Frankston City Council

Biodiversity Action Plan 2021–2036

Lifestyle Capital of Victoria

Message from the Mayor

As Mayor of Frankston City, I am pleased to present the Biodiversity Action Plan 2021–2036 (BAP). This plan will be integral to us working collaboratively with our community and partners towards a liveable, innovative and proud City, where ecosystems are healthy and resilient and the community is strongly connected with nature.

All human activities and endeavours ultimately rely on a diverse and functioning natural environment. Conservation of biodiversity underpins a healthy environment that supports life, human wellbeing and economic sustainability within our municipality. Biodiversity provides us with fresh air, clean water and plant pollination, which contributes to food security (known as 'ecosystem services').

Frankston City is one of the most biodiverse municipalities in Greater Melbourne, with habitats including the coast and waterways, dunes and scrubs, internationally recognised wetlands, heathlands, and a diversity of woodlands and forests.

We know that our community greatly values these natural areas, both for their beauty and inspiration, as well as places for recreation and exercise. The local community is often involved in the protection of our biodiversity, with a large and active volunteer community. Of course, the ability to access natural areas close to home has also been critical to many people's physical health and mental wellbeing in this time of social distancing and travel restrictions.

However, we also know that the ecosystems we love and enjoy are fragile and vulnerable. The rapid global decline and increasing threats to almost all ecosystems, plants, animals and other lifeforms is now beyond doubt. But there are also clear pathways to addressing this decline, which must be taken by all levels of government and society.

Local Government is the interface where large-scale conservation goals can be translated into policy and action at the local scale. As we meet the challenge of tackling climate change and global ecosystem decline, we also have a new understanding and appreciation of the critical role played by urban biodiversity, including small 'bush blocks', urban waterways, roadsides and even suburban backyards in supporting, protecting and sustaining our precious biodiversity.

The BAP outlines the benefits of protecting and maintaining our healthy ecosystems, while providing a clear strategic context and vision and objectives to help Council to achieve this goal. The BAP includes a review of existing biodiversity assets and identifies key threats to these assets.

It also highlights the importance of learning from the Traditional Custodians of the land that sustains us and recognises a strong partnership between Council and the Bunurong Land Council Aboriginal Corporation in protecting and restoring our community's natural heritage.

Through extensive community consultation and research, the BAP has developed 89 actions to be delivered over its 15 year lifespan to ensure Frankston's biodiversity is protected and enhanced for current and future generations.

The actions focus on improving community connections with nature, enhancing ecosystem health, establishing wildlife corridors and protecting flora and fauna and their habitats. Its implementation will result in enhanced and resilient ecosystems and provision of multiple ecosystem services for our community.

Cr Kris Bolam JP
Mayor, Frankston City

Contents

Acknowledgement of Country

Frankston City Council acknowledges the Bunurong people of the Kulin Nation as the Traditional Custodians of the lands and waters in and around Frankston City, and value and recognise local Aboriginal and Torres Strait Islander cultures, heritage and connection to land as a proud part of a shared identity for Frankston City.

Council pays respect to Elders past and present and recognises their importance in maintaining knowledge, traditions and culture in our community. Council also respectfully acknowledges the Bunurong Land Council as the Registered Aboriginal Party responsible for managing the Aboriginal cultural heritage of the land and waters where Frankston City Council is situated.

Statement of Significance from Bunurong Land Council

BLCAC respectfully offer the below statement of significance which covers all of our traditional land and water Country.

Over the last 35,000 years (minimum) Bunurong people have adapted to a range of significant changes within their Country. Our stories of the Bay flooding with water, asteroid impacts near Cranbourne, Arthurs Seat once being an Island, volcanic activity in the western suburbs, the great floods, fires and earthquakes all speak of such events.

Over 2000 generations of our people have been here before us. Archaeological excavation within our Country has already demonstrated about 35,000 years' worth of occupation. These sites can show us how our Ancestors interacted with their environment and how that interaction changed over time. We regard all evidence of our people's occupation as sacred.

All of our Country is highly significant, every square inch, every rock, every leaf, every dune, every plant and animal. If we could attribute the cause of this blanket high significance rating of our Country to any one thing, it would be that in Melbourne especially, so much has been destroyed and lost as the city grew, and so quickly. If you lose enough of something, what little you have left becomes so much more important. Similarly, when someone passes, their earthly possessions become more important to those they left behind. It's paramount that as we grow, we do so in a way that considers the voices of those that cannot speak for or represent themselves, as is the case for all flora and fauna.

With regards to our people's vast knowledge of the importance of all living things and their connectedness to each other and ourselves, we only need to look at the lore that they upheld which was focused on living in a way that minimises impact to all other things. We were judged for not having 'built form' by the rest of the western world, who didn't understand why. We see today that built landscapes have a negative effect on many things and that some of those things we now understand we cannot exist without. This shows the sacrifice our people made to accommodate all things. It seems they understood this well and truly before those that misunderstood this sacrifice as a lack of evolution or complexity. Building a wall by stacking rocks is easy; adding 3 more walls – just as easy; not living in the comfort of a solid rock home is difficult and we pay our respects to our Old People for that sacrifice.

Elders that passed away during early colonisation is the equivalent of a state library burning down today. One Bunurong Elder of the time was famously quoted saying that, 'Once we are gone, no one is going to know where anything is', clearly considering the vast amount of knowledge he and his people had collected about the landscape, all written in their songs and stories. Another Elder was noted as saying, 'one day smart people will lament at our passing', no doubt acknowledging again the ocean of information collected on every living thing here, every tree, every animal and the key to the complex balance of all things that his people had managed to evolve and sustain. European people are still learning of the complexities of Aboriginal culture.

1. Executive Summary

As defined in Frankston City Council's Biodiversity Policy, biodiversity is "the variety of life in an area including the animals, plants and micro-organisms, the genes they contain and the ecosystems of which they are a part. Conservation of biodiversity is important for a healthy environment that supports life, human well-being and economic sustainability within our Municipality. Biodiversity provides us with fresh air, clean water and plant pollination, which contributes to food security. Frankston's biodiversity assets include indigenous vegetation and fauna, canopy trees, waterways, wetlands".

Currently there are 1,900 ha of remnant native vegetation in Frankston City, spread across both private and public land. This native vegetation supports an array of biodiversity throughout the municipality, from the highly developed area of Frankston South through which Sweetwater Creek runs, to the low density area of Langwarrin South, with large remnant patches of bushland. Frankston's flora and fauna is diverse, including a number of significant species, and this diversity is well appreciated by the community.

Despite this abundance, Frankston City's biodiversity faces a number of issues:

- Low level of broader engagement on biodiversity conservation, especially with traditional owners, private landholders, adjoining municipalities, agencies and organisations
- Conflict between biodiversity protection and planning to meet development needs, infrastructure upgrades and bushfire protection
- Threats to biodiversity, including habitat fragmentation, pest plant and animal invasion, changing hydrology and climate change
- Lack of current management plans for natural reserves and regular flora and fauna surveys, causing data to be out of date or missing
- Limited resources to improve and enhance reserves and biodiversity assets that require intensive weed management or revegetation, resulting in their continued decline over time
- Lack of adequate resourcing for enforcement
- Limited capacity to incorporate biodiversity considerations and biodiversity enhancement into early planning for infrastructure capital works and maintenance programs

However there are numerous clearly identified opportunities for Council to address these deficits, including:

- Support private landowners to retain and improve habitat values
- Establish methods for engagement across all stakeholders and agencies – especially traditional owners (through the Registered Aboriginal Party) and fire authorities – to improve collaboration and ensure best practice in biodiversity conservation
- Engage with the community and encourage improved connections with nature, through citizen science projects and expanding existing programs such as Gardens for Wildlife and interpretation programs
- Update Natural Reserve Management Plans, and develop methods for monitoring and data collection, recording and sharing
- Work collaboratively with internal departments and external authorities to optimise opportunities for biodiversity conservation and enhancement, such as wildlife crossings in infrastructure project
- Research and implement international best practice examples to enhance wildlife (and waterway) corridors, to reduce fragmentation and increase connectivity and movement

This action plan has been developed to help Council address key issues for biodiversity, enable potential opportunities to be realised, and guide Frankston City to its vision of becoming the Lifestyle Capital of Victoria.

1.1 Scope

The purpose of this document is to collate and analyse existing data relevant to biodiversity in Frankston, identify knowledge gaps, and consider potential future threats to biodiversity. Following the analysis of this data, this document presents an Action Plan (see Section 3), containing targeted, achievable actions to enhance biodiversity across all land in Frankston City.

1.2 Funding of the plan

The plan is prioritised into short (up to 4 years), medium (4–8 years) and ongoing priorities. Budget estimates will be prepared for each of the priority periods and an annual bid for funding will be submitted to Council. This may be operational or capital funds as appropriate to the actions.

1.3 Delivery, monitoring and evaluation

This Action Plan will have a 15-year lifespan and will integrate with the other Council environmental and climate change initiatives, including the Urban Forest Action Plan. The Biodiversity Action Plan will be reviewed every four years. This will include an evaluation on the implementation status of each action, and a report on progress towards achieving the outcome indicators.

2. Introduction

This Biodiversity Action Plan is the strategic plan for how Frankston City Council will work over the coming years to continue the municipality's legacy of environmental protection.

Frankston City is located between the highly urbanised suburbs of Greater Melbourne to the north, more rural and natural environments to the south and east, and Port Phillip Bay to the west.

The municipality lies within the Gippsland Plain Bioregion, the Port Phillip and Western Port Catchment and the Dandenong sub-catchment (Melbourne Water, 2019). The main waterways flowing through Frankston City are Sweetwater Creek, Kananook Creek and Boggy Creek.

Today, Frankston City is one of the most biodiverse municipalities in Melbourne, with habitats including coastal dunes and scrubs, internationally-important wetlands, heathlands, and a diversity of woodlands and forests. These habitats support an abundance of flora and fauna species, a number of which are threatened.

Frankston City's natural areas are highly valued by its residents, who utilise them for appreciating nature in and of itself, as well as for recreation and exercise. Frankston City's residents are also often involved in the protection of this biodiversity, with a large and active volunteer community.

Frankston City Council's Biodiversity Policy, adopted in February 2018, sets out a vision for a municipality supporting a healthy ecosystem and strong community connections with nature.

To achieve this vision, Council has prepared this plan to provide
guidance and direction on management, enhancement and protection of Council's biodiversity assets and the allocation of resources to implement this.

The Biodiversity Action Plan aligns with the Frankston City Community Vision 2040 and the long term community aspiration that "Frankston City is green and sustainable, and a leader in sustainable industry and development. Both Council and community are committed to protecting and enhancing the environment and actively addressing climate change."

The Action Plan was developed through an extensive community and stakeholder consultation process over 12 months with input from residents, community conservation groups and a broad range of stakeholders and partners that work with Council to protect and enhance our natural heritage.

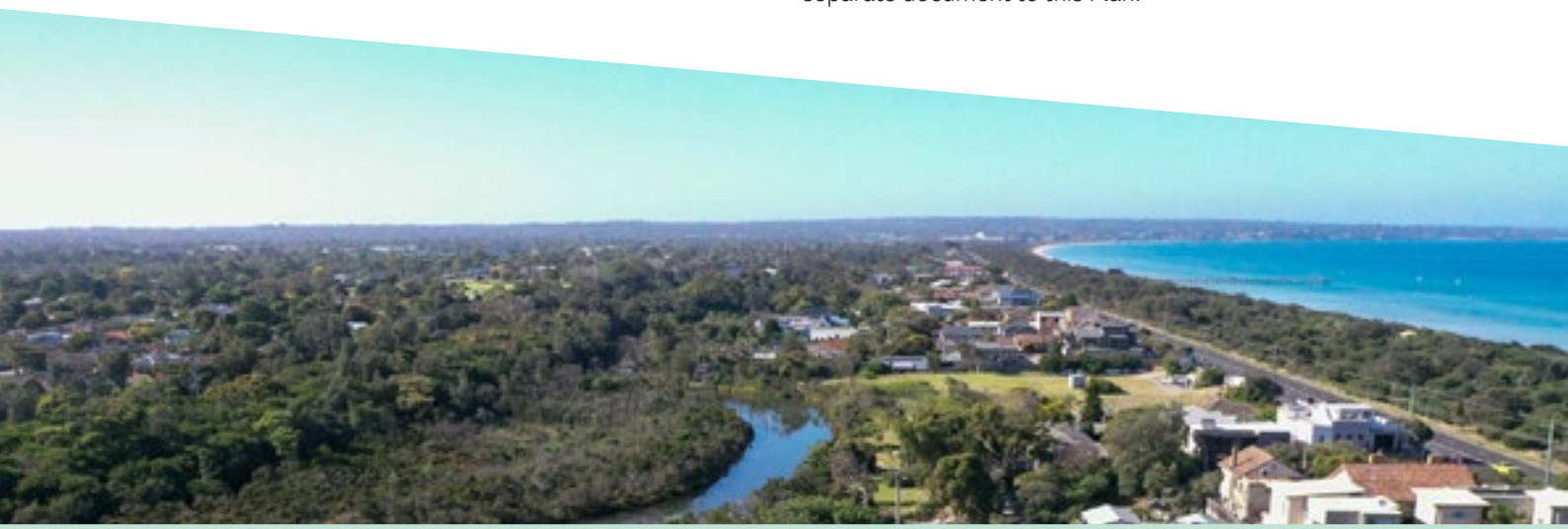
The action plan will have a 15-year lifespan and will integrate with the other Council environmental, climate change and health and wellbeing policies, strategies and plans including but not limited to the:

- Climate Change Strategy and Action Plan (under development)
- Coastal and Marine Management Plan (under development)
- Urban Forest Action Plan 2020
- Coastal Management Plan 2016
- Health and Wellbeing Plan 2021
- Open Space Strategy 2016
- Green Wedge Management Plan 2019

The development of this action plan has occurred in two parts:

- A Technical Report – which reviews the current state of biodiversity within the municipality and provides the evidence to help inform the rationale for investment in the Action Plan, and
- This Action Plan which will set out short term, medium term and ongoing actions, over the life of the plan (15 years), to achieve Council's vision for biodiversity

The following sections summarise a number of findings from the Technical Report – which can be found as a separate document to this Plan.



2.1 Benefits of biodiversity

There are many and diverse reasons why Australians care for nature or biodiversity, from the intrinsic belief that nature is beautiful and has a right to exist, through to a recognition of the services nature provides (Figure 1).

Known as 'ecosystem services', biodiversity provides us with food, drinking water, fibres, and building and manufacturing materials. Additionally, nature provides critical services such as carbon storage, filtering of air and water, pollination of food crops, protection from storms and floods, and places for rest and recreation.

Recent studies show that being in nature results in decreased prevalence of depression, anxiety, and stress (Bratman et al., 2012)(Cox et al., 2017)(Parr, 2007).

Residents of Frankston City value biodiversity for a number of reasons, and experience it in various ways.

Through the consultation process for this plan the community told us that it most valued Frankston's coastline and natural environment and that protection of these natural values was one if its highest priorities.

However, while the community highly values Frankston's biodiversity and natural assets, consultation identified a high level of community concern about climate change and loss of biodiversity, flora and fauna and native vegetation cover. Respondents to Council's climate change community survey highlighted that in tackling climate change, Council's highest priority should be biodiversity conservation and growing the urban forest.

The clear message from the community is that the natural assets of Frankston are amongst its most highly valued but at the same time there is high level of concern that these assets are declining, not adequately protected for future generations and that there is a pressing need for better community engagement and sharing of knowledge about how to protect and enhance Frankston's natural heritage.

Figure 1: *Ecosystem services diagram. Figure is from the World Wildlife Fund's Living Planet Report 2018.*

3. Current state of Frankston City's biodiversity

3.1 Habitats and native vegetation

Definition of Ecological Vegetation Classes (EVCs), EVC mosaics, and habitats

Ecological Vegetation Classes (EVCs) are a systematic organisation of plant communities into common types that occur in similar environmental conditions throughout Victoria. Each vegetation type is identified on the basis of its floristic composition (the plant species present), vegetation structure (such as woodland, grassland and saltmarsh), landform (such as gully, foothill and plain) and other environmental characteristics, including soil type and climate.

EVC mosaics are mapping units that indicate multiple EVCs occurring in a fine-scale, interspaced arrangement. They are not unique communities with their own descriptions, but rather a combination of others, which are difficult to separate in a logical manner.

Habitats are the most general grouping that will be used in this document, and refer generally to the structure of vegetation (e.g. canopy trees/shrubs/groundlayer) present within and between EVCs. This grouping has been defined to eliminate discrepancies across EVC identification, when talking about large-scale patterns, and to more succinctly describe habitat preferences of Frankston City's fauna.

Rationale: Of course, sorting the natural world into separate groups is fraught with difficulties and complications. There is an abundance of diversity within vegetation communities, and, for example, two areas of Heathy Woodland might look noticeably different only 200m apart. These two areas could be supported by (somewhat) different soils, topography, and rainfall, resulting in slightly different plant, animal, and fungal communities.

It is, however, often necessary (and extremely useful) to group vegetation communities, in order to:

- More easily interpret patterns in the landscape
- Be able to apply botanical and ecological knowledge across multiple areas
- Understand faunal habitat preferences
- Apply conservation significances (and ultimately legal protections) on certain types of vegetation

This report, therefore, groups vegetation communities by both EVC and habitat, in order to more efficiently discuss patterns across Frankston City. It is, however, important to keep in mind that no grouping method is perfect, and there will always be variations across different areas.

Box 1: *Definitions of Ecological Vegetation Classes (EVCs), EVC mosaics, and habitats.*

The EVCs found in Frankston City fall into the following five groupings of habitats (see the definition and rationale in Box 1 above):

- Closed Woodlands and Forests
- Open Woodlands
- Heathlands and Scrubs
- Grasslands
- Wetlands

Today, all habitats that existed before colonisation still exist to some degree, albeit in modified states. Closed Woodlands and Forests are still the most common habitat in Frankston City, largely due to extensive clearing of Open Woodlands and Grasslands, and the originally smaller cover of Heathlands and Scrubs and Wetlands (Figure 2).

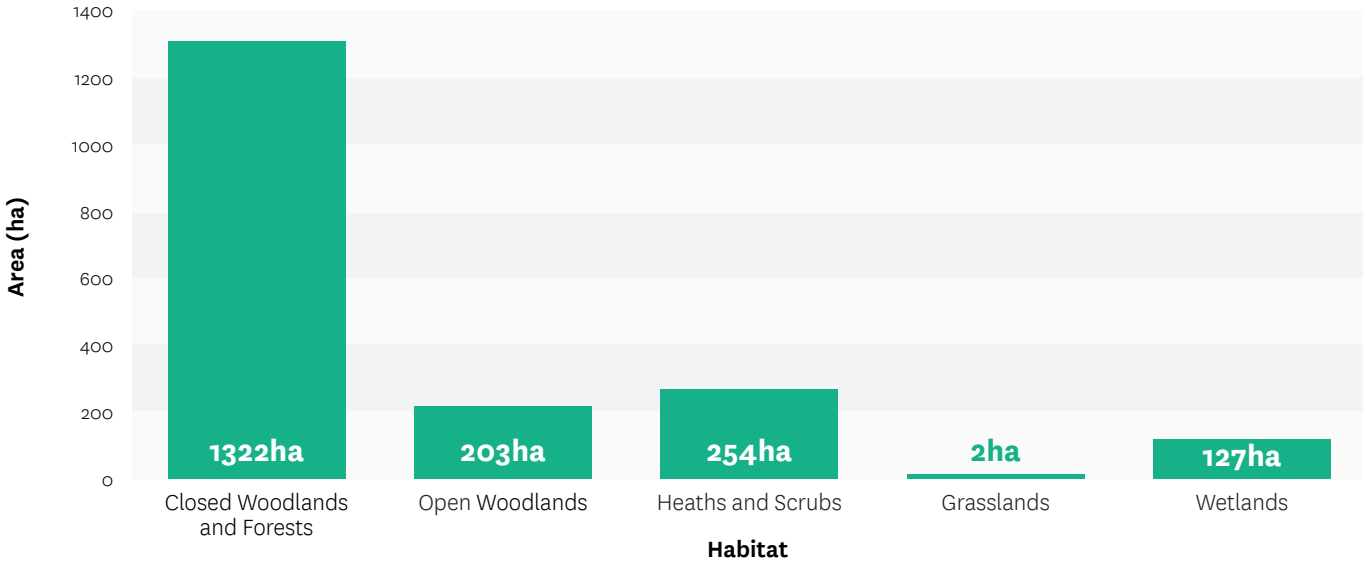


Figure 2: *Area of each habitat in Frankston City today.*

Relatively substantial percentages of the pre-settlement cover of Closed Woodlands and Forests, Heathlands and Scrubs and Wetlands still remain (Figure 3). Open Woodlands and Grasslands have almost completely been cleared, because they are easier to convert to agricultural land and had other past land uses (Figure 3).

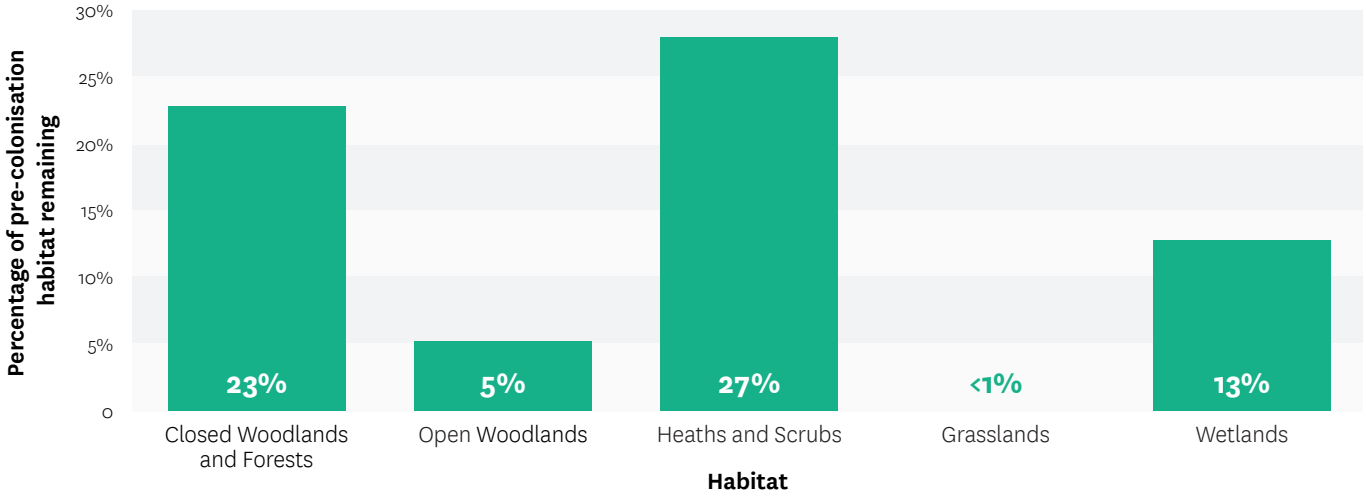


Figure 3: *Proportion of each pre-colonisation habitat that remains in Frankston City.*

Closed Woodland and Forest EVCs (including those in mosaics) that currently occur in Frankston City are:

- Coast Banksia Woodland
- Damp Heathy Woodland
- Damp Sands Herb-rich Woodland
- Gully Woodland
- Heathy Woodland
- Lowland Forest
- Shrubby Gully Forest
- Swampy Riparian Woodland
- Swampy Woodland
- Valley Heathy Forest

Woodland EVCs (including those in mosaics) that currently occur in Frankston City are:

- Grassy Woodland
- Plains Grassy Woodland

Heathland and Scrub EVCs (including those in mosaics) that currently occur in Frankston City are:

- Damp Heathland
- Coastal Dune Scrub
- Coastal Headland Scrub
- Riparian Scrub
- Sand Heathland
- Swamp Scrub

Grassland EVCs (including those in mosaics) that currently occur in Frankston City are:

- Coastal Dune Grassland
- Plains Grassland

Wetland EVCs (including those in mosaics) that currently occur in Frankston City are:

- Aquatic Herbland
- Aquatic Saline Meadow
- Aquatic Sedgeland
- Brackish Aquatic Herbland
- Brackish Wetland
- Plains Grassy Wetland
- Tall Marsh

Overall, approximately 15 per cent of Frankston City's original vegetation remains relatively intact, with the remaining 85 per cent of the municipality either heavily modified (i.e. potentially still containing some indigenous plants but not resembling an EVC), or entirely cleared (Figure 4).

Today, Heathy Woodland is by far the most widespread EVC in Frankston City, followed by Valley Heathy Forest, Grassy Woodland, Damp Heathy Woodland, Sand Heathland, and numerous other EVCs in more restricted distributions. Coastal Dune Grassland, Wet Heathland, and the Plains Grassland/Plains Grassy Woodland mosaic are the most restricted EVCs, each covering areas of less than 1 ha.

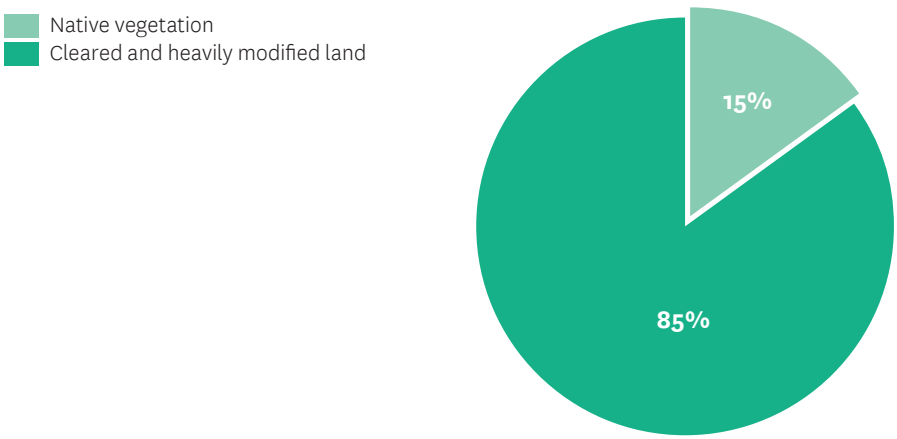


Figure 4: *Proportions of land in Frankston City covered by native vegetation, or cleared and heavily modified land.*

Frankston continues to be subject to biodiversity loss and habitat fragmentation due to permitted development such as subdivision, industrial development, new dwellings in 'bush-blocks' and for infrastructure projects including major road upgrades. Permitted removal of native vegetation under the Victoria Planning Provisions and Frankston's local Environmental Significance and Significant Landscape Overlays has resulted in depletion of a significant proportion of high quality habitat. For example, the Environmental Significance Overlay schedule 1 (ESO 1) covers sites of highest biodiversity value within the municipality and was gazetted in 2006. Since then over 114 ha of the habitat covered by this ESO has been removed with planning permission.

It is difficult to estimate the area of habitat and number of canopy trees lost due to unauthorised removal each year. However, anecdotally it is known to occur frequently across Frankston City. A review of aerial photography, records of infringements and the outcomes of enforcement actions, is required to demonstrate the full extent and impact of unauthorised clearing on biodiversity. This review would assist with identifying what level of resources are needed for enforcement and compliance.

While all planning decisions for removal of native vegetation must adhere to the principles of 'avoid, minimise and mitigate', nevertheless continued development has resulted a steady depletion and fragmentation of indigenous habitat within the municipality as Illustrated in Figure 5.

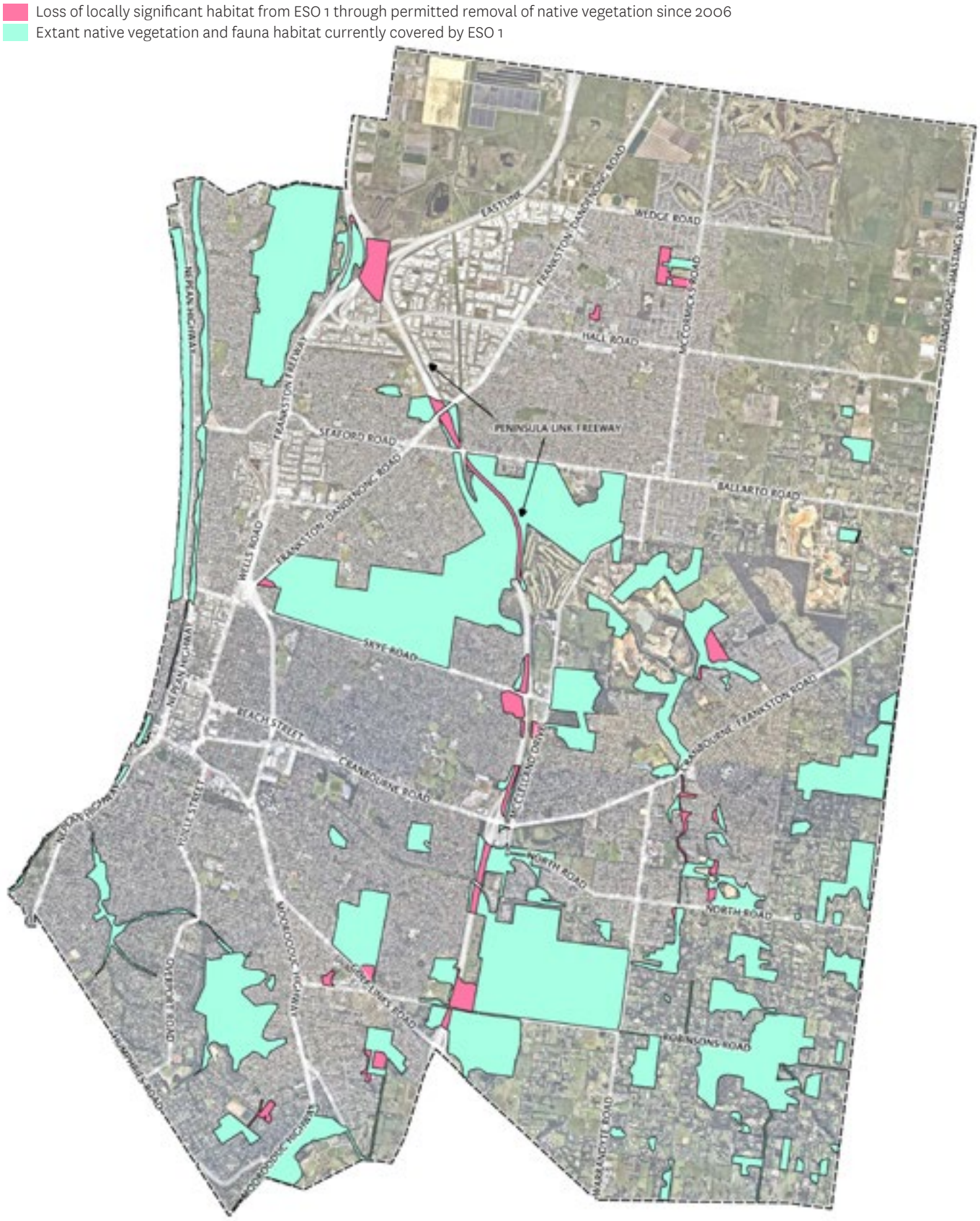


Figure 5: *Loss of native vegetation from Frankston's Environmental Significance Overlay (Schedule 1 – ESO 1) due to permitted development (2021).*

Figure 6: *Extent of indigenous habitat (Ecological Vegetation Classes shown in pink outline) within Frankston City showing the high level of habitat fragmentation. Aerial photo from Nearmap (2020).*

Of the approximately 1,900 ha of native vegetation remaining in Frankston City, 40 per cent occurs on private land (e.g. bush blocks in Langwarrin) (Figure 6). The other 60 per cent of native vegetation occurs on publicly-owned, or privately-owned but publicly-managed land (hereafter referred to as 'public land'), such as Melbourne Water managing the Edithvale-Seaford Wetlands Ramsar site (Figure 7).

Of Frankston City's public land, 47 per cent is covered by native vegetation, compared to only 9 per cent of private land (Figure 8). These data demonstrate the clear success of public authorities in retaining vegetation on their land, as well as the susceptibility of vegetation on private land to clearing.

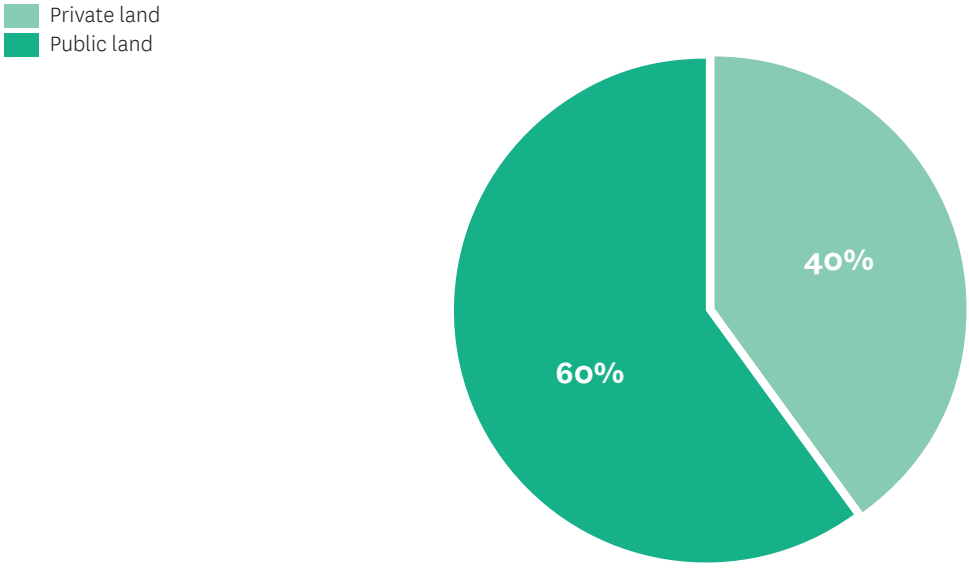


Figure 7: *Proportions of native vegetation in Frankston City occurring on either public or private land.*

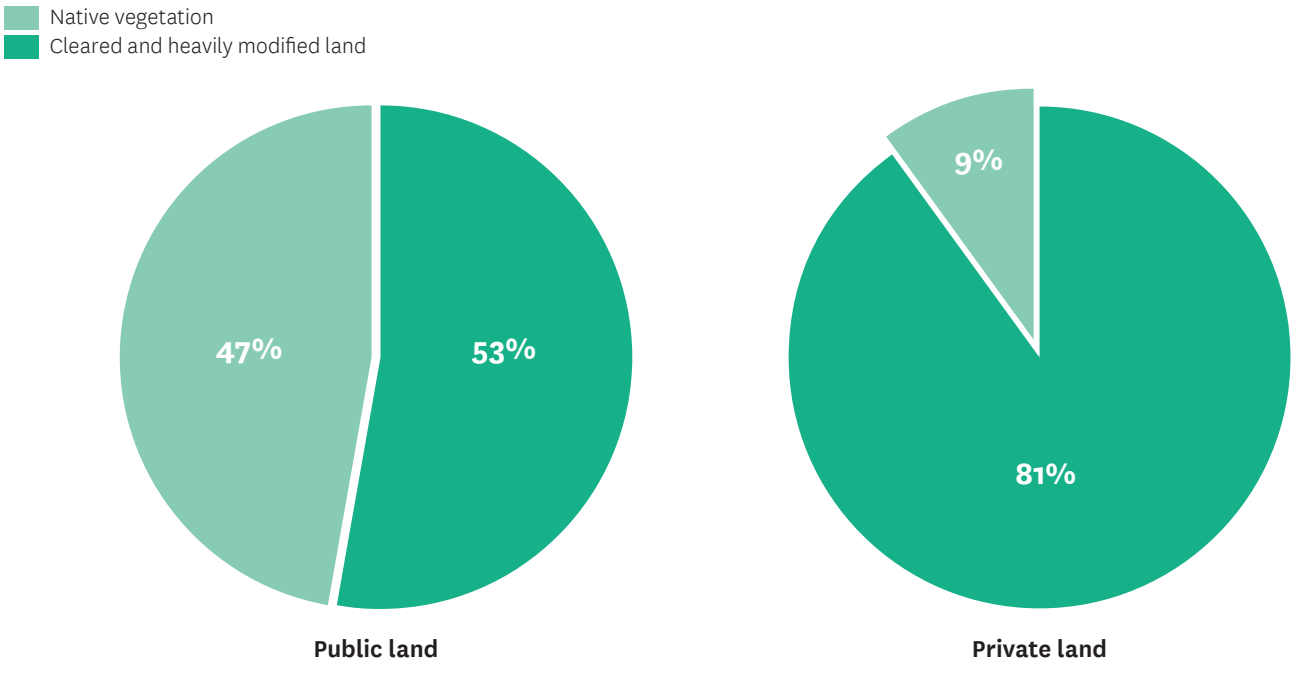


Figure 8: *Proportions of public and private land in Frankston City covered by native vegetation, or cleared and heavily modified land.*

3.2 Flora

Frankston City's natural reserve system encompasses 60 different reserves of varying sizes, from small parks to large flora and fauna reserves. Various surveys completed in previous years were compiled to analyse the flora in Frankston City's reserves.

Surveys in Frankston City's natural reserves detected an average of 81 indigenous species, which contrasts to an average of 50 species on private properties (Figure 9). While the average number of species detected on private properties is substantially lower than in Council's natural reserves, these data still point towards substantial flora diversity.

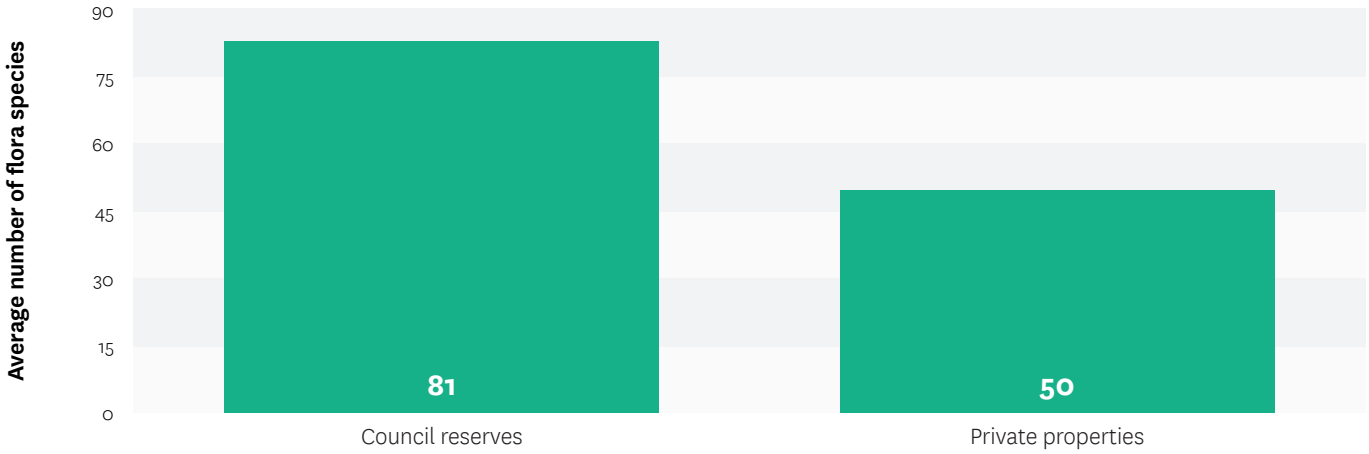


Figure 9: *Average number of flora species recorded in detailed surveys of 32 of Frankston City's reserves, and an un-standardised sample of 13 surveys on private properties.*

Additionally, a number of the private property surveys included in the sample are on small parcels of land in the more urbanised parts of Frankston City (e.g. Seaford), which had as few as 5 indigenous plant species, while surveys in more rural parts of the municipality (e.g. Langwarrin South) had as many as 158 indigenous plant species. While these findings are not intended to indicate the precise diversity of flora on private land, they do indicate that it is substantial and warrants protection and management.

The Flora and Fauna Guarantee Amendment Act 2019 gives effect to a consistent national approach to assessing and listing threatened species using the Common Assessment Method (CAM) and establishing a single comprehensive list of threatened flora and fauna species, known as the FFG Act Threatened list (DELWP 2021).

The FFG Threatened List also includes a list of threatened communities. However, no threatened communities of flora or fauna were identified as present within Frankston City. An analysis of records of listed flora – any indigenous flora species listed in The FFG Threatened List (DELWP August 2021) – was undertaken to determine which may be present in Frankston City.

The following species listed in the FFG Act Threatened List were considered to be potentially present in Frankston City but require records to be ground-truthed. For each species information about whether it is at risk in Australia or Victoria and the category of the threat (e.g. critically endangered, endangered, vulnerable) is listed in the FFG Act Threatened List (DELWP 2021).

- Common Apple-berry (*Billardiera scandens s.s.*)
- Frankston Spider-orchid (*Caladenia robinsonii*)
- Fringed Helmet-orchid (*Corybas fimbriatus*)
- Green Leek-orchid (*Prasophyllum lindleyanum*)
- Grey Spike-sedge (*Eleocharis macbarronii*)
- Lacey River Buttercup (*Ranunculus amplus*)
- Lizard Orchid (*Burnettia cuneata*)
- Mentone Greenhood (*Pterostylis x toveyana*)
- Prawn Greenhood (*Pterostylis pedoglossa*)
- Purple Blown-grass (*Lachnagrostis semibarbata var. filifolia*)
- Purple Diuris (*Diuris punctata var. punctata*)
- River Swamp Wallaby-grass (*Amphibromus fluitans*)
- Southern Bristle-sedge (*Chorizandra australis*)
- Pale Swamp Everlasting (*Coronidium gunnianum*)
- Upright Panic (*Entolasia stricta*)
- Annual Bitter-cress (*Cardamine paucijuga s.s.*)
- Grey Billy-buttons (*Craspedia canens*)
- Large River Buttercup (*Ranunculus papulentus*)
- Maroon Leek-orchid (*Prasophyllum frenchii*)
- Metallic Sun-orchid (*Thelymitra epipactoides*)
- Naked Sun-orchid (*Thelymitra circumsepta*)
- Swamp Everlasting (*Xerochrysum palustre*)
- Swamp Fireweed (*Senecio psilocarpus*)

A number of these species are likely to be locally extinct in Frankston (for example Frankston Spider-orchid is currently known from only one wild population in Mornington Peninsula Shire) however, confirmation of their status within the municipality requires further investigation and targeted searches.

3.3 Fauna

Analysis of fauna surveys conducted in 26 of Frankston City's reserves shows the composition of fauna in the reserves is diverse and species-rich (Figure 10). It is important to note that a number of the surveys used for this analysis date back as far as 1992, which clearly require updating. However, these data still provide a good indication of fauna composition in Frankston City.

Birds comprise the most commonly recorded group by far, followed by mammals, reptiles, and amphibians. Fish, crustaceans and invertebrates are sporadically recorded in low numbers throughout the reserve system, though minimal survey effort over time may be the reason for the sparse records.

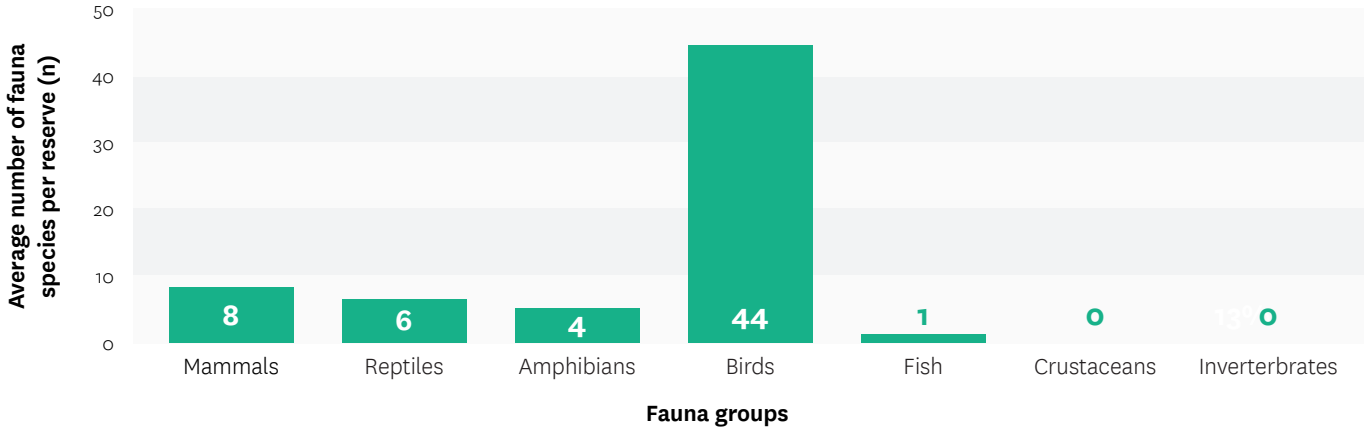


Figure 10: *Average number of different fauna groups surveyed in each of Frankston's reserves. Only reserves with detailed fauna surveys were included in this analysis.*

The most commonly recorded indigenous mammal species in Frankston City's reserves are Swamp Rat (*Rattus lutreolus*), Common Brushtail Possum (*Trichosurus vulpecula*), Common Ringtail Possum (*Pseudocheirus peregrinus*), Short-beaked Echidna (*Tachyglossus aculeatus*) and Little Forest Bat (*Vespadelus vulturnus*).

The most commonly recorded indigenous reptile species in Frankston City's reserves are Common Garden Skink (*Lampropholis guichenoti*), Blotched Blue-tongued Lizard (*Tiliqua nigrolutea*), Tiger Snake (*Notechis scutatus*), and Lowland Copperhead (*Austrelaps superbus*). The most commonly recorded indigenous amphibian species are Southern Brown Tree Frog, Common Froglet (*Crinia signifera*), Pobblebonk (*Limnodynastes dumerilii*), and Whistling Tree Frog (*Litoria verreauxii*) – also known as Verreaux's Tree Frog.

Formerly an abundant and widespread faunal group, woodland and heathland birds in Australia are declining at an alarming rate in extensively modified and fragmented landscapes (Howling and Fullagar, 2020). The diversity of heathland and woodland birds in Frankston is notably high for an urban fringe municipality, highlighting the importance (and success) of maintaining fragments of such habitats that act as stepping-stone fauna linkages across the landscape and contribute to habitat refuges. Waterbirds also make up a significant component of bird diversity with over 75 waterbird species recorded at Seaford Wetlands (Ecology Australia, 2016).

Fish, crustaceans, and invertebrates are not commonly recorded in surveys within Frankston. Fauna surveys do not usually target these species, tending to focus on terrestrial vertebrates. Despite this, some significant aquatic species have been recorded such as the nationally threatened Dwarf Galaxias (G*alaxiella pusilla*) in Boggy Creek, and a diversity of fish species in Kananook Creek.

While many of the abovementioned species are considered common throughout Victoria, Frankston City provides a local stronghold for a number of species such as Koala, Swamp Wallaby, Eastern Long-necked Turtle, and 11 species of microbat. The habitat in Frankston City for these species is especially important given the municipality's location on the fringe of the highly-developed inner suburbs.

The extensive wildfires of the summer 2019-2020 caused massive losses of biodiversity in south eastern Australia across some of our largest national parks. Now, areas outside the public reserve system in the rural, semi-urban and urban landscapes are being recognised for their contribution to maintaining our biodiversity.

The importance for biodiversity conservation of small bush blocks, urban waterways, road reserves and even smaller backyards has increased significantly in the context of the catastrophic loss of habitat and flora and fauna that occurred during the 2019-20 'Black Summer' fires.

Additionally, there is a growing appreciation of the contribution residential backyards and pocket parks can also make in supporting biodiversity with a growing number of Gardens for Wildlife programs being implemented across the state.

As with flora, records of fauna listed in the FFG Act Threatened List (DELWP 2021) in Frankston City were analysed, to determine which are present. The following species (including a high diversity of water and shorebirds*), were considered to be present in Frankston City. For each species information about whether it is at risk in Australia or Victoria and the category of the threat (e.g. critically endangered, endangered, vulnerable) is listed in the FFG Act Threatened List (DELWP 2021).

- Australasian Bittern (*Botaurus poiciloptilus**)
- Australasian Shoveler (*Spatula rhynchotis**)
- Australian Fur Seal (*Tursiops australis*)
- Blue-billed Duck (*Oxyura australis**)
- Caspian Tern (*Hydroprogne caspia**)
- Common Greenshank (*Tringa nebularia**)
- Curlew Sandpiper (*Calidris ferruginea**)
- Dwarf Galaxias (*Galaxiella pusilla*)
- Eastern Great Egret (*Ardea alba modesta**)
- Eastern Snake-necked Turtle (*Chelodina longicollis*)
- Freckled Duck (*Stictonetta naevosa**)
- Glossy Ibis (*Plegadis falcinellus**)
- Great Egret (*Ardea alba modesta**)
- Grey-headed Flying-fox (*Pteropus poliocephalus*)
- Hardhead (*Aythya australis*)
- Latham's Snipe (*Gallinago hardwickii**)
- Lewin's Rail (*Lewinia pectoralis*)
- Long-toed Stint (*Calidris subminuta**)
- Marsh Sandpiper (*Tringa stagnatilis**)
- Musk Duck (*Biziura lobata**)
- Nankeen Night-Heron (*Nycticorax caledonicus**)
- Pacific Gull (*Larus pacificus**)
- Pectoral Sandpiper (*Calidris melanotos**)
- Pied Cormorant (*Phalacrocorax varius**)
- Powerful Owl (*Ninox strenua*)
- Royal Spoonbill (*Platalea regia**)
- Southern Toadlet (*Pseudophryne semimarmorata*)
- Swamp Skink (*Lissolepis coventryi*)
- Swift Parrot (*Lathamus discolour*)
- Whiskered Tern (*Chlidonias hybrida**)
- White-bellied Sea Eagle (*Haliaeetus leucogaster*)
- White-throated Needletail (*Hirundapus caudacutus*)
- Wood Sandpiper (*Tringa glareola**)

Listed fauna species records were clustered around seven main areas within Frankston City:

1. The Edithvale-Seaford Wetlands
2. The Pines Flora and Fauna Reserve
3. Langwarrin Flora and Fauna Reserve
4. Frankston Nature Conservation Reserve
5. Boggy Creek
6. Kananook Creek
7. Langwarrin Woodlands**

**Defined as the area in the south-east of Frankston City with substantial native vegetation on private land.

Areas 1-6 are managed by a combination of Parks Victoria, Melbourne Water and Frankston City Council. The Langwarrin Woodlands, however, is a large area of privately-owned properties with substantial native vegetation interspersed throughout.

3.4 Habitat connectivity

A detailed study for the *Frankston Fauna Linkages and Crossing Structure Design 2012* (Practical Ecology, 2012) analysed the connectedness of fauna habitat throughout Frankston City and adjoining landscape, and made various recommendations.

The results of this study showed that within Frankston City, fauna linkages were fragmented to a high degree, as expected in such an urbanised area. Large areas of habitat were largely isolated from one another, pointing to poor structural connectivity among the most important areas of fauna habitat.

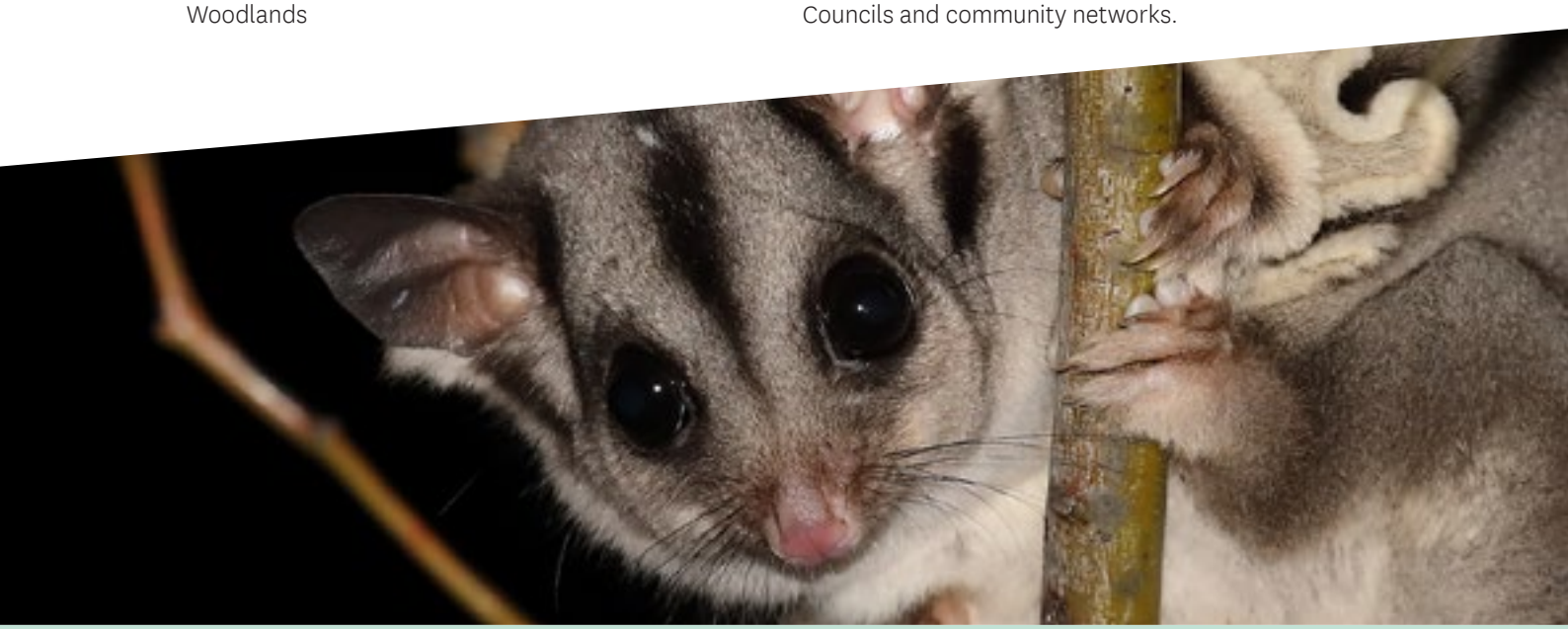
Two main corridors, each with a subsidiary corridor, were recommended as the highest priorities to be connected (Practical Ecology, 2012) shown in Figure 12, which are:

- **Corridor 1:** The Pines Flora and Fauna Reserve to Royal Botanic Gardens Cranbourne (through the former Burdett's Quarry on Potts Road Langwarrin)
- **Corridor 2:** The Pines Flora and Fauna Reserve to Langwarrin Flora and Fauna Reserve
- **Subsidiary Corridor 1:** The Pines Flora and Fauna Reserve to Corridor 1 via Studio Park
- **Subsidiary Corridor 2:** Corridor C1 to the Langwarrin Woodlands

The four priority corridors link large core remnant patches and offer the most cost-effective opportunities for creating a habitat network as significant sections are already connected. However, the Fauna Linkages study also identifies numerous existing and potential corridors that should also be considered for implementation over the life of the Biodiversity Action Plan. Full mapping of these biolinks is shown in both the Technical Report (Practical Ecology 2021) and the Fauna Linkages Study.

In addition, there are opportunities to work with Mornington Peninsula Shire Council and the Mornington Peninsula Landcare Network which has developed a Biolinks Plan for the Peninsula. This collaboration would enable long term planning to connect habitat on the peninsula with the Pines and Langwarrin Flora and Fauna Reserves, the Royal Botanic Gardens, Cranbourne and numerous patches and waterways within these links.

This mapping should form the basis of a Frankston City Fauna Connectivity Plan which would define long term connectivity projects in collaboration with neighbouring Councils and community networks.



3.5 Waterways and wetlands

Frankston's waterways and wetlands are key natural assets and provide essential ecosystem services to the community. The city's waterways and wetlands support some of its most significant biodiversity assets including locally rare riparian Ecological vegetation Classes (EVCs), flora species and habitat for the nationally significant freshwater fish, the Dwarf Galaxias (*Galaxiella pusilla)*, the state listed Swamp Skink (*Lissolepis coventryi*) as well as waterbirds such as the cryptic crakes and rails, and nationally endangered Australasian Bittern (*Botaurus poiciloptilus*).

The municipality is broken up into eight catchments based on topography of the landscape and drain alignments. The majority (85%) of the municipality drains to Port Phillip Bay with the remainder draining towards Watson's Inlet within Western Port (Frankston City Council 2016).

The main waterways within Frankston City are Kananook Creek (and its tributaries which include Boggy Creek, Little Boggy Creek and Tamarisk Creek) and Sweetwater Creek which flow to Port Phillip Bay. Watson's Creek arises within the municipality and flows to Western Port.

The waterways and wetlands of Frankston City have undergone substantial modification since European settlement. However, despite this highly modified environment, they still support areas of high quality remnant vegetation and fauna habitat. Significant values remaining in the catchments include the internationally significant (Ramsar) Seaford Wetlands and state significant biosites such as the Pines Flora and Fauna Reserve and Little Boggy Creek Retarding Basin. Other areas of high conservation value include Kananook Creek Reserve, Sweetwater Creek Reserves, Tamarisk Waterway Reserve, Boggy Creek Waterway Reserve, Studio Park, Boundary Road, PARCS wetlands and Frankston Nature Conservation Reserve.

Council has developed a 10-year Integrated Water Action Plan (IWAP Frankston City Council 2016) to facilitate a strategic and practical approach to integrated and sustainable water management. In addition Council and Melbourne Water have developed the 15-year Kananook Creek Corridor Management Plan (2009) to guide the complex management issues of the creek system and protect and enhance its fragile ecosystem. This plan now requires review and updating to ensure it aligns with the current state and local policy environment and reflects the changing condition of the waterway.

These Plans and the Biodiversity Action Plan are consistent in their objectives to protect and enhance the city's natural waterways and wetlands and their implementation should be undertaken as a collaboration between Council departments and external stakeholders including Melbourne Water, South East Water, the Department of Environment, Land water and Planning (DELWP) and Parks Victoria.

3.6 Management of coastal environments

The Frankston foreshore reserve is significant both for its geological and geomorphological features and its biodiversity values. The reserve (Frankston, Seaford and Frankston South foreshores) includes 54 ha of remnant indigenous vegetation, making it one of the largest natural reserves within Frankston City. Notably it includes the most intact remnant of the large coastal barrier and wetland complex that formed the Carrum Carrum Swamp.

The quality of the foreshore reserve's coastal vegetation varies considerably throughout its length, ranging from patches of high quality and high diversity to highly degraded sections.

Council's Coastal Management Plan was developed in 2016 to manage the complex issues associated with the coast and foreshore including to protect key environmental, heritage, economic and recreational coastal values.

This 10-year plan will be updated and replaced by the Coastal and Marine Management Plan (under development) which will build on and strengthen the current plan and will align with the Biodiversity Action Plan.

4. Threats to Frankston City's biodiversity

4.1 Low level of community engagement and support

While a portion of Frankston City's community are actively involved in both directly managing, and supporting the protection of, the municipality's biodiversity, support can always be improved. Community engagement and support directly influences political will and ultimately the available budgets for conservation programs.

This plan has identified difficulties in engaging some sectors of the community in biodiversity conservation, particularly if they have not previously been involved in biodiversity conservation activities.

However, at the same time the community told us that it most valued Frankston's coastline and natural environment and that protection of these natural values was one if its highest priorities. In addition, surveys identified a high level of community concern about climate change and loss of biodiversity, flora and fauna and native vegetation cover.

It is apparent that while the community highly values the municipality's natural assets and gives their protection a high priority, many sectors of the community do not know how to engage and contribute to local actions on the ground. The high level of community concern indicates there are opportunities for Council to better engage with the Frankston community at the grass-roots level.

In addition, there is a clear need for Council to better engage with Traditional Owners (through the Registered Aboriginal Party) in biodiversity conservation programs, and build on existing relationships with neighbouring municipalities, government and not for profit organisations to develop a regional approach.

4.2 Pest plants and animals

As throughout the rest of the country, pest plants and animals are present throughout Frankston City (DELWP, 2020), posing one of the most difficult challenges to biodiversity. Environmental weed invasion is considered one of the greatest threats to terrestrial ecosystems and biodiversity values across the Mornington Peninsula region (including Frankston). They displace indigenous species, reduce species diversity and alter habitat composition and structure.

Riparian, grassy woodland and coastal ecosystems are most heavily impacted by environmental weeds within Frankston City. However, all habitat types are susceptible. Environmental weed control remains a high priority for Council in the management of its natural reserves and other public land (although there are resourcing constraints – refer to section 4.4). However, the control of environmental weeds on private land has generally not been comprehensively addressed.

Initiatives to control environmental weeds on private land will be crucial in providing a co-ordinated response to tackle ecosystem degradation across the municipality and Council has an important role in supporting the efforts of private land holders in managing environmental weed infestations. There is a clear need for Council to work more closely with community groups to manage environmental weeds on private land including provision of weed management incentives and training for private landholders.

A comprehensive Weed Management Plan for private and public land is needed to ensure a coordinated response to current high threat and, importantly, emerging environmental and noxious weeds.

Frankston City Council (2019a) lists the most significant pest animals as:

- Black Rat (*Rattus rattus*)
- European Rabbit (*Oryctolagus cuniculus*)
- European Red Fox (*Vulpes vulpes*)
- Feral Cat (*Felis catus*)
- Green Shore Crab (*Carcinus maenas*)
- House Mouse (*Mus musculus*)
- Indian Myna (*Acridotheres tristis*)
- Mosquitofish (*Gambusia holbrooki*)
- Northern Pacific Seastar (*Asterias amurensis*)

The above species are widespread throughout the surrounding area and while it is extremely important that their numbers are controlled, it is highly unlikely that any can be completely eradicated from Frankston City.

Therefore, continued control of these species in priority areas (e.g. around large areas of native fauna habitat) should be advanced. The importance of feral animal control is demonstrated in the example of Southern Brown Bandicoot, where predation by foxes and cats is considered to have significantly contributed to its decline (DEPI 2014).

Council's Vertebrate Pest Management Plan (SMEC 2011) was developed to manage the impacts of vertebrate pests in the city's natural reserves. The plan adopts an integrated pest management strategy and is designed with an adaptive management approach with monitoring and refinement over time. However, it does not address pest animal impacts on private land and has not been updated.

It is timely to review this plan, update it based on current information and include private land within its scope. The updated plan and its implementation should be aligned with the Eastern Region Pest Animal Strategy 2020–2030 (Eco Logical Australia 2020) developed by the Eastern Region Pest Animal Network of which Frankston City Council is a member. Effective management of pest animals cannot be achieved without a regional approach, therefore working collaboratively with its network partners will be essential if Council is to minimise the impacts of pest animals at a local scale and contribute to effective control across the South East Region.

4.3 Urban expansion, biodiversity on private land and bushfire management

The most recent demographic data (.id The Population Experts, 2016) projects the population of Frankston City to grow by 23,440 by 2036, with the greatest growths in Carrum Downs (5,894), Langwarrin-Langwarrin South (4,071), Frankston Central (3,610) and Seaford (2,883).

A significant proportion of Frankston's waterways are also impacted by activities on private land. Waterways and wetlands are particularly vulnerable to the impacts of urbanisation which include altered hydrology, channelisation, straightening, undergrounding, increased nutrient loads and sedimentation and extensive weed invasion. Increasing Planning Scheme protection of biodiversity assets such as native vegetation, waterways and wetlands and canopy trees is required to balance the need for increased housing with the need to protect and enhance biodiversity, and improve habitat connectivity.

Biodiversity assets including canopy trees, bushland and wetlands are currently not recognised as an asset and are therefore often undervalued in the initial design process in the planning and building of hard infrastructure.

Dwelling construction in bushland areas (e.g. Langwarrin Woodlands) results in clearing large areas of native vegetation and more intensive management of vegetation beyond the footprint of the proposed dwelling and out buildings for the creation of defendable space under mandatory Bushfire Planning provisions.

As with urban expansion, early strategic planning of the development of areas within the Bushfire Management Overlay is needed to ensure that bushfire and biodiversity issues are considered as early as possible to allow for long-term planning.

At the same time strategic planning tools are considered, better engegaement with private landholders is critical to both gain support for any proposed strategic planning approaches and to encourage and assist landholders to value and protect the biodiverity assets on their land. Opportunities for better landholder engagement are discussed in Section 5 below.

4.4 Resources and funding

Current Council budgets do not have the capacity to enhance and improve all biodiversity assets such as natural reserves, high biodiversity value roadside vegetation and indigenous vegetation within parks and recreation areas. While maintenance budgets for Council reserves are allocated each year in recurrent funding, these budgets must cover management of all aspects of the reserve, not only ecological management and there is no capital funding available for major improvements to Council's biodiversity assets. While such a structure enables higher quality reserves to be maintained in their current condition, there remains a lack of resources to improve and enhance reserves that require intensive weed management or revegetation, resulting in their continued decline over time.

Council's capacity to enhance and increase natural habitats and improve connectivity for wildlife is impeded through lack of a funding structure that values biodiversity assets (e.g. large old trees, patches of indigenous bushland and wetlands) in a similar way to infrastructure assets.

Over time this lack of resourcing will lead to continued weed invasion and degradation of habitats on public land that should be the core of Council's biodiversity conservation estate.

Unlike infrastructure assets, 'green assets' aren't provided with long-term maintenance funding. Monitoring requires long term investment. For example 'RRR mapping' (Restoration, Rehabilitation, Retention), which is undertaken in Council natural reserves to monitor site condition occurs every five years and is only a small snapshot and of one key indicator. Assets need to be recognised for the ecosystem services they provide (refer to Section 2.1.1) and incorporated into Council's Strategic Asset Management Plan in a similar way to infrastructure assets.

An audit of green assets and priorities for funding is required. The ongoing maintenance cost for green assets needs to be factored into tender documents and project plans. Justification and rationale for funding maintenance of green assets should be driven by legislative obligations such as the Catchment and Land Protection Act 1994 (CaLP Act) and the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).

Similarly, implementing many of the actions listed in this plan including facilitating community engagement projects, data collection, planning scheme amendments and compliance and enforcement of biodiversity legislation will require additional staffing and resourcing.

4.5 The climate emergency

Frankston City Council declared a Climate Emergency on 18 November 2019. The public's high level of concern about the climate emergency was one the clearest results from community consultation. The core of this declaration is the urgent need for greenhouse mitigation, to reduce the cause and severity of climate change.

Intrinsic to the goals of this Action Plan for biodiversity enhancement is the primary goal to maintain global warming to well below 2 degrees. In terms of biodiversity benefits this will 'flatten the curve' of climate change risk to biodiversity.

Predicted changes to climate over the next few decades pose significant challenges to the City's biodiversity assets including vegetation communities, flora and fauna. Increased average temperatures, lower average annual rainfall and the increased incidences of extreme weather events will place greater pressure on our natural landscapes and expose the community to greater health impacts. In Frankston, it is likely that climate change will lead to increased frequency and intensity of wildfire; new and emerging environmental weeds and pest animals, altered phenology of flora and fauna (e.g. timing of flowering and breeding); decreased stream flows and loss of ephemeral waterways.

The most vulnerable habitats and species in our region are coastal, especially those with restricted distributions, or where the potential for inland migration with sea level rise is limited (Mornington Peninsula Biodiversity Conservation Plan – Mornington Peninsula Shire, 2019). These include beaches, primary and secondary dunes and coastal wetlands supporting migratory shorebirds.

Inland streams and wetlands are also likely to be impacted from reduced catchment inflows leading to decreased streamflow in waterways and decreased hydroperiod (the period of time a wetland holds water) in wetlands.

Species that depend on these habitats include the nationally significant freshwater fish, the Dwarf Galaxias (*Galaxiella pusilla)*, as well as waterbirds such as the cryptic crakes and rails, nationally endangered Australasian Bittern (*Botaurus poiciloptilus)* and the numerous migratory waders that visit Seaford Wetlands and surrounding ephemeral grassy wetlands.

Models of coastal inundation created by the Department of Environment, Land, Water and Planning (DELWP) predict sea levels to rise by 20, 47 and 82 cm by 2040, 2070 and 2100 respectively (Figure 11). Additionally, storm tides (with added wind forcing) are predicted by the same

models to increase by 6, 13, and 19 per cent by 2040, 2070 and 2100 respectively (Figure 11).

It is important to note that these models are based on the current topography of Victoria, and mitigation measures such as sea walls have the potential to alleviate some of this sea level rise.

Currently, approximately 20 ha of Frankston City is mapped as being inundated, which includes wetlands, streams, creeks and coastal inlets. Looking into the future, this is projected to increase to 42, 101, and 197 ha by 2040, 2070, and 2100 respectively, if no mitigation measures are put in place (Figure 11).

Storm tides (with added wind forcing) are modelled as potentially inundating approximately 177 ha within Frankston City as of 2009 (Figure 11).

These storm tides are projected to increase to potentially inundate 243, 404, and 683 ha by 2040, 2070, and 2100 respectively, if no mitigation measures are put in place (Figure 11).

While sea level rise will have widespread effects on Frankston City as a whole, there are potentially significant impacts on specific EVCs. A number of EVCs that occur in coastal areas, along waterways and in wetlands are most at risk of inundation.

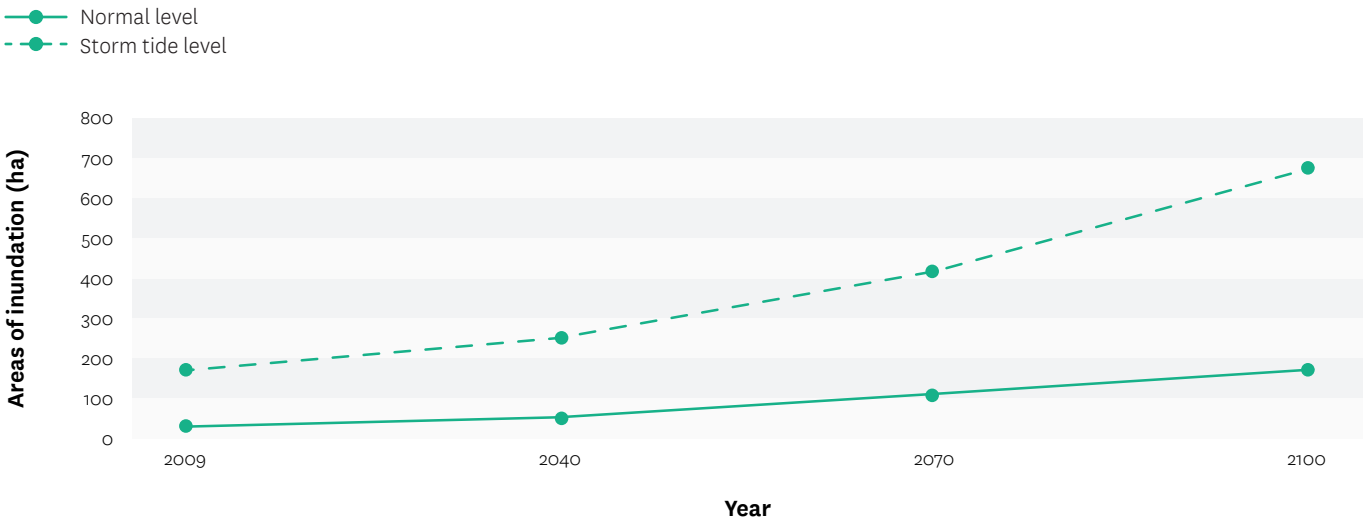


Figure 11: *Areas of Frankston City projected to be inundated in normal sea levels and during storm tides from 2009 to 2040, 2070 and 2100. Inundation modelling is from DELWP (2014).*

5. Opportunities to protect and enhance Frankston City's biodiversity

5.1 Improving community engagement and support

Consultation and partnership with the Bunurong Land Council Aboriginal Corporation, the Registered Aboriginal Party for the Frankston area (RAP) on all significant biodiversity-related matters is central to the successful implementation of this Biodiversity Action Plan. The Bunurong Land Council Aboriginal Corporation (BLCAC) is the Registered Aboriginal Party (RAP) for the area that includes the Frankston municipality.

Opportunities to work with Traditional Owners (through the RAP) throughout the implementation of this plan include:

- Meeting formally with the Bunurong Land Council as the RAP to consult on inclusion of Traditional Owner perspectives, knowledge and wishes
- Consulting with the Bunurong Land Council to establish a long-term vision for the potential implementation of traditional practices of land management in Frankston City which may include an investigation of the potential for cultural burning practices at selected sites where appropriate
- Consulting with Traditional Owners and Elders through the RAP and other Aboriginal and Torres Strait Islander community leaders and organisations on cultural protocols to be observed by Council in relation to biodiversity conservation
- Recognising that cultural heritage is closely tied to biodiversity and consider how biodiversity values can be incorporated into cultural heritage plans. For example scar trees are important both culturally and for the ecosystem services they provide
- Exploring options to develop or contribute to training of indigenous conservation officer and ranger programs

There is a significant resource available to Council through the extensive network of conservation volunteers within the city. The Frankston Environmental Friends Network (FEFN) is the umbrella body for a diversity of volunteer organisations with a depth of local expertise and willingness that support Council in protecting and enhancing the city's biodiversity. However, there is room to strengthen the partnership between Council and the 'Friends Network' recognising the great potential of volunteers to support implementation of the Biodiversity Action Plan.

Council can enhance the partnership with conservation volunteers through supporting and revitalising friends groups and FEFN assisting them to increase their capacity, diversity of membership and capabilities.

There is potential to build the capacity of the network to tackle municipal wide issues and strengthen relationships with successful community programs such as Intrepid Landcare (youth focused), Citizen Science projects, Koala Conservation on the Mornington Peninsula and Gardens for Wildlife. This may require additional resourcing from Council but could achieve considerable gains for the investment.

Additionally, there are numerous opportunities to integrate biodiversity conservation objectives with community wellbeing goals. For example, we can engage the wider community better by:

- Hosting more educational activities and displays at Council-run events
- Expanding volunteer programs such as 'Friends of' groups, and at community events such as planting days and citizen science programs
- Educating private landowners about biodiversity values on their properties and how to best manage them
- Supporting residents and commercial land owners to plant nature strips appropriately in line with Council's Nature Strip Planting Guidelines to increase indigenous habitat in residential, industrial and commercial streets
- Promoting and supporting landowner groups such as Landcare, and encouraging the establishment of youth Landcare volunteer groups such as Intrepid Landcare
- Working with Melbourne Water to assist landowners with stream frontages or wetlands to manage and protect these biodiversity assets on their properties
- Sharing of knowledge, actions and achievements through Council publications to keep residents updated, engaged and informed
- Improving interpretive signage at natural reserves
- Developing guidelines for 'nature play' that provide opportunities for children to engage with nature safely while ensuring biodiversity assets are not damaged
- Encouraging habitat improvement through increasing support for existing programs such as Gardens for Wildlife and plant giveaways, and developing a range of landholder incentive schemes for conservation works
- Involving sporting and recreation clubs in biodiversity conservation – for example, establishing 'citizen science' projects based around sporting grounds and facilities
- Focusing on educating multicultural groups on the importance of nature and biodiversity
- Integrating biodiversity into community events and community group activities including Youth Services and school holiday programs

The Frankston City Council Indigenous Nursery is a key resource and asset as both a supplier of local indigenous plants, and as a centre for community engagement in and information about the city's biodiversity.

Community feedback has reflected strong support for the indigenous nursery and indicates there is a high demand for its services amongst the Frankston community. However, the capacity of the nursery is limited, its facilities are aging and require significant upgrade and it is not readily accessible to many residents.

There is a clear opportunity for Council to maximise the potential of the indigenous nursery as a hub for all aspects of biodiversity conservation.

Upgrading the facilities, potentially relocating the nursery to a more central location and increasing staffing are initiatives that are likely to result in multiple benefits for biodiversity conservation throughout the city including better engagement with the community, increased availability of locally grown indigenous plants for private, commercial and Council projects, better support for community conservation groups and projects and provision of a centre for knowledge sharing.

Importantly an opportunity also exists to partner with the Bunurong Land Council on indigenous nursery development including the growing of indigenous food plants, provision of training opportunities and cultural heritage education.

In the first instance development of a business case is required to determine the most effective options for expansion of the nursery. The business case would need to provide a comprehensive analysis of the both the costs and benefits of increasing the capacity of the nursery and outline the social and environmental benefits that would result from such an upgrade.

Like the nursery, Frankston's nine community gardens play an important role in fostering community understanding of biodiversity conservation and community-based climate action. Community gardens are popular with residents with many committed members. Proactively engaging with community gardens would allow for a wider range of local people to understand and be involved in protecting biodiversity, planting of suitable indigenous plants locally for consumption and as an aid to pollination and as venues for citizen science projects.

Finally, for Council to successfully engage with the community on biodiversity, it is essential for all staff and businesses within Council, as well as Councillors, to have a sound understanding of the city's biodiversity and how to protect it. An effective way to address this is to incorporate biodiversity information within training packages for staff and Councillors.

5.2 Integrating biodiversity conservation and other open space objectives

Frankston City provides a wealth of open space and recreation opportunities including sporting grounds, local parks, playgrounds and shared use paths. These facilities are of key importance for community recreation and connection with nature and to improve health and wellbeing outcomes. Many of Frankston's open space areas are located within or close to natural reserves or support habitat such as hollow-bearing trees and understorey shrubs.

Activation of public spaces can potentially be deleterious to nature conservation goals. Therefore it is important for Council's park and open space management practices to incorporate ecological principles and recognise the importance of all open space in contributing to biodiversity values, for example:

- Ensuring new lighting design and strategies for sporting facilities and other open spaces are 'wildlife friendly' and based on current knowledge and best practice
- Ensuring outcomes for public spaces and visual amenity reflect consideration of biodiversity, such as including areas of dense habitat for fauna to move between habitat patches
- Undertaking long term trials and pilot projects to evaluate the costs and benefits of introducing more vegetation and fauna habitat into open spaces, taking into consideration the need to provide safe open spaces
- Integrating indigenous vegetation buffers and linkages into the design of sporting and recreation facilities
- Working with other agencies that manage open space (e.g. Melbourne Water) to advocate for appropriate revegetation of open space areas such as retarding basins and drainage reserves, particularly where there are opportunities to provide fauna linkages
- Maintaining best practice park and open space management that incorporates ecological principles and recognises the importance of all open space contributing to biodiversity values
- Consideration of alternative ways to reduce public risk where retention of habitat is important in open space settings

5.3 Better managing pest plants and animals

The control of pest plants and animals is a well-established conservation measure in urban environments and often one of the highest priorities. Frankston City Council's staff, contractors, and volunteers have a significant collective expertise in pest management methods.

However, in order to prioritise and implement control of pest plants and animals, it is essential that we:

- Document flora and fauna species listed as threatened throughout Frankston City
- Implement focused and species-specific pest plant and animal control measures around populations of listed flora and fauna in Frankston City
- Utilise available data and biodiversity modeling available online through DELWP's NatureKit 2.0 and other online biodiversity data and tools to help prioritise actions related to threatened species and managing threats to biodiversity
- Develop recovery plans for each documented species, and detail priority pest plant and animal threats
- Regularly review all Natural Reserve Management Plans or Management Statements (for less complex reserves) – in collaboration with on-ground staff – identify priority pest plants and animals, and make tailored management plans for each
- Encourage private landowners around remnants of bushland in Frankston City (e.g. through grants or rate incentives) to control pest plants and animals on their land
- Investigate stronger local laws and enforcement procedures for domestic animals and noxious weeds
- Consolidate these actions within comprehensive pest plant and animal management plans for the municipality including updating the current Vertebrate Pest Management Plan in line with the Eastern Region Pest Animal Strategy 2020–2030 (Eco Logical Australia 2020)
- Collaborate with neighbouring Councils through regional strategies and networks such as Eastern Pest Animal Network

5.4 Enforcement and compliance

Unauthorised removal and destruction of native vegetation and fauna habitat is an ongoing concern for Council. Investigations into incidences of tree and vegetation vandalism or unpermitted removal are often hampered by lack of evidence or witnesses.

The capacity of the current planning enforcement arrangement needs to be strengthened in terms of environmental compliance. Frankston City Council has a highly skilled planning compliance team but occurrences of environmental infringement are becoming more frequent and currently there are insufficient resources available to address these comprehensively. There is an opportunity to review the process for investigating environmental infringements to provide a specialist approach to unauthorised vegetation removal and habitat impacts. Up-skilling or recruiting officers with experience in vegetation management and biodiversity conservation is likely to increase the success rate of enforcement action. It is also important that the community is kept informed of any successful prosecutions for vegetation vandalism or environmental damage. Education on the values of biodiversity is also a key to reducing the occurrence of unauthorised habitat destruction.

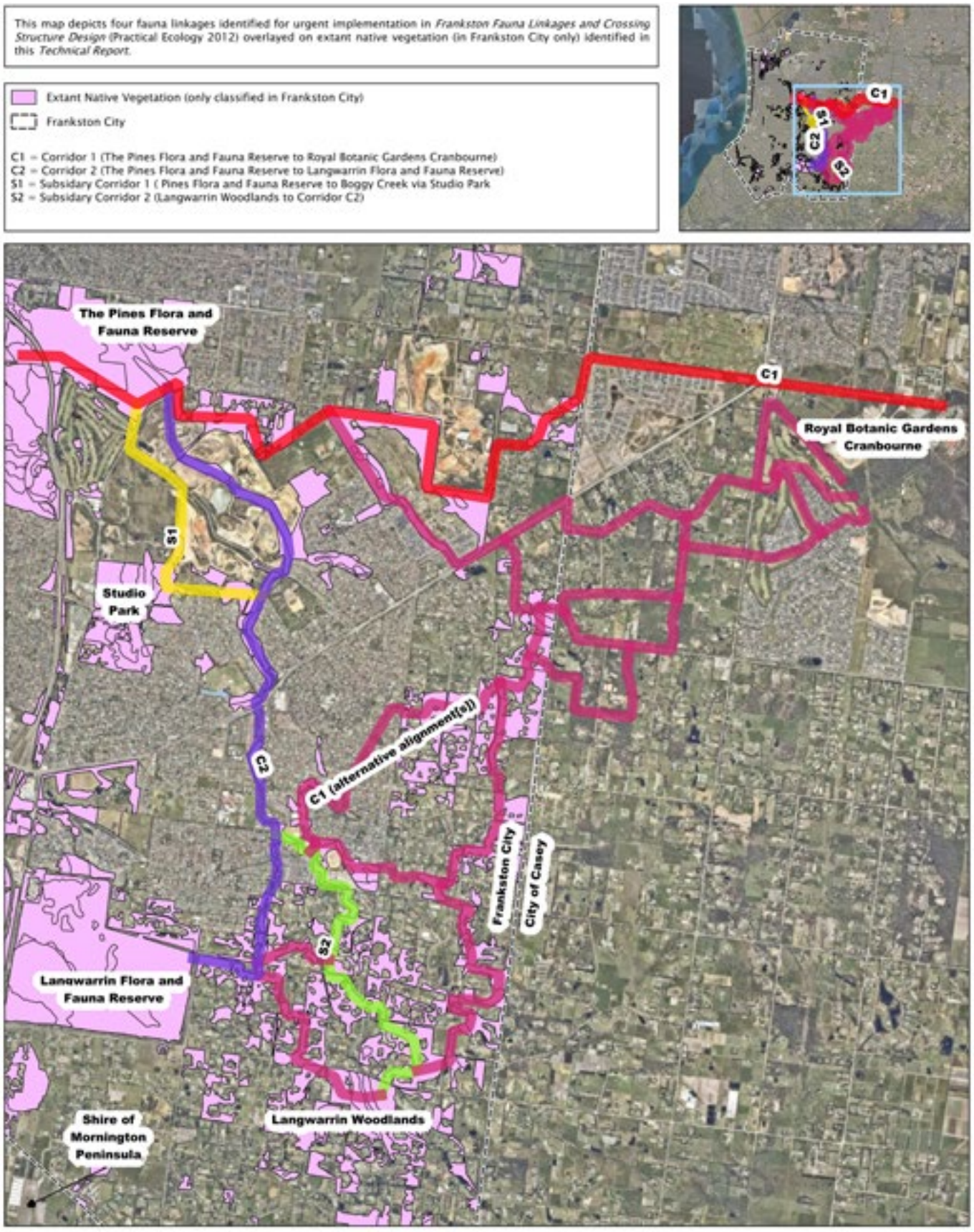


Figure 12: *Priority fauna linkages/habitat corridors in Frankston City, originally identified in Frankston Fauna Linkages and Crossing Structure Design (Practical Ecology, 2012).*

5.5 Strategic planning for urban expansion and protecting biodiversity on private and public land

With a large amount of Frankston City's biodiversity occurring on private land, it is at risk of being further fragmented, reduced in size, and neglected from management. A number of opportunities to better protect and manage biodiversity in light of urban expansion do exist, however, with the most important measures being to:

- Ensure that remaining fragments are well connected and allow unimpeded, safe movement of fauna, especially through two priority corridors as discussed above in Section 2.2.4 and shown to the left in Figure 12, which are:
  - Corridor 1 from The Pines Flora and Fauna Reserve to the Royal Botanic Gardens Cranbourne
  - Corridor 2 from The Pines Flora and Fauna Reserve to Langwarrin Flora and Fauna Reserve
- Strengthen Frankston City's Planning Scheme to expand coverage of overlays and other mechanisms that allow the protection of native vegetation
- Seek grant opportunities to build on identified corridors
- Ensure Frankston City Council's planners have a wide range of knowledge and tools to continue protecting the municipality's biodiversity
- Encourage private landowners (e.g. through grants or rate incentives) to protect and manage biodiversity on their land
- Increase the enforcement of legally-required Land Management Plans and of illegal vegetation clearing
- Collaborate with Melbourne Water and other external stakeholders to continue to implement The Frankston City Integrated Water Action Plan and review and update the Kananook Creek Corridor Management Plan

To ensure biodiversity is considered in development proposals, and to adequately protect biodiversity assets on both private and public land, the Biodiversity Action Plan should be incorporated into the Frankston Planning Scheme's Municipal Strategic Statement (MSS) and relevant Environmental Significance and Significant Landscape overlays.

5.6 Supporting bushland management

Frankston City's natural reserves, which include bushland as well as the city's key waterways and significant wetlands, are the municipality's core biodiversity assets and support a high diversity of flora and fauna including numerous threatened species (refer to the Technical Report – Practical Ecology 2021). Natural reserves are managed by a team of specialist bushland and coastal staff. Management includes conservation programs, recreation, interpretation, minor infrastructure maintenance and public safety in the:

- Frankston and Seaford Foreshore Reserves
- 53 inland natural reserves, including inland waterways and wetlands
- 29 roadside areas with significant vegetation totalling 450 hectares

In areas containing remnant bushland conservation programs focus on protecting and restoring habitat as well as conducting fire management, pest animal management and wildlife management programs. Council also runs its own indigenous nursery responsible for growing indigenous plants for Council projects and street trees, as well as supplying stock for contractors, community groups, other Councils and the general public. All indigenous seeds and cuttings are locally sourced.

The maintenance of a specialist internal team with a focus on biodiversity conservation results in a very high standard of biodiversity management in Frankston's natural reserves and is a key element of the City's biodiversity conservation program. An extensive knowledge base has been built up over several decades of natural reserve management in Frankston City. Many municipalities do not have this in-house expertise and rely on external contractors.

However, many of the current management monitoring systems have not been updated and revised over a number of years and biodiversity data for Frankston's natural reserves is becoming dated. With rapid changes occurring as a result of climate change and increased urbanisation, an agile monitoring system that regularly measures key indicators of overall ecological health, improvement or decline is required. This may include targeted surveys of indicator flora and fauna species and weed monitoring. This requires ongoing funding to help the specialist vegetation team adjust its programs to reflect positive or negative trends.

Council's natural reserves are currently monitored using the 'RRR system' which identifies zones in reserves for 'retention, restoration and rehabilitation' and provides a broad indicator of the condition of each site and its level of prioritisation.

The category is determined by a combination of on-ground survey of the percentage cover of weeds and an understanding of the definitions and values encompassed by each 'RRR' category and how they apply at a practical level.

However, the method is considered relatively coarse and only partially useful, as it's undertaken every 5 years and does not provide sufficient sensitivity to allow for rapid changes in condition and appropriate management responses.

As noted in section 5.4 a 'Green Asset' capital works and monitoring program is needed, providing ongoing funding support for accurate, timely data collection and reporting to monitor progress.

Funding is also required for the development and updating of management and works plans to ensure time and money is spent in the most useful areas with meaningful objectives and targets for works delivery, guidance for funding submissions and a system that tracks the progress of reserve improvement.

Most of Council's Natural Reserve Management Plans have not been updated for many years. Developing a consistent framework (including timeframes) for the review, updating and monitoring of plans is needed to ensure each reserve is managed appropriately and achieve the best results for biodiversity enhancement.

This system should entail a three-tier hierarchy with templates for detailed, intermediate and generic management plans based on the size and complexity of the reserve. Funding is also required for the development and updating of management and works plans to ensure time and money is spent in the most useful areas with meaningful objectives and targets for works delivery, guidance for funding submissions and a system that tracks the progress of reserve improvement.

Most of Council's Natural Reserve Management Plans have not been updated for many years. Developing a consistent framework (including timeframes) for the review, updating and monitoring of plans is needed to ensure each reserve is managed appropriately and achieve the best results for biodiversity enhancement. This system should entail a three-tier hierarchy with templates for detailed, intermediate and generic management plans or statements depending on the size and complexity of the reserve.

Activation of public spaces can be potentially deleterious to biodiversity values. The management framework for natural reserves should provide clear guidance on the appropriate use of natural bushland reserves, with limits to activities not classified as 'passive recreation'.

5.7 Supporting fire management and planned burning in bushland reserves

With many bushland reserves located in close proximity to houses, effective fire management is a key component of Council's vegetation management. Understanding fire behaviour and vegetation characteristics will influence:

- Species selection and arrangement in revegetation programs
- Maintenance practices in retaining habitat logs
- Manual fuel reduction programs in high risk areas
- Maintenance of firebreaks and management vehicle access tracks
- Community and interagency liaison to share the responsibility for fire risk reduction across boundaries and prescribed burning programs

Council carries out active fire management including fire management planning, bushfire suppression and the application of prescribed fire. Planned burning is currently only undertaken where there is an ecological benefit. This is often combined with fuel reduction outcomes for managing bushfire risk, however planned burning is never utilised as a fuel reduction measure if it has detrimental effects on biodiversity.

Council's planned burning program is based on the best available fire science and utilises a number of decision-making tools developed by experts to provide a consistent, transparent and repeatable approach to planned burning in bushland reserves and careful consideration is applied when determining if a site is suitable or practical for implementing planned burning. Furthermore, a significant investment of resources is placed on controlling weeds before and after a burn.

Examples of successful planned burn programs resulting in restoration of degraded sites into high quality indigenous vegetation include:

- Sweetwater Creek reserve where sites used to be primarily a monoculture of Coast Tea-tree but are now densely vegetated with a diversity of indigenous species with much greater habitat value
- Baxter Park that was choked with woody weeds with minimal indigenous canopy cover due to Bell Miner Associated Die Back (BMAD), but is now regenerating with a natural EVC including eucalypts which had essentially been eradicated from the site prior to the burn

Council's planned burn program is a central element of protecting and enhancing Frankston's biodiversity assets. Continuing this program is a high priority and opportunities to extend the burn program, based on the best fire science and practice should be a priority.

Opportunities for including cultural burning practices within Council's planned burn program may be limited as most sites where planned burning is considered are likely to be too highly modified and too weedy to enable cultural burning practices to work. Nevertheless, Council should pursue opportunities to work with the Registered Aboriginal Party on all aspects of bushland management and biodiversity enhancement and further consideration of the potential for cultural burning at suitable sites can be part of this discussion. For example, a cultural burn can be undertaken in a very small area or within 'non natural' reserves or parks where the cultural objectives of burning can be met more readily. The option of cultural 'micro-burns' may be one way to introduce the concept of traditional practices to Council's land management toolkit.

5.8 Linking biodiversity conservation and ecological management with infrastructure planning

Throughout the consultation process for this plan it was identified that Council capital works, infrastructure projects and master plans rarely consider the biodiversity or ecological implications of a proposal at the early stages of planning and delivering an infrastructure development.

As consideration of native vegetation, wildlife corridors or fauna habitat requirements occurs relatively late in the process, removal and habitat loss often becomes an unavoidable consequence of improving community infrastructure.

Embedding biodiversity considerations in long term capital works and infrastructure programming will inform and guide staff on how to include biodiversity asset protection when building new or upgrading existing infrastructure.

There is a clear opportunity within Council for its long term infrastructure planning to include a 'biodiversity lens', utilising the expertise within various service units of Council to contribute to long term infrastructure planning, including planning for road, drainage, recreational, building and facility upgrades and renewal.

Similarly, state government projects such as major road, rail and utility upgrades frequently result in significant losses of native vegetation and impacts on fauna habitat and connectivity. While public authorities must consult with councils on biodiversity impacts from the early stages of developments, there are often limited options under the Planning Scheme for local government to amend plans or reduce impacts on biodiversity with state authorities potentially lacking a local perspective on biodiversity values. Council needs to be proactive in its relationships with state transport and utility authorities to ensure proper consideration of locally significant biodiversity values.

Improving Council's biodiversity data sharing capacity through ensuring all relevant information is available as layers on Council's internal GIS is a relatively easy means of ensuring the correct information is available to all Council officers who need it. At the same time, ensuring biodiversity data is up-to-date is central to incorporating biodiversity conservation in infrastructure projects.

An ongoing monitoring, evaluation and reporting framework is needed to ensure the correct data is delivered to projects that require it.

Lack of capacity to incorporate biodiversity consideration into early planning also leads to delays in planning approvals as negotiations to mitigate impacts become complex. A long term, interdisciplinary approach to infrastructure planning would address this problem as consideration of ecological management and values would be already incorporated into a long term master plan (such as a roadside management plan).

Opportunities to consider biodiversity values in infrastructure projects during the project scoping phase include:

- Clear biodiversity guidelines and checklist that all departments need to follow before commencing an infrastructure project
- Require biodiversity considerations to be included in project planning and significant impacts reported to Council's Executive Management Team prior to project approval
- Develop a detailed Environmental Management System to capture all project data and tie in with strategies incorporating biodiversity protection and enhancement
- Further develop Council's GIS to provide relevant and accessible biodiversity and general environmental layers for project scoping and planning
- Proactively engage with state transport and utility authorities to ensure early consideration of locally significant biodiversity values in state transport and utility upgrade projects.

5.9 Monitoring the status of biodiversity and measuring success

Frankston City holds a large amount of biodiversity data from ecological surveys commissioned by Council, and for private development and internal records collected over many years. In addition the many friends' groups that work within Council's reserves have accumulated decades of local knowledge and records.

Detailed biodiversity data informs management and ensures that environmental values are taken into account during decision-making. Further, having sound and current baseline data that is easily accessible is critical to being able to evaluate the success of programs and management regimes.

Currently much of Frankston's biodiversity information is dated and not readily accessible. There is a need to develop a systematic data collection and biodiversity monitoring framework for Frankston's biodiversity assets. Data needs to be accessible to land managers and project managers and be suitable for tracking the progress and success of various community initiatives.

There are numerous opportunities to partner with community conservation groups such as Friends' groups to monitor biodiversity within the municipality. For example, wildlife carer organisations keep detailed records of wildlife rescued, recovered or taken into care. This data can provide important information on fauna diversity and movement and help Council plan to mitigate threats to wildlife including identifying locations of high frequency wildlife-vehicle collisions.

The community group Koala Conservation on the Mornington Peninsula (KCMP) records Koala sightings and road trauma across the Peninsula and Frankston. Partnering with this organisation can assist Council to develop a picture of Koala populations and movement and plan to reduce road trauma and other impacts on koalas.

Frankston's biodiversity monitoring framework could include elements such as:

- Measures of health of vegetation and canopy cover using photogrammetry, NDVI and LIDAR
- Establishing long term vegetation monitoring plots and photo points
- Targeted threatened or locally significant species monitoring (e.g. Koala, Dwarf Galaxias and Swamp Skink)
- Partnering with tertiary institutions to establish biodiversity monitoring programs
- Partnering with local wildlife carer organisations to collate data on fauna movements and threats to wildlife
- Including social research measures in the design of programs to connect communities with nature
- Developing 'citizen science' programs to assist in gathering data, engaging the Frankston Environmental Friends Network and other community organisations

5.10 Planning for the climate emergency

While building 'biodiversity resilience to climate change' is a key goal of this plan, Council must show leadership in reducing Council emissions, supporting our community to reduce their own and advocating to other levels of government for them to show leadership on emission reduction. The development of a Climate Change Strategy and Action Plan is paramount to this.

On a more direct level, building biodiversity resilience in a changing climate may include measures such as:

- Selecting plant species for revegetation that are likely to be resilient to changing climate conditions
- Protecting and enhancing remnant patches of indigenous vegetation through appropriate buffer plantings
- Heightening surveillance and control of new and emerging weed species
- Ensuring best practice Water Sensitive Urban Design (WSUD) is always used in developments and capital works projects
- Protecting overland flow paths, watercourses, swampy areas and wetlands
- Ensuring the internationally significant Seaford Wetlands Ramsar site is resilient to climate-induced impacts and continues to provide habitat for a diversity of water birds including migratory shore birds
- Seeking opportunities for use of stormwater for 'environmental watering' of seasonally inundated areas
- Ensuring (through all biodiversity management programs) that the municipality's biodiversity is diverse, healthy, and protected to ensure it has the best chance to adapt to changes in climate
- Establishing the priority fauna corridors mentioned above to allow the longitudinal movement of fauna in response to shifts in climatic envelopes
- Considering the climate emergency in all of Council's planning and policies
- Planning for sea-level rise and its effects on Frankston City's biodiversity and residents

6. Biodiversity Action Plan 2021–2036

6.1 Biodiversity Action Plan program/data logic

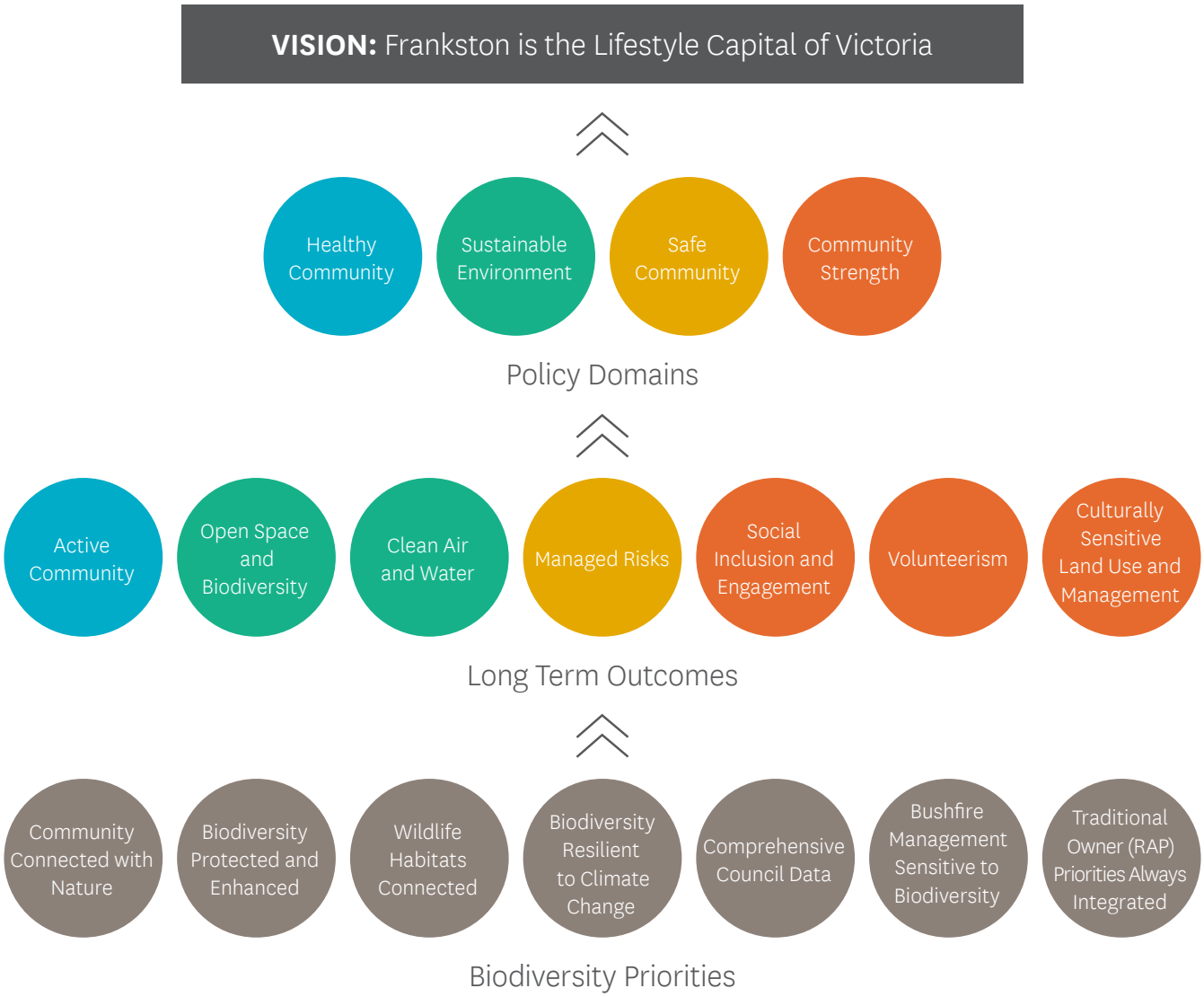
Council maintains a broad policy environment to guide community wellbeing improvements. Policy domains developed to provide this guidance include: A Healthy Community; A Safe Community; Community Strength; A Skilled Community; Stronger Families; A Sustainable Economy and a Sustainable Environment.

This Biodiversity Action Plan contributes to seven strategic outcomes associated with four of the policy domains. The Action Plan follows the groundwork of the *Greening Our Future Environment Strategy 2014–2024*, *Urban Forest Action Plan* (which also informs the *Council Plan*), *Open Space Strategy*, and the *Green Wedge Management Plan*.

The purpose of the Biodiversity Action Plan is to retain, enhance and connect Frankston's biodiversity. Frankston City Council will take the lead and partner with the Frankston Environmental Friends Network (FEFN), other volunteer conservation groups and stakeholder organisations, the Bunurong Land Council Aboriginal Corporation and the community to help implement the actions within this plan.

The actions set out in Section 6.2 are categorised according to Council's seven Biodiversity Priorities as set out in the Program Data Logic hierarchy below. Implementing each action will contribute to meeting these seven priority objectives for biodiversity conservation within the municipality and beyond. In addition a further action category is included based on a commitment by Council to lead best practice land and water management.

Note that while many actions meet a number of the Biodiversity Priorities, for simplicity each action is listed once under one primary priority.



The Biodiversity Action Plan priorities and program logic are influenced by external factors. As such, there are a range of assumptions to be taken into account, including:

- That increasing knowledge and awareness of the benefits of biodiversity leads to an increase in positive thinking of biodiversity within the community and the wish to act to protect nature (connection to nature)
- Our biodiversity is fundamental to the health and wellbeing of every community member
- Healthy biodiversity can help reduce the impacts of climate change and absorb any impacts of climate change
- Our indigenous species are more resilient to the impacts of climate change
- Landowners are generally likely to abide by vegetation controls
- The community supports further investment in our biodiversity and its benefits
- There will be no natural event or disease at a large enough scale to impact on achieving the targets
- There will be a return to a 'covid-normal' environment where there will be no ongoing restrictions or lock-downs that will impact the delivery of this plan
- There will be an increase in resources to achieve the actions to improve biodiversity, through Council and other government/agencies
- While there will continue to be fluctuations and trends, there will be no change in climate predictions over the implementation period
- There will be no significant decisions to change land use over the implementation period, without consideration to the natural environment
- There will be no reduction in the delivery of current programs such as Gardens for Wildlife, Greening Our Future and National Tree Day

The open space and biodiversity indicators within the program and data logic framework will be updated as new data/knowledge becomes available that adjusts these assumptions.

Planned outcomes and indicators

Policy domain and outcomes	Description	Measure of success	Indicator	Indicator data
1. Active Community	People are involved in passive and active use of Frankston City's natural reserves	Visitation to natural reserves and open space areas with appropriate activities undertaken	Increase in visitation/duration of stay	Survey or pedestrian counter setup in key local parks for each precinct
	Public recreational use of Frankston's natural reserves is appropriate and respectful of conservation values			Survey of activities undertaken in parks and natural reserves
	Public spaces are activated and have visual appeal	People feeling safe walking in their local area during the day	An increase in the percentage of residents who feel safe walking during the day that is comparable with the State benchmark	Replication of VicHealth Indicators Survey (2015)
		People feeling safe walking in their local area after dark	An increase in the percentage of residents who feel safe walking in their local area after dark that is comparable with the State benchmark	Replication of VicHealth Indicators Survey (2015)
2. Open Space and Biodiversity	Frankston City's local biodiversity is thriving and safeguarded	Habitat connectivity	Implementation of, or a guaranteed plan for, unimpeded movement for fauna (species to be determined) along Frankston City's two priority corridors	Satellite imagery and on-ground surveys, and plan review by fauna experts

Policy domain and outcomes	Description	Measure of success	Indicator	Indicator data
2. Open Space and Biodiversity	Frankston City's local biodiversity is thriving and safeguarded	Areas of recognised high significance vegetation are protected	Introduction of planning overlays within the Planning Scheme	Progress of Planning Scheme Amendments
		Weed cover and indigenous species cover in significant roadside vegetation	100% indigenous species with less than 5% weed coverage	RRR mapping and street tree inventory
3. Clean Air and Water	Frankston City's beaches and waterways are healthy	Water quality of Frankston's beaches	Frankston's beaches have a 'Good' rating (meets Victorian water quality standards) or above, at the end of each season's long term quality objectives	EPA Beach Report
4. Managed Risks	Frankston City's bushfire risk is well-managed while protecting biodiversity	The CFA and Frankston City Council consistently collaborate	Biodiversity and bushfire priorities are considered on all planning applications in the Bushfire Management Overlay	Planning application data
	Risk in public open space is managed with consideration of biodiversity values where practical	Council works collaboratively with the community to ensure alternative ways to reduce public risk in open space settings are considered where retention of habitat is important	Open space is safe and well designed with habitat elements and connectivity retained	Safety data and habitat assessments in open space
5. Social Inclusion and Engagement	Improved health and wellbeing amongst the community through improved connections with nature	Residents attending Council green events such as National Tree Day, Indigenous Nursery Open Day and Gardens for Wildlife	An increase in the number of residents participating in green events	Event attendance records
		Residents volunteering for green gains	An increase in the number of volunteers and number of hours volunteering	Volunteer register
6. Volunteerism	Community members engaged in citizen science projects	Participation	Increase in number of citizen science participants	Participation at event records
7. Culturally Sensitive Land Use and Management	Traditional Owner (through the RAP) perspectives and wishes are thoughtfully considered and implemented	Consultation, and integration of Traditional Owner priorities	Registered Aboriginal Party is consulted on all of Council's policies and strategies related to biodiversity	Inputs are integrated in all Council policies and strategies related to biodiversity

Policy domain and outcomes	Description	Measure of success	Indicator	Indicator data
Input consideration				
Best practice	Well-planned, resourced and managed biodiversity programs	Biodiversity values are well documented and managed	Documentation of native vegetation EVCs in Frankston City	100% of native vegetation patches are confirmed for their presence and type through ground-truthing surveys
			Listed flora and fauna species populations are determined and managed	Recovery plans created and implemented for all of Frankston City's listed flora and fauna species

6.2 Action Plan

Short term up to 4 years

Action no.	Action	Relationship to outcomes	Responsibility	Land Tenure	
				Public	Private
Community is connected with nature					
S1	Create a package of community educational resources (newsletters/brochures/displays/talks) for use at Council-run events such as Frankston Waterfront Festival, Pets Day Out, and the Mayor's Family Picnic	1,5	City Futures	✓	✓
S2	Expand the Environmental Interpretation Officer position to support the implementation of the Biodiversity Action Plan in particular supporting private landowners to protect and manage biodiversity assets on their properties and increasing support of the Frankston Environmental Friends' Network	2,5,6	City Futures	✓	✓
S3	Investigate the feasibility of increasing the capacity of the Frankston City Council Indigenous Nursery including increasing resourcing, staffing, accessibility and development as a hub for biodiversity conservation in the municipality	1,2,5,6,7	City Futures / Operations	✓	
S4	Promote and educate the community on the 24-hour cat curfew	2	City Futures / Community Safety	✓	✓
S5	Develop a biodiversity-focused 'welcome pack' for new residents in targeted high conservation value areas and a broader biodiversity information pack for all residents across the city	1,2,4,5	City Futures / Financial & Corporate Planning		✓

Action no.	Action	Relationship to outcomes	Responsibility	Land Tenure	
				Public	Private
Community is connected with nature					
S6	Develop a program of and a central database for 'Citizen Science' projects such as pollinator observations and bird monitoring. Engage with sporting clubs and community groups not typically involved in biodiversity conservation	1,5,6	City Futures / Community Strengthening	✓	✓
S7	In co-ordination with the the Frankston City Play and Leisure Strategies, develop guidelines for 'unstructured nature play' that provides opportunities for children to engage with nature safely while ensuring biodiversity assets are protected Consult with the Bunurong Land Council (the RAP) to incorporate the knowledge and insights of Traditional Custodians into nature play projects	1,2,5	City Futures / Community Strengthening		
S8	Build upon the quality of information provided on the biodiversity page on Frankston City Council's website, to include more education and informative resources such as case studies demonstrating examples of urban biodiversity conservation	5	City Futures / Business Transformation	✓	✓
S9	Develop a media and communications plan to promote the benefits of biodiversity to the Frankston community	5	City Futures / Community Relations	✓	✓
S10	Establish pollinator plots within open space (similar to the Woody Meadow Pilot Project conducted by the City of Melbourne)	2	City Futures / Operations	✓	
S11	Collaborate with Landcare groups, encourage the development of an Urban Landcare and/or a Youth Landcare Group and collaborate with existing groups. Consider local youth employment projects based on the former 'Green Army' model	1,5,6	City Futures		✓
S12	Engage with community garden groups to connect with broader range of residents on biodiversity issues				
S13	Enhance the partnership with conservation volunteers through supporting and revitalising friends groups and the Frankston Environmental Friends Network (FEFN) assisting them to increase in their capacity, diversity of membership and capabilities	1,5,6	City Futures	✓	✓
S14	Review and promote the Frankston City Council Nature Strip Planting Guidelines to ensure residents have the opportunity and access to advice to enable them to revegetate their nature strips	2,3,5	City Futures / Engineering Services	✓	✓

Action no.	Action	Relationship to outcomes	Responsibility	Land Tenure	
				Public	Private
Biodiversity is protected and enhanced through planning and policy					
S15	Review and investigate the Environmental Significance Overlay Schedule 1 (ESO1) and the Significant Landscape Overlay Schedules 1 and 2 (SLO1 and 2), in accordance with the recommendations in the Frankston Native Vegetation Study 2019. Prepare planning scheme amendment as required	2,4	City Futures	✓	✓
S16	Advocate for and work with DELWP to expedite the transfer of 'Burdett's Quarry Reserve' - known as Lot 3 160 Potts Road - to the Crown Land Estate, to be managed as a conservation reserve in accordance with Development Plan Overlay (DPO7)	2	City Futures / Procurement, Property and Risk		✓
S17	Submit a nomination to the Wetland City Accreditation Scheme of the Ramsar Convention for Frankston to become a 'Wetland Accredited City' recognising the steps council has taken to protect Seaford Wetlands and its other wetlands	2,3	City Futures / Procurement, Property and Risk	✓	
S18	Include the Biodiversity Action Plan as a Background Document in the Frankston Planning Scheme including in the relevant Environmental Significance Overlay and Significant Landscape Overlay Schedules	2,4,7	City Futures	✓	✓
S19	Investigate opportunities to increase enforcement of unauthorised vegetation removal and permit breaches	2	City Futures / Statutory Planning		✓
S20	Investigate the need for the establishment of a dedicated environmental or vegetation compliance officer position to provide a focused approach to compliance with biodiversity/vegetation and landscaping requirements under the Planning Scheme and other legislation as well as promoting land stewardship within the community	2,3	City Futures / Statutory Planning	✓	✓
S21	In significant areas of indigenous vegetation, high biological value and bushfire risk, explore strategic planning mechanisms that are in addition to planning overlays to ensure appropriate development outcomes (such as rezoning, schedule to the zone, lot consolidation and building envelopes)	2	City Futures		✓
S22	Develop Wildlife Sensitive Lighting Guidelines for Frankston City with reference to the Frankston City Lighting Plan	2	City Futures	✓	✓
S23	Develop a holistic Weed Management Action Plan which includes supporting ongoing investigation of alternative weed control methods	2	City Futures / Operations	✓	✓
S24	Review and update the Vertebrate Pest Management Plan investigating the efficacy of current pest animal control methods and what improvements are needed	2	City Futures / Operations	✓	✓

Action no.	Action	Relationship to outcomes	Responsibility	Land Tenure	
				Public	Private
Biodiversity is protected and enhanced through planning and policy					
S25	Investigate rate incentives for landholders to enter 'Trust for Nature Covenants' and other land management agreements	1,2,5	City Futures / Financial & Corporate Planning		✓
S26	Investigate the cost and benefits of establishing an incentivised program for owners of land with biodiversity values who undertake maintenance activities to enhance and protect them	1,2,5	City Futures		✓
S27	Develop standard offset/replacement ratios to compensate for vegetation removal Investigate potential for a revegetation program on Council land, which is funded through developer contributions made under the ESO, where revegetation cannot be undertaken on private land	2	City Futures	✓	✓
S28	Identify under utilised land in public ownership where opportunities exist for creation of habitat and biodiversity corridors. Advocate with Melbourne Water, South East Water and other agencies	1,2,5	City Futures	✓	
S29	Develop a valuation structure that values biodiversity assets (e.g. large old trees, patches of indigenous bushland and wetlands) in a similar way to infrastructure assets. Incorporate 'green' assets into Council's Strategic Asset Management Plan	2	City Futures / Operations / Engineering Services / Sustainable Assets / EMT	✓	
S30	Investigate the future opportunities at a landscape scale for the use of extractive industry sites (in line with existing work authorities plans) and consult with owners of sites that are nearing the end of their useable life, to investigate possible future land uses for the sites (e.g. to become part of the open space and recreation network)	2	City Futures / Statutory Planning		✓
Wildlife habitats are connected					
S31	In collaboration with neighbouring councils and community networks, develop a Fauna Connectivity Plan based on corridors detailed in the Frankston Fauna Linkages Study, Biodiversity Action Plan Technical Report and the Mornington Peninsula Landcare Network's Connectivity Plan	2	City Futures	✓	✓
S32	Work with Casey City Council to develop an implementation plan for the corridor from the Royal Botanic Gardens Cranbourne to The Pines Flora and Fauna Reserve (Corridor 1)	2	City Futures	✓	✓
S33	Develop an implementation plan for the corridor from The Pines Flora and Fauna Reserve to Langwarrin Flora and Fauna Reserve (Corridor 2)	2	City Futures	✓	✓

Action no.	Action	Relationship to outcomes	Responsibility	Land Tenure	
				Public	Private
Wildlife habitats are connected					
S34	Develop a Fauna Crossing Plan identifying priority locations, and work with road authorities and internal Council departments to create structures for safe fauna movement across roads	2,4	City Futures / Sustainable Assets	✓	✓
S35	Develop Wildlife and Roads Guidelines to prioritise locations for wildlife signage, fencing, traffic calming devices and other measures, to mitigate against incidents between wildlife and traffic	2,4	City Futures / Engineering Services	✓	✓
Council's biodiversity data is comprehensive					
S36	Validate vegetation communities, flora and fauna data from the Technical Report with on-ground surveys, prioritising rare vegetation communities and rare species listed in the FFG Threatened List (DELWP August 2021)	2	City Futures / Operations	✓	✓
S37	Develop a central database for recording and monitoring the condition of Franskton's biodiversity assets which includes a process for inputting all data collected	2	City Futures / Operations	✓	✓
S38	Establish a monitoring and reporting protocol to determine the impacts of recreational activities and infrastructure (such as lighting) on natural areas, and flora and fauna in reserves, where natural areas are adjacent to recreational facilities or host recreational activities. The results will assist in guiding and managing recreation use to ensure impacts on biodiversity values are minimised, as well as engaging participants in citizen science.	2	City Futures / Operations / Community Strengthening	✓	
S39	Establish a protocol to ensure that flora and fauna surveys undertaken in Frankston City are always entered into the Victorian Biodiversity Atlas (e.g. make this a condition for surveys completed in relation to permit applications)	2	City Futures	✓	✓
S40	Encourage local observations to be recorded on Frankston City's iNaturalist project and develop a partnership with local wildlife carer organisations to collate existing and new data	1,2,5,6	City Futures	✓	✓
S41	Prepare a schedule for surveying and monitoring flora and fauna populations within Frankston's natural reserves	2	City Futures / Operations	✓	
S42	Invest in smart technologies such as wildlife cameras and drones, to conduct better monitoring of coastal and bushland environments	2	City Futures / Operations	✓	✓

Action no.	Action	Relationship to outcomes	Responsibility	Land Tenure	
				Public	Private
Traditional Owner priorities are always integrated					
S43	Consult with the Registered Aboriginal Party, Elders and other Aboriginal and Torres Strait Islander community leaders and organisations on cultural protocols to be observed by Council in relation to biodiversity conservation	5,7	City Futures / Operations	✓	
S44	Partner with the Bunurong Land Council Aboriginal Corporation as Registered Aboriginal Party to establish a long-term vision for biodiversity projects including: - potential implementation of cultural burning and other practices - enhancing the indigenous nursery - indigenous walks and talks from indigenous providers - Cultural and caring for Country induction by BLCAC for Councillors, Council staff and community volunteers	2,7	City Futures / Operations	✓	
S45	Provide a minimum of 10 volunteering opportunities per year within the Frankston Environmental Friends Network (FEFN) for unemployed Aboriginal and Torres Strait Islanders, with a pathway to ongoing paid work	5	City Futures	✓	
Council leads best-practice land and water management					
S46	Review all Natural Reserve Management Plans and any gaps in plans to develop a consistent approach for the development, review and monitoring of plans. Develop templates for detailed, intermediate and generic management plans based on a hierarchy system of the reserve. The management framework will provide clear guidance on the appropriate public recreational use of natural bushland reserves	2,3	City Futures / Operations	✓	
S47	In partnership with Melbourne Water, DELWP, Kananook Creek Association and other stakeholders, review and update the Kananook Creek Corridor Management Plan	2,3,7	Engineering Services / City Futures / Operations / Community Strengthening		
S48	Develop a guideline to include best practice vegetation retention and revegetation for each asset renewal project within the Long Term Infrastructure Plan	2,4,7	City Futures / Sustainable Assets	✓	
S49	Strengthen partnerships with other greening agencies such as Landcare, Greening Australia, Greener Spaces Better Places and local greening community groups, to work collaboratively to achieve targets across all land tenure	1,5,6	City Futures	✓	✓
S50	Establish an annual forum for bushland contractors, friends groups, local experts and Frankston City Council staff to meet and discuss best practice bushland management	1,2,5,6,7	City Futures	✓	✓
S51	Establish a collaborative regional group at officer level with neighbouring councils, agencies and organisations, which focuses on regional biodiversity issues and projects	2	City Futures	✓	✓

Medium term from 4–8 years

Action no.	Action	Relationship to outcomes	Responsibility	Land Tenure	
				Public	Private
Community is connected with nature					
M1	Develop and publish a range of biodiversity-related GIS data, with a function for a property search to give community members the details of all biodiversity points of interest on their land	2,5	City Futures / Information Technology	✓	✓
M2	Work with the community including community gardens network to create a Gardens for Wildlife display garden	1,2,6	City Futures	✓	✓
M3	Expand Gardens for Wildlife to schools, kindergartens, businesses, industrial areas, and entire streets	1,2,6	City Futures		✓
M4	Investigate a centre for biodiversity education and community meeting space			✓	
Biodiversity is protected and enhanced through planning and policy					
M5	Further investigate the expansion of the Seaford Wetlands RAMSAR boundary (including into Down's Estate)	2,3	City Futures / Procurement, Property & Risk	✓	
M6	Develop local recovery plans for listed flora and fauna	2	City Futures	✓	✓
M7	Implement planning scheme controls to protect Biodiversity Corridors	2	City Futures	✓	✓
Wildlife habitats are connected					
M8	Collaborate with gas, water and electricity distributors to establish vegetation guidelines for underground mains, to minimise vegetation clearance and maintain biodiversity corridors where possible	2,3	City Futures	✓	✓
Council's biodiversity data is comprehensive					
M9	Develop a database of hollows and other habitat features (both natural and man-made)	2	City Futures / Operations / Sustainable Assets	✓	✓
Council leads best-practice land and water management					
M10	Review and update the Significant Roadside Management Plan to include prioritisation plan for re-vegetation along significant roadsides to contribute to biodiversity corridors (with consideration to the roadside risk assessment) and encourage landholders to better manage their roadsides and understand their rights and responsibilities	1,2	City Futures / Operations	✓	✓
M11	Develop a priority list of sites where Water Sensitive Urban Design could achieve biodiversity objectives	2,3	City Futures / Engineering Services	✓	✓

Ongoing

Action no.	Action	Relationship to outcomes	Responsibility	Land Tenure	
				Public	Private
Community is connected with nature					
O1	Continue to support the FEFN through collaboration, training, funding of equipment, and membership expansion through setting up new groups	2,6	City Futures / Operations	✓	
O2	Promote and support Frankston Indigenous Nursery through purchasing plants for internal projects, and continuing to hold the Nursery Open Day	2	City Futures / Operations / Capital Works Delivery	✓	✓
O3	Continue to deliver and develop new initiatives for an annual community engagement program that includes but is not limited to tree planting days, information seminars, workshops, free plant giveaways. Look to other councils worldwide to explore new ways to engage the community and build on the appreciation of biodiversity	1,2,5,6	City Futures	✓	✓
Biodiversity is protected and enhanced through planning and policy					
O4	Implement the Frankston City Green Wedge Management Plan in alignment with the with the Biodiversity Action Plan, particularly to ensure development is appropriate and biodiversity assets are protected within the Green Wedge	2	City Futures	✓	✓
O5	Continue to engage with extractive industry operators and neighbouring landowners, to ensure that the rehabilitation of sites is a collaborative process	2	City Futures / Statutory Planning	✓	
O6	Ensure that biodiversity protection, enhancement and cultural heritage considerations are embedded in Council capital works projects, and is considered at all stages of projects. Include Environmental Policy and Planning team and the Registered Aboriginal Party in Local Area Traffic Management consultations	2,4	Capital Works Delivery / Building & Facilities / City Futures	✓	✓
O7	Ensure the importance of biodiversity for climate change, and health and wellbeing, are considered in the development or review of Council strategic documents	2	City Futures	✓	✓
O8	Continue to support the Southern Brown Bandicoot Recovery Group, and investigate options for reintroductions	2	City Futures	✓	
O9	Develop staff training packages on local biodiversity and the Biodiversity Action Plan including: - a compulsory biodiversity training package for all Council staff and Councillors and - targeted regular training sessions for statutory and strategic planners on the Planning Scheme's Bushfire and Biodiversity clauses	2,4	City Futures / Statutory Planning	✓	✓
O10	Undertake proactive audits of the implementation of Land Management Plans and Offset Management Plans, which are required as permit conditions	2	City Futures / Statutory Planning		✓

Action no.	Action	Relationship to outcomes	Responsibility	Land Tenure	
				Public	Private
Biodiversity is protected and enhanced through planning and policy					
O11	Require biodiversity considerations to be included in all project plans and any significant biodiversity losses to be reported to EMT before project approval	2	Capital Works / City Futures	✓	✓
O12	Continue to progress Council's native vegetation offset project for internal capital works projects	2	City Futures / Capital Works Delivery	✓	
O13	Consider opportunities for Council to secure sites of high conservation values, as public reserves	2	City Futures / Procurement, Property & Risk		✓
Wildlife habitats are connected					
O14	Continue to explore opportunities to undertake planting to increase habitat and connectivity within Council open space that is not classified as natural reserve especially during Master planning. Consider sites for future National tree day or planting days with the involvement of associated clubs	1,2	City Futures / Recreation / Operations	✓	
O15	Identify 'Wildlife Corridor' and natural reserve buffer streets, encourage residents to be 'good bush neighbours' by removing weeds and providing indigenous planting along roadsides to bolster habitat linkages	2	City Futures / Operations	✓	✓
Biodiversity is resilient to Climate Change					
O16	Continue to implement Council's *Towards Zero Emissions Plan (2019-2023)* to reduce the severity of climate change and progress Council's climate emergency response	2,3	Sustainable Assets / City Futures	✓	✓
O17	Continue to convene the Environmental Governance Group to oversee Council's climate emergency response and help to embed climate change considerations in all Council decisions	2,3,4	City Futures / Sustainable Assets	✓	✓
Council's biodiversity data is comprehensive					
O18	Continue to partner with tertiary institutions to establish biodiversity research and monitoring programs	2	City Futures / Operations	✓	✓
Traditional Owner priorities are always integrated					
O19	In collaboration with the Registered Aboriginal Party provide an annual Aboriginal and Torres Strait Islander cultural heritage training workshop for the FEFN and Council staff	7	City Futures / Community Strengthening	✓	
Bushfire management is sensitive to biodiversity					
O20	Continue to investigate the effectiveness of bushfire controls in relationship to the level of risk within Frankston City Council. Consult with Fire Rescue Victoria and where required continue to advocate to State Government for reviews of the bushfire controls and exemptions within Frankston City Council Planning Scheme. Investigate potential collaboration with MAV on this issue	2,4	City Futures / Operations / Statutory Planning	✓	✓

Action no.	Action	Relationship to outcomes	Responsibility	Land Tenure	
				Public	Private
Council leads best-practice land and water management					
O21	Continue to fund pest plant and animal control, to protect Frankston's natural assets	2	Operations	✓	✓
O22	In partnership with Melbourne Water, DELWP, Friends of Edithvale – Seaford Wetlands and other community groups, continue to implement the Ramsar Management Plan for Seaford Wetlands, to enhance habitat for migratory waders and water birds and other fauna that rely on the wetlands	2	City Futures / Operations / Capital Works Delivery	✓	
O23	In partnership with Melbourne Water, DELWP and other stakeholders continue to implement the Frankston City Integrated Water Action Plan	2,3,7	Engineering Services / City Futures / Operations		
O24	Develop collaborative partnerships with other land agencies to improve management responsibilities on their lands (e.g. Melbourne Water, Parks Victoria, Department of Transport, Department of Education)	2	City Futures	✓	✓
O25	Utilise biodiversity data to inform all future master plans and local area plans, and ensure tree planting and landscaping is a key design element in all master plans and capital projects	2	City Futures / Community Strengthening / Capital Works Delivery		✓
O26	Continue to develop and refine Council's standards and checklist for handover of land from development to Council, e.g. consider 3-year maintenance period, pathways, signage, seating, fire management buffers and maintenance and access gates	2	City Futures / Operations / Statutory Planning		✓
027	Continue to implement the recommendations from the 2021 Centenary Park Golf Course Master Plan, to improve biodiversity values	1,2	Operations / Capital Works Delivery / Sustainable Assets	✓	

6.3 Delivery, monitoring and evaluation

Aligned to Council's planning process, an annual implementation plan will be developed encompassing priority actions and other significant projects, roles, responsibilities, input requirements (funding EFT), intended outcomes, timelines and success criteria for the following 12 months.

A review of the Action Plan will take place every four years. This will include an evaluation on the progress of the Action Plan to provide information on the implementation status of actions and report on progress towards achieving the outcome measures.

7. References

.id The Population Experts (2016) *Population and household forecasts, 2011 to 2036.* Frankston City Council.

Bratman, G. N., Hamilton, J. P. & Daily, G. C. (2012) *The impacts of nature experience on human cognitive function and mental health.* Annals of the New York academy of sciences, 1249, pp. 118-136.

Cox, D. T., Shanahan, D. F., Hudson, H. L., Plummer, K. E., Siriwardena, G. M., Fuller, R. A., Anderson, K., Hancock, S. & Gaston, K. J. (2017) *Doses of neighborhood nature: the benefits for mental health of living with nature.* BioScience, 67, pp. 147-155.

DELWP (2014) *Victorian Coastal Inundation.* Department of Environment, Land, Water and Planning, Government of Victoria.

DELWP (2020) *Victorian Biodiversity Atlas.* Department of Environment, Land, Water and Planning, Government of Victoria. Accessed via: vba.dse.vic.gov.au.

DELWP (2021) *Flora and Fauna Guarantee Act 1988 – Threatened List – August 2021* online at https://www.environment.vic.gov.au/__data/assets/pdf_file/0031/536089/FFG-Threatened-List-June-2021-v2.pdf.

DEPI (2014) *Sub-Regional Species Strategy for The Southern Brown Bandicoot.* Victorian Government Department of Environment and Primary Industries. Melbourne, January 2014.

Eco Logical Australia (2020) *Eastern Region Pest Animal Strategy 2020-2030 Volume 1.* Prepared for the Eastern Region Pest Animal Network.

Ecology Australia (2016) *Edithvale-Seaford Wetlands Ramsar Site Management Plan.*

Frankston City Council (2018) *Frankston's Biodiversity Policy.*

Frankston City Council (2016) *Coastal Management Plan.*

Frankston City Council (2016) *Integrated Water Action Plan 2016–2026.*

Howling, G. and Fullagar, A. (2020) *Temperate Woodland Birds Conservation Action Plan*, first edition 2020-2024.

Legg, M. (2020) Personal Communication.

Melbourne Water (2019) Dandenong Catchment. Accessed February 2021 via: melbournewater.com.au/water-data-and-education/water-facts-and-history/river-health-and-monitoring/dandenong-catchment.

Melbourne Water and Frankston City Council (2009) *Kananook Creek Corridor Management Plan.*

Mornington Peninsula Shire Council (2019) *Biodiversity Conservation Plan.* Accessed via: mornpen.vic.gov.au/Your-Property/Environment/Flora-Fauna-Biodiversity/Our-Biodiversity.

Nearmap (2021) Nearmap. Accessed 18 February 2021 via: nearmap.com/au/en.

Parr, H. (2007) *Mental health, nature work, and social inclusion.* Environment and Planning D: Society and Space, 25, pp. 537-561.

Practical Ecology (2012) *Frankston Fauna Linkages and Crossing Structure Design.* Practical Ecology Pty Ltd., Preston, Victoria.

Practical Ecology (2021) *Frankston City Council Biodiversity Action Plan Technical Report.* Practical Ecology Pty Ltd, Preston, Victoria.

Presland, G. (1985) *Aboriginal Melbourne; The lost of the Kulin People.* McPhee Bribble Publishers.

SMEC (2011) *Vertebrate Pest Management Plan Frankston City Council*

Image Credits

Image 1	Seaford Wetlands. Photograph by Mark Calleja.	01
Image 2	Cr Kris Bolam, Mayor.	02
Image 3	Bunurong Elder, Uncle Shane Clark conducting a Welcome to Country at Bunarong Park, Frankston.	04
Image 4	Seaford Wetlands. Photograph by Mark Calleja.	01
Image 5	Dragonfly. Photograph by Erika Anderson.	06
Image 6	Fungus. Photograph by Erika Anderson.	08
Image 7	Common Fringe Lily *Thysanotus tuberososus ssp. tuberosus*. Photograph by Erika Anderson.	09
Image 8	Kananook Creek and the Frankston Foreshore. Photograph by Mark Calleja.	10
Image 9	Bunarong Park. Photograph by Erika Anderson.	12
Image 10	Bushland reserve. Photograph by Erika Anderson.	18
Image 11	Hyacynth orchid *Dipodium spp*. Photograph by Erika Anderson.	19
Image 12	Spotted Pardalote *Pardalotus punctatus*. Photograph by Patrick Kavanagh.	20
Image 13	Sugar glider *Petaurus breviceps*. Photograph by Patrick Kavanagh.	23
Image 14	Seaford Wetlands. Photograph by Mark Calleja.	25
Image 15	Upper Sweetwater Creek Reserve. Photograph by Mark Calleja.	27
Image 16	Community planting. Photograph by Nathalie Nunn.	30
Image 17	Weed control warning signs. Photograph by Mark Calleja.	33
Image 18	Planned burn. Photograph by Erika Anderson.	38
Image 19	Regeneration after fire. Photograph by Erika Anderson.	39
Image 20	Paratea Reserve grassy woodland. Photograph by Erika Anderson.	40
Image 21	Rosy sundew *Drosera Spatulata*. Photograph by Erika Anderson.	54

FRANKSTON CITY COUNCIL
30 Davey Street
Frankston VIC 3199
Australia

PO Box 490
Frankston VIC 3199

Phone 1300 322 322
+61 3 9784 1888
Fax +61 3 9784 1094

frankston.vic.gov.au

Seaford » Frankston » Langwarrin » Karingal » Skye » Frankston South » Frankston North » Carrum Downs » Langwarrin South » Sandhurst