

PROTECTING OUR WILD HEART

AN ACTION PLAN FOR HOBART'S BUSHLANDS



City of **HOBART**

Cover: Scarlet robin. Photo: Michael Roberts.

Below: Tawny frogmouth. Photo: Michael Roberts





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PROTECTING OUR WILD HEART

Hobart is very special. No other capital city in Australia, and very few in the world, are so closely linked to nature. Alpine heaths and bogs swathe the tops of the city's wild mountain backdrop, kunanyi/ Mt Wellington, eucalypt forests cloak the mountain's forested hills, towering Tasmanian blue gums shadow our rivulet corridors and native grasslands flank the River Derwent.

Many of our residents live next to these wild places, and if they don't they can easily reach one. This close proximity to forests, woodlands, grasslands and our coastal environment creates an inexorable link between Hobartians and the natural world around us.

As a land owner, the City of Hobart is committed to working with the local community to retain, promote and enhance these natural values for the long-term environmental, social and economic benefit of the community.

Our fire and biodiversity team is critical to this mission, managing our bushland reserves and the wildlife they protect by controlling and where possible eradicating environmental weeds, reducing fuel loads to mitigate the risk of dangerous bushfire and restoring degraded landscapes to their natural state.

THE BUSH, OUR HOME

The City of Hobart manages 4600 hectares of diverse native bushland that envelopes the City in a series of connected, protected nature reserves.

Near the city's northern boundary is Cornelian Bay, and then closer in, Queens Domain. To the south is Lambert Gully, Waterworks Reserve, Ridgeway and Bicentennial parks. In the foothills overlooking the city lies Knocklofty Reserve, and towering far above Hobart is the largest of our reserves, Wellington Park.

Blanket leaf. Photo: John Sampson



Tasmanian pademelon. Photo: Michael Roberts

Each area has its own unique values. Knocklofty Reserve, for example, protects a large area of pre-European, old growth white gums, an extremely rare natural commodity in a landscape that has changed dramatically over the past 200 years.

Protecting Our Wild Heart outlines the City's plans for protecting Hobart's bushlands, ecosystems and native plants and animals.

It sets out the key threats facing our bushlands and how we plan to manage these threats.

PROTECTED AREAS

The principal mechanism for the conservation of natural ecosystems is protected areas.

A protected area has been defined by the IUCN as '[a] clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values' (Worboys et al., 2013).



HOBART'S BUSHLAND RESERVE SYSTEM

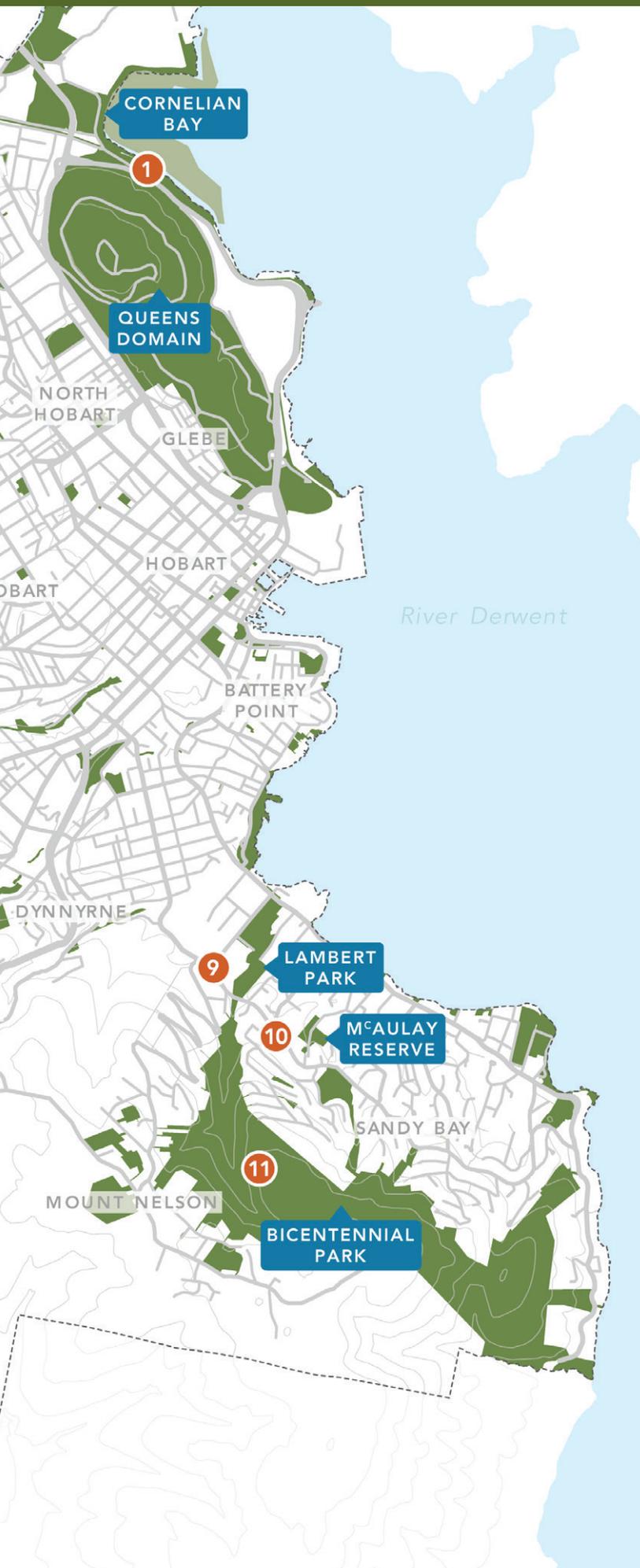
The City of Hobart manages nearly 4600 hectares of protected areas within its bushland reserve system, dedicated under the *Local Government Act 1993*.

These areas are the stronghold for the City's biodiversity and encompass entire ecosystems, geological and hydrological features, and the lifeforms that are part of them, including native trees and shrubs, grasses, wildlife, leaf litter, soils and seed beds.

Local volunteer Bushcare groups work closely with the City, helping to manage environmental weeds, monitoring wildlife and restoring degraded habitats.

Bushcare groups

- ① Cornelian Bay Bushcare
- ② Valley Street Bushcare
- ③ Friends of Knocklofty Reserve
- ④ Friends of Wellington Park
- ⑤ South Hobart Bushcare
- ⑥ Waterworks Valley Landcare
- ⑦ Fern Tree Bushcare
- ⑧ Ridgeway Bushcare
- ⑨ Lambert Gully Bushcare
- ⑩ Friends of McAulay Reserve
- ⑪ Mount Nelson Bushcare





THE BUSH: IT'S IN OUR BLOOD

In 2018 the City of Hobart released *Hobart: A community vision for our island capital*.

Created with contributions from more than 1100 community members and stakeholders, its purpose is to guide all of the City's work, so that Council decisions help create the Hobart our communities want, for current and future generations.

The community vision describes what people love and value about Hobart and how they want it to evolve. Its vision statement reads:

Hobart breathes.

Connections between nature, history, culture, businesses and each other are the heart of our city.

We are brave and caring. We resist mediocrity and sameness.

As we grow, we remember what makes this place special.

We walk in the fresh air between all the best things in life.

The document includes eight pillars that represent the major parts of Hobart life. The sixth pillar is the Natural Environment:

We are a city whose people see ourselves as part of a beautiful and unique natural environment, from the mountain to the river, which embrace us and shape our identity. We are proud custodians and advocates, ensuring resources are appreciated rather than wasted, supporting biodiverse ecosystems in honour of past, current and future generations.

Tasmanian waratah, kunanyi/Mt Wellington.
Photo: Matt Newton



SHAPED BY PLACE

Hobart's identity is shaped by where we live, a place where we are deeply connected to nature and wilderness, in, around and above our city.

Our connection with the natural environment is part of a recognition that we all live, work and play in the midst of our mountain, our river and the land around us.



BIODIVERSITY: THE WEB OF LIFE

Biodiversity – or biological diversity – is the word used to describe the incredible diversity of all lifeforms on Earth, how they interact with each other and their environment.

It includes not just animals and plants, but also fungi, microbes, the genetic differences among them and the ecosystems in which they occur.

Biodiversity is the stuff of life. We rely on it to give us clean air, fresh drinking water and healthy soils in which to grow our crops.

Plants renew Earth's oxygen, trap sunlight and produce food for other species. Fungi and microorganisms create and maintain the soils of the world. Birds, insects and mammals pollinate plants and maintain nutrient cycles.

Biodiversity also provides some insurance against disease, climate change, fire and drought, ensuring there are always robust species that can survive and rebuild ecosystems.

No matter how technologically advanced we consider ourselves to be, food, fibre, materials and energy from nature are the foundation of our livelihoods. We rely on the life-supporting ecosystem services nature provides us.

Its beauty inspires and enriches our lives, and we have a moral duty to protect it and ensure its survival – and in the long-term our own survival – for future generations.

Eastern banjo frog, left, and a Tasmanian devil, right.
Photos: Michael Roberts





TACKLING NATURE'S THREATS

The City of Hobart has identified key, high conservation value areas within its bushland reserve system as priorities for conservation action.

It has also identified the four greatest threats to the health of its bushland reserves: invasive weeds and pest animals, climate change, fire and habitat fragmentation.

Biodiversity hotspots that will be a focus for conservation action include Knocklofty Reserve, Waterworks Reserve, Ridgeway Park and the Queens Domain.

There will also be a greater focus on threatened species found within the City's bushlands. Some of these threatened species are endemic to Hobart – they are found nowhere else on Earth – and include the Knocklofty leek-orchid, Mt Wellington eyebright, silky snail and the Ammonite snail. If lost from Hobart's bushland reserves they would become globally extinct.

Managing bushland reserves based on their biodiversity values and the threats that may impact on those values is recognised as the best method of achieving positive long-term outcomes for the City's bushland reserves, its native plants and animals.

The key aims of this approach are to:

- outline the City's role in biodiversity management as part of the broader natural resource management network of government agencies, industry, private land owners, not-for-profit organisations and community groups operating in the City
- identify biodiversity values and threats within the City's bushland reserves, and what conservation actions could be undertaken to protect, preserve and improve biodiversity
- prioritise biodiversity conservation actions for the City's bushland reserves

The fires that ravaged Tasmania in early 2019 created an eerie glow over Hobart. Photo: Mischa Pringle



A volunteer with the Friends of Knocklofty Bushcare group tackles a large infestation of gorse. Photo: John Sampson

- identify gaps in the City's understanding of its biodiversity to help prioritise future work, and improve biodiversity management in the long-term through an adaptive management approach to biodiversity conservation
- define management priorities for the City's fire and biodiversity unit and Bushcare volunteers through an adaptive management approach.

Information from existing, statewide data sets has been used to determine the City's biodiversity hotspots – threatened flora, fauna and native vegetation communities – with a focus on endemic species.

A biodiversity score has then been used to identify areas containing high value biodiversity assets.



Dry forest and woodland in Knocklofty Reserve.

HABITATS UNDER THREAT

Blue gum (*Eucalyptus globulus*) dry forest and woodland

Mostly found on dolerite ridges, slopes and flats, this blue gum forest and woodland community is poorly protected in Tasmania. It has suffered from extensive land clearing for agriculture as well as plantation and timber harvesting. It provides important habitat for the critically endangered swift parrot, which is dependent on the blossoms of the Tasmanian blue gum (*Eucalyptus globulus*), its main food resource during breeding.

Location: Bicentennial Park, Knocklofty Reserve and Queens Domain.

Black gum (*Eucalyptus ovata*) forest and woodland

Typically occurs on poor draining, damp sites such as flats, depressions, drainage lines and gullies. Dominated by eucalypts commonly known as black gum (*Eucalyptus ovata*) these forests and woodlands are characterised by a sedgey understorey, and provide essential habitat for a diverse range of threatened native animals including the eastern quoll, Tasmanian devil and the swift parrot.

Location: Kalang Avenue Reserve, Knocklofty Reserve and Bicentennial Park.

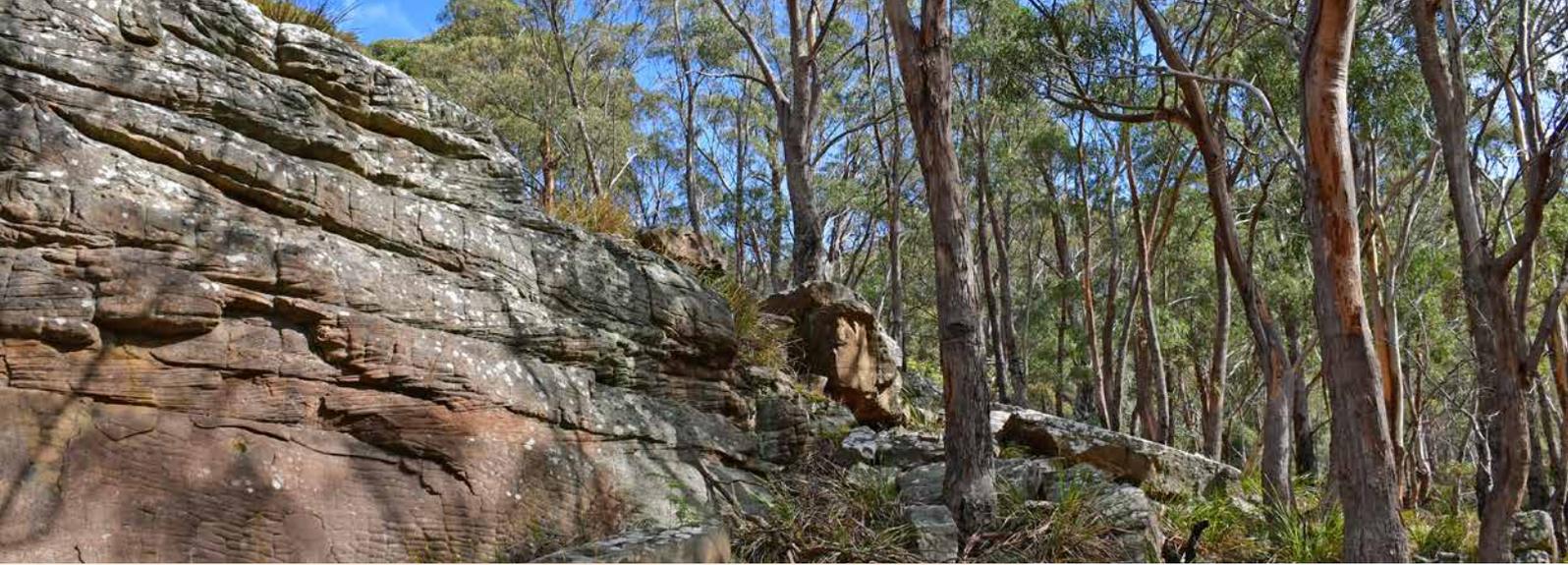
Black peppermint (*Eucalyptus amygdalina*) forest and woodland on sandstone

This forest and woodland community is dominated by black peppermint (*Eucalyptus amygdalina*), a eucalypt found only in Tasmania. The forest and woodland community is poorly protected in Tasmania. Healthy sites have a diverse shrub layer but are vulnerable to grazing, a high frequency of fire, woody weeds and *Phytophthora cinnamomi*, a plant pathogen commonly described as the 'bulldozer of the bush' for its ability to destroy bushlands, heath and woodlands.

Location: Knocklofty and Waterworks reserves, Ridgeway Park.



The lowland native grasslands on the Queens Domain are a nationally threatened ecological community. Photo: Greg Milne



Black peppermint forest and woodland on sandstone.

Lowland native grasslands of Tasmania

This nationally threatened ecological community is dominated by kangaroo grass and characterised by native lilies, daisies, orchids and other herbs nestled into grassy tussocks. It supports a unique set of native animals including the tussock skink and eastern barred bandicoot. It is regarded as one of Tasmania's most threatened and fragmented ecosystems and the most depleted vegetation formation in the state.

Location: Queens Domain.

Silver peppermint (*Eucalyptus tenuiramis*) forest and woodland

Found only in Tasmania this ecological community has been extensively cleared for agriculture, and very little of what remains is protected. These dry sclerophyll forests and woodlands are generally characterised by a shrubby understorey with low cover and diversity.

Location: Kalang Avenue Reserve, McRobies Gully, Waterworks Reserve and Ridgeway Park.

KEY FLORA SPECIES

- Forest fingers, *Caladenia sylvicola*
- Mt Wellington eyebright, *Euphrasia gibbsiae* subsp. *wellingtonensis*
- Stinking pennywort, *Hydrocotyle laxiflora*
- Knocklofty leek-orchid, *Prasophyllum perangustum*
- Bare midge-orchid, *Corunastylis nudiscapa*
- Shade nettle, *Australina pusilla* subsp. *muelleri*
- Dainty leek-orchid, *Prasophyllum amoenum*



THREATENED SPECIES

The City of Hobart's bushland reserves protect many native plants and animals, including threatened species and vegetation communities listed at both state and federal levels. Ensuring our reserves remain ecologically healthy and robust is critical to protecting these vulnerable species.

Within the City are 28 vegetation communities. This includes one federally listed vegetation community, Lowland Native Grasslands of Tasmania, listed as Critically Endangered under the *Environment Protection and Biodiversity Conservation Act 1999*.

Four vegetation communities are considered to be threatened and listed on Schedule 3A of Tasmania's *Nature Conservation Act 2002*.

Ten flora species listed under the *Environment Protection and Biodiversity Conservation Act 1999* are known to occur within Hobart's bushland reserves. They are also listed on Tasmania's *Threatened Species Protection Act 1995*.

Eleven fauna species listed under the *Environment Protection and Biodiversity Conservation Act 1999* are known to occur in our bushlands, and of these, nine are also listed on the state *Threatened Species Protection Act 1995*.

Of these threatened species, five are endemic to Hobart – the Ammonite snail, forest fingers, Knocklofty leek-orchid, Mt Wellington eyebright and the silky snail.

KEY FAUNA SPECIES

- Ammonite snail, *Discocharopa vigens*
- Silky Snail, *Roblinella agnewi*
- Tussock skink, *Pseudemoia pagenstecheri*
- Tasmanian chaostola skipper, *Antipodia chaostola* subsp. *leucophaea*
- Eastern barred bandicoot, *Perameles gunnii*
- Grey goshawk, *Accipiter novaehollandiae*
- Swift parrot, *Lathamus discolor*
- Masked owl, *Tyto novaehollandiae*
- Eastern quoll, *Dasyurus viverrinus*
- Tasmanian wedge-tailed eagle, *Aquila audax* subsp. *fleayi*
- Little penguin, *Eudyptula minor*



Masked owl. Photo: Michael Roberts



Eastern barred bandicoot. Photo: JJ Harrison | CC BY-SA 3.0



Eastern quoll and a little penguin. Photos: Michael Roberts

Eastern quoll

Once widespread throughout south-eastern Australia, eastern quolls are now considered extinct on the mainland and have recently undergone rapid and severe population decline in Tasmania. Their distribution is associated with areas of low rainfall and cold winter minimum temperatures, suggesting that climatic changes may be having an impact. Direct competition with feral cats for food has been devastating to the species. The eastern quoll is listed as Endangered under the federal *Environment Protection and Biodiversity Conservation Act 1999*.

Masked owl

This species is the largest of Tasmania's nocturnal birds, an amazing predator capable of pinpointing prey – small mammals, rats and mice – in the dark and flying just inches above them without being detected. They are dependent on large, old-growth hollow-bearing trees that are an irreplaceable commodity. In an urban landscape, one of the greatest threats to the masked owl is secondary poisoning from

rodent bait. Its population has been estimated to be only 500 breeding pairs in Tasmania. The masked owl (Tasmanian) is listed under the federal *Environment Protection and Biodiversity Conservation Act 1999* and the *Threatened Species Protection Act 1995*.

Swift parrot

The nationally-listed, critically endangered swift parrot is a tiny, very fast bird that winters on the mainland but returns to Tasmania every summer to breed. It is dependent on blue gum and black gum dominated forest and woodland with large hollow bearing trees and can be found foraging in Knocklofty Reserve, Ridgeway and Bicentennial parks.

Eastern barred bandicoot

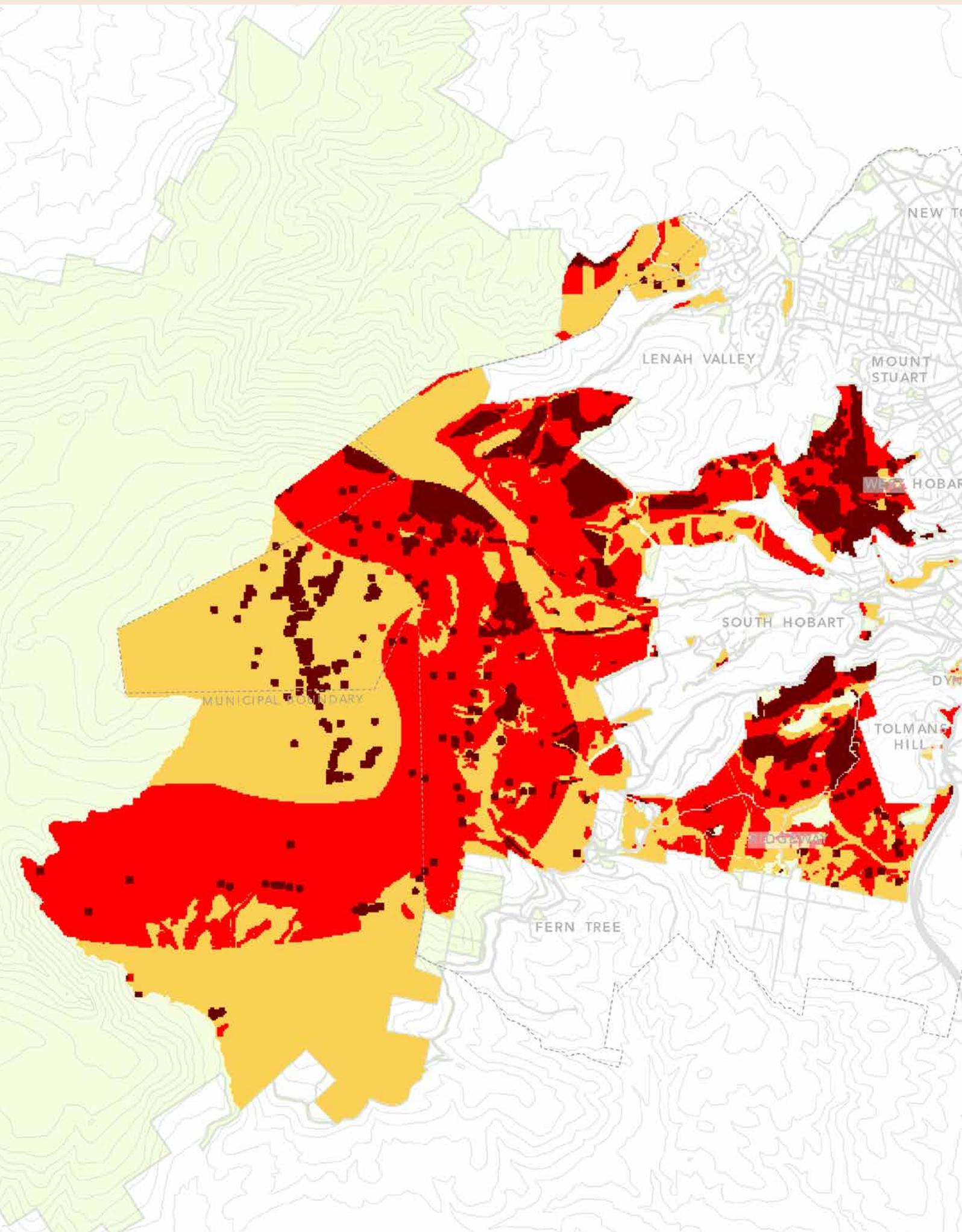
One of Australia's most endangered species, the eastern barred bandicoot is considered extinct in the wild on the mainland and has been almost entirely lost from its original range in Tasmania. The Queens Domain, Knocklofty and Waterworks reserves are particular strongholds, providing suitable grassland/grassy

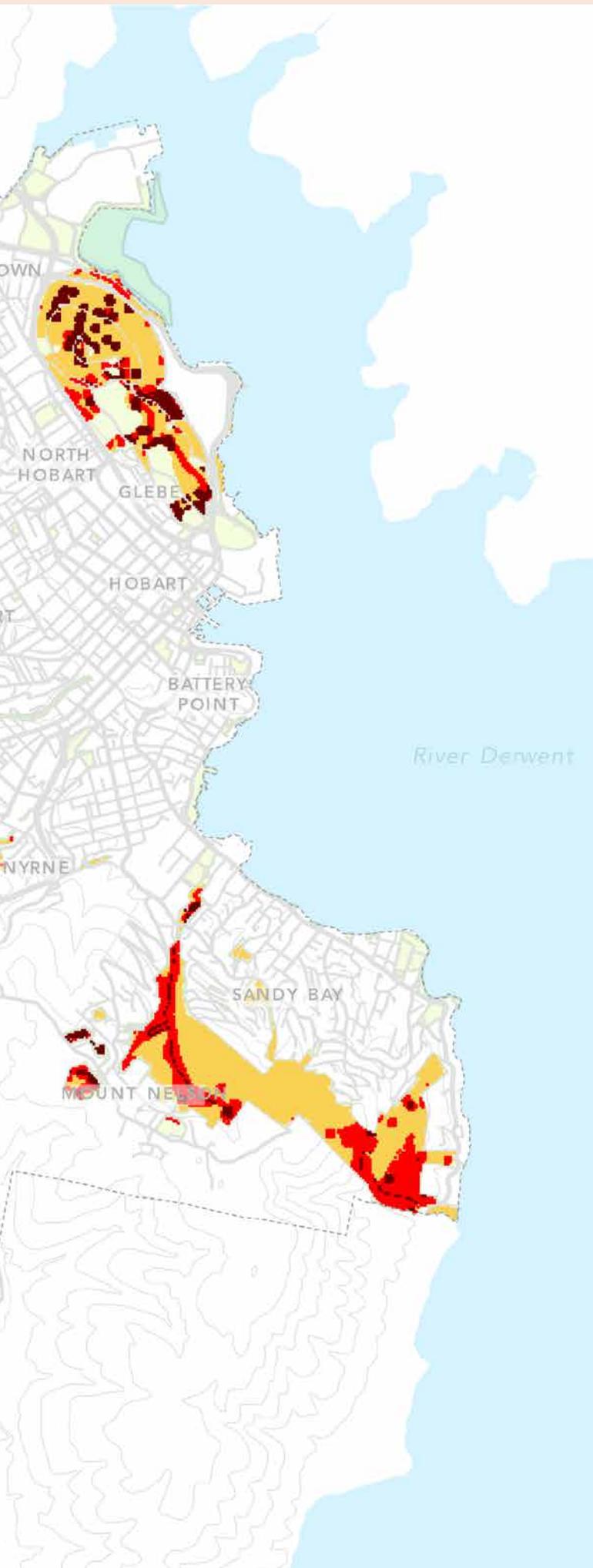
woodland habitat. Predation from cats and dogs is their greatest risk if they are to continue to survive in Hobart's bushland reserves.

Grey goshawk

This large, pure white raptor nests in mature wet forest but can also be seen in more open woodland and on urban fringes. There are thought to be less than 110 breeding pairs in Tasmania, where it is listed as endangered on the state's *Threatened Species Protection Act 1995*.







BIODIVERSITY HOTSPOTS

The City of Hobart is committed to working with the local community to retain, promote and enhance these natural values for the long-term environmental, social and economic benefit of the community.

As part of that commitment we have created a Biodiversity Action Plan that prioritises our work in protecting high conservation bushland areas and the many threatened native plants and animals that live in these places.

The plan identifies highly significant biodiversity hotspots within the City's bushland reserves including parts of Knocklofty Reserve, Waterworks Reserve and the Queens Domain.

It highlights the areas of high biodiversity in a renewed push to protect them from key threats such as invasive weeds, pest animals, climate change, fire and habitat fragmentation.

The map gauges the importance of Hobart's bushland areas based on conservation values determined by our biodiversity action plan.

While all natural areas have some value in conserving biodiversity, identifying natural areas that are of greater value to prioritise management achieves the best long-term outcomes for biodiversity.

- High Biodiversity Value
- Moderate Biodiversity Value
- Low Biodiversity Value



KEY THREATS

In Australia a range of threats are to blame for a decline in biodiversity across the country. Australia's Biodiversity Conservation Strategy 2010-2030 identified the main threats as:

- habitat loss, degradation and fragmentation
- invasive species
- unsustainable use and management of natural resources
- changes to the aquatic environment and water flows
- changing fire regimes
- climate change (Natural Resource Management Ministerial Council, 2010).

In addition, protected areas within an urban context have a distinctive set of localised threats including:

- receive large numbers of visitors, including many who visit frequently, even daily
- are threatened by urban sprawl and intensification of urban development
- are disproportionately affected by crime, vandalism, littering, rubbish dumping, light and noise pollution
- are subject to urban edge effects such as more frequent and severe fires, air and water pollution and the introduction of invasive alien species (Worboys and Trzyna, 2015).



Platypus in the Hobart Rivulet. Photo: Michael Roberts

The key threatening processes for biodiversity in the City of Hobart are:

1. Habitat fragmentation and degradation.
2. Climate change.
3. Invasive species – weeds, pest animals (including cats and dogs), disease.
4. Fire.

HEALTHY RIVULETS

As well as being important in their own right, Hobart's rivulets and the native vegetation in and around them (the riparian zone) create vital habitat corridors for the movement of our native plants and animals. Rivulets play a critical role in our bushlands in the face of climate change – in times of drought the high productivity and diversity of plant communities found within the riparian zone supports a range of native animals and provides safe havens from increasing temperatures.



1. HABITAT FRAGMENTATION AND DEGRADATION

Habitat loss, degradation and fragmentation is viewed as the largest cause of biodiversity loss and the primary factor resulting in species being listed as threatened or endangered.

Direct causes of habitat loss include the clearing of native vegetation and the cumulative effects of human activities such as:

- smaller-scale loss of vegetation
- degradation of habitat remnants
- nutrient run-off
- damage caused by illegal access for recreation
- erosion caused by legal track formation
- illegal land clearance and encroachment into bushland reserves
- removal of dead wood (firewood collection) and trees

- escape into bushland of weedy garden plants
- rubbish dumping.

On a landscape scale, Hobart's bushland reserve system represents a largely continuous tract of vegetation. However, a closer inspection reveals a variety of land tenures, major arterial roads, residential roads, powerline easements, a large edge interface with residential areas, residential encroachment, mountain bike trails and walking tracks – both formal and informal, authorised and illegal – all dissecting our bushland reserves.

Any one of these elements can disrupt ecosystem functions, create barriers to the movement of native plants and animals through the landscape, and provide avenues of entry for invasive species such as weeds and feral animals. To protect intact native vegetation from degradation and prevent further fragmentation many of these elements require ongoing management.



Grey butcherbird. Photo: Michael Roberts

Objectives of management

- Maintain and protect large, intact, healthy units of native vegetation and protect them from fragmentation. Restore degraded habitat.
- Evaluate the degree to which high biodiversity value areas have suffered fragmentation, and restore degraded habitat where possible.
- Protect hollow-bearing trees as critical wildlife habitat. The availability of tree hollows in Tasmania's landscape is declining due to forestry, firewood collection, land clearance for agriculture, urbanisation and increasing tree senescence. Trees less than 100 years old are unlikely to contain hollows. Trees with hollows suitable for use by animals are generally more than 150 years old. This resource cannot be readily replaced.

RESPONDING TO CLIMATE CHANGE

Climatic changes and possible impacts on nature.

Increased temperature

- May lead to earlier springs, delays in the arrival of autumn and an increase in out-of-season events such as winter flowering.

Reduced precipitation

- Decreased regeneration rates in dry eucalypt forests.

Changes in seasonal rainfall patterns

- Widespread dieback of eucalypt species.
- The breeding seasons of mammals that rely on spring rainfall may change.

Extreme events

- More frequent and severe bushfires may lead to the loss of major ecological communities dominated by tree species such as blue gum (*Eucalyptus globulus*), swamp gum (*Eucalyptus regnans*) and Athrotaxis.

Increased carbon dioxide

- Increased levels of carbon dioxide in the planet's atmosphere could lead to a woody, "thickening" of vegetation, threatening open grassy woodlands.

Interactive effects

- Changes to when different plants flower could have negative impacts on pollinators such as native bees and butterflies, and successful pollination of plant species.
- Increased fire frequency will affect age structure of forests and habitat availability.

Reduction in frost

- Loss of alpine plant species that require frost for germination.
- Uphill movement of the treeline into sub-alpine and alpine areas.

2. CLIMATE CHANGE

Existing pressures on biodiversity continue to be the main causes of biodiversity loss, but climate change will magnify the impact of these threats and directly threaten some species and ecological communities (Natural Resource Management Ministerial Council, 2010).

Climate change will lead to many cumulative changes to biodiversity. Critically, the abundance and distribution of species will change, the genetics of populations will evolve, species assemblages will change and ecosystems will change in their structure and function as well as their composition – some known ecosystem types may disappear and novel ones form (Dunlop and Brown, 2008). Planning approaches that include managing for uncertainty will be critical to protecting biodiversity and require a greater emphasis on risk management and adaptive management approaches.

Given that changes in abundance and distribution are inevitable, and that different species will respond to climate change in different ways, some conservation goals may become conceptually difficult if not practically impossible in a natural setting. Conserving some characteristics of biodiversity (e.g. maintaining particular species, communities and ecosystems in specified places) will, over time, require more intensive management.

Deciding which conservation goals are appropriate will be difficult. Deciding which elements of biodiversity are particularly threatened and of high enough value to society to be worth conserving will require input from scientists, land managers and the general community.



Striated pardalote. Photo: Michael Roberts

Objectives of management

- Ensure our bushland reserve system is effective in protecting biodiversity values now and continues to be effective in the future.
- The broad-scale connectivity and sympathetic management of surrounding lands outside of the City's bushland reserve system will provide sufficient porosity in the landscape to allow species to disperse and establish through changing environmental conditions.
- Ecosystem resilience will be the key to ensuring that natural systems have the capacity to adapt to the impacts of climate change. Resilience involves securing critical intact habitats, maintenance of habitats, restoring habitat through the landscape and ecological connectivity.
- Maintain and protect well-functioning ecosystems, including ecological functions and associated ecosystem services, with a priority for large, intact, healthy areas of native vegetation.
- Conserve natural terrestrial ecosystems and restore degraded ecosystems. Protect and maintain a diversity of habitats as a form of insurance against the uncertainty surrounding the specific impacts of climate change on different habitats, native plants and animals.



Lambert Gully Bushcare volunteers with bags of weedy red hot pokers they pulled from nearby bushland.

3. INVASIVE SPECIES: WEEDS, PEST ANIMALS AND DISEASE

Weeds

Weed invasion is unarguably a major threat to the floristic values of Hobart's bushland reserves. Depletion of the natural values of our bushland reserves is probable without appropriate management of weeds.

There are 564 vascular plant species identified as 'introduced' in the City of Hobart (DPIPWE, 2018) and finite resources to control those species that are environmentally harmful weeds. A method for prioritising weed control programs is essential.

To determine which weeds should be a higher priority for management the environmental weed risk databases including Weeds at Early Stage of Invasion and the Advisory List of Environmental Weeds in Victoria were used. The databases were developed to help land managers understand the relative risks posed by different invasive plants, allowing them to focus efforts on the species that pose the highest risk.

Objectives of management

- Prioritise high threat weeds within high value biodiversity asset management units for eradication.
- Weed management needs to be cooperative, involving all agencies, private landholders and

WEEDS, A CHALLENGE

Environmental weeds are one of the biggest threats facing our bushland reserves. They take over ecosystems and choke waterways, pushing out native plants and destroying native animal habitat.

Of the 1513 plant species recorded in Hobart's bushlands more than a third (37%) are considered introduced species. Not all are a threat to our bushlands, but those that are have to be taken very seriously. Weeds of particular concern include bluebell creeper, Chilean needle grass, blackberry, heather, karamu, Spanish heath and orange hawkweed.

other stakeholders. The City of Hobart's bushland unit and its volunteer Bushcare program should work cooperatively with adjoining landholders and other interested parties, sharing information about which weed threats in high value biodiversity asset management units are being targeted for eradication and control.

Pest animals

Predation by feral cats is considered the most significant factor in Australia's recent mammal extinctions, and regarded as the factor impacting the

largest number of threatened and near threatened mammals in the country (Fancourt, 2015).

The interaction of wildlife with domestic dogs is poorly documented, despite anecdotal evidence that dogs opportunistically hunt native animals, especially on the urban fringe.

However, work by Holderness-Roddam and McQuillan (2014) analysing four years of state government records that detail domestic animal attacks on wildlife in natural, peri-urban areas in Tasmania, indicates dogs target a wide cross section of native wildlife. Attacks on pademelons, Bennett's wallaby, potoroos, bettongs, brush-tailed possums, echidnas and bandicoots (eastern barred bandicoots and southern brown bandicoots) were all strongly represented.

The research also examined predation by domestic cats, which were more likely to attack smaller mammal species. Bandicoots were a major target.

This comparison highlights the vulnerability of small mammals such as bandicoots, showing them to be at high risk of predation from the combined impacts of

domestic cats and dogs, which persist in a number of bushland reserves across the City of Hobart.

Given the vulnerability of our native mammals to domestic cat and dog attacks, a greater awareness of their habitat requirements and their management is necessary to ensure the protection of these native species.

Objectives of management

- Feral cat management programs are implemented as a priority in areas containing high value biodiversity asset management units and/or threatened fauna species.
- Dog prohibited areas implemented as a priority in areas containing high value biodiversity asset management units and/or threatened fauna species.
- Collaboration with the City of Hobart's animal management unit for appropriate education and enforcement.



A wildlife monitoring camera recorded this feral cat with a bandicoot in its mouth.



Summer bushfire smoke shrouds the City of Hobart's bushland depot. Photo: John Fisher

4. FIRE

Fire, or its absence, has helped shape Australia's landscape. Many native plant species, including eucalypts and acacias, have evolved in fire-prone environments and are dependent to various degrees on fire events to maintain ecological cycles. In contrast, ecosystems developed in the absence of fire are highly vulnerable when changed conditions such as prolonged drought increase their susceptibility to fire.

Climate change will alter the nature of fire risk and increase the need to have effective fire management regimes in place that protect people and property in a way that recognises the role of fire in biodiversity management.

Objectives of management

- Ensure the biodiversity values of the City's bushland reserves are incorporated into fire management and that the ecological values of the bushland reserve system are a recognised part of a strategy of burning the landscape to mitigate the impacts of high intensity wildfire.
- Ensure appropriate intervals between fuel reduction burns are maintained based on the ecology of plants in specific bushland reserves. Greater knowledge is needed about the impacts of regular burning at a local scale. For example, intervals of 15 and 25 years for dry eucalypt grassy woodland may be too high or too low for maintaining biodiversity. Site specific data should

FIRE, A TOOL IN THE RIGHT HANDS

The careful and considerate use of fire is the single greatest natural tool we have at our disposal for the long-term management of major ecological threats such as weeds and wildfire within Hobart's bushland reserves.

Every year the City of Hobart carries out strategic fuel reduction burns to reduce the amount of flammable materials on the ground that build up and if not managed could lead to catastrophic wildfires, destroying important habitat refuges such as old tree hollows, wet gullies and threatening nearby homes and even human lives.

Burning is also used to control and where possible eliminate environmental weeds.

be collected and employed in the determination of the best burning regime for maintaining site biodiversity values together with objectives for asset protection.

- Review burning schedule if it is shown that rare and significant species are not persisting with the frequency of burns.



The City of Hobart carried out one of its largest ever bushfire fuel reduction burns at Knocklofty Reserve in 2019.



HOBART'S WILD HEART IS IN YOUR HANDS

The City of Hobart is surrounded by an extraordinary network of bushland reserves that are floristically rich and which protect a multitude of native plants and animals, some found nowhere else on Earth.

These reserves also provide incredible recreational opportunities including bushwalking, mountain bike riding, picnicking, orienteering, running, bird watching and rock climbing.

They are home to waterfalls, fern glades, rainforest, woodlands and grasslands, offering sanctuaries and a deep sense of place.

The City is committed to protecting, promoting and enhancing these natural values for the benefit of everyone.

It does this through the work of its fire and biodiversity team, which is made up of highly skilled people motivated by a love of the landscape in which they work.

They protect, restore and enhance the City's bushland reserves, maintaining a robust network of connected, protected areas that are a haven for many rare and threatened species through a combination of weed and fire management.

But they can't do it alone. There are a number of ways individuals and communities can help protect our City's bushlands and the native plants and animals that call them home.

Superb fairy wren. Photo: Michael Roberts

We need more weed warriors!

What seems like a perfectly harmless plant can turn into an environmental weed if it jumps your garden fence and heads into bushland. Coastal Weeds of Tasmania is a fantastic online resource that will help steer you clear of environmental weeds. It has a great list of alternative Tasmanian native plants for your garden.

dpiwwe.tas.gov.au/Documents/Coastal-Weed-of-Tasmania-booklet.pdf

Turn your garden into a habitat sanctuary

Using plants that are native to your region is a great way to create a habitat sanctuary in your own garden that will attract local birds and other wildlife, including butterflies. NRM South has created an excellent native plants of Hobart list that will help you find the right native plants for your garden.

nrmsouth.org.au/resources/understorey_hobart/

Responsible pet ownership

Much of Hobart's wildlife, including more common species such as possums, kangaroos, wallabies, lizards and many species of bird may be at risk from domestic pets in urban areas. This is also true for our rarer or threatened species such as bandicoots and quolls.

Here's some simple tips to help keep pet dogs and cats away from wildlife.

Unchecked, dogs harass and even kill native animals. Even though their human owners carefully meet their pet's requirements for food and shelter, instinctive hunting and chasing behaviour will continue.

- a) Keep your dog under control when outside of your home, and on a leash in nature reserves or bushland where native animals roam.
- b) Make sure your dog can't escape your backyard, particularly when you are not there.

- c) Properly train your dog to respond to your commands.

Domestic cats can have a devastating impact on local wildlife. Cat owners have a responsibility to ensure their pet cats don't kill native wildlife or become a nuisance to others. The TassieCat website provides expert advice and useful resources to help you keep your cat safe, healthy and happy while protecting our wildlife and our communities.

- a) Keep cats inside at night and particularly at dawn and dusk. Even well-fed cats can roam at night, hunting and killing small native mammals – they often target birds at dawn and dusk. Keeping your cat indoors or in a secure area in your garden also helps keep your cat out of fights with other cats and reduces the risk of them being hit by a car. Pet cats that are prevented from roaming have been found, on average, to live up to four times longer than those that are allowed to roam.
- b) Desex your cat and identify your cat as a pet. Cats that are microchipped can be identified from feral and stray cats by local councils and animal shelters. This means they can be quickly and safely returned to you if they get injured or lost!
- c) Never dump unwanted kittens or cats. Not only is it illegal but dumped cats are likely to become feral and prey on wildlife as a food source. Unwanted cats and kittens should be taken to the RSPCA or Ten Lives, the largest dedicated cat shelter in Tasmania.
- d) Don't feed stray cats or kittens. Many stray cats are not desexed and feeding them supports breeding, resulting in greater impacts on native wildlife, disease spread, public nuisance and more cats for the feral population. Do not feed a cat that is not yours.



Bushland restoration is one of the many activities Bushcare volunteers take part in. Photo: John Sampson

Join Bushcare

The City of Hobart's Bushcare program works with volunteers who help care for and protect Hobart's much-loved bushland reserves.

Bushcarers volunteer their time improving wildlife habitat, protecting threatened plants, weeding, maintaining and developing tracks as well as teaching others about these special places.

You don't need any experience – Bushcare provides the training, tools, a cuppa and biscuits!

It's a great way to meet other people who care about nature, and learn new skills while making a real difference to your local environment.

- To get involved visit hobartcity.com.au/Bushcare, phone 03 6238 2884 or email bushcare@hobartcity.com.au

Learn more with Bush Adventures

The City's Bush Adventures program offers a range of activities, workshops, guided walks and expert guest presenters to help people explore the wonders of nature while learning about local wildlife and ecology.

The program operates throughout Hobart's bushland reserves and caters for all ages.

- For the latest activities visit hobartcity.com.au/bushadventures

Slow down for wildlife on our roads

You can help reduce the number of wildlife killed on our roads by:

- a. Taking care while driving at night.
- b. Slowing down between dusk and dawn – and letting other people know they should do the same.
- c. Reporting sightings of native animals dead on our roads using the RoadKill App, including location details and a photo if possible. This information will be used to identify which roads are most dangerous for our native wildlife and how strategies can be put in place to reduce roadkill.

dpipwe.tas.gov.au/wildlife-management/save-the-tasmanian-devil-program/about-the-program/roadkill-project

Become a citizen scientist

Every observation can contribute to biodiversity science, from the rarest butterfly to the most common backyard weed. Mobile apps such as iNaturalist, FeralScan and the Roadkill App all create data sets that help organisations make informed decisions. Download these apps from the Apple App Store or Google Play for Android.



Australian emerald dragonfly.
Photo: Michael Roberts





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