areas. This is a very restricted weed in Tasmania and should be eradicated as a priority. Dig out or foliar spray isolated plants. Do not slash as this will spread the seed. Remove and bag seed heads.
High priority	<b>Montpellier broom, holly, crack willow</b> – control isolated plants along Kellaways creek. Cut and paint or hand pull broom and holly. Drill and fill willows.

Spanish heath, Californian thistle, blackberry – control infestations in surrounding areas, especially near the edges of black gum forest. Foliar spray isolated plants and larger infestations.
 All high-risk weeds - Routinely check for new weed incursions in areas of black gum forest.

For more information on weed control refer to <u>https://dpipwe.tas.gov.au/invasive-species/weeds/weeds-index/declared-weeds-index</u>

# **Restoration and revegetation**

Natural regeneration of black gums is occurring around the edges of remnants and should be encouraged. Place temporary fencing or cages around seedlings if needed to protect them from browsing pressure. Fallen branches and debris can also protect seedlings and provides excellent habitat for fauna.

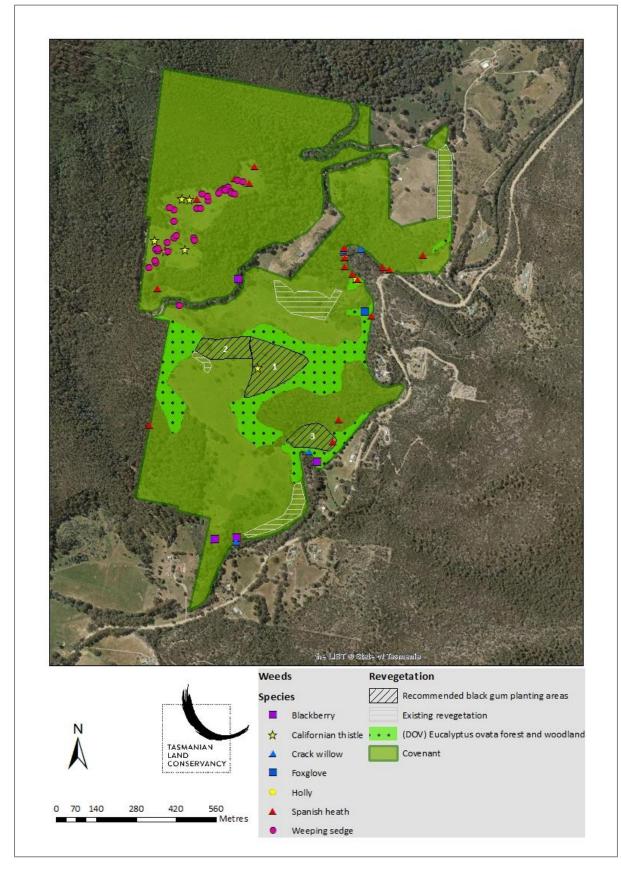
Revegetation in the modified land is recommended (refer to Map 2). This should aim to buffer and connect remnant vegetation. Focus on planting black gums, especially in waterlogged areas, which would have originally supported black gum forest. Plant understorey species that naturally occur in the surrounding black gum forest (refer to plant list). Try to replicate the structure and composition of the remnant vegetation. Include a high proportion of sedges and grasses. Plant in clumps, rather than evenly spaced rows.

Planting scattered black gums into areas that already have a good cover of native sedges/sagg is a good way of assisting regeneration.

When preparing grassy areas for planting, try to retain native plants already present such as grasses, herbs, and sedges.

Sites and Areas	Site	ha	Description
Infill between main patch of black gum	1	2	Infill gap in main patch of black gum forest. Already has good cover of native sedges and grasses. Recommend planting scattered black gums to facilitate natural regeneration. Low shrubs such as teatree, bottlebrush, native primrose, and prickly moses could also be planted.
North west corridor	2	1	Connect the two large patches of black gum forest to the west boundary. Some revegetation has already occurred in this area. Recommend planting scattered black gums to link the patches. Patches of tussock grasses/sedges and mid-shrubs could also be planted.
Infill near Kellaways Creek	3	~0.5	Infill low-lying wet area near Kellaways Creek. Plant scattered black gum to assist natural regeneration. Already has native rushes and sedges and could include some shrubs such a teatree and bottlebrush.

# **Revegetation priorities**



Map 2: Location of weeds and revegetation areas.

# Threatened species management

Swift parrot	Tasmanian blue gum and black gum are a critical food source for the swift parrot. Protecting black gum forest and planting more of these trees will provide foraging habitat for swift parrots. Also protect large hollow-bearing trees which are critical for nesting. Nest boxes can also be installed for swift parrots. One of the main threats to the swift parrot are introduced sugar gliders which eat swift parrot eggs, kill the chicks and adult birds. Trials are currently underway to control sugar gliders in known swift parrot breeding areas.	
Eastern-barred bandicoot	The eastern barred bandicoot nests in tussock grasses, sagg and sedges and forages in open grassy areas. Dense low shrubs also provide good cover and protection for bandicoots. Retain areas of sagg/sedge/tussock grasses and leave fallen timber and woody debris as habitat. A mosaic of open grassy understorey alongside areas of shrubby cover is ideal.	
Eastern quoll Tasmanian devil	Quolls and devils nest in underground burrows, under rocks, or fallen logs. They can also use made-made structures. Keep large fallen logs, rocks, and le piles for habitat. Maintain a mosaic of open grassy understorey along with areas of shrubby understorey for foraging habitat and cover.	

## What assistance is available?

Funding is available from NRM South as part of the Protecting Black Gum and Brookers Gum project for management activities such as weed control and revegetation <u>https://nrmsouth.org.au/bobg-project/</u>

Further support for Covenant landholders is provided by Tasmanian Land Conservancy through the Protected Areas Partnership Program <u>https://tasland.org.au/programs/protected-areas-on-private-land/</u>

Conservation Landholders Tasmania also provide support for Covenant landholders and hold regular field days <u>http://www.clt.asn.au/</u>

You can also get involved with Land for Wildlife <a href="https://tasland.org.au/programs/land-for-wildlife/">https://tasland.org.au/programs/land-for-wildlife/</a>

## **Other resources**

The Australian Government has detailed information on Tasmanian Black Gum or Brookers Gum Forests on their website including Conservation Advice and a Guide for Land Managers

https://www.environment.gov.au/cgibin/sprat/public/publicshowcommunity.pl?id=77&status=Critically+Endangered

More information on *Eucalyptus ovata* forest and woodland is available from DPIPWE <u>https://dpipwe.tas.gov.au/Documents/20.%20Eucalyptus%20ovata%20forest%20and%20woodland.pdf</u>

NRM South have a Fact Sheet for Black Gum and Brookers Gum <u>https://nrmsouth.org.au/wp-content/uploads/2021/01/BOBG-fact-sheet\_FINAL.pdf</u>

Threatened Species Link is a great resource for information on threatened species in Tasmania <u>https://www.threatenedspecieslink.tas.gov.au/Pages/default.aspx</u>

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A landscape-scale approach always works best. Talk to your neighbours about wildlife management issues. Get involved with a local environmental group such as the Tasmanian Land Conservancy, Land for Wildlife, NRM organisations or Landcare.

# Swift parrot (Lathamus discolor)

## Description

The swift parrot is a small, fast-flying parrot with a streamlined body and a long, pointed tail. The body is mostly bright green, with dark blue patches on the crown, cheeks and wings. It has distinctive patches of red on the throat, chin, face and forehead. It also has a red tail, and red on the shoulder and under the wings. They are noisy and active, with a very fast, direct flight. A distinctive call of 'kik-kik' is given when flying.

### **Similar Species**

It is a similar size to the musk lorikeet, but the prominent red patches under the wing, long red tail, and bright green body are distinctive, as is the flight call.

### **Breeding Habitat**

The swift parrot only breeds in Tasmania during the summer and migrates to mainland Australia for winter. The breeding range of the swift parrot is largely restricted to the east and south-east coast of Tasmania. The location of breeding areas is largely determined by the flowering patterns of Tasmanian blue gum (*Eucalyptus globulus*) and black gum (*E. ovata*), which can vary dramatically from year to year.

Nest sites are usually located near the coast in old-growth dry forests on upper slopes and ridge tops. Swift parrots make their nests inside a hollow tree branch or trunk in very old or dead trees, and do not prefer a particular tree species for nesting. Dead or senescent trees tend to have far more hollows than live trees, and trees with numerous hollows are more likely to provide a suitable hollow for nesting. It is not unusual to find more than one pair of swift parrots nesting close to each other. Nest sites may be re-used but not necessarily in successive years. The use of a particular nest site depends on the heavy flowering of Tasmanian blue gum or black gum in that area.

After the breeding season, usually in February and March, the entire population flies north, dispersing throughout Victoria and NSW. On the mainland they are semi-nomadic, often flying around in large flocks, foraging on flowering eucalypts and lerps.

### Status

The swift parrot is listed as Critically Endangered on the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999*. It is also listed as endangered under the Tasmanian *Threatened Species Protection Act 1995*.

### Why is it a threatened species?

The swift parrot is listed as a threatened species because its numbers are very low there is growing evidence that its numbers may be continuing to decline. Previous population estimates suggest that there were fewer than 2000 breeding pairs, and recent research suggests that the current number is much lower than this. Predation by introduced sugar gliders is considered a major reason for this decline. Sugar gliders kill and eat adult female swift parrots while they are incubating their eggs, as well as the eggs and chicks. Up to half of the nesting parrots can be eaten by sugar gliders every year. Another reason for the swift parrot's threatened status is because that most of the blue gum habitat on which it depends occurs on unprotected land and continues to be cleared. Collision with man-made structures, especially windows and chain-mesh fences, is another major threat.

# **Plant list**

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	silver banksia	Banksia marginata
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	native cherry	Exocarpos strictus
	bitterpea	Daviesia ulicifolia
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	sagg	Lomandra longifolia
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