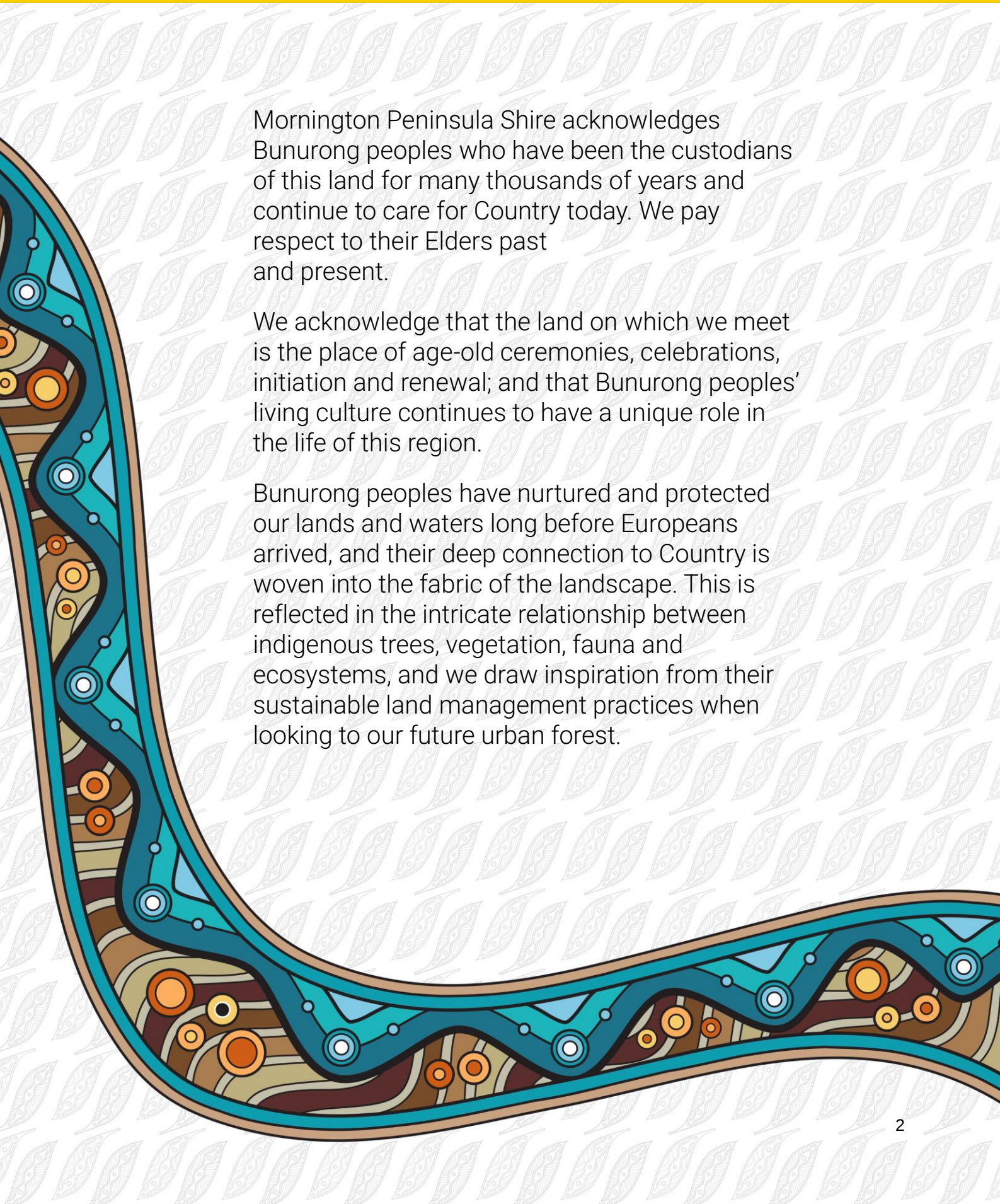


Our Urban Forest

2024-2034



**MORNINGTON
PENINSULA**
Shire



Mornington Peninsula Shire acknowledges Bunurong peoples who have been the custodians of this land for many thousands of years and continue to care for Country today. We pay respect to their Elders past and present.

We acknowledge that the land on which we meet is the place of age-old ceremonies, celebrations, initiation and renewal; and that Bunurong peoples' living culture continues to have a unique role in the life of this region.

Bunurong peoples have nurtured and protected our lands and waters long before Europeans arrived, and their deep connection to Country is woven into the fabric of the landscape. This is reflected in the intricate relationship between indigenous trees, vegetation, fauna and ecosystems, and we draw inspiration from their sustainable land management practices when looking to our future urban forest.

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Mayor's message

Ensuring a thriving urban forest is of critical importance for our region. With increased tree cover our urban areas will benefit environmentally, socially, economically, and be more resilient to the changes of our climate. This strategy takes a holistic approach that addresses multiple aspects of urban living, enhancing the overall quality of life and health for residents while promoting environmental stewardship and sustainability.

'Our Urban Forest' is a comprehensive framework for the Shire and community to protect, manage and enhance our urban green spaces and the invaluable biodiversity on the Peninsula, in the context of rising challenges from climate change, population growth and biodiversity loss.

The Strategy identifies an overall growth in canopy over the last 10 years, while also highlighting that there are significant losses of canopy cover on private land across every township. Despite these localised challenges, the strategy underscores myriad benefits that urban forests delivers, including the crucial role they play in mitigating urban heating, supporting our communities and ecosystems, and building resilience to current and future climate impacts.

Through this Strategy we acknowledge the traditional custodians of this land, the Bunurong people, who have cared for this land for countless generations and have a deep-rooted connection to the trees, animals and nature on the Peninsula.

We know that the lifetime of our urban forest is longer than this strategy and that the investment we make today will benefit many generations to come.

Councillor Simon Brooks, Mayor
Mornington Peninsula Shire Council

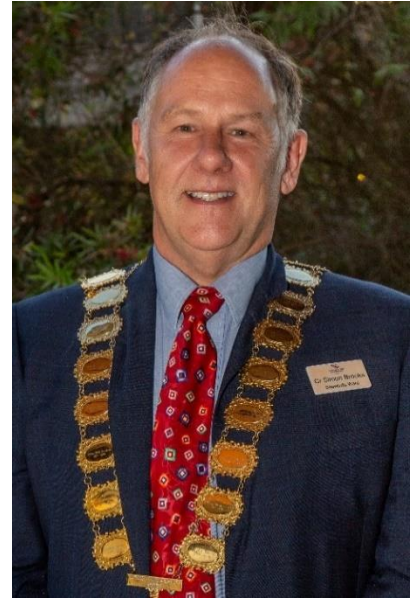


Image 1. Footpath, Blairgowrie

Executive summary

The Mornington Peninsula Shire has a rich and unique landscape of coasts and hills, substantial native biodiversity, a mix of urban character in its townships and importantly extensive tree canopy cover. The Peninsula's tree canopy cover, the key component of the urban forest, cools our urban areas, enhances liveability for residents, and attracts visitors. Our urban forest also plays a crucial role in supporting biodiversity and helping animals and ecosystems to flourish.

While the percentage of tree canopy cover is higher than most councils in metropolitan Melbourne, the tree canopy is not evenly spread across the Peninsula, with significant variations between different townships and areas within them. This leads to the impacts of climate change and urban heating being disproportionately felt by vulnerable communities, residents and ecosystems.

The Shire recognises that the urban forest is also vulnerable to the challenges of climate change, urban densification and urban heating. Our climate is changing with rising temperatures, reduced annual rainfall, and increased frequency and severity of storms and heatwaves. These changes threaten both community wellbeing and the health of the urban forest. The urban forest provides a myriad of benefits such as shade and cooling that enhance liveability and reduce the vulnerability of communities to extreme heat.

Urban development is expanding throughout the Peninsula to accommodate a growing population and the renewal of housing stock. Development may lead to the loss of tree canopy cover, further exacerbating the uneven distribution of canopy cover. Given these complex challenges, a strategic response from the Shire is crucial to maintaining and enhancing the resilience of the environment and community. Nature-based solutions are increasingly recognised as a cost-effective and holistic approach.

In response to these issues, the Shire has developed **Our Urban Forest Strategy**. This strategy aims to substantially increase resilient canopy cover across the Peninsula to mitigate the impacts of urban heat, enhance amenity, and support the unique natural environment and biodiversity of the region.



Image 2. Frankston-Flinders Rd, Tyabb

An analysis conducted in 2020 revealed that the average overall canopy cover of urban areas in the Mornington Peninsula Shire was 37.2%, one of the highest in metropolitan Melbourne. However, there is significant variation between townships, ranging from 14% in Safety Beach to 68% in Arthurs Seat, highlighting the need for more equitable canopy distribution.

The vision of Our Urban Forest Strategy is that the future Mornington Peninsula urban forest is growing, thriving and resilient, providing the diverse ecological, social and economic benefits to all people and creatures who live in the unique Peninsula forest.

This strategy sets an ambitious and evidence-based target that by 2034, vegetation is in place to achieve an average of **45% canopy cover in urban public spaces**, and shared objectives among the community and landholders across the peninsula.

Our Urban Forest Strategy guides and coordinates investment and action to protect, enhance, and expand vegetation and tree canopy in urban areas. Ultimately, the goal is to create a healthy community and environment for current and future generations to enjoy.

Our Urban Forest Strategy Overview

Strategy at a glance

The Mornington Peninsula has a rich and unique urban forest, across every township and landscape. We face many threats and challenges, and so Our Urban Forest Strategy sets our vision for the future and how it is protected, managed and enhanced.

Our Urban Forest Strategy 2034 Vision

The future Mornington Peninsula urban forest is growing, thriving and resilient, providing the diverse ecological, social and economic benefits to all people and creatures who live in the unique Peninsula forest.



Theme	Description	Targets
Growing and protecting	Growing and protecting what we have is central to the strategy, so our urban forest is thriving, healthy, resilient and equitable into the future.	- By 2034, vegetation is in place to achieve an average of 45% canopy cover in urban public spaces (road reserves and open spaces) - No net canopy loss in any township by 2034 - All new trees planted are recorded and monitored for health and risk
Thriving	A thriving urban forest depends on coordination between everyone on the Peninsula. Residents, community groups, the Shire and other land managers will share ownership and integrate greening and nature-based solutions across boundaries.	- Tree and vegetation planting is included in all Shire capital works to meet canopy targets, with WSUD included where significant impervious surface is added - A collaborative network is established between the Shire, Traditional Owners and all relevant state government departments and organisations - Residents are supported and activated to plant and manage trees and vegetation on their land
Resilient	A resilient urban forest reduces our vulnerability to the changing environment – preparing for climate change, heatwaves, extreme weather events, flooding, urban heat, pests and disease outbreaks.	- Our community and environment has increased resilience to climate impacts including coastal inundation, flooding, extreme heat and drought - Our urban forest has improved diversity in species, age and health appropriate to future conditions - All townships have improved heat vulnerability scores
Equitable	The myriad benefits provided by our urban forest must be shared across all townships, communities and demographics in a fair and equitable manner. Our connection to nature, biodiversity and cool green spaces is a fundamental principle for all communities across all current and future planning.	- Canopy cover disparity between townships is reduced by 2034 - Community groups and schools are supported to plant and manage urban forest projects in open spaces - Reduced number and severity of injuries, damage and claims from public trees - All Principal Pedestrian Network routes have been planted to increase canopy cover target 60%

Our Urban Forest Strategy Overview

Introduction and background

What is the urban forest?

The urban forest in the Mornington Peninsula Shire (the Peninsula) comprises all the trees and other vegetation – and the soil and water that sustain them – on private and public land within the urban areas of the Peninsula¹. It includes vegetation in streets, parks, gardens, bushland reserves, river and creek corridors, wetlands, railway corridors, foreshores and civic areas. It includes vegetation on public and private land.

Urban forests provide critical environmental services that support the liveability of the towns in which we live, work and visit. Climate change, urban heating and urban densification are significant challenges impacting the health and wellbeing of our community and the places we live. Cities throughout the world are turning to trees and other green infrastructure solutions to meet the climate challenge and to enhance the resilience of the environment and support community health and wellbeing.



Image 3. Sheoak, Mt Eliza

Urban forests can help sustain healthy urban ecological systems by providing critical habitat for urban biodiversity. They link areas of habitat within urban areas and connect to important habitats outside urban areas.

The urban forest, and trees in particular, are now recognised as essential infrastructure, indispensable to the liveability and resilience of every city or town.

The urban forest extends throughout the urban areas² of the Peninsula (Figure 1. The urban areas of Mornington Peninsula Shire).

It is located on private residential, commercial and industrial land, and public land owned and managed by Mornington Peninsula Shire Council (the Shire) and several other government agencies. A holistic view of the urban forest and its associated ecosystem services, across land uses and ownership is critical to consider the broader issues of climate change, urban heat effects and population growth.

In recognising the collective benefits of a green governance approach and the importance of green links, the primary focus of Our Urban Forest Strategy (the strategy) is the management of trees in the urban areas across the Peninsula.

¹ While the scope of this strategy is limited to urban areas, there are opportunities to deliver greening and cooling projects outside this area, such as in open spaces, reserves and streets adjacent to the Urban Growth Boundary.

² Urban areas are defined as all areas of the Peninsula located within the urban growth boundary. A full definition is provided in the glossary.

Our Urban Forest Strategy Overview

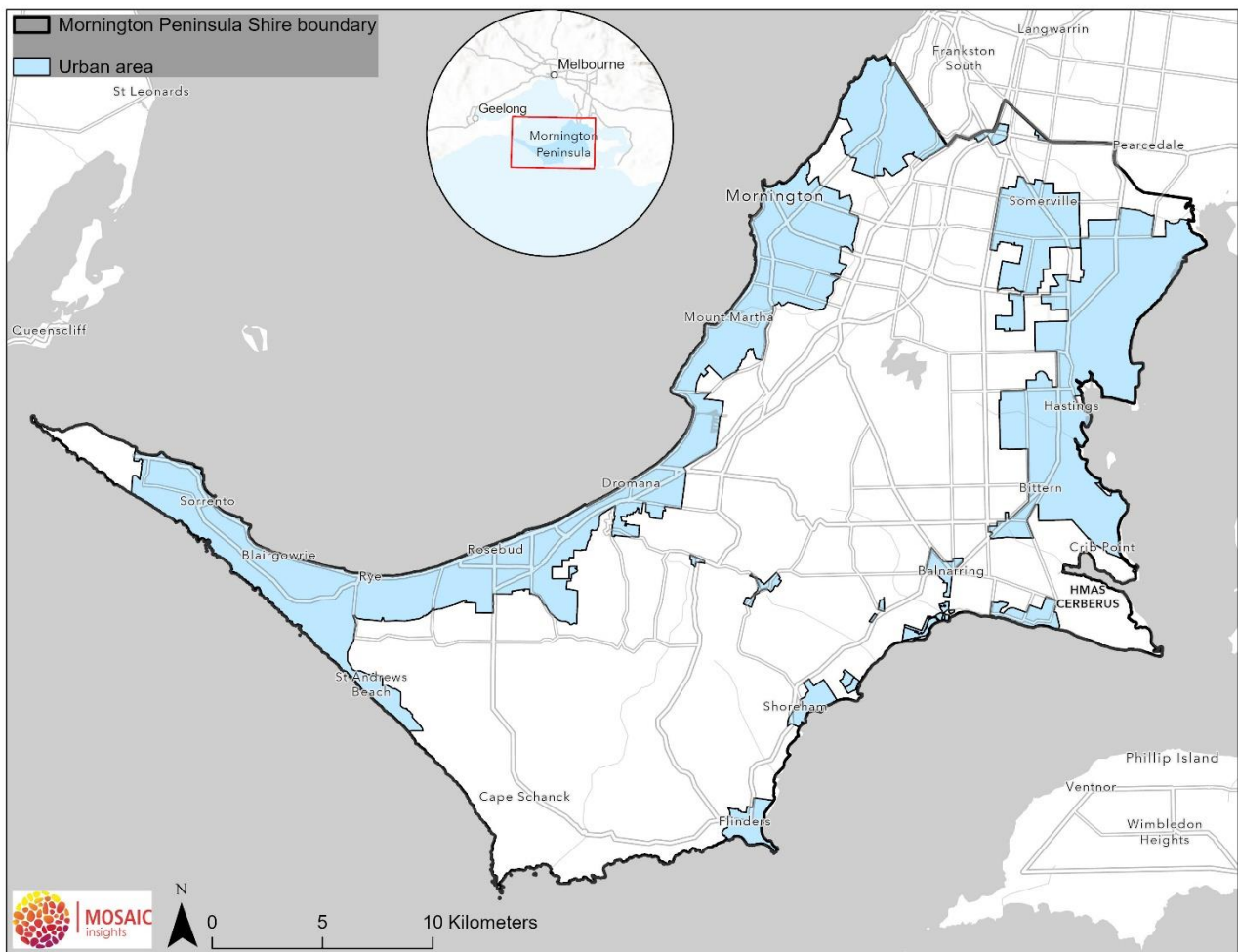


Figure 1. The urban areas of Mornington Peninsula Shire

The benefits of our urban forest

The urban forest provides a myriad of benefits to residents and visitors and is a critical component of the unique biodiversity on the Peninsula. Harnessing these benefits will assist the Shire and the community to respond and adapt to challenges from climate change (see text box below), urban densification and social vulnerability. They support the protection and enhancement of the natural environment and improve community connections to nature. Realisation of these benefits requires a resilient urban forest; one that has a balance of vegetation type, tree age, health and species.

Climate change and our urban forest

The Shire's Climate Emergency Plan (CEP) recognises that Mornington Peninsula's climate has already changed due to historic greenhouse gas emissions. Given our geography and latitude, the Peninsula will likely continue to experience climatic changes to a greater degree than state, national and global averages. Changes in the climate include rising temperatures, reduced annual rainfall, increased storm events, and increased frequency and severity of heatwaves and bushfires. The CEP sets out a pathway to increase the resilience of the community, with a peak goal of net zero emissions by 2040.

Our Urban Forest Strategy Overview

The strategy will guide the delivery of on ground greening outcomes to unleash the potential of nature to maximise the many benefits provided by the urban forest, which include:

- **Climate resilience** – Trees play a significant role in adapting to, and mitigating, the effects of climate change. As described below, trees provide cooling and shading benefits, can protect infrastructure from deterioration (e.g. increasing the lifespan of road surfaces), reduce the risk of flooding after more frequent and extreme weather events, and sequester CO₂ from the atmosphere (Moore, 2020).
- **Mitigation of urban heat island (UHI) effect** – The rising temperatures and more frequent heatwaves with climate change present a particular challenge for urban areas because of the UHI effect. Urban areas are warmer than the surrounding rural land because roads, pathways, buildings and dark roofs absorb heat and radiate it back into the environment. Research in Adelaide found a difference in temperatures between urban and rural areas of 5.9 °C (Soltani & Sharifi, 2017). The UHI effect can be mitigated by increased tree canopy and vegetation, particularly when combined with water sensitive urban design to maximise the cooling effect (Cooperative Research Centre for Water Sensitive Cities, 2020).
- **Enhanced biodiversity in an urban context** – Biodiversity is critical on the Peninsula, particularly through our bushland reserves, coastal foreshores, national parks and green wedge. The urban environment can play a key role in supporting, protecting and enhancing these areas of high biodiversity value, and can foster improved plant and animal health, wellbeing and survival. Trees provide habitats and food sources for a large range of species and enhance wildlife corridors (Zart, 2022).
- **Community health and wellbeing benefits** – There are numerous benefits of urban forests for human health and wellbeing including increased happiness and mental health outcomes (Long, 2019), increased connection with nature (Weir, 2020), improved air quality from pollution reduction (Ren et al., 2023), protection from extreme heat (Armson et al., 2012), and even reduced crime and anti-social behaviour (Kondo et al., 2017).
- **Shading and cooling** – In addition to providing cool, shaded areas for people to shelter from the sun, trees can reduce ambient temperatures in urban areas by shading heat absorbing surfaces, absorbing heat, and through the process of evapotranspiration. Shading and cooling from trees is beneficial both for human health, allowing people to walk along cool streets to schools, shops, parks, and more, and for reducing the need for cooling (air conditioning), saving money and reducing emissions (Livesley, 2010). This is particularly relevant for key pedestrian routes as set out in our Pedestrian Access Strategy (2024).
- **Reduced flooding and erosion** – Trees play a vital role in reducing the risk of flooding in urban areas by slowing down runoff on its path to drains and sewer systems, allowing more time for the runoff to infiltrate the soil (Corrigan, 2023).
- **Amenity/economic benefit** – A key consideration of our urban forest is the benefit we get from living in leafy suburbs. As well as a more pleasant environment to live, work and play, studies show that properties in tree-lined streets are valued up to 30% higher than those without (Plant, 2006). Tree-lined, shady streets also reinforce a sense of place and Mornington Peninsula Shire identity and provide a beneficial experience for the large number of visitors to the Peninsula each year.
- **Integrated Water Management** – Managing our water resources on the Peninsula is one of our key objectives, and a well-planned urban forest can support our targets by reducing the need for watering with potable water, reducing stormwater pollution and alleviating flooding effects.
- **Carbon sequestration** – Trees and vegetation play a vital role in drawing carbon from the atmosphere and storing it in the trunks, branches, leaves and roots. This carbon is 'sequestered' which helps mitigate climate change. While it varies by species, size and age, trees can store an average of approximately 20 kg of carbon dioxide per year (Kilgore, 2024), so across our urban forest this can have a large effect.

Our Urban Forest Strategy Overview

Threats to our urban forest

There are numerous threats and barriers to both existing trees in urban areas, and to increased greening in the future. The following threats have been considered through the development of the strategy:

- **Pests and diseases inhibit healthy growth** – Stress from changing climate may increase susceptibility of urban trees to pests and diseases, further risking their survival in increasing temperatures and other climate related threats (Tubby & Webber, 2010).
- **Climate change and urban heat** – Climate projections clearly show that we are going to experience higher temperatures, more frequent and extreme weather events, increasing coastal inundation and storm surge and other factors that will affect vegetation in our urban environment. The Peninsula is at particular risk of loss of land (and large amounts of the urban forest on the coastal fringe) to inundation. Events of extreme heat and ongoing UHI effects in urban areas can reduce the effectiveness of photosynthesis in trees and cause stress, limiting the growth of leaves and reducing their ability to provide benefits (Esperon-Rodriguez et al., 2021). It is critical that we plan our urban forest for the coming climate conditions.
- **Population growth and urban development** – Ongoing urban development through subdivision and development or extension of existing dwellings often leads to the loss of existing trees, trees that mature to a smaller height, and decreased opportunities to establish meaningful landscaping and planting of large canopy trees (The Nature Conservancy & Resilient Melbourne, 2019). Development often impacts the size of trees that can be installed in the nature strip before impacting on buildings, so smaller trees have to be planted. The installation of more driveway crossovers to service smaller lots also impacts the potential for trees to be installed within the public realm.
- **Costs involved in tree maintenance and infrastructure repairs (buildings, paths, fences etc)** – Installing, establishing and maintaining trees through their lifespan requires investment over a period of years. Lifetime maintenance costs of street trees in Australia is estimated to be between \$2,800 and \$5,300 per tree for trees with projected useful lifespan of 50 years (Moore, 2021). If insufficient funding is provided, then tree mortality rates are higher and longer-term costs such as impacts on overhead powerlines can be higher (particularly for trees planted in road reserves).
- **Risk of damage to public and private infrastructure** – Increasing the number of trees in our urban areas may lead to increased risk of insurance and liability claims, particularly where tree species and design are not appropriate for the site and conditions.
- **Tension between different uses of public land** – Maximising tree canopy while providing adequate open space for outdoor active and passive recreation, and active transport, can sometimes be in conflict, and provide constraints on opportunities to plant trees in (for example) sports fields.



Image 4. Deakin Cr, Baxter

Our Urban Forest Strategy Overview

- **Poor soil conditions leading to stunted growth** – Growing conditions for street tree roots are generally harsh with restricted underground space, impervious surfaces that limit water availability, conflict with underground services and compacted soils. There are also risks of planting in open spaces on ex-landfill sites, as tree roots can damage the landfill caps leading to the release of landfill gases and potentially damage to trees.
- **Poor species selection and lack of species diversity** – Not all species are appropriate for providing canopy cover. Lack of diversity in species can lead to less resilient urban forests as pest and disease related threats will often threaten one species of tree and could wipe out a whole population of single species trees (Paquette et al., 2021).
- **Conflict with other infrastructure** – Trees are often removed in preference of underground utilities such as pipes and wires being provided as roots can cause damage to these services (Rogers, 2014). Roots can also cause damage to footpaths leading to tree removal.
- **Vandalism and illegal removal of trees and vegetation** – trees and vegetation removed outside of approved and permitted processes can cause significant losses for our urban forest, including remnant vegetation and newly planted trees. This damage can be caused by residents, developers or visitors, either intentionally or unintentionally.
- **Vehicle pollution/ traffic management and sight lines** – Pollution from vehicles can cause pollution damage in trees, resulting in symptoms such as early leaf shedding, delayed bud bursting, or slower and/or stunted growth (Moore, 2016). Trees are also often removed or pruned (reducing their shading benefits) if blocking sight lines for traffic.
- **Threats from increased visitation during peak season** – The large number of visitors make a crucial contribution to the economy of the Peninsula. It is important to maintain, protect and enhance vegetation while also accommodating influx of visitors in holiday periods. The foreshore and other highly visited locations are at particular risk. Threats from visitors could include vandalism and other damage from poor perceptions of trees (Moore, 2015).
- **Inequity in provision of ecosystem services** – Trees and open space can have uneven distribution. We know that there is very strong correlation between areas with low canopy cover and areas with higher rates of low socioeconomic status (Threlfall et al., 2022). This puts pressure on families and communities and risks widening social and economic inequality.

Our Urban Forest Strategy Overview

Why we need the urban forest strategy

The strategy will provide guidance in the growing, protection and development of our urban forest. It will guide and coordinate our investment in maintaining, enhancing and expanding vegetation and trees in the urban areas of the Peninsula to support a healthy community and environment for current and future generations.



Image 5. Esplanade, Mount Martha

Our Urban Forest Strategy Overview

What the community told us

Community input has directly informed the development of the strategy to ensure the vision and aspirations for the future urban forest reflect community values and priorities.

Our Urban Forest Strategy engagement

The Draft Our Urban Forest Strategy was released for public exhibition in May 2024. The community and stakeholders were able to view the draft strategy and provide feedback via:

- Online survey: 150 responses were received. Feedback covered the draft vision, themes, implementation opportunities, and collaboration.
- Map comments: 58 comments provided including information on what people identify as important areas of the Peninsula's urban forest, areas of the urban forest for improvement, and ideas for the future. These comments will be highly valuable in strategy implementation.
- Community pop-up sessions: six sessions were held throughout the Peninsula. Attendees made it clear that they believe increasing tree canopy will benefit them and the community and ranked all four draft strategy themes as extremely important.
- Community stakeholder workshop: representatives of community groups on the Peninsula were invited to attend an online community stakeholder workshop to explore barriers and opportunities for planting programs across the peninsula. The feedback from this workshop will be highly valuable in strategy implementation focusing on how Council, community groups, schools and other stakeholders can work together to deliver planting programs.
- External stakeholder workshop: a workshop was held with external stakeholders from key state government departments and other organisations to provide feedback on the draft and discuss implementation and partnership opportunities.

Overall, there was strong support for the draft strategy and recognition of the benefits provided from a growing, thriving, resilient and equitable forest.

Council and Wellbeing Plan

Community engagement was undertaken in 2016 to gather insights to inform the development of the Council Plan and the Municipal Health and Wellbeing Plan, and to inform other related Shire strategies and policy.

From this engagement, we know that the community and visitors highly value the diverse natural assets of the Peninsula, including beaches and coastline, parks, rural landscape, and clean, green environment. Community feedback also identified the need to find a balance between growth in housing and population and protecting the environment, township character and community.

Our Citizens' Panel

Since 2021, Mornington Peninsula Shire recruit a Citizens Panel of 50 people from randomly selected households to help shape the future of the Mornington Peninsula Shire. The Urban Forest Strategy was discussed at a 2023 Citizens Panel to build the foundations of the strategy.

The Panel undertook a visioning exercise to imagine what the urban forest might look like across the Peninsula in 2035. The responses aligned with the following themes:

- Improved planning for new developments
- Maintenance and management of existing and end-of-life trees for safety
- Increase volume and diversity of native/indigenous plantings to support fauna
- Improve and sustain amenity and liveable suburbs
- Better connection – bringing people together and linking green spaces.

The Panel took these aspirations for the future and developed a vision statement for the strategy:

Our Urban Forest Strategy Overview

The Mornington Peninsula Shire Urban Forest Strategy will enhance streets, parklands and bush spaces in which people work, exercise and play by increasing the planting of native trees, shrubs and plants. It will identify zones that need extra foliage, including parklands, streetscapes and bushland. The Community will benefit from the healthier environment, cleaner air and shaded areas. Fauna and native birds will have corridors that will protect and nourish their habitat. Foliage will be managed and maintained to bring the Shire improved green surroundings, a calmer aesthetic, and a move towards carbon neutrality.

In response to the question ‘what do we need to think about when prioritising where we plant trees?’ the Panel noted the following in order of priority (Figure 2).

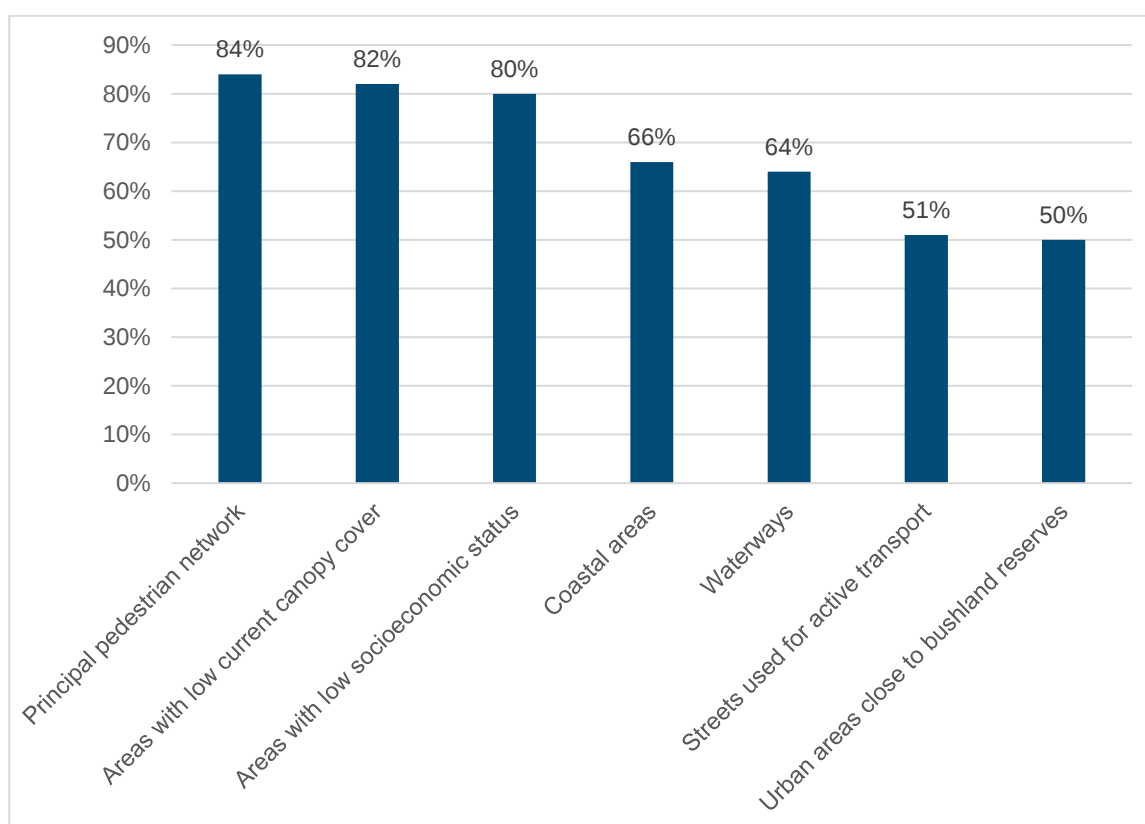


Figure 2. Citizen Panel planting prioritisation

Nature strip policy engagement

From engagement in 2022 specifically around the Shire’s nature strip policy, it was clear the community are interested in what happens in their streetscape, in being part of the decision-making process, and in implementing outcomes.

Of the respondents, 60% were not happy with their current nature strip and almost all respondents would like to do something with or on the nature strip such as planting vegetation including shrubs and trees. The main drivers behind this are to improve the streetscape, mitigate climate change, increase native vegetation, and be part of a biolink.

Our Urban Forest Strategy Overview

Strategic context

The strategic or policy context recognises that the urban forest is a living system that is non-jurisdictional and green governance and management of the various aspects of the urban forest is undertaken by multiple organisational systems.

Relevant State and metropolitan plans and strategies



Plan Melbourne 2017-2050

Plan Melbourne is the Victorian Government's plan to manage growth in the city and suburbs to 2050. It outlines how Melbourne will grow for the next 35 years through integrated land-use, transport and infrastructure planning.

Outcome 6 of Plan Melbourne is that Melbourne will be a sustainable and resilient city. A key direction (6.4) is to make the city greener and cooler. A key action (policy 6.4.1) is to support a cooler Melbourne by greening urban areas, buildings, transport corridors and open spaces to create an urban forest.



Living Melbourne: our metropolitan urban forest (2019)

Living Melbourne aims to extend and link existing urban greening, reforestation and nature initiatives across metropolitan Melbourne to improve wellbeing and reduce community exposure to hazards such as heatwaves and flooding. The strategy vision is 'our thriving communities are resilient, connected through nature'.

Living Melbourne is endorsed by the Victorian Government and directly responds to Plan Melbourne Action 91 (a whole-of-government approach to cooling and greening Melbourne).

Living Melbourne includes targets for local government authorities. For Mornington Peninsula the 2050 target is 30% tree canopy and 50% tree canopy and shrubs.

Our Urban Forest Strategy Overview

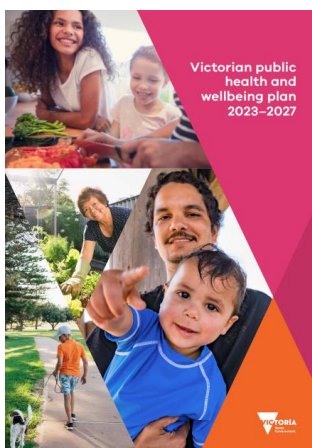


Open Space for Everyone

Open Space for Everyone is the open space strategy for metropolitan Melbourne. It provides the strategic framework to guide the planning, acquisition, design, management, use and maintenance of the metropolitan open space network. The strategy includes a vision that 'Melbourne is a city in nature with a flourishing and valued network of public open space that is shared and accessible by everyone.'

Open Space for Everyone directly responds to Plan Melbourne Action 93 to prepare a metropolitan open space strategy that enhances recreation, amenity, health and wellbeing, species diversity, sustainable water management and urban cooling.

The strategy includes two goals relating to the urban forest: to create healthier biodiversity and enhance climate change resilience. One of the principles that underpins Open Space for Everyone (resilience and sustainability) includes the requirement to protect and strengthen urban forest canopy and the connectivity of habitat corridors.



Victorian Public Health and Wellbeing Plan 2023-27

The plan sets the direction for improving public health and wellbeing, providing a framework for coordinated action to ensure all Victorians have the opportunity for optimal health and wellbeing, so they can participate fully in their community, in education and employment.

One of the ten priority areas of the plan is 'tackling climate change and its impacts on health'. Key outcomes of the Victorian public health and wellbeing outcomes framework include:

- Outcome 5.1 Victorians belong to resilient and liveable communities
- Outcome 5.2 Victorians have access to sustainable built and natural environments.

The plan is clear that health and wellbeing depends on a healthy environment.



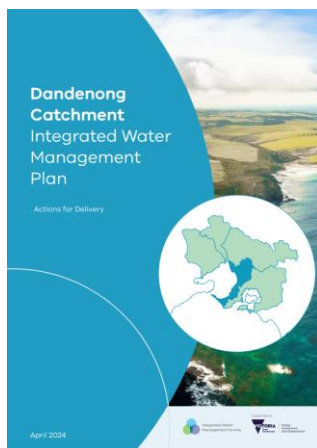
Healthy Waterways Strategy 2018

Vegetation (e.g. trees, shrubs, grasses, bulrushes) is identified as one of the nine key values used throughout the Healthy Waterways Strategy.

Street trees are identified in the strategy as a place-based approach to support delivery of the strategy's stormwater targets to manage flows as well as water quality.

The strategy also includes the Reimagining Your Creek program as a case study and highlights the use of a place-based approach including tree canopy cover to cool the area and respite areas to encourage the local community to stay longer. It particularly highlighted how the amenity provided by a waterway and the natural environment can integrate seamlessly into a local urban context to benefit residents.

Our Urban Forest Strategy Overview



Dandenong Catchment Integrated Water Management Plan (April 2024)

The Dandenong Catchment IWM Plan aims to drive collaborative, integrated water management at a catchment scale.

The Mornington Peninsula Shire urban forest strategy is identified as a Structural Action in the plan.

To support strategic outcome 5 – ‘healthy and valued urban and rural landscapes’ the plan includes measure 5.1 Street trees that are supported with permanent (active or passive) irrigation from an alternative water supply.

The target linked to this measure is 11% and 23% of street trees are supported with permanent irrigation from an alternative water supply by 2030 and 2050 respectively, for the catchment.

Local plans and strategies

Our Urban Forest Strategy is supported and influenced by several current local strategies and policies (Figure 3).

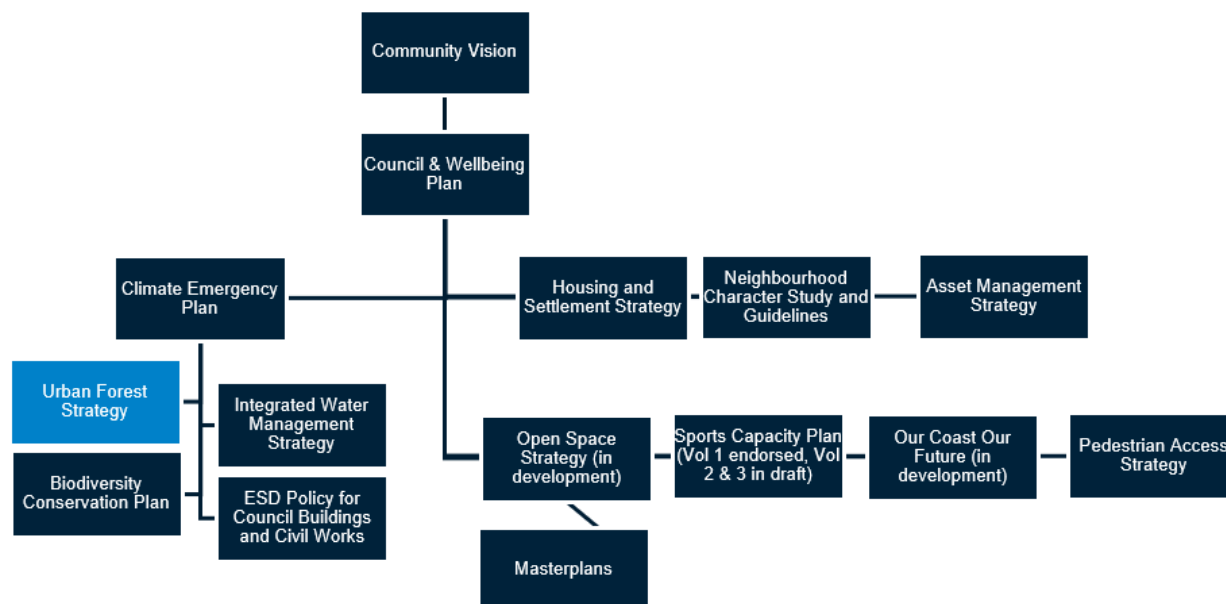


Figure 3. Strategic context of Our Urban Forest Strategy

Our Urban Forest Strategy will support, consider and where possible deliver on key objectives and actions of the Shire and other relevant policies, plans and strategies.

Our Urban Forest Strategy Overview

Our urban forest today

The Mornington Peninsula is one of Melbourne's greatest assets characterised by unique townships, highly valued green wedge land, areas of national and international conservation significance, and more than 10% of Victoria's total coastline.

There are an estimated 1,174,000 trees in the urban areas of the Mornington Peninsula Shire, contributing to the unique coastal character and rich biodiversity of the Peninsula. It provides local amenity, cultural values, cooling and shade for residents and visitors, and habitat for the native animals that call the Peninsula home.

Who manages the urban forest?

The Shire, other government organisations and the community all have an important role to play in ensuring the health and extent of the urban forest. The Shire is responsible for planning, maintaining and replacing trees and vegetation in Shire parks and reserves, street trees, and trees around community buildings owned by the Shire. Other state agencies such as Parks Victoria, VicRoads, and Melbourne Water have a role in managing vegetation on land that they own or manage, such as National Parks, State Parks, major roads and waterway corridors. Other state government departments are responsible for trees around government schools, hospitals and utility infrastructure.

Many areas of high value biodiversity exist on the Peninsula and are actively managed by community volunteer groups including Friends Of groups, Landcare networks and formal Committees of Management, with support and grants from the Shire and other State Government agencies. More than half of all tree canopy is located on private residential land, so the community and urban developers have a critical role to play in maintaining and expanding the urban forest.

Biodiversity on the Peninsula

The Peninsula's natural environment has undergone significant modification since European settlement and faces many challenges including habitat fragmentation, degradation of ecosystems and declines and extinction of species.

Despite these challenges, our bushland areas, waterways, coastal areas and biodiversity, much of which is in or next to our urban areas, is among the most important and valuable assets on the Peninsula for residents and tourists alike.



Image 6. Residential interface of Tootgarook Wetland

Our approach to protecting and supporting our biodiversity is outlined in the Biodiversity Conservation Plan (2018), and the vision 'The Mornington Peninsula's biodiversity is healthy, valued and protected' strongly aligns to this strategy.

Tree canopy cover

Tree canopy cover is the proportion of an area (e.g. a property, street or township) shaded by trees. The area of tree canopy changes over time, as trees are planted, grow and are removed when they reach the end of their lifecycle. Canopy cover is an important measure of an urban forest, with research showing that areas with more canopy cover are cooler (Sharifi et al., 2017) and have higher levels of community health (Astell-Burt & Feng, 2019).

Our Urban Forest Strategy Overview

The Shire has acquired high resolution tree canopy data for the urban area using a sophisticated approach that combines aerial photography and artificial intelligence (see box below for more details).

The Shire engaged Player Piano Data Analytics to develop a comprehensive map of all canopy across the Peninsula to accurately monitor and track canopy growth, losses and removals in every township. The Tree Ledger tool uses aerial images and LiDAR scans, with machine learning algorithms to create a map of tree canopy and height. By using historical aerial captures, we analysed growth trends of our trees over time to inform evidence-based decisions for our future urban forests. unless otherwise stated, all canopy maps and statistics in the strategy use the Mornington Peninsula Tree Ledger as the base data set.

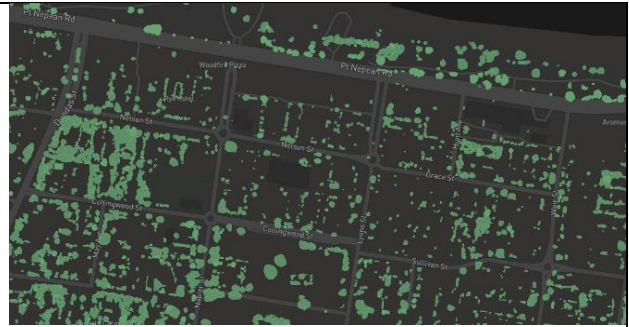


Image: Screenshot of canopy cover in the Tree Ledger browser

Analysis of the canopy data shows that the average canopy cover of all urban areas in the Mornington Peninsula Shire was 37.2% in 2020, which is one of the highest in metropolitan Melbourne, reflecting the green nature of our townships. The data also showed that canopy cover in urban areas had increased from 27.8% in 2011, which reflects the growth of existing trees and additional trees over that period.

However, closer inspection of canopy cover shows that there are large variations across the urban areas of the Peninsula. There are large areas of high canopy cover in the Point Nepean and Mornington Peninsula National Parks, some of the coastal areas fringing Western Port, and waterway corridors like Balcombe Creek (Figure 4).

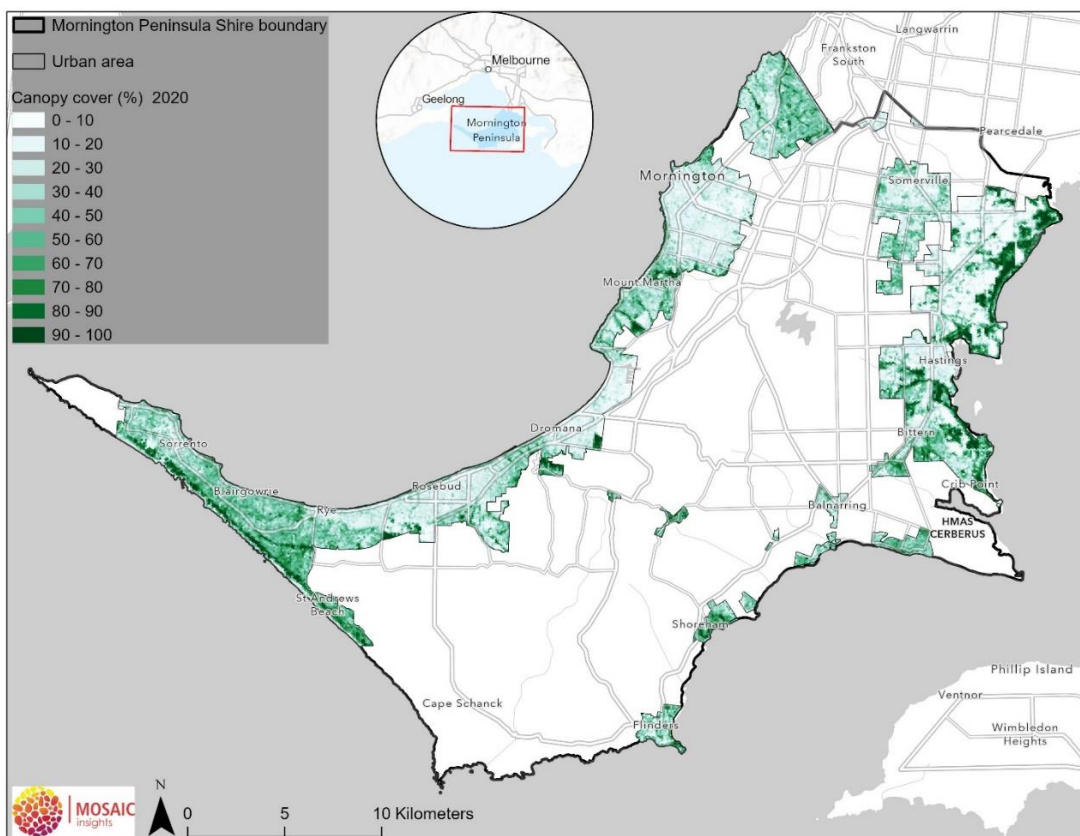


Figure 4. Canopy cover (%) in 2020 in the urban area

Our Urban Forest Strategy Overview

Canopy cover varies widely across the townships in the urban area, from 14% in Safety Beach to 68% in Arthurs Seat (Figure 5). Canopy cover change between 2011 and 2020 also varied between townships. All townships saw a net increase in canopy cover in that period, with increases ranging from 1% to 30%, with an average increase of just below 10%.

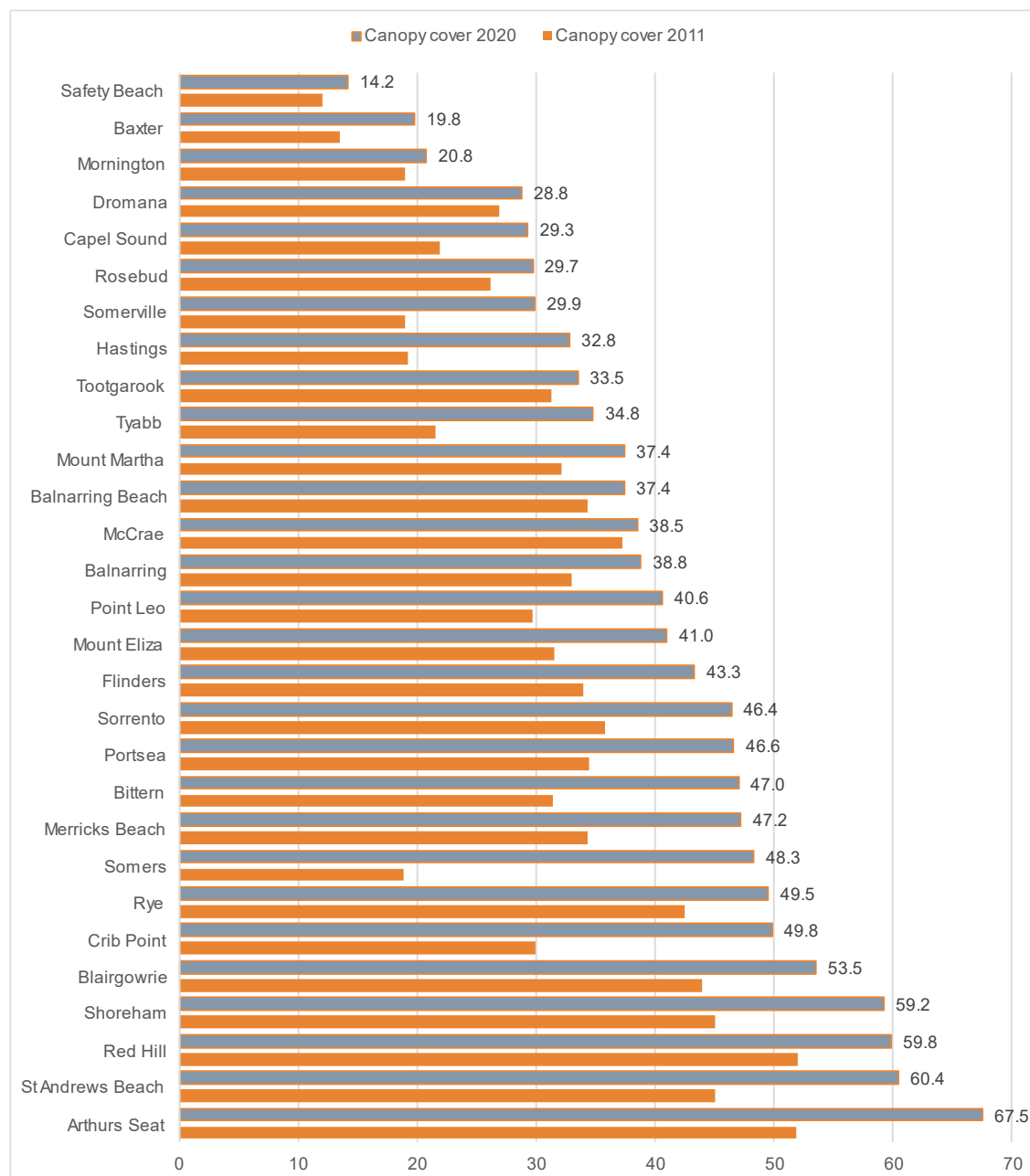


Figure 5. Canopy cover in 2011 and 2020 in the urban area of each township.

Note: Five townships with small areas inside the urban growth boundary were not included in the analysis in this section but are included in the actions set out in the 'Our future forest' section of the strategy.

Our Urban Forest Strategy Overview

Canopy cover also varies with land use across the Peninsula reflecting the natural history, climate conditions and human influences, particularly since European settlement, through vegetation clearing for agriculture and urban development. Of the 13,025 ha of canopy in the urban area, it is estimated that 63% is in residential areas, reflecting the dominance of residential land use in the urban areas of the Peninsula (Figure 6).

Although canopy cover is increasing over the whole urban area, when changes in canopy cover are explored at a finer spatial scale it is apparent that there are areas where canopy cover has decreased between 2011 and 2020 (Figure 7).

There are areas that have lost canopy in all townships, with a concentration of loss in locations closer to the Port Phillip Bay foreshore. Although the losses in canopy are offset by increases in canopy in other areas (which is why canopy cover in every township has increased) the pattern of loss of canopy represents a loss of the ecosystem services those trees provided to the local area, and over time will impact more widely.

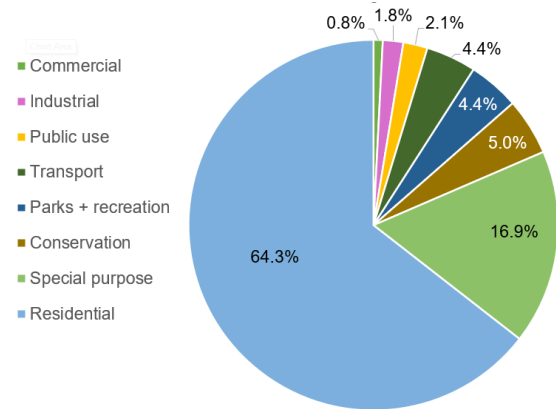


Figure 6. Tree canopy cover in the urban area by land use zone

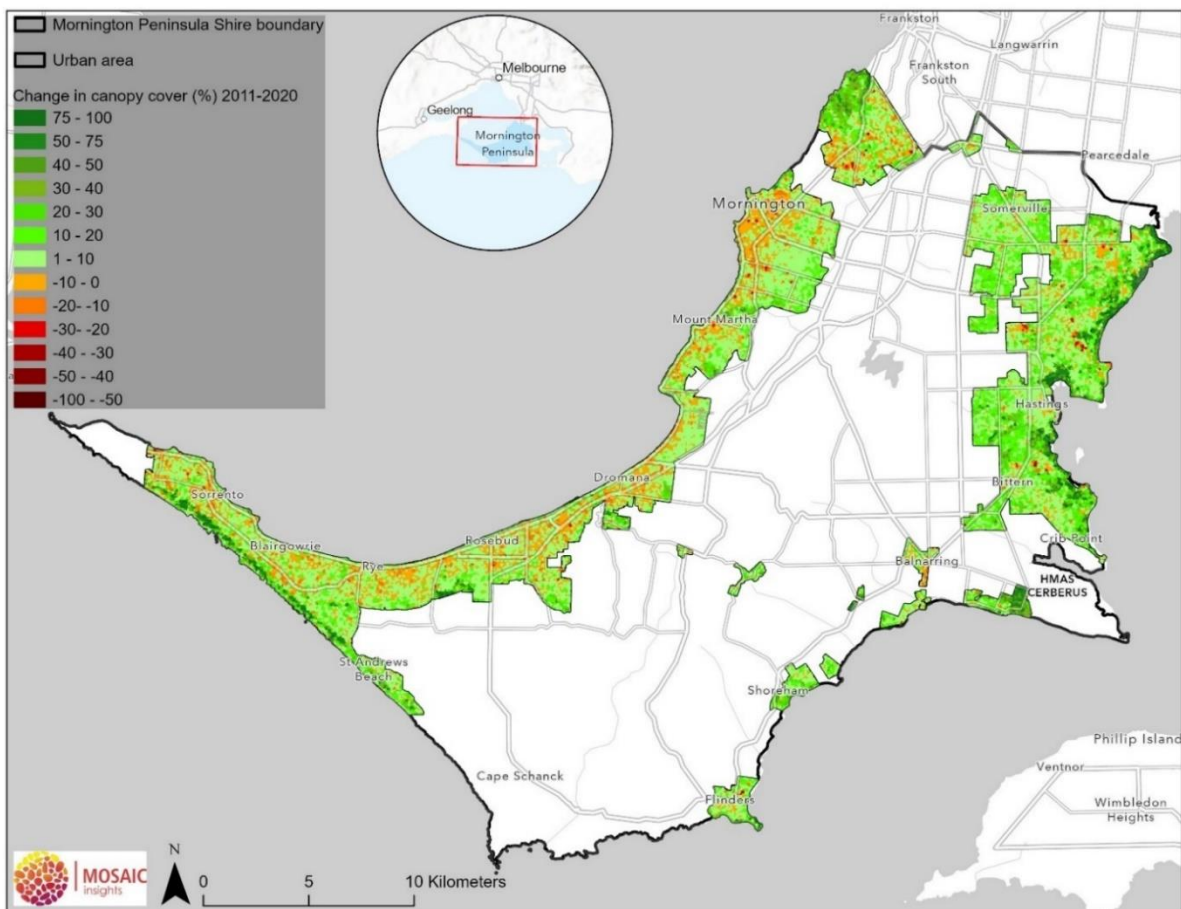


Figure 7. Change in tree canopy cover in the urban area between 2011 and 2020

Our Urban Forest Strategy Overview

The patterns of canopy change in each township are explored in the Township Summaries in (Appendix A). A case study illustrating the drivers of changes in canopy on residential land is provided below.

Case Study - the impact of residential urban development on canopy in Mornington

Mornington has low canopy cover compared to most of the urban areas of the Mornington Peninsula Shire, although it is slowly increasing (from 19% in 2011 to 21% in 2020). It is one of the most urbanised townships, with the highest population density in 2021 and the second more rapidly growing population of the townships.

Although canopy cover across the whole of Mornington is increasing, detailed spatial analysis of changes in canopy cover shows there was a reduction in canopy cover in many areas between 2011 and 2020, with the canopy cover reducing by more than 20% in some areas (Figure 8).

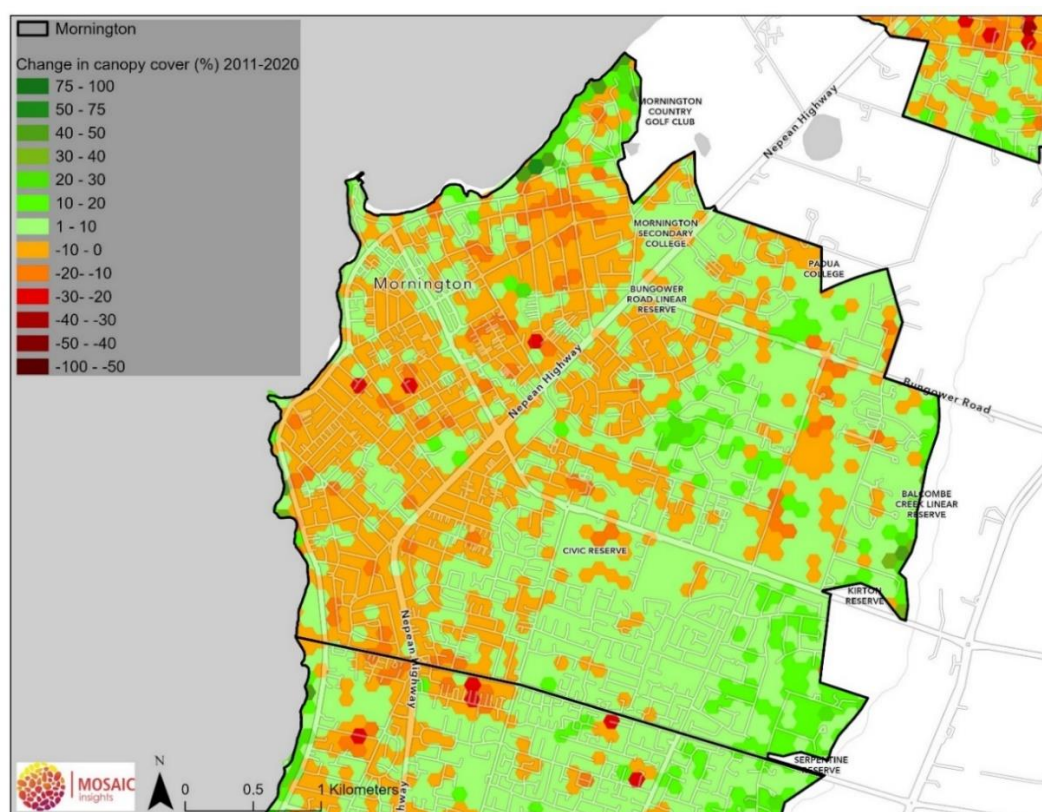


Figure 8. Change in canopy cover in Mornington between 2011 and 2020

Analysis was undertaken to understand the impact of development on canopy cover in Mornington, which found:

- 58% of the township is zoned residential
- There was a net increase of 170,448 m² in canopy cover in residential areas between 2011 and 2020
- The increase was driven by the addition of 322,666 m² of canopy in some residential areas
- But there was also a loss of more than 152,218 m² of canopy in other residential areas of Mornington. This is the equivalent of losing around 2,300 trees over that period.

Our Urban Forest Strategy Overview

Aerial imagery illustrates the change in more detail and shows that canopy has been lost in some areas due to infill urban development (Figure 9). In addition to the loss of tree canopy cover the infill development also decreases permeable surfaces, increases runoff and adds to urban heating.



Figure 9. Aerial images of Mornington from 2012 (top) and 2020 (bottom) showing areas of canopy loss from infill urban development along Birdrock Avenue.

Our Urban Forest Strategy Overview

The trees in the urban forest

Understanding the trees that make up the urban forest is an important building block in its long-term management. The Shire collects and maintains a database of information on trees in streets, open spaces, reserves and other Shire-managed land as part of its ongoing maintenance program. The data focusses on trees that present a risk to health and safety or property and is not a comprehensive record of trees and vegetation in the urban areas.

However, the database provides insights into the species, health, maturity and likely useful life expectancy of Shire-managed trees. This information has been used as the basis for some of the analysis that informs the key challenges, actions and objectives in the strategy.

Climate vulnerability of the urban forest

The climate of the Peninsula is forecast to continue to change, with increased average temperatures, more frequent extreme heat days, decreased total rainfall (higher intensity rainfall events) and coastal impacts through sea level rise, coastal erosion and increased inundation. The frequency and intensity of extreme weather events including storms, bushfires, droughts and heatwaves will also increase.

Changes in the prevailing climate can impact trees, leading to reduced health and shorter lifespans. The level of vulnerability to climate change of the trees in the urban areas of the Peninsula was assessed for two climate change scenarios released by the Intergovernmental Panel on Climate Change: SSP2/ RCP 4.5, which is an intermediate scenario, where emissions peak around 2040, then decline and SSP3/ RCP 7.0, which is a scenario in which emissions continue to rise throughout the twenty-first century. The scenarios confidently forecast changes in mean annual temperature (MAT) which is strongly correlated with the spatial distribution of trees at a global level in natural areas and in cities. While changes in MAT do not directly lead to tree mortality, these changes interact with precipitation and the distribution of pests and diseases to affect water use and tree health, and urban trees near the edge of their known MAT envelopes have reduced abundance in cities.

The current MAT of the Mornington Peninsula is around 15°C, which includes the 1°C of warming from urban heat. The analysis uses the available tree species data for the urban forest and additional data from published sources to assess the known climate suitability of all the tree species included in the analysis against the future climate scenarios.

The assessment indicates that *most trees* are known to be suitable for the likely climatic conditions in 2050 in the Mornington Peninsula. However, the increase in temperature expected by 2090 means that more than a third of the tree species for which the Shire has data are not known to be suitable for the conditions at that point in time. This means that very common species including *Eucalyptus viminalis*, *Allocasuarina verticillata* and *Eucalyptus leucoxylon* may be vulnerable to increased temperatures in the 2090s. Where tree species are not known to occur in these future climates it does not necessarily mean they will fail, but the risks to the urban forest are higher. For important species e.g. indigenous or heritage species, further investigation of the performance in future climates may be warranted e.g. finding climate analog locations, or research on specific tree responses to climate.

Our Urban Forest Strategy Overview

Prioritising action

It is important to prioritise tree planting using an evidence-based approach that reflects the diverse character of townships and communities on the Peninsula, considers environmental and social goals and the interactions between different communities and ecosystems.

The tree planting prioritisation approach ensures the benefits of nature are accessible to all and focuses investment where it will provide the greatest social, environmental and economic benefits.

Priorities for the Shire

Two primary criteria are used to identify targets and priority actions for urban areas of the Peninsula:

- Existing tree canopy cover
- The vulnerability of the community to extreme heat.

Canopy cover

The wide variation in canopy cover across the Peninsula means access to the wide range of benefits provided by urban greening is currently inequitable (Figure 10).

To address this inequality, action to grow and protect the urban forest is prioritised in townships that currently have lower canopy cover.

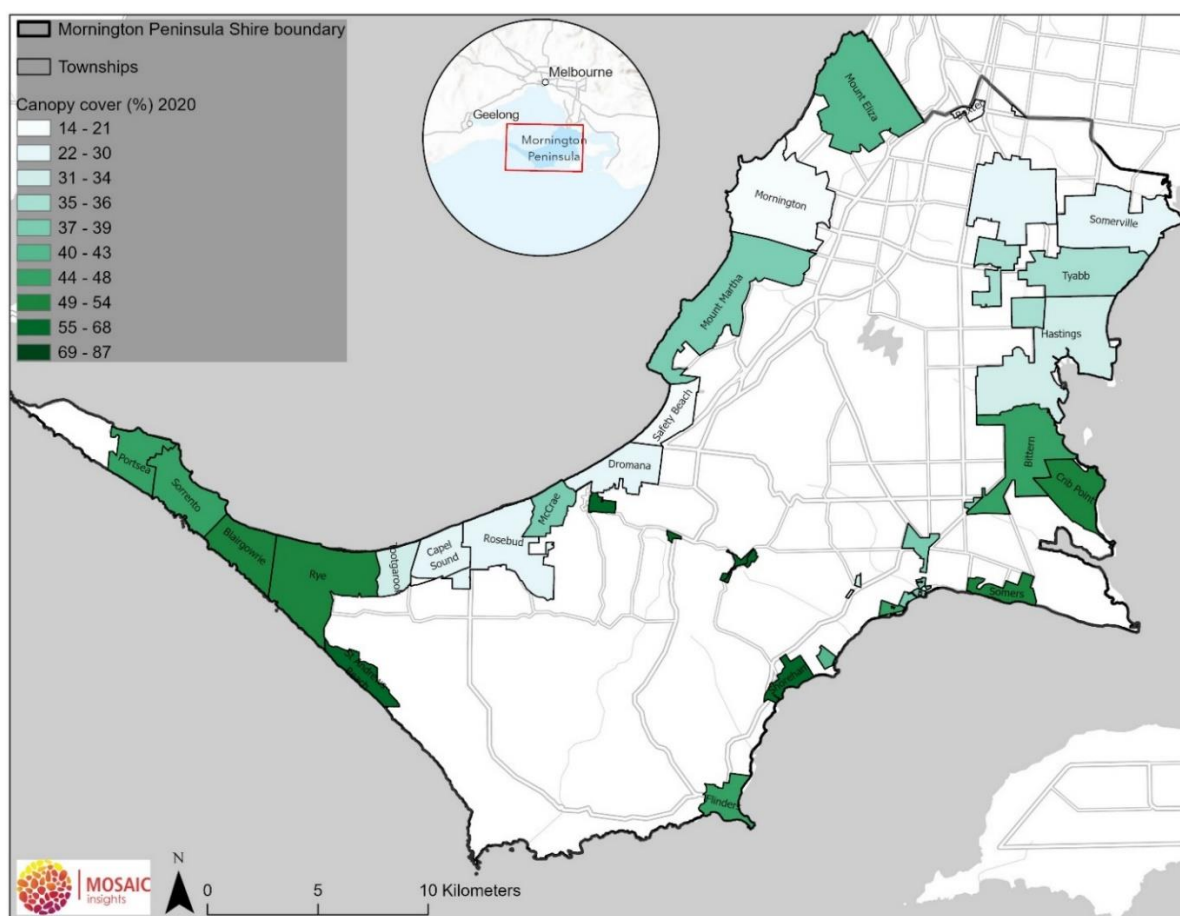


Figure 10. Tree canopy cover in the townships in the urban areas

Our Urban Forest Strategy Overview

Heat vulnerability

Community heat vulnerability refers to the degree that residents are susceptible to the adverse impacts of extreme heat. A heat vulnerability index (HVI) was mapped across the Peninsula in 2018 by the State Government and RMIT University (Figure 11). The HVI incorporates a range of factors that influence community vulnerability to heat, including information on the local climate, and the age, health and level of social disadvantage of the community. More information is available at this [website](#).

To reduce the vulnerability of the community, action to grow and protect the urban forest is prioritised in townships that have a higher heat vulnerability index.

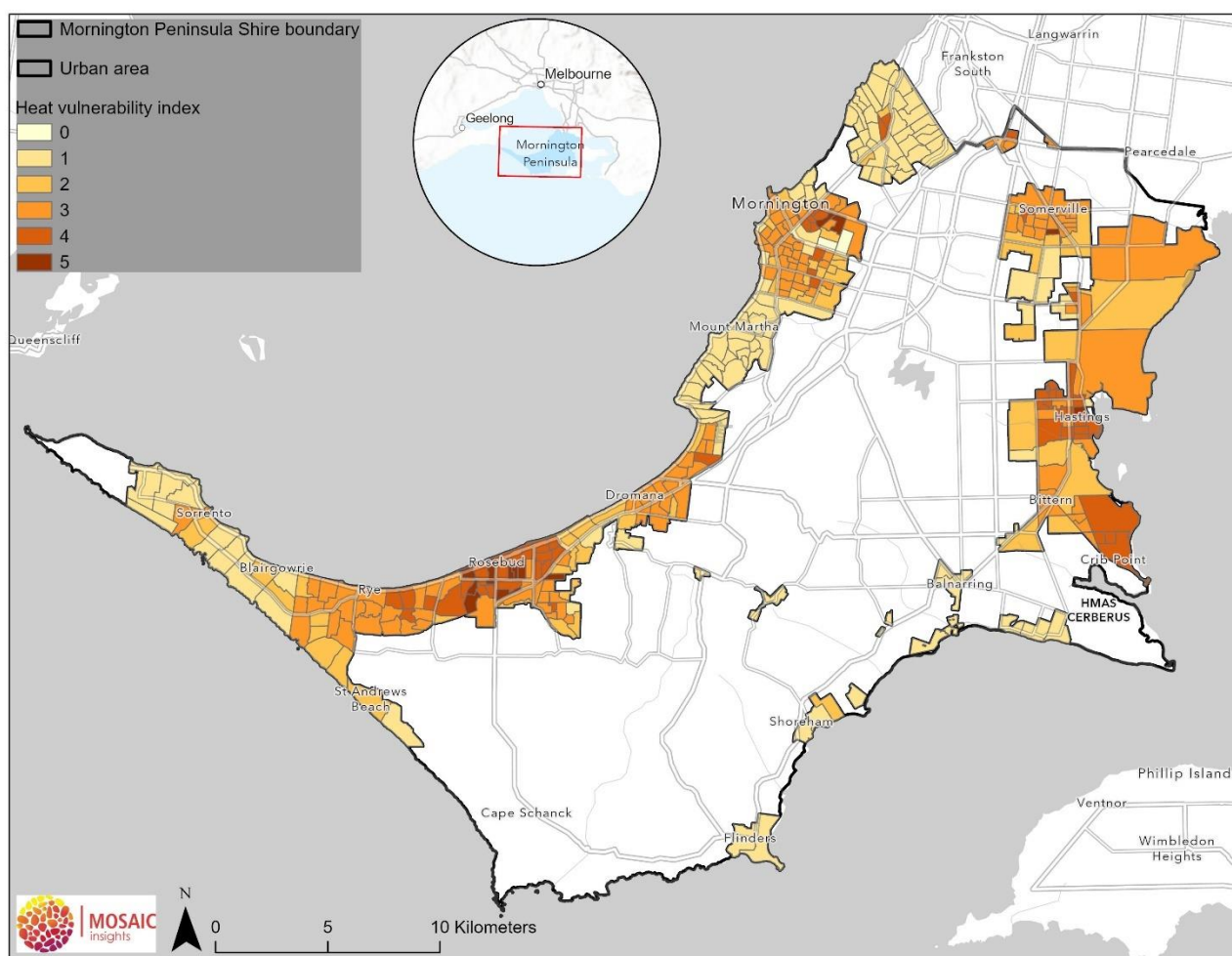


Figure 11. Heat vulnerability index in the townships in the urban areas

Our Urban Forest Strategy Overview

The priority ranking of townships is presented below (Table 1).

Table 1. Prioritisation of tree planting by township

Township	Canopy cover % (2020)	Heat vulnerability index (2018)	Total prioritisation score	Priority rank
Safety Beach	14.2	2.6	-10.0	1
Baxter	19.8	3.2	-14.0	2
Mornington	20.8	2.5	-15.0	3
Dromana	28.8	2.7	-20.9	4
Capel Sound	29.3	4.0	-21.0	5
Rosebud	29.7	3.4	-21.4	6
Somerville	29.9	2.7	-21.7	7
Hastings	32.8	3.1	-23.8	8
Tootgarook	33.5	3.4	-24.3	9
Tyabb	34.8	1.9	-25.6	10
Mount Martha	37.4	1.4	-27.7	11
Balnarring Beach	37.4	1.0	-27.8	12
McCrae	38.5	2.0	-28.4	13
Balnarring	38.8	1.0	-28.9	14
Point Leo	40.6	1.0	-30	15
Mount Eliza	41.0	1.1	-30.5	16
Flinders	43.3	1.0	-32.2	17
Sorrento	46.4	1.5	-34.4	18
Bittern	47.0	2.8	-34.5	19
Portsea	46.6	1.0	-34.7	20
Merricks Beach	47.2	1.0	-35.2	21
Somers	48.3	1.0	-36.0	22
Crib Point	49.8	3.9	-36.4	23
Rye	49.5	2.8	-36.4	24
Blairgowrie	53.5	1.3	-39.8	25
Shoreham	59.2	1.4	-44.1	26
Red Hill	59.8	1.0	-44.6	27
St Andrews Beach	60.4	1.5	-44.9	28
Arthurs Seat	67.5	1.0	-50.4	29

Other considerations for prioritising action

This strategy has undertaken an initial prioritisation at the township scale by using the two key criteria of canopy cover and HVI. This assessment has identified a wide variation in canopy cover and heat vulnerability between townships across the Peninsula. There is potential to refine the prioritisation in each township by incorporating further criteria such as canopy cover over shared paths and footpaths, areas of high visitation, flood prone areas and biodiversity. The ongoing loss of canopy in every township through tree mortality and removal means tree planting is needed in every township (even those with currently high levels of canopy cover).

Our Urban Forest Strategy Overview

Setting canopy targets

Tree canopy cover is a key measure of the benefits provided by the urban forest to the community and the environment. Increasing the number of trees and the canopy they provide is important, but we must plan properly to achieve the greatest benefits for the least expenditure of public funds. It is more important to improve the extent and quality of canopy cover than to simply increase the number of trees.

Setting tree canopy targets is a powerful tool to guide investment and monitor progress in increased tree planting and the implementation of other actions identified in the strategy to achieve the vision of a growing, thriving and resilient urban forest.

To establish influential and achievable targets it is critical to understand the environments and land use to which the targets relate. Not all urban areas of the Peninsula are the same, and not all land use types can contribute equally to tree canopy. The capacity of any Council to directly provide increased canopy cover is influenced by the jurisdiction and area of land uses, the extent of the existing urban forest, and the new opportunities for tree planting.

Establishing a baseline

As a starting point for setting meaningful canopy targets we have had to understand the current distribution of canopy cover. The high-resolution canopy mapping data and detailed analysis of the spatial distribution and changes in canopy cover over time (described in previous sections of this strategy) provides a rigorous baseline understanding of the current urban forest extent.

Where can we plant more trees

Although the definition of the urban forest includes trees and canopy on all types of land and land ownership, most Shire-managed trees and opportunities for the Shire to plant more trees are in the public realm, the 1,800 public open spaces and 2,900 hectares of Shire road reserves across the urban areas of the Peninsula. This area represents only around 20% of the urban area of the Peninsula and in 2020 had an overall canopy cover of 28.9%.

Establishing opportunities for new tree plantings in the public realm is critical in setting an informed canopy cover target. To do this a spatial analysis was undertaken that used high resolution canopy mapping, spatial data on open spaces and roads and data on existing trees in the urban areas. The analysis calculated the available area for new plantings in the public realm across the urban area and modelled changes in tree canopy for different planting scenarios.

The area available for additional planting in the public realm across the urban areas was estimated to be in the range of 739 ha to 1,732 ha. The range reflects assumptions that the maximum available canopy cover on road and open space reserves ranges between 43% to 80%. Road reserves and open spaces that currently have a canopy cover above those levels were assumed to have no space for additional canopy.

To estimate the number of trees that could be established in the available area for planting, available tree data were analysed to determine the canopy area of trees typical of trees in the urban areas. Two tree canopy sizes were selected for the modelling: a large tree with a canopy area of 120 m² (based on the largest long-lived species in the data set) and a smaller tree with 65 m² canopy area that represents a typical tree in the existing urban forest.

Combining the available area for new plantings and the selected canopy areas showed there is potential available space to plant between 60,000 and 267,000 trees (Table 2).

Our Urban Forest Strategy Overview

Table 2. Estimates of plantable area and number of trees

Area available for additional tree planting (ha)	Assumed canopy area at maturity (m ²)	Estimated number of trees that can be planted
739 (road reserves have 43% canopy cover)	65	114,355
	120	61,615
1,732 (road reserves have 80% canopy cover)	65	266,502
	120	144,355

Public realm tree canopy targets

To inform realistic canopy targets for each township, three public realm tree planting scenarios were modelled to estimate the future growth or loss of tree canopy. The scenarios were combinations of two tree planting rates and two estimates of the area available for new plantings and canopy (Table 3).

Table 3. Modelled tree planting scenarios

Scenario	Number of new trees planted per year	Mix of trees	Area available for additional tree planting (ha)
1	1,500	Matching species profile of existing urban forest	739
2	5,000	Matching species profile of existing urban forest	739
3	5,000	Large trees at higher density planting	1,732

Changes in tree canopy cover were analysed using a sophisticated tree canopy modelling approach that drew on the analysis of the available area for new tree plantings in the public realm, detailed mapping of existing canopy cover, an understanding of the tree species in the urban area and published literature on tree growth and mortality rates. The modelling includes the growth and mortality of existing trees and forecasts canopy growth or decline over a 100-year timeframe.

The modelling forecasts the change in the public realm canopy cover for the urban areas (Table 4). This modelling enables overall average for townships, and in individual townships. In turn the establishment of targets for future canopy cover enables for planning and costing of the planting of trees.

Table 4. Estimates of changes in canopy cover in the public realm for the urban areas over 100 years

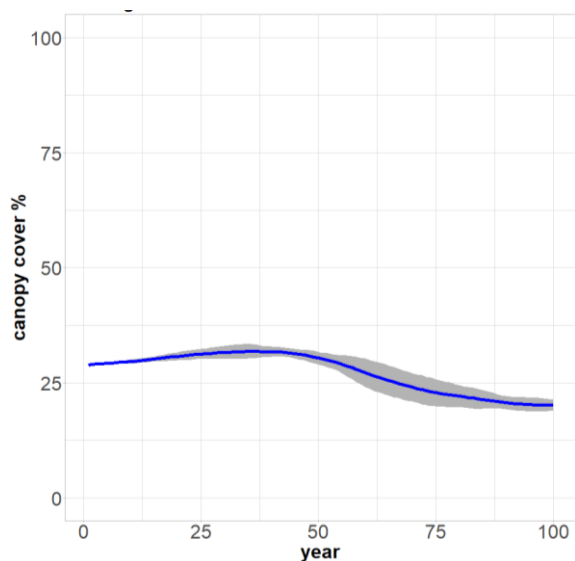
	Area available for additional tree planting (ha)	Trees planted / year	Assumed canopy area (m ²)	Public realm canopy cover (2020)	Canopy cover 50 years	Canopy cover 100 years
1	739	1,500	65	28.9%	28%	20.2%
2	739	5,000	65	28.9%	38.8%	39%
3	1,732	5,000	120	28.9%	45%	58%

As clearly illustrated in Table 4 planting, scenario 1 (1,500 trees per year) would result in a loss of close to 9% of the public realm canopy cover in the long-term, reflecting the net loss of canopy through tree mortality

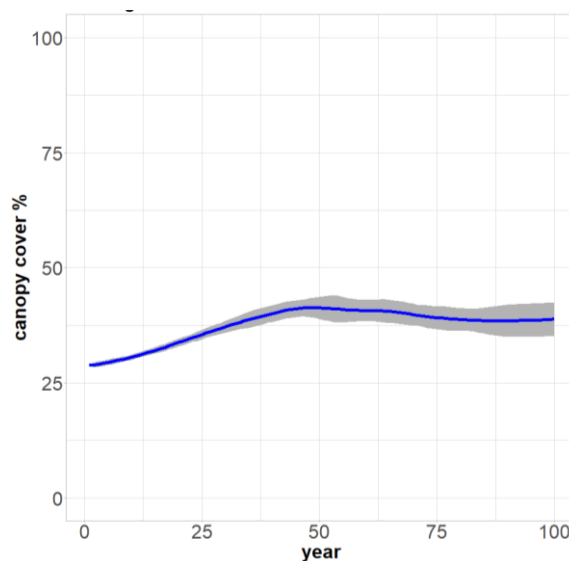
Our Urban Forest Strategy Overview

not being replaced by growth of existing trees and new plantings. Planting 5,000 trees per year will lead to an increase of between 10% to 30% after 100 years, depending on the area available for new public realm tree plantings (which as described above depends on the level of canopy cover that road reserves in the urban area can accommodate).

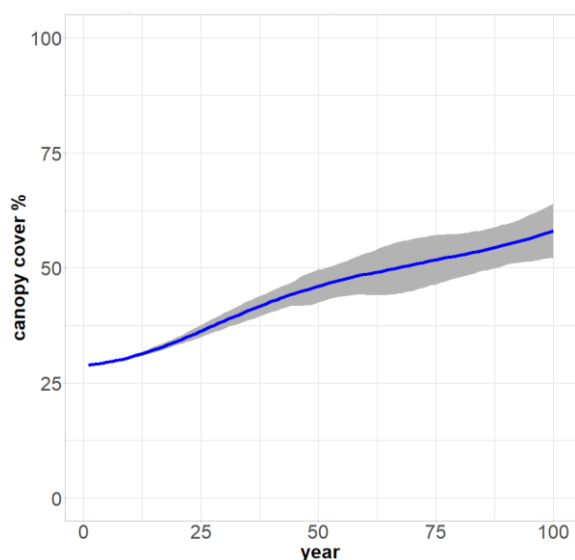
Graphical representation of the canopy cover projections over the next 100 years are provided below (Figure 12).



Scenario 1: 1,500 trees / year, matching existing species profile



Scenario 2: 5,000 trees / year, matching existing species profile



Scenario 3: 5,000 trees / year, larger trees at higher density

Figure 12. Tree canopy cover projections over the next 100 years under different planting scenarios. 95% confidence intervals are shown in grey shaded areas

Our Urban Forest Strategy Overview

The tree canopy modelling provides a unique evidence-base to inform tree canopy targets. A target of 45% tree canopy cover for the public realm is an achievable and inspirational goal for the Shire to strive for, with the support of the community.

Township canopy cover targets

The canopy target of 45% by 2034 is an average overall figure for the public realm on the Peninsula. As is typical of all cities and municipalities there is significant variation in existing and potential canopy cover across the Peninsula and between townships. Being mindful of this variation and of the desire for equitable canopy cover, targets have been set for the public realm area of each township wholly or partly in the urban area of the Peninsula. The impact of the planting scenarios on the overall canopy cover in each township has also been calculated, assuming that the canopy on private land remains constant.

Final canopy cover levels were calculated at the end of the modelled period (i.e. 2120) for each scenario. The projected canopy cover on public land and total township cover (assuming no change in cover on private land) were compared with the current Peninsula-wide average of 37.2%. Canopy projections by township are provided in Appendix B. Overall tree canopy on public land increased substantially when 5,000 new trees were planted compared with 1,500 trees, and when road reserves could accommodate 80% road canopy cover rather than 43%.

In Scenario 1 (1,500 new trees per year), 14 of 29 townships were below the Peninsula-wide average township canopy cover at the end of the modelled period, compared to ten townships below the average for the 5,000 trees with 43% canopy cover on roads. In the 5,000 trees with 80% road canopy cover scenario, six townships were below the Peninsula-wide average, but only one (Safety Beach) was substantially below this level.



Image 7. Martha Cove Boulevard, Safety Beach

Our future forest

The vision for the future Mornington Peninsula Shire urban forest has been developed with the community through the 2023 citizen panel vision and 2024 community engagement. The vision supports the Mornington Peninsula Community Vision 2040 and is aligned with Plan Melbourne, Living Melbourne and Open Space for Everyone.

Our Urban Forest Strategy 2034 Vision

The future Mornington Peninsula urban forest is growing, thriving and resilient, providing the diverse ecological, social and economic benefits to all people and creatures who live in the unique Peninsula forest.

The four themes directly reflect the central elements of the vision and provide a clear structure that links the strategic objectives, targets and actions to the vision. The themes are strongly interrelated, reflecting the holistic nature of contemporary urban forest management (*Figure 13. Urban Forest Strategy themes*).



The themes articulate the pathways for management of the urban forest for the benefit of the entire community and for future generations. Improving the quantity and quality of the urban forest will be a shared endeavour and the themes enable all contributors to see their role and play their part in realising on ground outcomes that reflect the vision. The themes and supporting strategic objectives, targets and actions (outlined in the following sections) will provide for a growing and resilient forest for the benefit of all.

Figure 13. Urban Forest Strategy themes

Theme	Description
Growing and protecting	Growing and protecting what we have is central to the strategy, so our urban forest is thriving, healthy, resilient and equitable into the future.
Thriving	A thriving urban forest depends on coordination between everyone on the Peninsula. Residents, community groups, the Shire and other land managers will share ownership and integrate greening and nature-based solutions across boundaries.
Resilient	A resilient urban forest reduces our vulnerability to the changing environment – preparing for climate change, heatwaves, extreme weather events, flooding, urban heat, pests and disease outbreaks.
Equitable	The myriad benefits provided by our urban forest must be shared across all townships, communities and demographics in a fair and equitable manner. Our connection to nature, biodiversity and cool green spaces is a fundamental principle for all communities across all current and future planning.

Theme 1: Growing and protecting

Our urban forest will support and build on the canopy and biodiversity we have and expand across the whole Peninsula to provide urban cooling and greening benefits to the community.

Growing and protecting our urban forest is central to the strategy, and underpins the other themes of a thriving, resilient and equitable urban forest. Our objectives, targets and actions will be tailored to the unique existing urban forest and biodiversity. We know that one target or approach won't meet our needs, and implementation of the strategy will need bespoke programs to complement the distinct features of each township and region.

Targets

- By 2034, vegetation is in place to achieve an average of 45% canopy cover in urban public spaces (road reserves and open spaces)
- No net canopy loss in any township by 2034
- All new trees planted are recorded and monitored for health and risk

Strategic Objective	Action	Timeframe
1. Increase canopy cover across all townships on the Peninsula	A. Develop and deliver an annual tree planting program, prioritising areas of low canopy cover and high heat vulnerability, and areas with high rates of tree losses	Ongoing
	B. Create an Urban Forestry Team to lead and manage annual planting program, proactive inspection program, community support and activation, and other long-term priorities and actions (including succession planting)	2026
	C. Develop an Urban Forest Implementation Plan that includes detailed planting opportunity maps for each township to inform the annual tree planting program	2026
	D. Where appropriate, require developers to plant appropriate street trees, particularly when private development leads to net canopy loss	2026
2. Protect and maintain existing canopy cover and biodiversity on public and private land, including restricting inappropriate losses and removals on private land	A. Include a Tree Protection and Vandalism Policy on public land, road reserves, coastal crown land and open spaces	2025
	B. Develop a Tree Valuation Policy or procedure including appropriate charges for trees removed from road reserves for development. Funds to be redirected to future planting and greening budgets	2026
	C. Investigate and implement actions to increase protections for local trees on public and private land, such as a local law	2028
	D. Finalise Planning Scheme Amendment C219morn to implement the Neighbourhood Character Study & Guidelines	2025
	E. Progress a new planning scheme amendment to implement the Biodiversity Conservation Plan by reviewing environment and landscape overlays in the Mornington Peninsula Planning Scheme	2027
	F. Continue to advocate to the state government to review bushfire mapping and requirements to prevent unnecessary and inappropriate clearance of vegetation in low-risk areas ³	2027

³ Improving Bushfire Planning Provisions (<https://www.mornpen.vic.gov.au/Building-Planning/Strategic-Planning/Strategic-Planning-Projects/Improving-Bushfire-Planning-Provisions>)

Strategic Objective	Action	Timeframe
	G. All tree species immediately adjacent to remnant vegetation and areas with high biodiversity values are indigenous and appropriate for the nearby ecosystems. Dark zones and corridors are to be included to impacts from artificial lighting are reduced	Ongoing
	H. Indigenous and native species are prioritised in Shire planting projects	Ongoing
3. Improve data collection evaluation and monitoring of urban forest health	A. Undertake development of comprehensive tree inventory that is kept up to date	2025
	B. Ensure the Tree Valuation Policy or procedure (Action 2.B above) can be used to calculate the economic value of the benefits provided by our urban forest to communicate its value and inform the recovery of costs for potential tree removals	2026
	C. Regularly inspect and monitor the health and growth of all trees on the Peninsula	Ongoing
	D. Update the Tree Ledger tool and use the data to: -Report on progress of tree planting and canopy outcomes -Update delivery program to reflect changing priorities	2026

Case study 1: Frankston's Urban Forest Action Plan

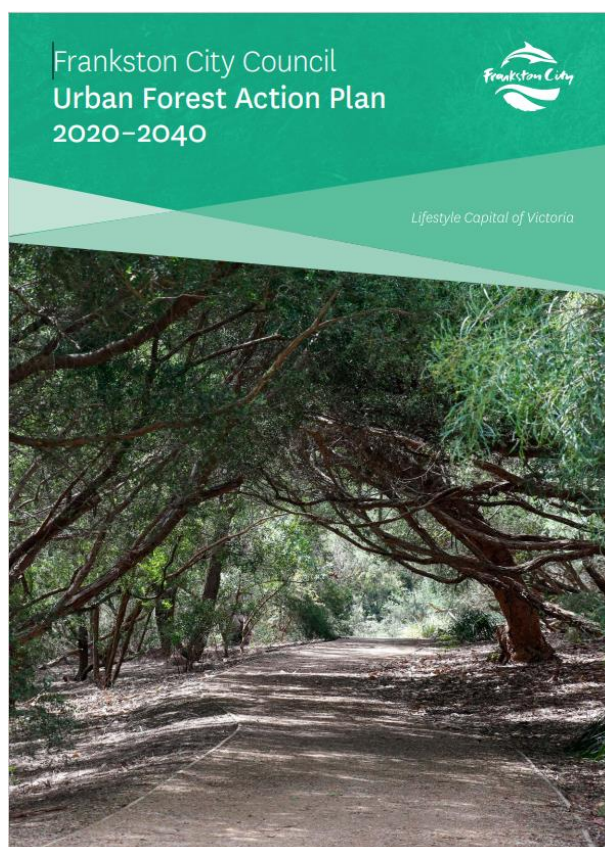
Frankston City Council adopted its 20-year Urban Forest Action Plan in 2020 to transform the City's urban forest into a highly-valued, well-resourced and thriving asset. The Plan sets a target of growing tree canopy cover from 17% to 20%, through planting 20,000 trees per year for four years.

In FY22/23, 20,035 trees were planted across natural reserves, open spaces, road reserves and in capital works projects.

The program demonstrates the significant investment required to grow and maintain an urban forest, and the benefits that a cooler and greener urban area provide.

Read more here:

<https://www.frankston.vic.gov.au/Community-and-Health/Environment/Trees-and-vegetation/Urban-Forest-Action-Plan>



Theme 2: Thriving

Our urban forest will form an integral part of the Peninsula, blending grey, green and blue infrastructure to support our community, ecosystems, waterways and animals to live and thrive in balance.

The urban forest will be integrated across the landscape, with greening and nature-based solutions central to decision making, coordinated design and implementation. All land-owners and managers will coordinate approaches to deliver best-practice land management and improve water health, soil health, permeability and Bunurong cultural values.

Targets

- Tree and vegetation planting is included in all Shire capital works to meet canopy targets, with WSUD included where significant impervious surface is added
- A collaborative network is established between the Shire, Traditional Owners and all relevant state government departments and organisations
- Residents are supported and activated to plant and manage trees and vegetation on their land

Strategic Objective	Action	Timeframe
1. Demonstrate leadership in managing a thriving urban forest on Shire owned and -managed land	A. Integrate urban forest objectives into relevant Shire policies, plans and processes	Ongoing
	B. Create a multi-disciplinary working group within the Shire to integrate cooling and greening across capital and maintenance programs	2025
	C. All Shire capital works projects to deliver best-practice urban forest outcomes, including protecting existing trees and vegetation, and planting additional trees to achieve maximum canopy over the site	Ongoing
2. Improve community ownership and support for our urban forest	A. Support, educate and enable residents to plant and manage trees and vegetation on their properties to deliver urban forest outcomes	2027
	B. Resource delivery of relevant Biodiversity Conservation Plan actions to support community groups and landholders to manage our bushland reserves and improve private properties (including Gardens for Wildlife program, Conservation Land Rate, Landcare Network and Friends Groups)	Ongoing
	C. Create and regularly update a page on the Shire's website to inform our community on past and future planting program, communicate the benefits of our urban forest and empower residents, businesses and community groups on opportunities to act	2025
	D. Implement the Shire's Nature Strip Policy and associated guidelines, request a street tree program and communications to remove barriers for residents to request trees and plant vegetation on nature strips	2025
3. Provide water quality benefits for urban runoff	A. Ensure tree planting is considered in the development of WSUD guidelines and design standards for Shire projects (Integrated Water Management Plan, Action 4.1d)	2026

Strategic Objective	Action	Timeframe
improving the health of our waterways and ecosystems	B. Incorporate WSUD in all Shire projects that include carparks, commercial precincts, plazas or other areas with large impervious surfaces	Ongoing
4. Share urban forest objectives and responsibilities across land-owners, jurisdictions and with key stakeholders including Traditional Owner groups	A. Meet on Country at least annually with BLCAC or other Traditional Owner groups to inform planting and protection programs	Ongoing
	B. Develop framework with BLCAC or other Traditional Owner groups for planting culturally significant trees for future generations	2027
	C. Work with BLCAC or other Traditional Owner groups to include Aboriginal names, cultural stories and values in communications, signage and projects involving tree and vegetation planting, where appropriate	2027
	D. Establish working relationships with relevant state government, committees of management and community organisations to deliver a consistent and effective urban forest response	2026

Case study 2: School tree planting

In 2024, St Mary's Primary School in Hastings planted 300 indigenous plants around the school oval to support the local biodiversity, and help deliver the Water Stewardship Plan developed together with the Western Port Biosphere.

The students now have opportunities to learn about the environment and become citizen scientists by monitoring the biodiversity of the newly-formed habitat.

The works were done in partnership with the Shire as part of our Climate Action Grants.



Names L-R: Callum, Lexi, Cr Dixon, Jacqui Salter, Mayor Brooks, Gab Espenschied

Theme 3: Resilient

Our urban forest will be resilient to the current and future impacts of climate change and urban densification, and in turn provide resilience to our communities and ecosystems.

The urban forest can be vulnerable to a changing environment, particularly the stresses and shocks from climate change, heatwaves, extreme weather events, flooding, urban heating, pest and disease outbreaks. Through planning and managing for resilience, we can reduce impacts to our urban forest and support community and ecosystem resilience across the Peninsula. Our role as stewards of the forest is to recognise current and future threats and to act to mitigate these and ensure the forest of the future is healthier and more resilient than the forest of today.

Targets

- Our community and environment has increased resilience to climate impacts including coastal inundation, flooding, extreme heat and drought
- Our urban forest has improved diversity in species, age and health appropriate to future conditions
- All townships have improved heat vulnerability scores

Strategic Objective	Action	Timeframe
1. Improve resilience of urban forest to current and future impacts of climate change	A. Develop species palette with climate-ready species, resilient to the projected 2100 climate conditions, to be reviewed and updated regularly	2025
	B. Develop methodology for selecting tree species appropriate to different infrastructure constraints, land use types, geological and topographical conditions on the Peninsula	2024
	C. Ensure that all new trees and vegetation areas with higher bushfire risk profiles are planted to ensure there is no measurable increased risk, and are carefully monitored and managed into the future	Ongoing
	D. Invest in coastal management that enhances vegetation buffers and allows coastal ecosystems to migrate with a changing coastline	Ongoing
2. Increase resilience through managing species, age and health of trees in each township	A. Identify and prioritise planting in townships and precincts with low species, age and health diversity	2026
	B. Undertake regular pest and disease monitoring and establish sentinel plantings at potential points of ingress	2026
3. Improve urban heat island effect outcomes across the Peninsula	A. Review updated state government HVI mapping to prioritise planting in vulnerable areas as it becomes available. Advocate for timely mapping by the state government to support strategic objectives.	2028
	B. Identify high priority locations for canopy increase to achieve targets	2028
4. Nuisance flooding risks are reduced through use of passive irrigation	A. Identify opportunities for the planting program, maintenance activities and capital works projects to deliver coordinated flood mitigation outcomes	Ongoing

Case study 3: Tree protection

In 2023, the Shire officially opened Eco Park in Mt Martha, an Active Recreation Hub that includes a skate bowl, scooter path and all-access playspace.

The design focused on retaining the existing trees to keep the high biodiversity and habitat value and provide cool and shaded places for the community.

Tree protection and planting is a key element of all capital works design and construction, to ensure that our buildings, paths and open spaces are green and health for future generations

Read more here:

<https://www.mornpen.vic.gov.au/About-Us/Major-Projects/Current-Projects/Mount-Martha-Eco-Park-Active-Hub-Skate-Park>



Theme 4: Equitable

Our urban forest will provide benefits to everyone across the Peninsula, and our community will help foster active connections to the trees and vegetation in our streets and open spaces.

The urban forest varies greatly between townships and across demographics, and we know that climate change and urban heating disproportionately affects vulnerable communities and people. Through planning for our future urban forest, we will ensure a fair and equal spread of the urban forest by prioritising areas more vulnerable to heating and climate impacts, and build canopy, shade and resilience into key areas such as walking paths, open spaces and carparks. We acknowledge the critical role that our community has in caring for and growing trees in the places that we live and work and will actively support and nurture these activities.

Targets

- Canopy cover disparity between townships is reduced by 2034
- Community groups and schools are supported to plant and manage urban forest projects in open spaces
- Reduced number and severity of injuries, damage and claims from public trees
- All Principal Pedestrian Network routes have been planted to increase canopy cover target 60%

Strategic Objective	Action	Timeframe
1. Tree canopy cover is equitably distributed across the municipality	A. Regularly review planting priorities to validate and improve data, assumptions and decisions	Ongoing
	B. Advocate for retention of trees in areas with low current canopy cover, or with high rate of tree removals	Ongoing
2. Programs are developed to enable Community groups and residents to actively participate in the stewardship of our urban forest	A. Support and enable community activation for community groups to plant and manage trees and vegetation in open spaces, reserves and on private land, particularly in areas of highest heat vulnerability. This may include community planting days and projects, school and citizen science programs and community stewardship initiatives	2028
	B. Trial a Miyawaki Forest (dense planting of indigenous species in a small area) on the Peninsula with the support of a community group	2028
3. Deliver cool and green paths and spaces for vulnerable populations	A. Consideration of tree protection and tree planting incorporated into all footpath construction projects, particularly along the Principal Pedestrian Network	2034
	B. Integrate Urban Forest objectives into the Open Space Strategy, and all future Masterplans and projects delivering open spaces	2026
4. Minimise impact to private and public infrastructure from trees	A. Develop and implement a proactive inspection and preventative maintenance program, prioritising trees with highest potential to cause issues	2026

Case study 4: Miyawaki forests

In 2023 the Green Pakapakanthi community group in the City of Adelaide has pioneered the planting of a 'Miyawaki Forest' at Victoria Park, aiming to grow a pocket forest with up to 100 times the biodiversity of a natural forest.

The group used methods to prepare and plant out a dense forest with 420 plants of 37 different species, chosen to attract birds and other species. They will continue to monitor the development and growth.

Miyawaki forests represent opportunities to significantly increase canopy, urban cooling and biodiversity in areas with limited space for traditional planting methods.

Read more here: <https://www.adelaide-parklands.asn.au/blog/2023/9/13/pocket-forest-pops-up>



Implementation

The strategy actions will increase the quantity and quality of the urban forest across the Peninsula and move it towards the vision. Over time the monitoring and evaluation of the changes to our urban forest will guide further shaping of the implementation program. As the Peninsula changes and develops, the urban forest must also change and evolve to meet our future needs and challenges.

Everyone who lives, works and plays in Mornington Peninsula Shire contributes to and benefits from a healthy forest. An urban forest needs active planning and maintenance from the Shire, the community, and many other stakeholders to build and maintain a healthy urban forest.

This section discusses some of the critical objectives and constraints that need to be considered when planning and managing our future urban forest.



Image 8. Gum tree in Mt Eliza

Greening the private realm

As private land (residential, commercial, transport and industrial) makes up most of our urban area, action to green these spaces can have the highest impact. The majority of canopy cover loss occurs in residential areas, so it is important to seek ways to both prevent decline and support an increase. We know that the challenges of climate change, heatwaves and urban densification affect all land use types, so it is important that all areas contribute to the greening of the peninsula and to support our strategic goals.

There are many opportunities for the Shire to provide leadership and engage and partner with landowners to pursue improved greening outcomes. Exemplars, knowledge sharing, incentivisation, partnerships and regulation all play a part in promoting greening.

Effective and impactful actions can be taken by resident and community groups by choosing to be active stewards of the forest. Some examples are:

- Planting trees, shrubs and grasses in backyards
- Educate and support private landowners to plant and care for suitable trees on their property
- Reducing the amount of paved surfaces
- Including green roofs and vegetation integrated with pergolas and verandahs
- Joining the Gardens for Wildlife program

As our urban forest crosses property boundaries and land types, collaboration is essential to achieve our targets. This can look like formal programs and agreements, or it can be individual action that contributes to a larger cohesive response.

The importance of vegetation in the private realm is also recognised in the Shire's Housing & Settlement Strategy 2020-2036, which outlines a sustainable approach to housing growth on the Peninsula for the next 15 years, acknowledging the importance of vegetation to the Shire's character and biodiversity. Our Neighbourhood Character Study and Guidelines (2019) also encourages new development to retain existing vegetation and provide large side and rear setbacks to allow for planting of significant vegetation.

Tree species selection on the peninsula

One of the considerations of planning our future urban forest is how to decide which species of tree should be planted. This can be complex as there are multiple objectives that can conflict, notably those of biodiversity values and urban cooling and greening. An urban forest that is Thriving, Resilient and Equitable will need careful consideration of what and where trees are planted to reduced our vulnerability to climate change, support biodiversity, connect communities to nature and support liveability. This will look different in each township, street and open space.

Biodiversity

Biodiversity protection and enhancement is a fundamental principle on the peninsula, due both to the value our community places on our natural ecosystems, and to support the inherent right of these ecosystems to thrive. Our [Biodiversity Conservation Plan](#) is the guiding document for managing and protecting these areas. When planting in and around areas with high biodiversity values (such as bushland reserves, coastal areas and remnant vegetation), indigenous species aligning to Ecological Vegetation Classes (EVCs) should be prioritised.

Urban cooling and greening

Addressing and mitigating the urban heat island effect is a core objective of the strategy, and this is typically highest in the most built up areas. These areas often have increased constraints around space, safety and underground and overhead infrastructure, and careful planning is needed to avoid damage and increased risk.

When planting in urban areas, exotic and non-indigenous native species may be more appropriate and provide a higher benefit to our urban forest, while also considering future maintenance implications. To balance these two principles, all planting programs, regardless of who is delivering them, a range of criteria should be used, including biological, ecological, functional, aesthetic and spatial. No one criteria will completely exclude all others, however the weighting of each criteria will vary for each location. In this way, we can ensure we adopt a 'right tree, right place' approach to elect the most appropriate species.

Integrated Water Management

Our [Integrated Water Management Plan](#) (2021) sets out our vision, targets and objectives for water management on the Peninsula to provide 'a liveable, resilient and thriving community and environment on the Mornington Peninsula'. The plan covers all sources of water, including waterways, creeks, bays, stormwater, rainwater and groundwater and includes actions to improve water health, potable water reduction and flood mitigation, all of which overlap with this strategy's objectives. Integrated Water Management is especially critical when planning for drought conditions where access to potable water is further restricted.

Trees and vegetation require water to establish, survive and thrive, and, especially in highly urbanised areas that often have the highest need for urban cooling, can benefit from infrastructure that diverts rainwater and stormwater to the tree. This approach is known as Water Sensitive Urban Design (WSUD), and although there are significant benefits from their inclusion, WSUD systems can significantly increase the costs and scope of tree planting projects, and conflict with other surrounding infrastructure.

To efficiently plan and manage our urban forest into the future, WSUD systems, including passive irrigation for trees, should be prioritised in all capital works projects that include construction of impervious surfaces. Passive irrigation should also be prioritised when planting trees in commercial precincts, plazas, carparks and other areas where access to water may be a risk for tree health.

Coastal Planning

Our foreshore and coastal areas, on both the Port Phillip Bay side and the Western Port side, are some of the most important and valuable areas on the Peninsula. These spaces house critical biodiversity and ecosystems, act as primary destinations for residents, campers and tourists, and host versatile open spaces for active transport, leisure and building community. Most residents live along the Port Phillip Bay coastline, and we are expecting a 4.6% increase in population by 2036.

Our coastal areas are also under significant threat from climate change. Many of our coastal areas, and the assets within them, are at risk from coastal inundation, storm surge, erosion and sea level rise, both now and into the future, as identified in the [Our Coast Our Future Strategy](#), developing a long-term Coastal Strategy. Nature-based solutions are some of the most cost effective for limiting these impacts and provide co-benefits that enhance the natural values of our coast. These solutions include planting, maintaining and supporting vegetation and trees along the coast.

There are clear opportunities for many areas along our coastline to improve resilience, amenity and cooling by planting appropriate trees and vegetation. This should be done carefully to align with long term plans for each area, and in line with the best scientific projections of future climate change impacts. This includes succession planting in areas with large old indigenous trees, such as the McCrae foreshore.

Accessibility and Universal Design

Our [Universal Design Policy](#) (2022) provides clear objectives to ensure that “all public spaces... are accessible and welcoming for all Mornington Peninsula residents and visitors”. Adopting a universal design approach to our urban forest will support our goals, especially the Equitable theme, particularly as those with highest needs can be the most vulnerable to the effects of urban heating and climate change.

There are potential conflicts with providing accessible walking routes, particularly in road reserves and open spaces where tree roots, leaf litter and fruits or nuts can impact walking paths and cause trip hazards. Planting and supporting some species can cause unplanned impacts to some communities or people.

Care must be taken when developing street tree and vegetation palettes, planting programs and maintenance regimes to ensure that, as much as practical, our urban forest provides benefits to all without impacting access in the ways mentioned above.

Reporting and review

Our investment into growing and protecting our urban forest will be guided by an annual implementation plan that directs the townships and streets that will be planted in the following years.

Monitoring progress is a key component of implementation, both to provide transparency to the community and to ensure that our decision making takes new evidence into account. Each year, a report will be published on the Shire website, reporting on progress against each action and target in this Strategy, as well as all known data on tree planting, tree removals, canopy increase/decrease, and other metrics such as urban heat island effect and carbon sequestration. Note that some metrics are not updated annually and so will be updated as and when available.

The lifetime of Our Urban Forest Strategy is 10 years to reflect the significant and sustained efforts necessary. To ensure that it remains relevant the strategy will undergo a major review after 5 years.

While the timeframe of this strategy is 10 years, the lifetime of a forest is much longer (50-100 years), therefore the targets developed are longer term and reflect sustained efforts over generations.

Glossary

Term	Definition
Biolink	A series of connected ecosystems that provide safe and easy movement of wildlife
Canopy cover	The land area covered by the vertical projection of a tree crown (branches, leaves and reproductive structures), that provides shade and cooling
Climate change	The long-term rise in global average temperature, caused by human influence, resulting in negative effects such as sea level rise, ocean acidification, extreme weather events, loss of biodiversity and increase in human suffering.
Climate Resilience	The sustained ability of a community or ecosystem to respond to, withstand and recover from shocks and stressors. Acute shocks include disasters like fire, floods and storms.
Ecosystem services	The benefits provided to humans by the natural environment and healthy ecosystems
Exotic species	Plants, animals, fungi and other organisms that have been introduced (deliberately or accidentally) to Australia or a given area after European settlement
Heat vulnerability	The extent to which a person or community is vulnerable to injury or death during and immediately following extreme heat, measured by heat exposure, heat sensitivity and adaptive capacity (resources to respond and adapt to heat)
Indigenous species	Plant and animal species found naturally in pre-European Australia within a specific geographic region
Integrated Water Management	Integrated Water Management (IWM) is a collaborative approach to planning and managing all elements of the water cycle, including stormwater, wastewater, water supplies (surface water and groundwater) and waterways.
Native species	Species occurring in Australia as part of the pre-European flora or fauna, but not necessarily indigenous to areas where it is recorded
Nature strip	A nature strip (road reserve) is the strip of public land between a property boundary and the adjacent roadway. They can have a number of important functions such as walkways around a community, providing remnant habitat for native species and supporting services (sewerage, power, phone).
Nuisance flooding	Low levels of inundation that do not pose significant threats to public safety or cause major property damage, but can disrupt routine day-to-day activities, put added strain on infrastructure systems such as roadways and sewers and cause minor property damage
Urban area	The areas of interest for the urban forest strategy defined as areas of the Mornington Peninsula Shire local government area within the Urban Growth Boundary and areas outside the Urban Growth Boundary but zoned residential (GRZ + LDRZ)
Urban forest	All the trees and other vegetation – and the soil and water that supports it – within the urban area of the municipality
Urban heat island effect	An increase in localised temperature due to the urban built environment, primarily due to high amounts of concrete and asphalt, and a reduction in vegetation. Increasing tree canopy cover is a key method to reduce these effects.
Urban growth boundary	The urban growth boundary (UGB) is a planning mechanism implemented by the Victorian government to manage the expansion of the Greater Melbourne's urban footprint. The purpose of the UGB is to contain urban sprawl, encourage more efficient land use, protect environmentally sensitive areas, and promote sustainable development patterns.
Water Sensitive Urban Design	A holistic approach to water management that integrates urban design and planning with social and physical sciences in order to deliver water services and protect aquatic environments in an urban setting.

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Appendices

Appendix A – Township Summaries – refer attachment

Appendix B – Canopy projections by township

Appendix B – Canopy projections by township

Table 5. Canopy projections in 2120 by township⁴

Township	Public land canopy cover (%) 2020	Township canopy cover (%) 2020	Final public land canopy cover (%) - 1,500 mixed	Final township canopy cover (%) 1,500 mixed	Final public land canopy cover (%) 5,000 mixed	Final township canopy cover (%) 5,000 mixed	Final public land canopy cover (%) 5,000 large - 80% road canopy cover	Final township canopy cover (%) 5,000 large
Arthurs Seat	62.3%	67.5%	29.6%	64.5%	58.1%	67.2%	58.2%	67.2%
Balnarring	35.0%	38.8%	20.1%	35.5%	40.2%	39.9%	57.6%	43.7%
Balnarring Beach	36.3%	37.4%	19.4%	33.9%	38.5%	37.9%	67.0%	43.9%
Baxter	14.7%	19.8%	19.7%	21.8%	34.8%	27.7%	60.8%	37.9%
Bittern	26.1%	47.0%	21.1%	46.2%	42.3%	49.8%	53.4%	51.7%
Blairstown	48.1%	53.5%	24.6%	48.0%	45.7%	52.9%	61.6%	56.6%
Capel Sound	29.1%	29.3%	19.4%	25.8%	37.5%	32.3%	46.4%	35.5%
Crib Point	38.8%	49.8%	21.5%	48.0%	37.8%	49.7%	61.4%	52.1%
Dromana	22.1%	28.8%	19.3%	28.1%	35.2%	31.9%	61.9%	38.3%
Flinders	35.8%	43.3%	19.3%	41.0%	37.1%	43.5%	61.8%	47.1%
Hastings	25.0%	32.8%	19.1%	32.2%	36.6%	34.0%	62.1%	36.8%
McCrae	31.0%	38.5%	19.6%	36.7%	35.9%	39.3%	63.4%	43.8%
Merricks Beach	57.0%	47.2%	34.6%	44.7%	48.0%	46.2%	66.6%	48.2%
Mornington	16.9%	20.8%	17.2%	20.9%	35.7%	26.3%	55.9%	32.1%
Mount Eliza	30.6%	41.0%	20.2%	39.1%	37.7%	42.3%	59.8%	46.3%
Mount Martha	29.2%	37.4%	20.8%	35.1%	40.5%	40.5%	56.0%	44.8%
Point Leo	34.1%	40.6%	23.1%	38.9%	38.4%	41.3%	74.3%	46.9%
Portsea	40.1%	46.6%	26.0%	44.4%	47.8%	47.9%	62.3%	50.2%
Red Hill	69.6%	59.8%	35.8%	46.8%	55.8%	54.5%	57.4%	55.1%
Rosebud	26.9%	29.7%	19.2%	27.4%	38.0%	33.0%	59.8%	39.6%
Rye	41.0%	49.5%	22.6%	45.4%	39.9%	49.2%	62.8%	54.4%
Safety Beach	13.5%	14.2%	18.2%	15.2%	37.3%	19.4%	60.4%	24.4%

⁴ In some cases, the canopy cover figures may be affected by the presence of non-residential land being included in the urban growth boundary. This may have an impact on the final results in this strategy, but is not considered to significantly change any recommendations or prioritisation.

Our Urban Forest

Township	Public land canopy cover (%) 2020	Township canopy cover (%) 2020	Final public land canopy cover (%) - 1,500 mixed	Final township canopy cover (%) 1,500 mixed	Final public land canopy cover (%) 5,000 mixed	Final township canopy cover (%) 5,000 mixed	Final public land canopy cover (%) 5,000 large - 80% road canopy cover	Final township canopy cover (%) 5,000 large
Shoreham	37.1%	59.2%	25.0%	57.1%	41.8%	60.1%	56.3%	62.6%
Somers	27.1%	48.3%	20.9%	46.4%	41.3%	52.6%	49.3%	55.0%
Somerville	19.6%	29.9%	19.3%	29.9%	39.3%	32.1%	56.8%	34.1%
Sorrento	40.1%	46.4%	21.7%	42.9%	37.7%	45.9%	61.2%	50.4%
St Andrews Beach	42.7%	60.4%	22.9%	59.2%	39.1%	60.2%	64.1%	61.7%
Tootgarook	29.3%	33.5%	19.2%	31.4%	37.6%	35.3%	60.3%	40.0%
Tyabb	29.4%	34.8%	18.0%	34.1%	33.8%	35.1%	57.3%	36.4%