

BASS COAST

Urban Forest Strategy **2022-40**



Acknowledgement of Country

Bass Coast Shire Council acknowledge the Bunurong as the Traditional Owners and Custodians of the lands and waters, and pays respect to their Elders past, present and emerging, for they hold the memories, the traditions, the culture and Lore.

Bass Coast Shire Council celebrates the opportunity to embrace and empower the Aboriginal and/or Torres Strait Island Communities in their diversity.

Bass Coast Shire Council will create opportunities for future recognition and respectful partnerships that will honour the Traditional Owners and Custodians, and Aboriginal and/or Torres Strait Islander Peoples.

Diversity and Inclusion

Bass Coast Shire Council is committed to providing communications and engagement that is welcoming, safe, accessible and inclusive for our community including First Nations, Culturally and Linguistically Diverse (CALD), Lesbian, Gay Bisexual, Transgender, Queer, Intersex and Asexual (LGBTQIA+) peoples, people with disability and of all ages.

BASS COAST

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2041
Community Vision

From its flowing hills to its wild unspoiled coastlines, the Bass Coast is a source of celebration for all who live in and visit the region. Our townships are vibrant, rich with culture and full of life, each with its own distinct character. Drawing on our creativity, innovation and resilience we've created a thriving and diverse economy that supports sustainable agriculture and industry.

We live proudly on Bunurong Country, and build on learnings from our First Peoples and their knowledge. We coexist in harmony with our environment, and are prepared for future challenges and changes. We are the people of the Bass Coast. Experience our cultures and history, and contribute to our story.

Executive summary

Bass Coast Shire Council has listened to our community and will work towards achieving our Community Vision by increasing the trees and vegetation in our townships to create our Urban Forest.

We are expanding and growing our Urban Forest, to help us adapt to the threat of climate change. Urban Forests are made up of all trees and vegetation in an urban area. They include street trees and other vegetation on nature strips, in parks and open space, as well as in backyards, along waterways, in industrial areas and in conservation areas.

Our Urban Forest is one of the most efficient and cost-effective mechanisms for adapting our region to climate change. While most of our townships enjoy a high cover of vegetation, with an average of 25 percent cover, our Urban Forest currently faces some serious threats such as climate change and urban development. We aim to increase the canopy cover to 40 per cent across our townships by 2040.

While Council currently manages our urban vegetation effectively within existing resources, particularly trees in the public realm, we know that there is room for improvement. We also acknowledge that the biggest contributor to our Urban Forest is vegetation on privately owned land - land in residential, commercial and industrial areas. Council managed land only makes up 24 per cent of our urban township areas. We have a passionate, knowledgeable community who would like to see strong leadership and support from us in protecting and enhancing our Urban Forest. Our community have told us that they:

- want more trees planted across townships, predominantly in new developments, in parks, on nature strips, around sports grounds and along main shopping strips
- support Council investing in more public street and park trees
- recognise the importance of trees on private property
- think Council should require greater regulatory protection over trees and vegetation and would support Council developing incentives for tree protection and planting on private property

This Strategy, the first of its kind for Bass Coast, directly supports the delivery of the Council Plan 2021-25, the Community Vision 2041 and the Climate Change Action Plan 2020-2030. We are directly seeking to:

1. PROTECT our Urban Forest
2. GROW our Urban Forest
3. EMPOWER our community and other land holders to protect and grow the Urban Forest on their land
4. EMBED best practice Urban Forest principles into our everyday work.

We are looking to play a leading role in delivering this Strategy and given the extent of Urban Forest on private land, supporting and encouraging other landowners, developers and our community to collaborate and work with us.



Urban Forest Policy Statement

Bass Coast recognises the critical importance of our Urban Forest in achieving our desired local climate change adaptation, environmental and health and wellbeing outcomes. Our community wants to see our Urban Forest grow and to be able to connect with our wild spaces.



We commit to investing in the planning, maintenance and management of our Urban Forest to maximise the social, economic and environmental returns for our region into the future. This includes the following elements of planning and management of trees and vegetation:

- protection
- planting and tree establishment
- maintenance and management
- integration with civil and capital works
- community engagement and participation
- regulation and incentives on private land



Trees are our best friends in dealing with climate change

Community member, 2022

What is Bass Coast's Urban Forest?

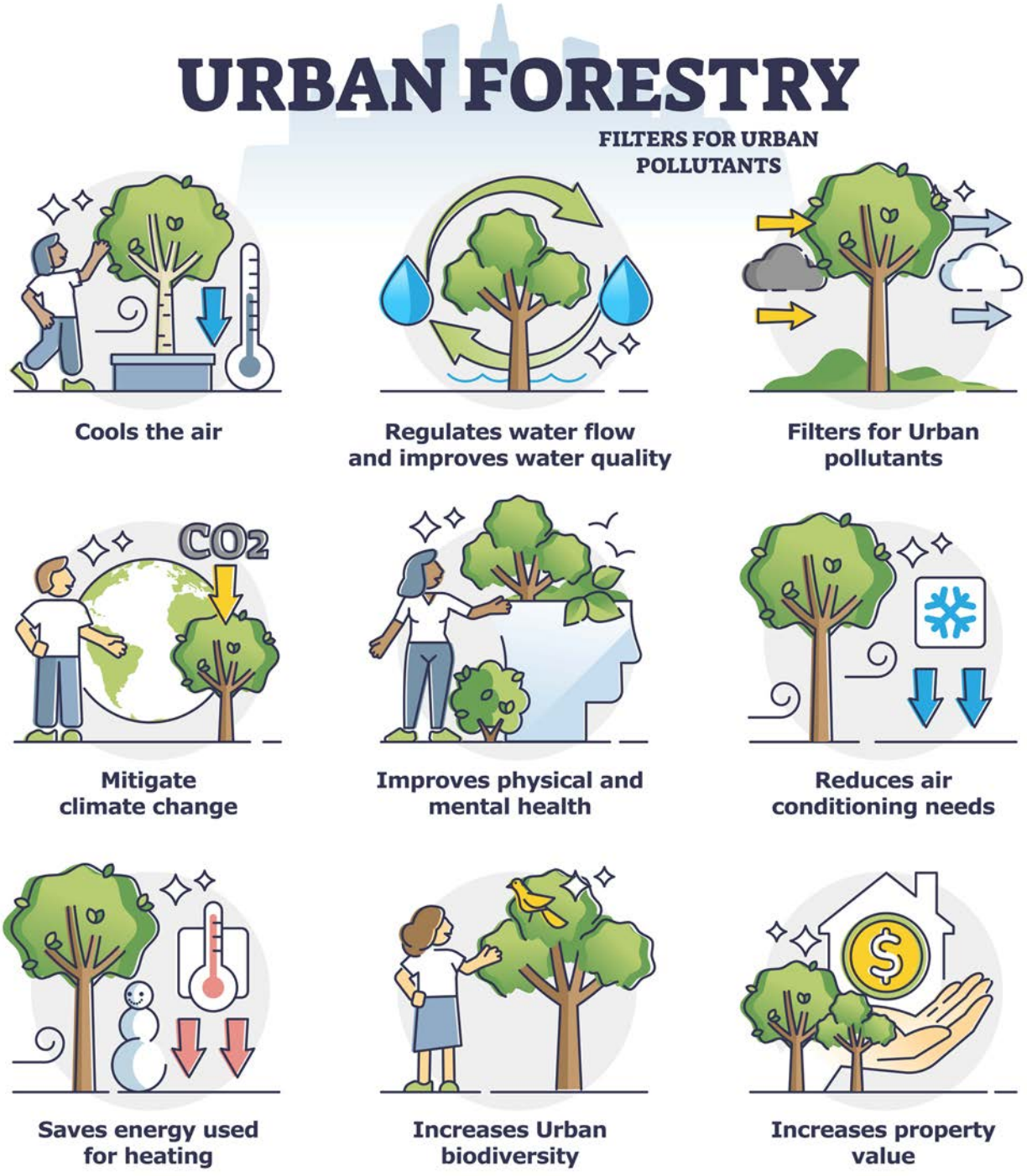
Bass Coast's Urban Forest is the combination of all vegetation including trees, shrubs and grasses within our townships. It includes street and road trees, parks and gardens, foreshore vegetation, residents front and back gardens, trees in carparks and vegetation along waterways.

Our Urban Forest is one of the most cost effective and efficient mechanisms for adapting our townships to climate change, as it allows for:

1. Cooling and shading of our urban landscapes during summer
2. Intercepting rainfall and reducing the amount of stormwater runoff into our waterways
3. Providing habitat for biodiversity and connecting our Biolinks through townships and
4. Storing and sequestering carbon

There are also a whole host of other reasons why our Urban Forest is important to us and our environment.




URBAN FORESTRY
FILTERS FOR URBAN POLLUTANTS
Cools the air
Regulates water flow and improves water quality
Filters for Urban pollutants
CO2
Mitigate climate change
Improves physical and mental health
Reduces air conditioning needs
Saves energy used for heating
Increases Urban biodiversity
Increases property value

Did you know:

1. Tree shade can improve energy efficiency in a home and reduce electricity consumption by up to 5-10 per cent in summer *(ref. 20,26,31,35)*

2. Tree shade along pedestrian and cycling paths encourages more walking and cycling and even reduces UV exposure *(ref. 11,13,17,20,25,28,32)*

3. Houses in leafy streets attract significantly higher sale prices. Well maintained and spaced street trees can increase property values by up to 30 per cent *(ref. 7,23,24)*

4. Motorists drive more slowly along treed streets and so trees are frequently used as traffic calming measures *(ref. 34,35)*

5. Retail and commercial shopping strips that are well treed and landscaped, record greater economic productivity by up to 20 per cent as shoppers spend more time and therefore more money *(ref. 33)*

6. Trees absorb carbon dioxide and air pollution and produce oxygen, noting that large healthy trees absorb 60-70 times more air pollution than smaller trees *(ref. 8,10,16,22)*

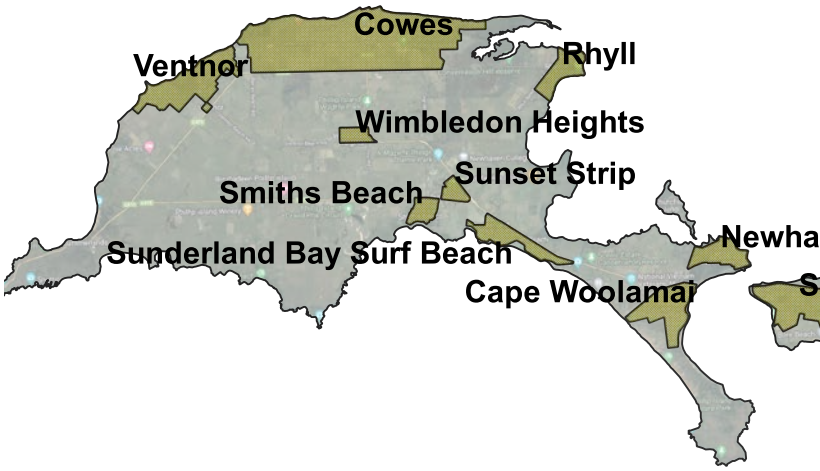
Strategy Scope

This Strategy covers the planning, management and maintenance of our Urban Forest and its scope covers all land within our urban settlements, shown in yellow on the map.

Our Urban Forest includes street trees, park trees and shrubs, foreshore vegetation, and trees and vegetation on private property.

It is worth noting that Council manages just 24 per cent of the urban land in Bass Coast. By contrast 76 per cent of the land is privately owned by residents, businesses and landlords.

As a result, private land is the greatest contributor to our Urban Forest.



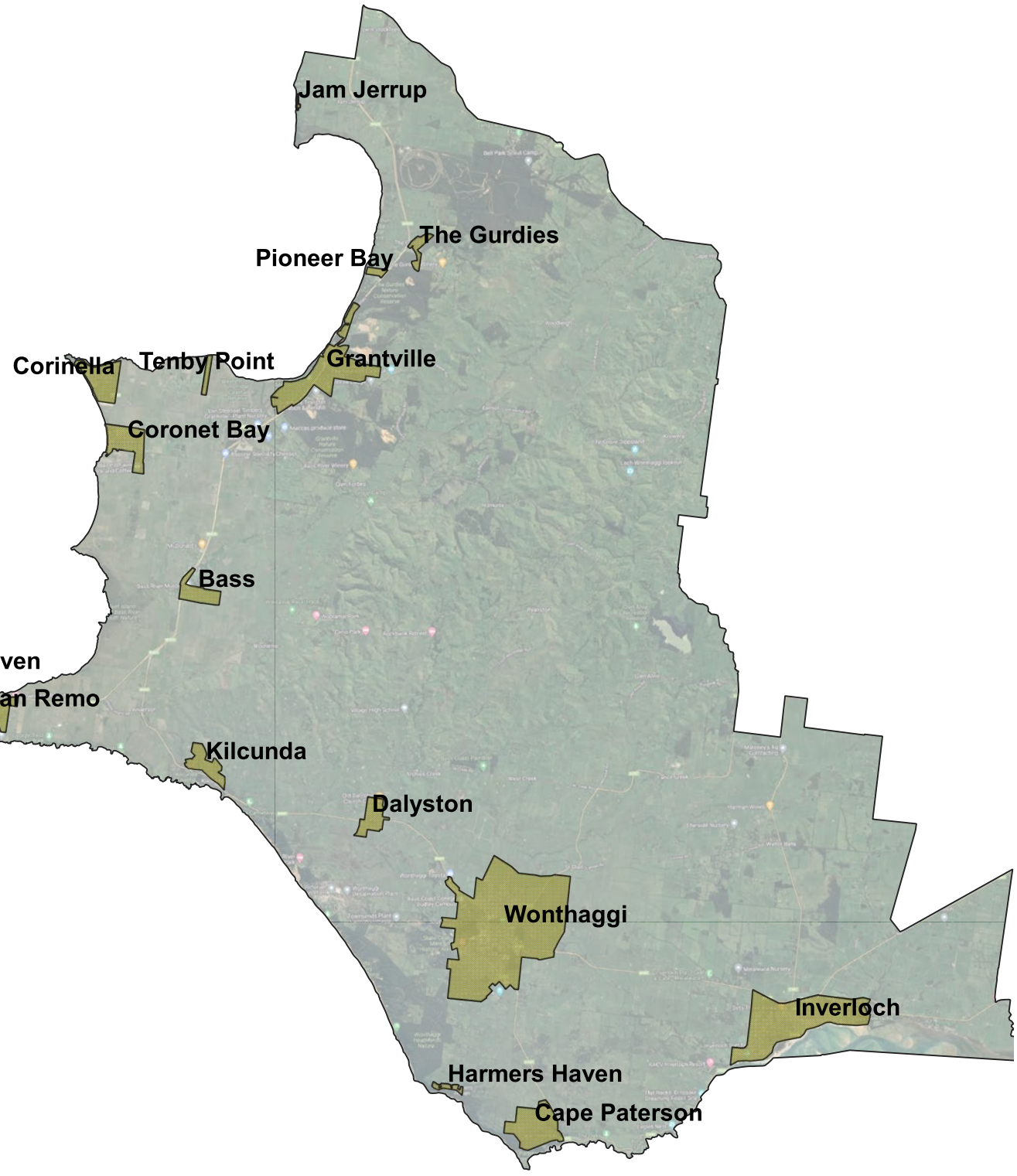
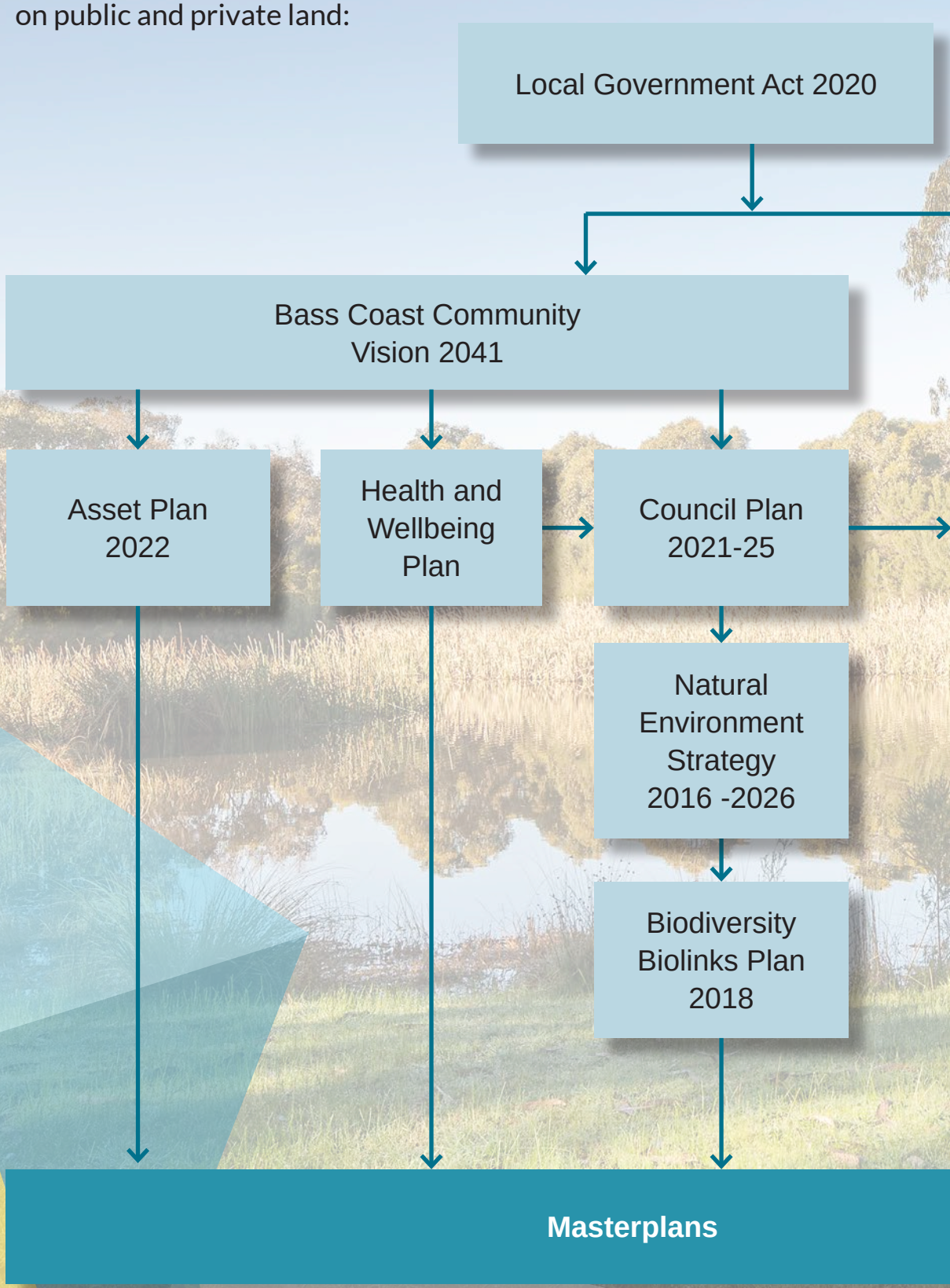


Image 1: This Urban Forest Strategy applies to all land with our townships, coloured

Strategic Context

Council has a number of Plans, Strategies and Policies in place that in some way influence the way we manage our Urban Forest both on public and private land:



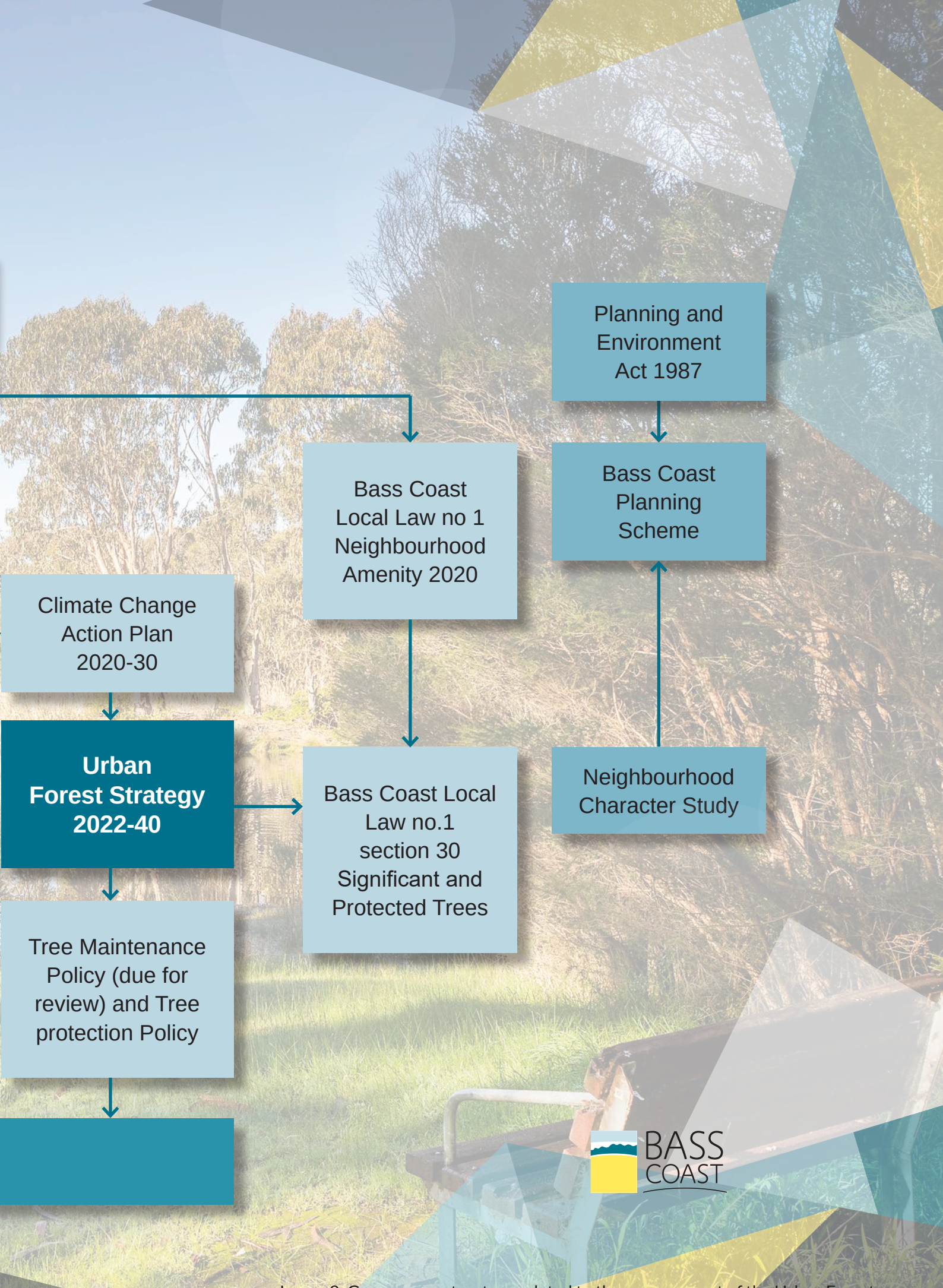
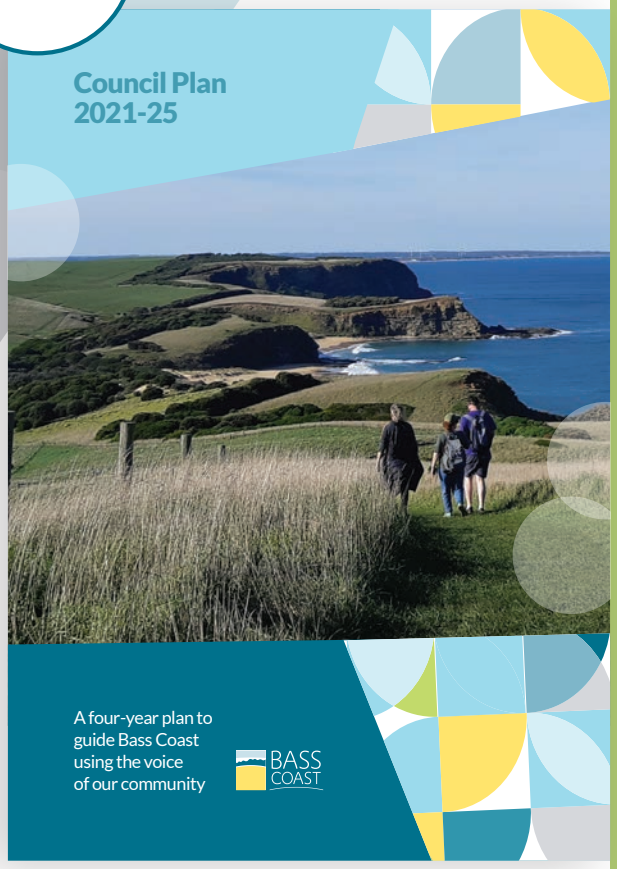


Image 2: Governance structure related to the management of the Urban Forest

1



Council Plan 2021-25

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This Urban Forest Strategy and our

Protecting our natural environment

Existing Commitment:

- Ensure Council's planning instruments protect the environmental assets of the Bass Coast
- Improve biodiversity through careful management of land, water and ecosystems that protect and enhance our native flora, fauna and Biolinks
- Increase net vegetation cover

The Urban Forest Strategy will:

- Seek to establish a Significant Tree Register
- Explore the most appropriate mechanisms for protecting and encouraging the planting of trees on private land
- Identify where the Biolinks intersect with our urban areas and prioritise the planting of native and indigenous species to enhance and buffer these areas
- Set urban tree canopy cover targets to ensure an increase in vegetation within our settlements

ongoing program **will contribute** to Council's following existing priorities:

Healthy Community

Existing Commitment

- Work in partnership with the community to adapt and respond to emergencies and climate change

The Urban Forest Strategy will:

- Seek to establish more community tree planting and citizen science programs, building upon the significant community knowledge already held

Our Places

Existing Commitment

- Create attractive and accessible public open spaces that complement and enhance our visitor economy

The Urban Forest Strategy will:

- Ensure tree planting is prioritised for high impact areas such as township centres to maximise the community benefits of increased tree canopy cover

Sustainable Development

Existing Commitment

- Promote environmentally sustainable and universal design principles as standard

The Urban Forest Strategy will:

- Seek to improve the integration of trees, vegetation and stormwater into civic and capital works

Leading for our Community

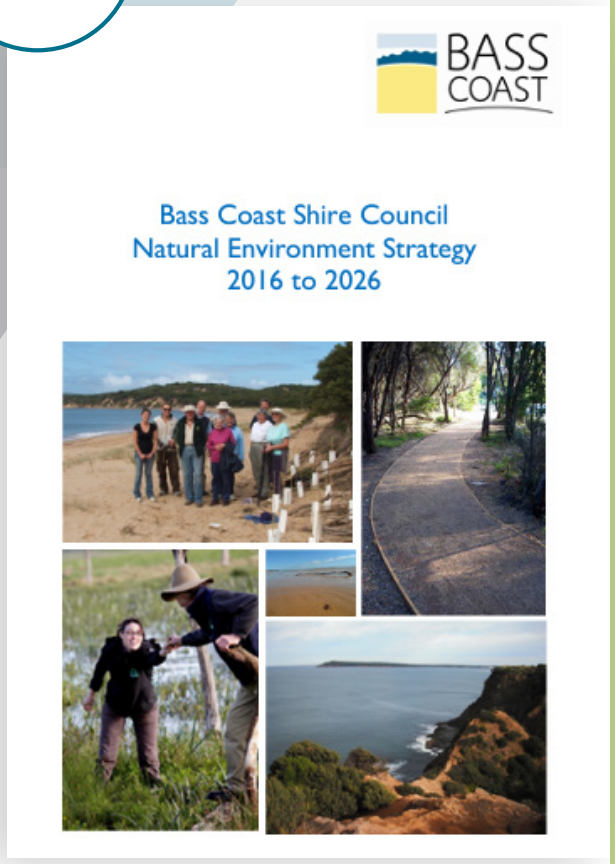
Existing Commitment

- Foster partnerships and engage with the community, Traditional Owners and businesses to deliver the Climate Change Action Plan and achieve the zero net emissions target by 2030
- Demonstrate good governance, integrity and accountability through decision making that is ethical, informed and inclusive

The Urban Forest Strategy will:

- Encourage Council to collaborate and partner with community groups to grow the Urban Forest
- Identify the gaps in our tree management program and set actions for improvement and transparency

2



Natural Environment Strategy

Mitigating the forecast impacts of climate change

Existing Commitment:

- Minimise urban heat islands by increasing native vegetation cover in urban areas

The Urban Forest Strategy will:

- Set tree canopy cover targets to improve vegetation cover over our urban areas

Improve health of the landscape through increased biodiversity and indigenous vegetation protection

Existing Commitment

- Increase indigenous vegetation and biodiversity within the Shire through planting events

The Urban Forest Strategy will:

- Collaborate and partner with community groups to maximise Urban Forest outcomes: citizen science, data collection, revegetation on public land, nesting boxes, community stewards

Develop community partnerships that promote environmental awareness

Existing Commitment

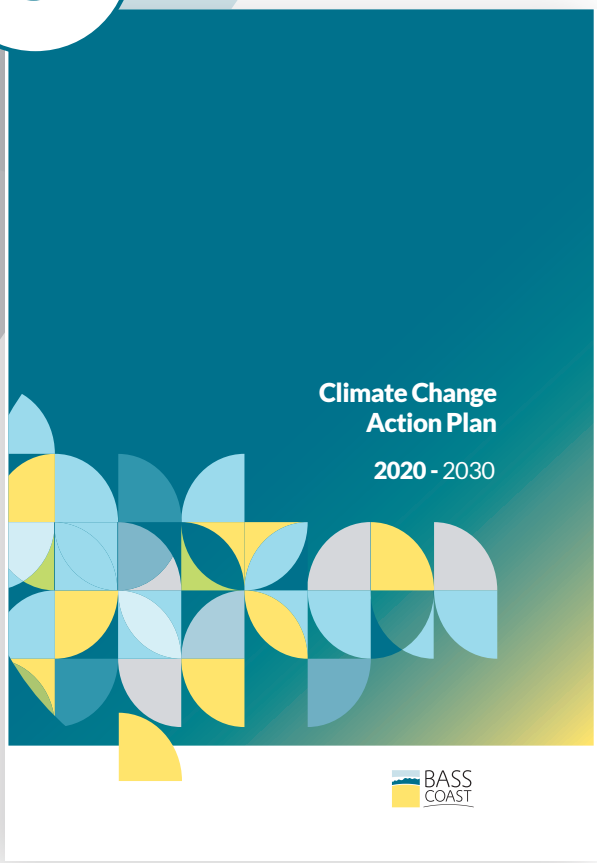
- Investigate new models to collaborate and work more productively with community conservation and sustainability volunteer groups within the Shire
- Increase the amount of indigenous vegetation cover in our urban townships towards the target of 1.5 per cent per year

The Urban Forest Strategy will:

- Collaborate and partner with community groups to maximise Urban Forest outcomes: citizen science, data collection, revegetation on public land, nesting boxes, community stewards
- Set tree canopy cover targets to improve vegetation cover over our urban areas



3



Climate Change Action Plan 2020-2030

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Existing Commitment:

- Action 22 Update the climate resilient species list
- Action 23 to improve vegetation cover in urban centres
- Encourage landholders to grow the Urban Forest in private gardens to help draw carbon from the atmosphere
- Continue to deliver urban revegetation projects to restore wildlife corridor and habitat

The Urban Forest Strategy will:

- Develop a climate resilient species list for Council works, planning and community.
- Set tree canopy cover targets to improve vegetation cover over our urban areas and seek appropriate budget for a fully funded tree planting program
- Investigate incentives for the retention and planting of vegetation on private land
- Identify key locations of Biolinks in townships and plant understory, shrubs, and place nesting boxes in existing trees



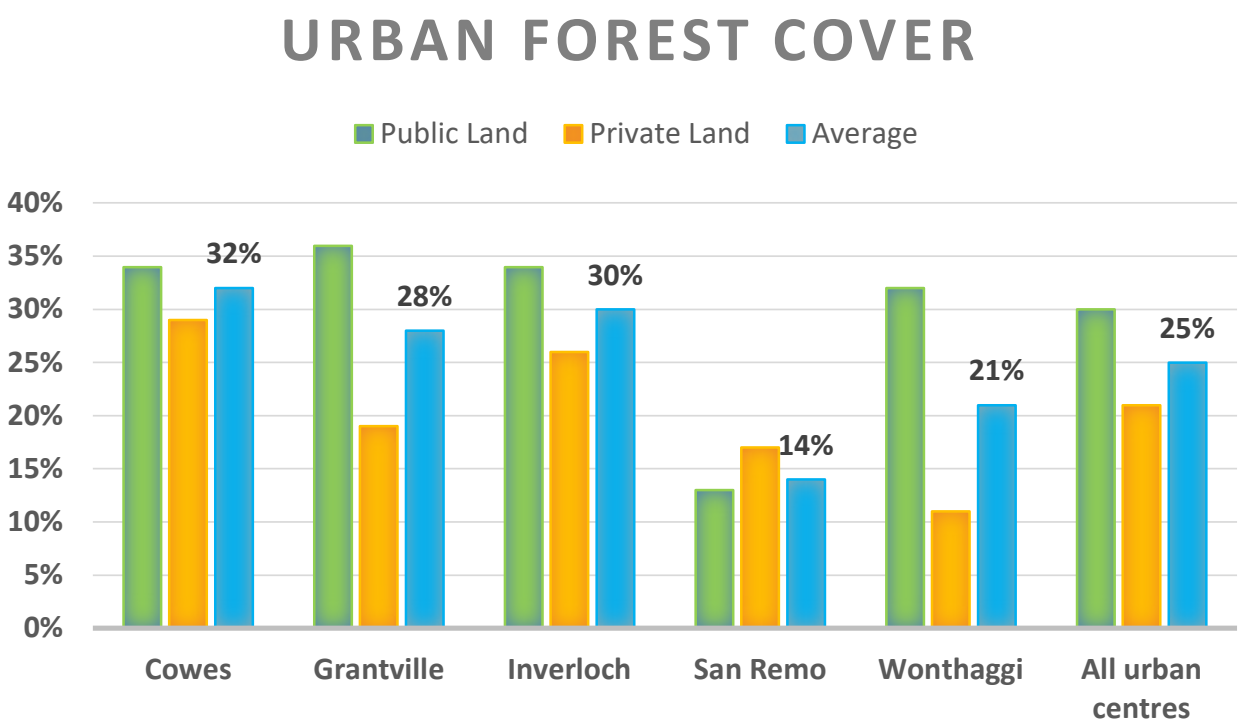
Bass Coast's Urban Forest today

To plan for a larger and more resilient Urban Forest, it is important to understand what our Urban Forest looks like today in 2022 and where the opportunities for improvement lie.

Tree canopy and shrub cover

Canopy cover is a useful measure of the Urban Forest as it quantifies the amount of vegetation covering an area and thereby directly quantifies the measure of benefits provided to the local area eg. the amount of shade cover, rainfall interception, carbon stored and sequestered.

Urban Forest cover, which is the combination of all urban trees and shrubs, has been measured over public and private land across Bass Coast's five largest townships. Vegetation cover for Cowes, Grantville, Inverloch, San Remo and Wonthaggi was investigated using point sampling of aerial imagery. Sampling was undertaken separately for public and private land within each township. The analysis used 1,000 points that were randomly distributed within each land tenure type (public and private) in each township and every point was manually classified as either hard surface, tree, shrub, grass, dirt/gravel/sand and other (e.g. water bodies). These points were then used to determine statistical cover for each land cover classification. This study showed that 24 per cent of the Shire is public land, while 76 per cent is private so it is important to engage with private landowners to improve the health and coverage of the Urban Forest.

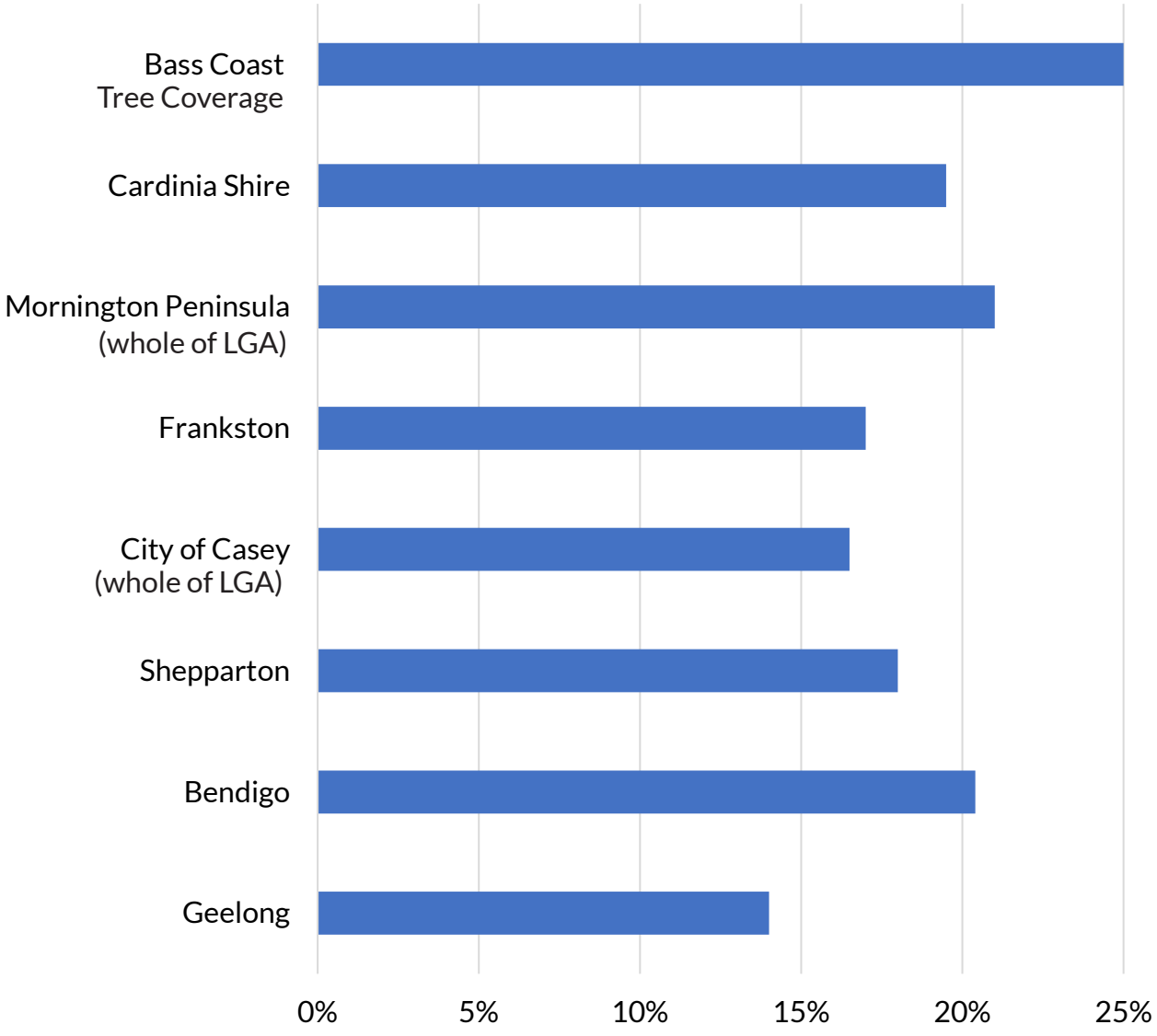


Urban Forest cover over our five biggest townships measures an average of 25 per cent. This varies between land tenure type. Urban Forest cover over public realm (shade over streets, parks, and foreshores) is at 30 per cent. Over the private realm, (private residential land, commercial and industrial land), there is a lower cover of 21 percent.

There are considerable differences between the townships. Cowes, Grantville, Inverloch, and Wonthaggi all record over 30 per cent public realm Urban Forest cover. San Remo has a higher cover of vegetation on its private land than public, and Wonthaggi has the lowest private vegetation cover of all of the towns at only 11 per cent.

A 25 percent Urban Forest cover is considered in the Victorian context to be quite high as shown on the graph over the page, with many Melbourne metropolitan Local Government Areas (LGA's) setting aspirational targets to achieve this level of cover.

From a regional comparison, canopy cover baselines for other LGA's and Regional Cities are as follows:



What is the optimal tree canopy cover?

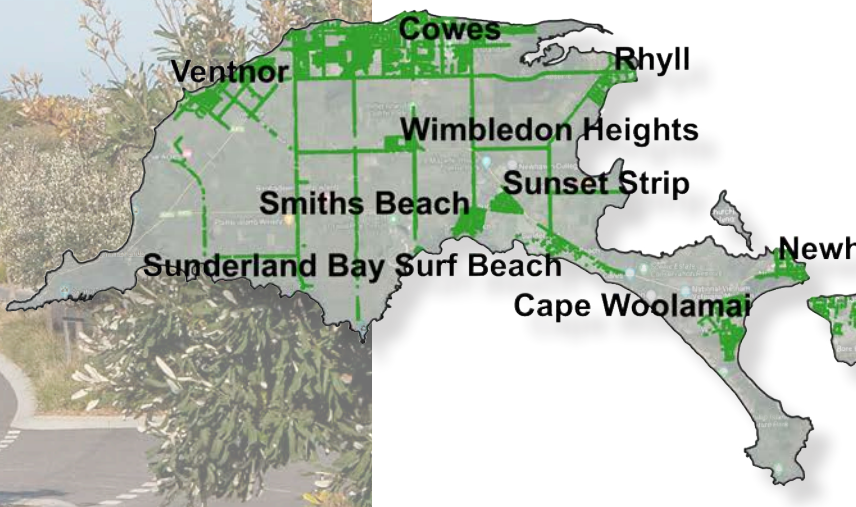
Trees provide shade and cool our cities, reduce stormwater flows and nutrient load while providing amenity and health benefits. Research suggests that the optimal urban tree canopy cover for environmental and social benefits is 40 per cent (Ziter et al, 2019). Health and community benefit decline when canopy cover drops below 25 per cent. Taking this into account, a target of 40 per cent canopy coverage by 2040 has been set with no area falling below 25 per cent canopy coverage, to ensure all Bass Coast communities share the benefits of urban greening.

While we have a strong baseline of canopy cover in Bass Coast, without future planning and in the face of climate change, our Urban Forest is at risk of shrinking. We cannot afford to be complacent, particularly because our local economy and lifestyle is dependent on our natural environment.



Street Trees

We have collected the spatial locations of the majority of our urban street trees and those along some rural roads, which provides an estimate of the number of trees Council manages. There are 39,367 trees that have been geolocated, however we are yet to collect other information such as species, age, health or useful life expectancy.



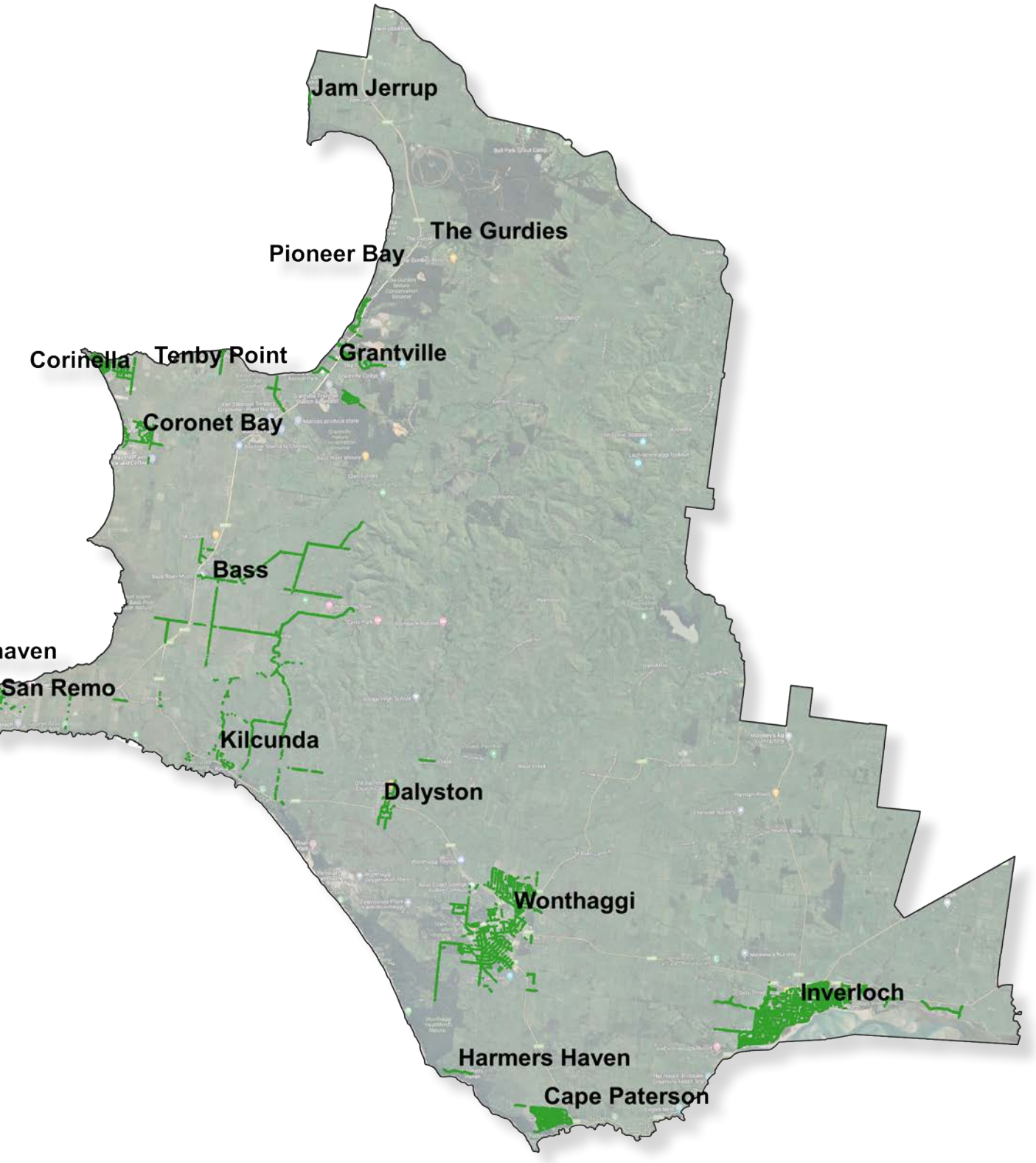


Image 2: Distribution of township street trees in 2022



Potential street tree planting sites

A desktop analysis using aerial imagery of our townships, has identified a number of potential vacant street tree planting sites to provide an indication of the scale of future tree planting programs. Each site has yet to be assessed on ground for potential conflicts and suitability, particularly for species selection and soil preparation. This validation work will be necessary before any trees can be planted.

Approximately 8,500 potential vacant street tree sites have been identified across our five largest townships as follows:

Township	No of vacant sites
Cowes	2,046
Grantville	498
Inverloch	2,056
San Remo	1,011
Wonthaggi	3,064
TOTAL	8,675

Further work will need to be done to identify potential vacant street tree planting sites across the other townships as well as within parks, open space and along shared pathways.

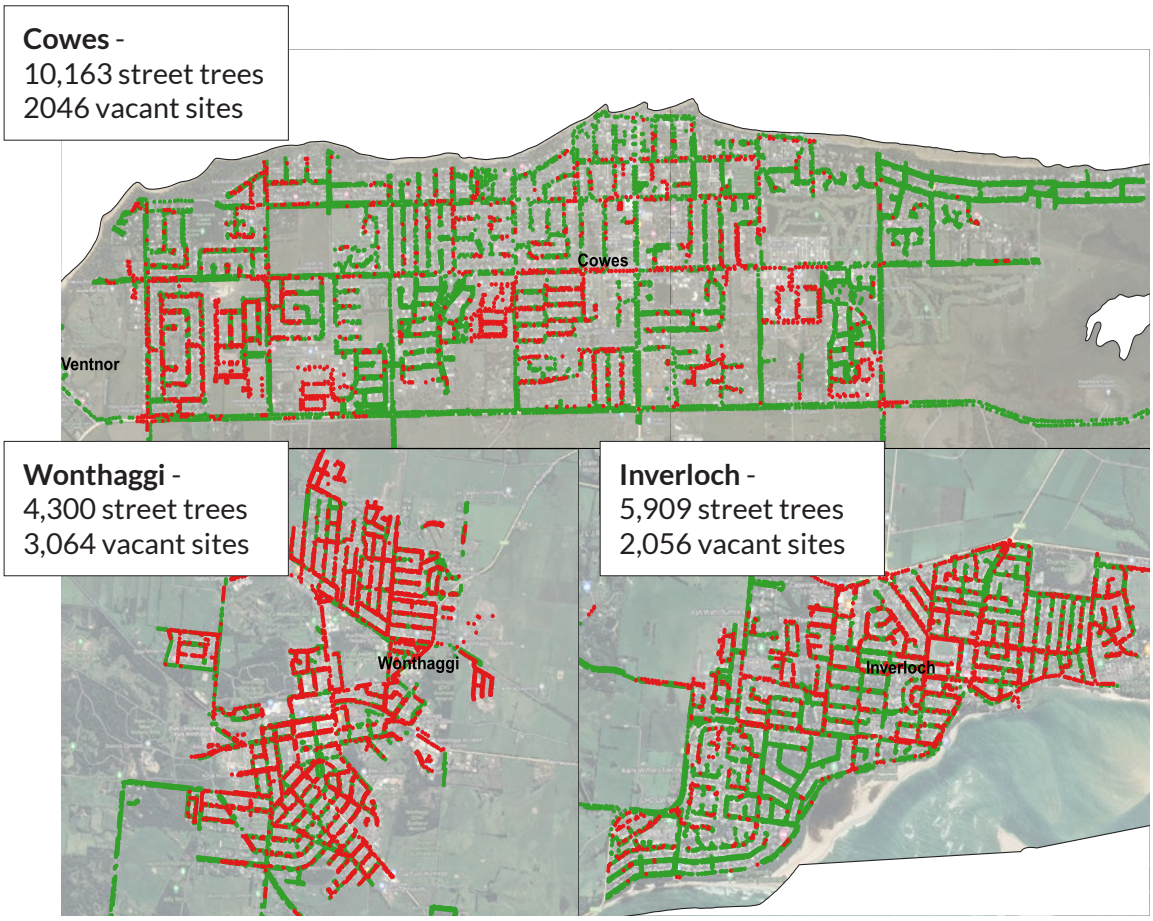


Image 3: Distribution of vacant street tree sites in Cowes, Wonthaggi and Inverloch as at 2022

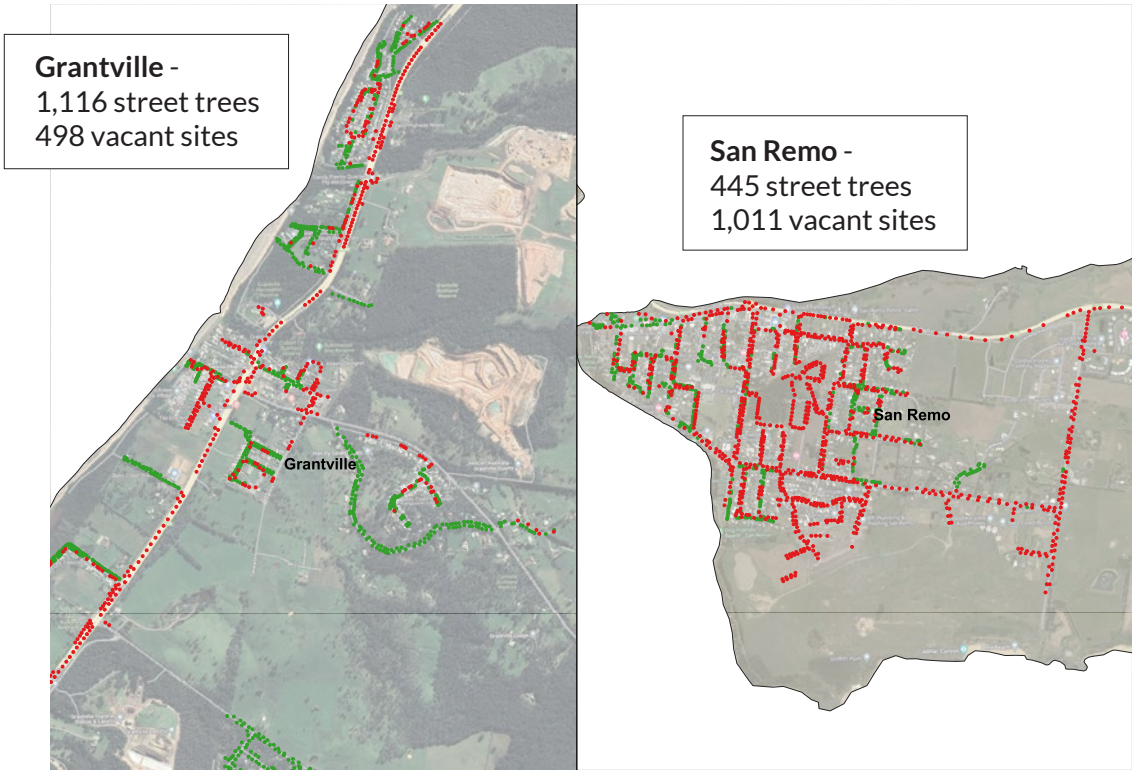


Image 4: Distribution of vacant street tree sites in Grantville and San Remo as at 2022



Biolinks

Biolinks are wildlife corridors that connect pockets of native vegetation. They allow animals to move between these areas and increase the genetic diversity in breeding populations.

It is recognised in the Biodiversity Biolinks Plan 2018 that only 14 per cent of Bass Coast's native vegetation remains. Community members and landholders have identified 200 Biolinks across Bass Coast and now we are working in partnership with landholders to vegetate these Biolinks.

Whilst the Biolinks Plan focuses on protecting and enhancing wildlife corridors on rural land, some of these corridors intersect through or along our urban townships. These Biolinks will be continued into the urban areas to increase habitat cover and encourage the spread of biodiversity into townships.

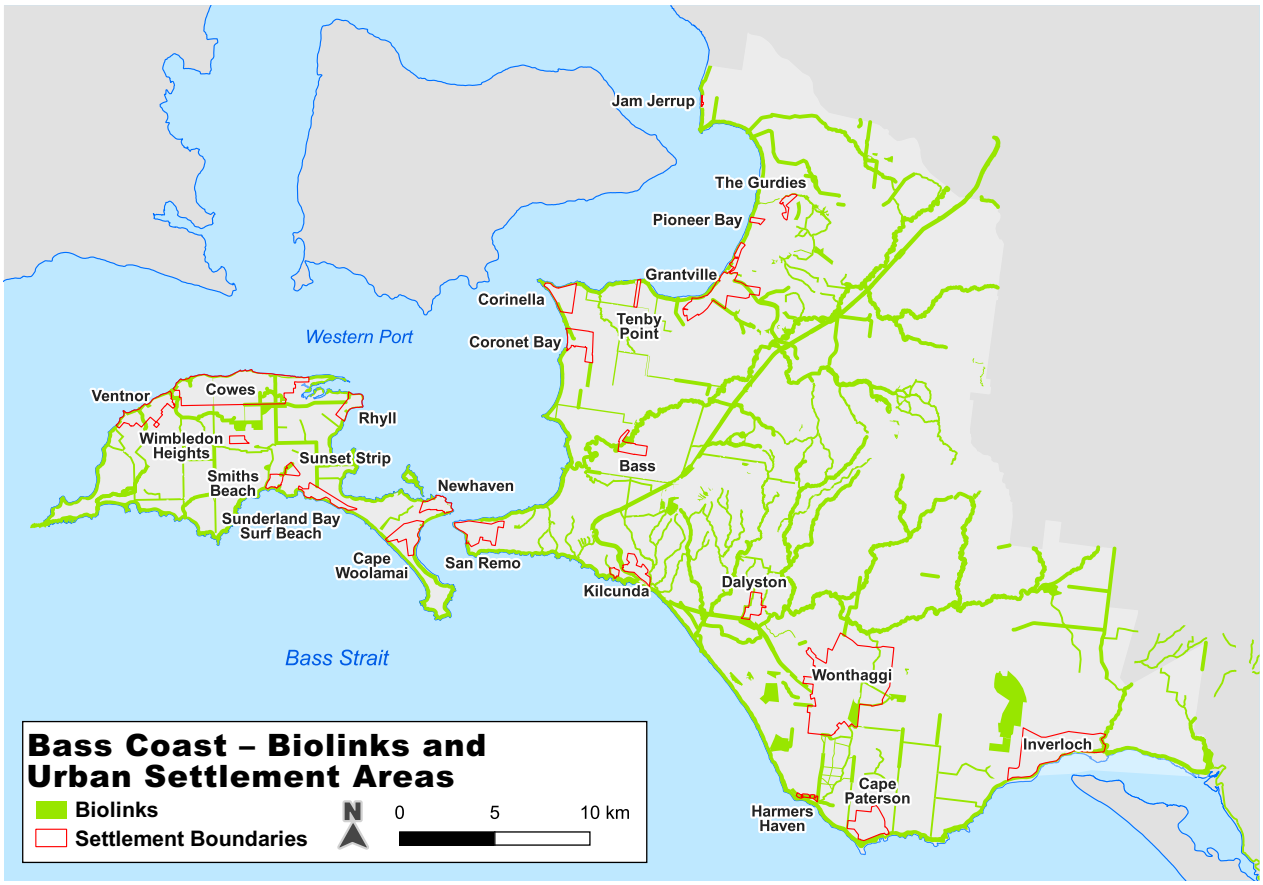


Image 5: Biolinks in rural and urban areas.

Who is responsible for the Urban Forest?

Critically, many opportunities to improve our Urban Forest lie on private land that is directly managed by landholders, not Council, so it is critical to understand the full extent of responsibilities when it comes to managing our Urban Forest.



	Parks + Natural Areas
Community and private businesses	Foreshore Management Committees and Friends Groups who undertake planting and maintenance
Other agencies	Parks Victoria, West Gippsland Catchment Management Authority, Phillip Island Nature Parks, Bass Coast Landcare Network, DEECA, Water Authorities
Council	- Parks and reserve masterplans' - Tracks and trails - Community gardens - Conservation reserves



Residential Neighbourhoods	Urban Centres and Main Roads
Private gardens and trees Need to adhere to Local Law no.1 section 30 Significant and Protected Tree Register	Shopping centre and commercial carpark vegetation planting and maintenance
Utility Provider Companies Powerline clearance Gas line works	Department of Transport main road trees and vegetation
Street tree maintenance and planting Asset renewal: roads, footpaths, kerb and channel, stormwater Streetscape design and liveability	Main street, plaza and carpark vegetation maintenance and planting Implementation of capital works



I think the Council staff do a great job of making the place look nice. I would just like to see more trees planted in parks and along nature strips

Community member, 2022

Public vegetation management

Council has a passionate and knowledgeable Arboriculture and Horticulture Team that drives vegetation planting and maintenance across the Shire.

We plant around 500 trees per year, with 300 of these coming from customer requests. Species are selected from an existing preferred list that includes a large range of natives and a smaller group of exotics. Species selection is currently informed by the existing character of a township eg. Inverloch is predominantly native while Wonthaggi is ornamental exotics.

Tree establishment includes watering and formative pruning of newly planted trees and is currently done on an ad-hoc basis when resources and budgets allow.

Our arborists work alongside internal Civil Teams to avoid and minimise tree removal for Council infrastructure works where possible, though sometimes trees are required to be removed if considered dangerous. Unfortunately, there is currently little enforceable protection given to street trees impacted from private development works, such as during development of subdivsions. Better protection could be provided to newly planted trees in subdivisions.

Other than trees in high profile locations or those under powerlines, which are routinely inspected and maintained, all other trees are maintained on a reactive basis informed by customer requests or storm/wind damage. Vandalism is also an issue, particularly where trees may impede on views from private property.

Private vegetation management

The Bass Coast Planning Scheme sets out a clear framework for vegetation management within Bass Coast. Image 6 provides an overview of relevant policy included within the Municipal Planning Strategy and Planning Policy Framework. There are also controls within the Victorian Planning Provisions to manage protection of vegetation.

Some trees and vegetation may also have planning controls requiring a planning permit to remove them. The assessment of removal applications for protected and significant trees are conducted within our Strategy and Growth department.

> *"I have appreciated recent work landscaping the Cape Woolamai shopping precinct"*
>
> *Community Member, 2022*



State Policy

Environment and landscape

Planning should help to protect the health of ecological systems and the biodiversity they support (including ecosystems, habitats, species and genetic diversity) and conserve areas with identified environmental and landscape values.

- Planning should protect, restore and enhance sites and features of nature conservation, biodiversity, geological or landscape value
- To assist the protection and conservation of Victoria's biodiversity

Native vegetation management

- To ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation
- Implement principles of:
  - Avoid the removal, destruction or lopping of native vegetation
  - Minimise impacts from the removal, destruction or lopping of native vegetation that cannot be avoided
  - Provide an offset to compensate for the biodiversity impact from the removal, destruction or lopping of native vegetation

Bushfire planning

- To strengthen the resilience of settlements and communities to bushfire through risk-based planning that prioritises the protection of human life
- Ensure settlement growth and development approvals can implement bushfire protection measures without unacceptable biodiversity impacts by discouraging settlement growth and development in bushfire affected areas that are important areas of biodiversity



Local Policy

- Identify and protect good quality vegetation stands
- Avoid impacts of land use and development on identified significant flora and fauna habitats and remnant indigenous vegetation, including roadside vegetation
- Site, design and construct development to retain existing vegetation (particularly when indigenous) and incorporate revegetation where possible

Municipal Planning Strategy

Council seeks to:

- Protect and conserve the Shire's biologically diverse natural environment
- Prioritise habitat protection and enhancement
- Minimise the decline and fragmentation of indigenous vegetation
- Minimise the degradation of the coastline and other areas of high habitat value
- Support a built environment that enhances surrounding natural environment and landscape values
- Support building design that complements its setting
- Support the role of landscape design as integral to any development

Image 6: Policy relevant to the Urban Forest Strategy contained within Municipal Planning Strategy and Planning Policy Framework



Trees on private land are not directly managed by Council. A new Local Law 30 – Significant and Protected Trees was adopted in 2022 which now requires residents to apply for a permit to cut, prune, lop or otherwise interfere with a tree protected.

Guidelines have been prepared in order to clearly set out the way in which applications for permits will be assessed for trees listed as 'Significant' or 'Protected' as defined in Section 8 of the Local Law 2022. Under this subclause the following is defined:



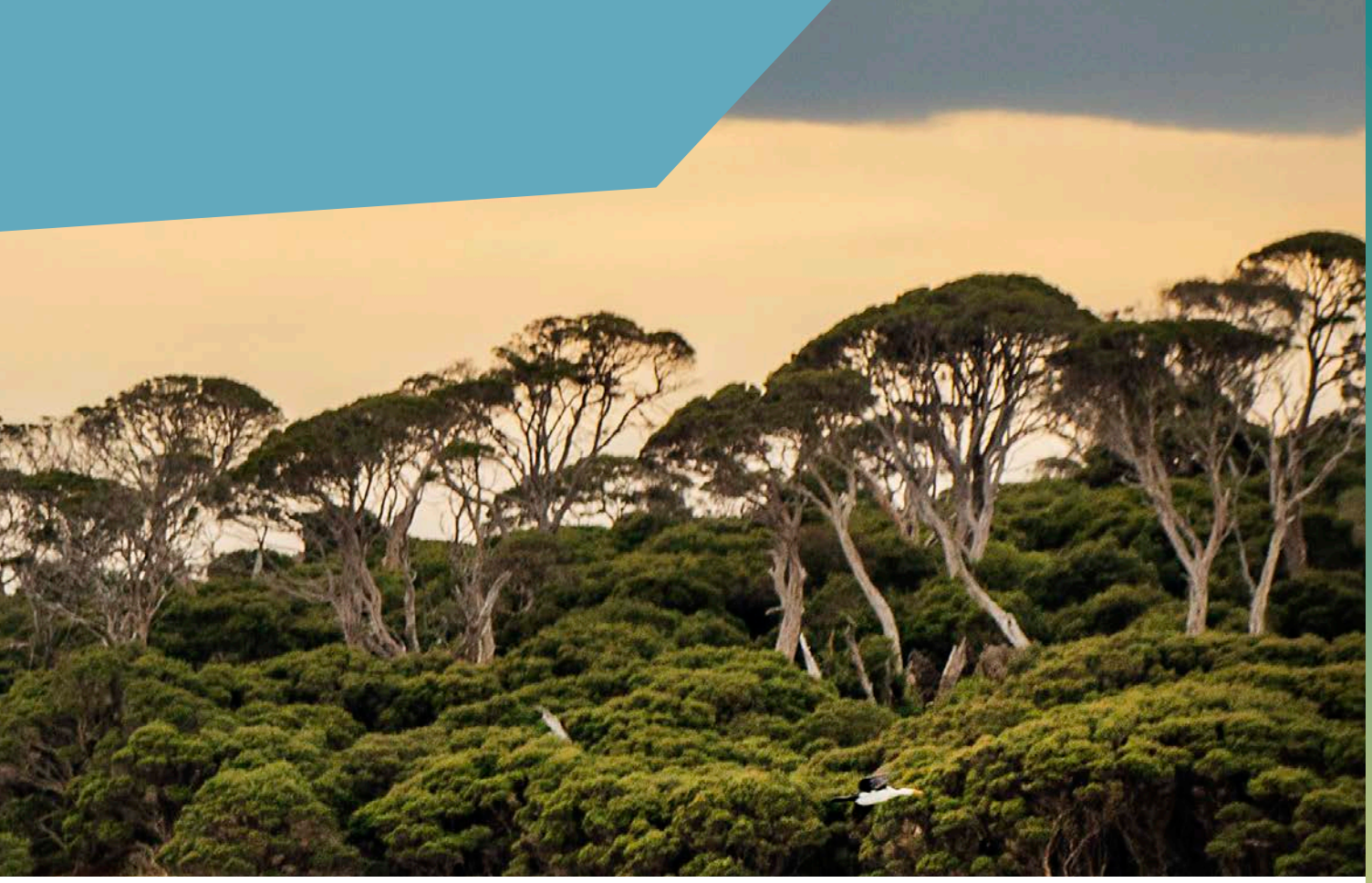
Significant tree

means a tree recorded on Council's Significant Tree Register.



Protected tree

means a tree with a single trunk circumference or combined trunk circumference greater that 155 centimetres measured at one metre above ground level but excluding species which are noxious weeds.



We will be implementing a Significant Tree Register as an action of this Strategy, the significant tree register is enforced under the Local Law.

Protection of significant vegetation under the Planning Scheme, is a desirable outcome, and would require a significant vegetation study and significant vegetation register to be developed. This would involve a study to identify all significant vegetation underpinned by a rigorous methodology to determine significance and if it is to be protected in the Planning Scheme, this would be supported by strategic justification and identified in the Municipal Strategic Statement.

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Challenges and opportunities for our Urban Forest

Bass Coast's Urban Forest faces a series of challenges that we need to address to appropriately mitigate risk and develop an efficient and effective management program going forward.

Climate Change

One of the most urgent and unprecedented challenges is climate change.

The climate change hazards identified for the Bass Coast region include increased average temperatures and solar radiation, increased extreme heat days, more extreme storm and bushfire events, decreased annual rainfall, rising sea levels and ocean acidification. It is likely that the biggest impacts to the Urban Forest will be warmer average temperatures, the reduction in average rainfall and high wind events.

Given that the Urban Forest is a critical mechanism by which we can adapt our townships to withstand climate change, the need to protect and expand it is vital. There are some essential Urban Forest management approaches that we can adopt to help transition our Urban Forest into a healthy and viable climate change adaptation tool:

- Select the right species for the right location, whether it be indigenous, native or exotic
- Plant species that are likely to withstand our changing climate
- Plant understory where possible
- Create good growing conditions for new trees: adequate soil volumes, soil moisture levels, above ground space, mulching etc to encourage deep root establishment
- Establish all newly planted trees through irrigation and formative pruning 24 months after planting
- Routinely inspect and proactively maintain all existing street and park trees to prune, uplift, deadwood, mulch
- As trees are removed, ensure they are replaced

Biodiversity loss

There is a wealth of biodiversity within our townships thanks to the range of gardens and backyards on private land and the variety of species within our parks, streets and foreshore reserves. This diversity of indigenous, native and exotic species supports a range of local wildlife, insects and organisms. However, this biodiversity is under threat, particularly from development and invasive pest plants and animals.

Our townships provide exceptional opportunities to act as buffers and protectors of certain signature plant and animal species. Reducing biodiversity loss requires collaborative action from all land holders, with Council taking a leading role in:

- Active removal of invasive vegetation species on public land and replacement with suitable vegetation for the site
- Aligning street and park tree species selection with areas identified within an existing Biolink
- Encouraging residents to plant bee, insect and bird friendly gardens and be aware of weedy species
- Protect and enhance foreshores within our townships in partnership with our active community groups and public land managers
- Seek to protect significant trees on public and private land, especially those with ecological and biodiversity value
- Retain habitat trees in the landscape

> *"A more nuanced approach to decision making on the tree canopy is widely recognised and is required in Bass Coast where issues of biodiversity decline are acute"*
>
> *Community member, 2022*

Development

Urban development within Bass Coast settlement boundaries is an important aspect of our growth and economic productivity.

The State Government and the advent of protected settlement boundaries will likely place further pressure on established urban areas to provide for population growth, increasing the amount of infill development.

Further to infill development pressures, there is an opportunity to rethink the planning of our last remaining greenfield subdivisions to elevate the importance of trees and vegetation. Doing this will provide greater liveability of our townships.

The protection of trees is vital to retaining the character and environment of our townships. Trees grow in a delicate balance with their environment and any changes to that balance must be minimised if the tree is to remain in a healthy state and fulfil its potential. It is difficult to repair stressed and injured trees, so damage needs to be avoided during all stages of development and construction.

There are many development levers to drive improvement, including planning and regulation, guidelines, education and incentives.

Some of the things we will explore to create better outcomes for vegetation alongside development include:

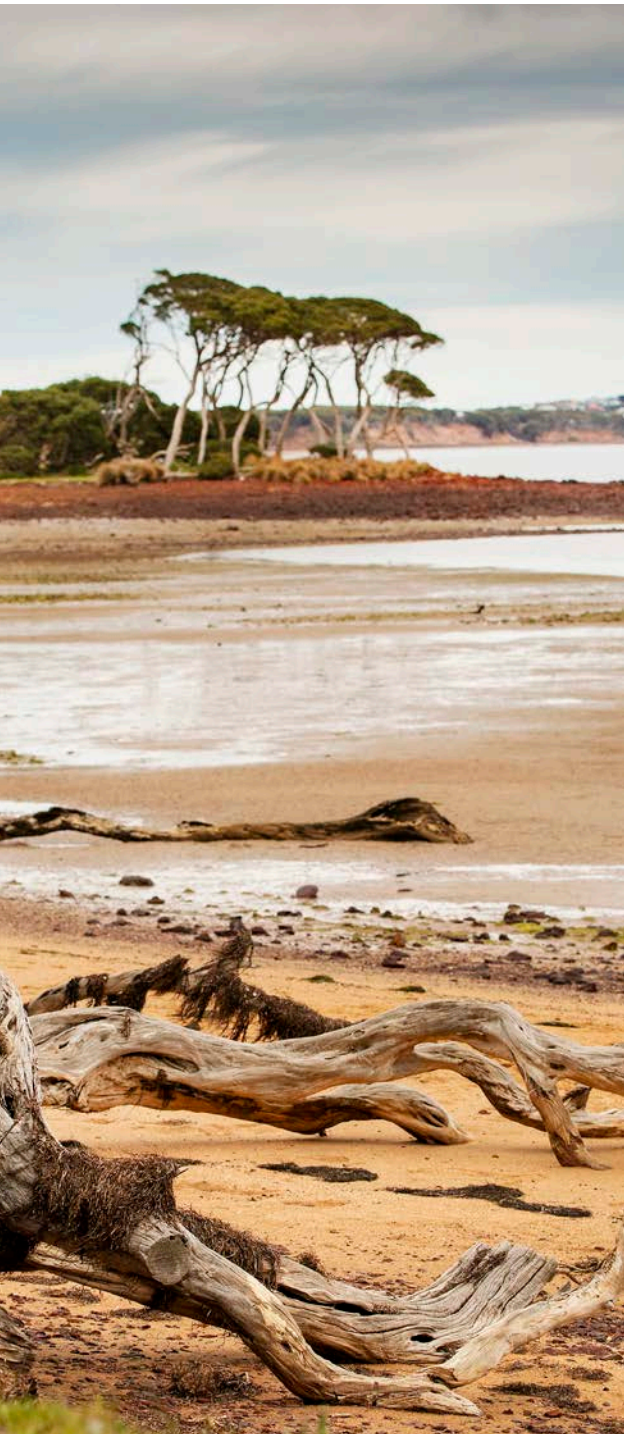
- Improve controls and policies in the Planning Scheme for infill and greenfield subdivisions
- Develop guides for species selection to encourage the right plant for the right place, climate resilience and future maintenance requirements
- Review and define effective mechanisms for tree protection in subdivision developments
- Develop a tree protection policy for construction in subdivisions through the planning and construction phase related to infrastructure layout and network
- Showcase leading and innovative infill and greenfield developments that retain vegetation, provide space for additional vegetation, incorporate passive stormwater retention and prioritise biodiversity.



We have been trialling more innovative public realm urban design treatments to improve biodiversity, stormwater retention and improve overall landscape character. Planting of native understory species and grasses improves habitat for biodiversity while providing for the safety of road and footpath users. These small changes to public realm urban design make a significant difference to the look and feel of neighbourhoods and aim to keep ongoing maintenance at a manageable level. It is our aim to showcase great development outcomes for the Urban Forest to normalise healthy vegetated landscapes in our townships.

> *Protection needs to be nuanced - blanket protection will not support owners to improve tree planting on their block*
>
> *Community member, 2022*

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Inherited Landscapes

Many of our urban landscapes have been inherited from past decision making which may not have been as well informed as our contemporary decisions. In some instances, the wrong type of species was planted, and it has now outgrown its location or become weedy, such as the Norfolk Pines planted in the main street of Wonthaggi that have outgrown their locations. In other instances, older infrastructure such as drainage or sewer pipes have deteriorated, and opportunistic tree roots have caused further damage. As a result, we continue to manage landscape conflicts between trees and vegetation with other infrastructure such as footpaths, kerb and channels, powerlines and stormwater structures. This can be costly, and, in some circumstances, tree removal may be the only viable option to retain safety and minimise risk.
In these instances, and in planning road, kerb and drainage upgrades, we can make more informed decisions about how to replace trees and vegetation back into the urban landscape by:

- Utilising a detailed tree inventory to identify trees for renewal
- Developing a tree renewal or succession plan, particularly for trees in high profile locations in township centres
- Explore innovative remediation methods for retaining trees whilst minimising risk
- Develop tree selection and planting protocols to ensure the right tree in the right place

Urban Tree Management Program

Our Open Space Team run an effective Tree Management Program based on the budget and resources available. However, we have identified some gaps and therefore opportunities to transition away from an ad-hoc and reactive program to one that is run on evidence-based decision making and aligns more with best practice. This will keep us in line with many other local governments who are also improving the way they manage their Urban Forests. The gap and opportunities for us to focus on include:

- Developing a clear and transparent street and park tree management policy to support our staff and their decision making, particularly around tree removal and protection
- Collecting a detailed street tree inventory for existing geolocated tree points inclusive of species, age, structure, useful life. Include this in Council's asset management register
- Identifying projects where tree planting should be included in scope such as road upgrades and reconstructions, special charge schemes, footpath and kerb renewals as well as recreation reserve upgrades
- Developing a formal tree establishment program for all newly planted trees
- Improving the resilience of the Urban Forest by embedding best practice: good soil preparation prior to planting, proactive and regular maintenance and pruning
- Transitioning street tree maintenance from reactive to proactive using detailed tree inventory to inform works
- Developing succession/renewal plan for trees needing to be replaced due to old age, poor health, poor structure or inappropriateness using detailed tree inventory
- Developing guidelines for determining vacant tree planting sites to consider appropriate species for the environment (particularly roadsides) and consider how to manage potential conflicts with existing infrastructure and road safety.
- Considering the full-time employment of an inspections arborist and a planning arborist so Council can properly enforce compliance framework
- Reviewing Council's compliance framework to ensure that when vegetation is illegally removed Council is enforcing appropriately
- Developing a Significant Tree Register alongside better resource compliance and permit requirements and developing a specialised management plan for significant trees on public land

What our community want

We asked our community about what they'd like the our Urban Forest Strategy to focus on.

We heard through:

- 224 people completing our online survey
- 20 people attending our online workshop
- 4 community groups provided detailed submissions

The following themes emerged that will influence how we deliver the Urban Forest Program going forward:

- Our community demonstrated an exceptionally high level of understanding of the broad benefits offered by the Urban Forest – and not just trees. There was a strong recognition that all forms of vegetation play a role in diverse and healthy Urban Forests
- 91 per cent of survey respondents want more trees planted across Bass Coast townships, predominantly in new developments, parks, nature strips, around sports grounds and along main shopping strips
- Native trees that support local wildlife and are resilient to the impacts of climate change were identified as the most important
- 96 per cent of respondents support Council investing in more public street and park trees
- 82 per cent of respondents recognised the importance of trees on private property and accordingly just over half of the respondents (53 per cent) think that Council should require greater regulatory protection over them, but with realistic allowances for circumstances when trees or vegetation can be removed
- 81 per cent of respondents would support Council developing incentives for tree protection and planting on private property
- There is significant interest from community groups and other stakeholders to be actively involved in protecting and enhancing our Urban Forests through planting, advocacy and restoration works

What we want to achieve

Supporting the Bass Coast Community Vision 2041

2041 Community Vision

From its flowing hills to its wild unspoiled coastlines, the Bass Coast is a source of celebration for all who live in and visit the region. Our townships are vibrant, rich with culture and full of life, each with its own distinct character. Drawing on our creativity, innovation and resilience we've created a thriving and diverse economy that supports sustainable agriculture and industry.

We live proudly on Bunurong Country, and build on learnings from our First Peoples and their knowledge. We coexist in harmony with our environment, and are prepared for future challenges and changes. We are the people of the Bass Coast. Experience our cultures and history, and contribute to our story.

Bass Coast is becoming more closely settled. Promoting the value of trees will encourage people to include trees in their gardens to benefit themselves and the wider community

Community member, 2022

Key objectives, outcomes and targets

To grow and maintain a thriving Urban Forest with and for our community, we have set four simple objectives for our Urban Forest Program from which we have defined specific outcomes and targets to measure our progress.

	Objective	Outcomes
1	**Protect** Manage our Urban Forest to maximise our ability to mitigate and adapt to climate change	- Proactive maintenance program informed by good quality tree asset data - Robust planning mechanisms in place that are audited and enforced - Appropriate fines and recourse if regulations and local laws are not abided by
2	**Grow** Increase the equitable distribution of vegetation cover, to enhance neighbourhood and township character, sense of place and support biodiversity connectivity	- Non-contested tree planting and establishment budget (to allow for 1500 trees planted per annum) - Species selection list utilised in decision making - Urban Biolinks are established and maintained - Our foreshore areas are protected and enhanced
3	**Empower** Support our community to participate in, celebrate and influence better outcomes for the Urban Forest on public and private land	- General community members are better informed about the value of managing the Urban Forest - Effective incentives are available from Council to support community led Urban Forest management on private land - Productive collaborations are forged with utility providers, developers and other government agencies to support their management of the Urban Forest
4	**Embed** Build best practice Urban Forest outcomes into our decision making and planning systems to build a sustainable Urban Forest Program that works in synergy with our other asset programs	- Water Sensitive Urban Design, soil improvements and biodiversity led design are business as usual within all Council projects - Resources provided to capture tree inventory, maintain and update asset register to ensure street and park trees are identified as Council assets - Planning arborist to assess applications to deliver better Urban Forest outcomes in the private realm - Impacts on trees are minimised from the earliest stages of public infrastructure planning, site selection, and design

Targets

- No net loss of vegetation on private residential land and ensure a minimum of 25 per cent canopy coverage across all townships by 2040

- Vacant street tree planting sites will be reduced by planting 1,500 trees per year
- Urban Forest cover will be increased in our townships across all land tenures, to reach an average of 40 per cent by 2040

- Increased number of community members participating in Urban Forest stewardship

- All residential planning applications are assessed for their capacity to improve tree canopy cover





Implementation

In understanding our key challenges and opportunities in managing the Urban Forest, we have developed a comprehensive suite of actions for Council to deliver over the timeframe of this Strategy, to 2040 to align with the Community Vision. We acknowledge that Council will need to take a lead role in delivering these actions, but also recognise that there are significant benefits and opportunities in working with other stakeholders, particularly our community, utility service providers and other government agencies.

There are some priority actions which will need to be delivered first in order to pave the way for other work to be done. Some of these will need specific one-off budgets or an increase in annual budget. This Strategy will be used to inform business cases for funding bids.

Priority actions for Council

1. Improve our tree and vegetation data by collecting a detailed tree inventory for street trees as a minimum while park trees can be collected as budget and resources allow. Also, collect vacant sites and baseline Urban Forest cover for all townships. This data will inform our annual tree planting plan, review of public tree protections and the transitioning towards a proactive inspections and maintenance program.

2. Continue to support and resource the enforcement of tree protection mechanisms such as the Local Law no. 1 section 30 and the Significant and Protected Tree Register.

3. Develop a Street and Park Tree Protection and Removal Policy outlining clear and transparent protocols for tree protection and removal on public land. This Policy needs to clearly specify tree protection zones for construction in subdivisions. This should then be utilised for all works that may impact on our trees and enforced through appropriate compliance measures.

4. Develop an annual street and park tree planting program that will:
    a. Plant 1,500 trees per year (an approx. 1,200 net gain of trees per year)
    b. Utilise species from our Species Selection Matrix that are likely to adapt with our changing climates
    c. Increase shade and vegetation cover in townships with low tree canopy cover and high number of vacant sites
    d. Improve landscape character and amenity as well as shade in areas of high pedestrian activity such as along shopping strips, walkways, schools, new developments, in parks and around sports grounds
    e. Prioritise the planting of native and indigenous vegetation to enhance our urban Biolinks
    f. Include understory where possible

5. Build organisational capacity, improve risk management and assessment and enforcement of planning applications by resourcing a dedicated planning arborist and an inspections arborist

Other Actions

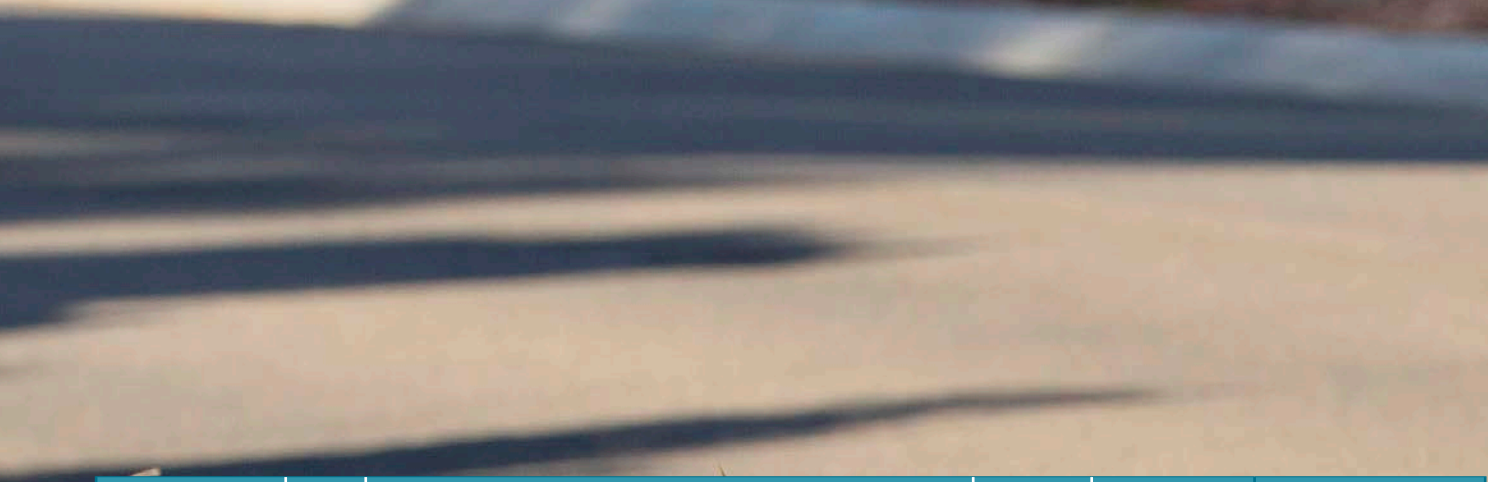
Objective		Action	Cost	Timeframe	Lead Department
Protect	1.1	Collect a detailed tree inventory for street trees on public land	$$$	Short	Sustainable Environment Support – Asset Management
	1.2	Develop tree valuation methodology and utilise in tree asset protection bonds	$	Medium	Sustainable Environment
	1.3	Develop a Significant Tree Register and process for nomination and protection.	$$	Ongoing	Infrastructure Maintenance, Sustainable Environment, Strategy and Growth
	1.4	Develop a public tree renewal/succession program for removed trees	Existing	Short-Med	Sustainable Environment Support- Infrastructure Maintenance
	1.5	Retain "habitat" trees and hollows where it is safe to do	Existing	Ongoing	Infrastructure Maintenance
	1.6	Utilise detailed tree inventory to transition towards a more proactive inspections and maintenance program for street and park trees	$$$	Medium	Infrastructure Maintenance
	1.7	Develop Landscape Guidelines to inform all new developments that ensure new Urban Forest assets are established effectively; e.g. appropriate soil profiles are retained within developments	$	Short	Strategy and Growth
	1.8	Advocate for increased penalties for the damage or removal of vegetation without approvals as per local laws and/or *Planning and Environment Act 1987*	$$	Short	Strategy and Growth
	1.9	Continue to respond to damage of public or foreshore vegetation, on site as per Foreshore and Bushland Reserves Vegetation Protection Policy	Existing	Ongoing	Sustainable Environment
	1.10	Develop a weed action plan to guide the removal of weedy species in our urban forest, foreshores and reserves	Existing	Ongoing	Sustainable Environment
	1.11	Review the Tree Maintenance Policy and incorporate a Tree Protection Policy. Include protocols around tree selection and planting, including the use of the Species Selection Matrix	Existing	Ongoing	Sustainable Environment Support - Infrastructure Maintenance
	1.12	Develop a significant vegetation register for the entire municipality; to ensure protection of significant vegetation under the planning scheme	Existing	Medium	Strategy and Growth Support - Infrastructure Maintenance, Sustainable Environment

Objective		Action	Cost	Timeframe	Lead Department
Grow	2.1	Develop and fund a formal tree establishment program for all newly planted trees to include watering and formative pruning for the first 24 months	$$$	Ongoing	Infrastructure Maintenance
	2.2	Identify potential vacant planting sites across all other townships and along parks, open space and along shared pathways	$	Short	Sustainable Environment
	2.3	Identify key locations of Biolinks in townships and plant understory, shrubs, and place nesting boxes in existing trees to support these Biolinks	Existing	Short	Sustainable Environment
	2.4	Identify Council works programs where tree planting should be included in scope such as road upgrades and reconstructions, tracks and trails, special charge schemes, and footpath, kerb renewals and stormwater constructions	Existing	Ongoing	Asset Management
	2.5	Investigate all mechanisms, including planning and local laws, to guide appropriate tree protection and ways to enhance tree planting and landscaping within public and private land; including tree species selection and minimum requirements and setbacks	$$$	Medium	Strategy and Growth
	2.6	Work across Council and with other service authorities (water, electricity distribution, etc.) to maximise vegetation cover while minimising conflict with services and assets	Existing	Short	Asset Management, Infrastructure Delivery
Empower	3.1	Provide residents with notice and information before the arboriculture team comes to plant nature strips or remove trees	$	Ongoing	Infrastructure Maintenance
	3.2	Develop a suite of communication tools regarding the benefits of our Urban Forest to the community: website, stories, social media, workshops	$$	Short	Sustainable Environment
	3.3	Continue to collaborate and partner with community organisations to protect and enhance our foreshores	Existing	Ongoing	Sustainable Environment
	3.4	Update guidelines for planting nature strips	$	Short-Medium	Strategy and Growth
	3.5	Investigate incentives for retention of vegetation on private land including labour to support low income or pensioners, annual rate rebate while healthy, bond levy on property if damaged, subsidised arboricultural advice, vouchers for green waste drop off	$	Ongoing	Sustainable Environment
	3.6	Develop guidelines of information around species selection for residents to encourage them to plant bee, insect and bird friendly gardens	$$	Short-Medium	Sustainable Environment
	3.7	Collaborate and partner with community groups, schools and organisations to maximise Urban Forest outcomes: citizen science, data collection, revegetation, weed control on public land, nesting boxes and community stewards	Existing	Ongoing	Sustainable Environment
	3.8	Identify ways to actively celebrate trees	Existing	Ongoing	All Departments
	3.9	Encourage greening, including examining voluntary planting program locally	Existing	Medium	Sustainable Environment



Cont....Other Actions

Objective		Action	Cost	Timeframe	Lead Department
Embed	4.1	Once tree planting plan is established, consider contract growing street tree stock 2 to 3 years in advance	$$	Medium	Infrastructure Maintenance
	4.3	Integrate Water Sensitive Urban Design into ongoing capital and civil works to include vegetation. Develop typologies/design guidelines: permeable paving, trenching, back of kerb stormwater inlets	Existing	Ongoing	Infrastructure Delivery, Asset Management, Major Projects
	4.4	Utilise Tree Protection and Removal Policy to ensure that all Council projects protect and include trees and vegetation. Trees to be treated as assets	Existing	Ongoing	Asset Management, Infrastructure Delivery
	4.5	Include the detailed tree inventory into Council's asset management system	Existing	Ongoing	Asset Management Systems
	4.6	Develop alternative street sections and plans to those in the Infrastructure Design Manual (IDM) to support urban greening and utilise within Capital works and development including: - Expanded landscape verge widths - Service locations which do not conflict with tree roots - Consolidated crossovers with consideration of different surface treatments other than concrete - Allow for a minimum of 30 per cent mature canopy tree cover - Tree outstands to support additional trees and mid-strata vegetation - Narrower pavement widths where traffic volumes are low - Deep soil zones - Consider the inclusion of these street sections and plans into the **IDM** as an appendix	$$$	Short - Medium	Strategy and Growth



Objective		Action	Cost	Timeframe	Lead Department
Cont... Embed	4.8	Improve Council assessment coordination of landscape plans and functional layout plans to ensure alignment and to avoid conflicts that result in sub-optimal outcomes for canopy trees and other vegetation	$	Ongoing	Strategy and Growth
	4.9	Improve resourcing for planning assessment of landscape plans to ensure time for adequate consideration of: - Implementation issues with landscape plans - Site specific conditions and soil types - Plant selection	$$$	Short	Strategy and Growth
	4.10	Employ inspections arborist and planning arborist	$$$	Short-Medium	Strategy and Growth and Infrastructure Maintenance
	4.11	Review Council policy regarding crossovers and explore other materials to improve permeability of landscape and reduce the need for tree removal	Existing	Short	Strategy and Growth
	4.12	Seek to establish an active urban greening internal working group to help embed Urban Forest priorities across Council to improve internal communications and collaborations	$	Ongoing	Sustainable Environment
	4.13	Ensure impacts on trees are minimised from the earliest stages of public infrastructure planning, site selection, and design	$	Ongoing	Sustainable Environment, Infrastructure Design and Delivery, Strategy and Growth
Monitoring and Evaluation	5.1	Measure vegetation canopy cover change over time for all townships to determine current trends over public and private land	$	Short	Sustainable Environment Support - GIS
	5.2	Remeasure tree canopy cover every five years and publish an evaluation of progress against each Urban Forest Strategy objective, outcome, target, and action	$	Medium	Sustainable Environment Support - GIS
	5.3	Advocate to State Government to procure high resolution regional tree canopy data, including Bass Coast townships	Existing	Ongoing	Sustainable Environment
	5.4	Actively update tree inventory through programmed works	Existing	Ongoing	Support - GIS Infrastructure Maintenance

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Urban Forest Strategy

2022 - 40

Bass Coast Shire Council
76 McBride Avenue, Wonthaggi, VIC 3995
PO Box 118 Wonthaggi, VIC 3995

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