Brighton Urban Forest Precinct Plan 2024

Bayside City Council

Cover page: Brighton Beach Gardens

Inside Cover Page: North Road

Acknowledgement of Traditional Owners

Bayside City Council acknowledges the Bunurong people of the Kulin Nation as the traditional custodians of the lands and waterways in the area now known as Bayside, and pays respect to their elders past, present, and emerging, as well as to all First Nations' communities who significantly contribute to the life of the area.

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Introduction to the Precinct Plans

In December 2019, Bayside City Council declared a climate emergency and has since prepared a *Climate Emergency Action Plan 2020 – 2025*. Climate change is real and without respecting our environment or changing the way we behave as a society, there will be even greater impacts than those already experienced. Expanding Bayside's urban forest is one way that we can help cool the urban environment in which our residents live.

As an action listed in the Climate Emergency Action Plan, the development of the Bayside *Urban Forest Strategy* was undertaken and ultimately adopted at its February 2022 Council Meeting. In addition, Bayside City Council has endorsed *Living Melbourne: Our Metropolitan Urban Forest* in 2019, which sets out regional targets for tree and vegetation canopy cover to be reached by 2030, 2040 and 2050.

The vision of the Bayside *Urban Forest Strategy* is:

"Bayside's urban forest will protect and restore ecological systems with special concern for biological diversity and natural processes which will create a cooler and greener Bayside with enhanced amenity and character where people are connected to nature."

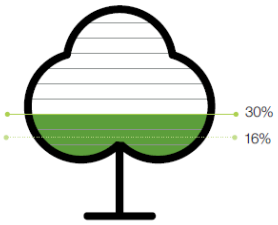
The overarching goal of the Bayside Urban Forest Strategy is to increase the urban tree canopy cover from the current 16.01% to 30% by 2040, and to continue this increase into the future.
The Bayside *Urban Forest Strategy* identifies a range of actions to be undertaken over the next four years. A key focus is the preparation of Precinct Plans for each suburb in Bayside to guide tree planting and greening at a local level. Precinct Plans are subsidiary documents to the Bayside *Urban Forest Strategy* and form a key component of the strategy's implementation. Bayside is made up of 9 suburbs and the Urban Forest Precinct Plans will be prepared for each. They will provide tailored direction for increasing canopy cover and urban forest outcomes into the future.

Tree and vegetation (understorey) cover data referenced in these Precinct Plans has been derived from the Victorian Government's aerial imagery and has been analysed by Council's GIS (Geographical Information System) to determine an approximate level of tree and vegetation cover per suburb.

What is an urban forest?

The urban forest encompasses all the trees, shrubs, grasslands, other vegetation and the soil and water that support them – within Bayside, on both public and private land. The urban forest incorporates vegetation in streets, parks, gardens, plazas, campuses, river and creek embankments, wetlands, railway corridors, community gardens, home gardens, green walls, balconies, and roofs.[1] Fauna is an important component too, with complex interrelations between animals and plants helping to maintain the urban forest.

Bayside's urban forest is made up of native, indigenous and exotic trees, shrubs, grasslands and other vegetation, growing on public and private land, and the soil and groundwater that support them. This includes vegetation in parks, reserves, private gardens, along railways, waterways, main roads, and local streets, and on other green infrastructure such as green walls and roofs. The urban forest provides habitat to a wide range of fauna.



The overarching goal of the Urban Forest Strategy in Bayside is to increase the urban tree canopy cover from the current 16.01% to 30% by 2040, and to continue this increase into the future.

[1] Resilient Melbourne, Living Melbourne Strategy, 2018, available at: https://resilientmelbourne.com.au/wp-content/uploads/2019/09/LivingMelbourne_Strategy_online3.pdf

The Urban Forest Strategy

Principles:	Strategies:
1. Increase	1.1 Consider the individual needs of Bayside's suburbs and ensure that the approach to increasing canopy cover and urban forest outcomes is tailored to the conditions of each area. 1.2 Reframe Council's approach to major capital and infrastructure renewal projects as opportunities to increase urban forest outcomes. 1.3 Through the Bayside Planning Scheme, require development to provide increases to the number of canopy trees provided.
2. Healthier ecosystems	2.1 Increase the tree and vegetation canopy cover that is of a diverse range of species across Bayside. 2.2 Ensure humans and wildlife can simultaneously and safely access densely vegetated areas, streets and reserves.
3. Monitor	3.1 Improve, implement and facilitate Council processes and procedures to assist the monitoring of the urban forest
4. Maintain	4.1 Ensure the tree removal process is transparent and equitable 4.2 Reframe our planning and policy framework to give greater priority to existing trees and vegetation when siting new development and ensuring the longevity of any new trees or vegetation by ensuring it is appropriately sited nearby surrounding hard surfaces or infrastructure. 4.3 Enhance Council's ability to retain existing trees on private property through increased regulation of tree removal. 4.4 Support the maintenance and retention of trees on public land.
5. Learn and Celebrate	5.1 Increase Council's capacity to provide advice and build community sentiment to tree planting in Bayside. 5.2 Continue to build upon Council's green image and utilise this platform to advocate and partner with key stakeholders to provide greener outcomes across Bayside, metropolitan Melbourne and Victoria. 5.3 Leverage from the strengths of our network of volunteers, community groups, State Government departments, neighbouring local governments, academics and professionals to support the delivery of community education, information sharing and creating partnerships.

Key Issues

Environmental challenges

Impact of climate change

All trees, including trees on private property, are being affected by climate change. It is important that Council continues to encourage residents to plant climate-resilient trees and vegetation on their property and nature strips. To support this, the provision of readily accessible information and useful tips on how to best plant these types of trees and vegetation will be of great value. Council will also ensure its species palette for streets and parks include the use of more climate-resilient trees and vegetation.

Tree health, age, Useful Life Expectancy, and species diversity

The Bayside *Urban Forest Strategy* defines key issues across Bayside's urban forest, including climate change, insufficient growth space and natural characteristics (disease, insects, etc.) being significant contributing factors to the health and sustainability of tree coverage across Bayside. This Precinct Plan identifies locations of trees that are in poor health, are reaching senescence and has low useful life expectancy so that appropriate action can be taken in due time.

Tree survival rate

A high proportion of street and park trees that have been planted have struggled to survive either during or after their initial period of maintenance (first 2 years). Expanding the urban forest and increasing tree canopy coverage will be challenging, especially if high tree attrition continues to occur.

Developmental challenges

Trees on private property

Trees on private property make up a significant proportion of Bayside's urban forest. The removal of trees on private property is a significant and challenging issue to address as the management of private trees, to some extent, falls into the hands of individual property owners. Partnering with the private owners and undertaking a precinct-based approach to the protection, retention and enhancement of the urban forest will allow Council to consider the local opportunities for vegetation and tree plantings, process improvements and other locally specific issues.

Planning permits involving vegetation removal

There are several mechanisms currently in place within the Bayside Planning Scheme that seek to protect vegetation in certain areas of Bayside and require a planning permit to be granted for tree or vegetation removal. These mechanisms include but are not limited to the Vegetation Protection Overlay (VPO), Significant Landscape Overlay (SLO), Heritage Overlay (HO) and Erosion Management Overlay (EMO).

Surrounding infrastructure

Street trees are located alongside public and private assets that include footpaths, roads, fences, overhead powerlines and underground services. This pressure is similarly felt on private property for medium and high density developments where there are competing uses and infrastructure to be sited. While there are management and design techniques that can mitigate most of these issues, it is not always easy, particularly with established trees. Established trees have larger roots that can impact footpaths and roads, creating potential hazards that need to be fixed.

Social challenges

Older people, children, and people with disabilities

More vulnerable members of the community include older people, young children and people with disabilities and their carers. While trees bring many benefits, they can also create challenges. Maintenance of trees can be challenging for older people or people living with disabilities. Particularly large trees that overhang private property or within the property that can become hazardous through debris that create trip and slip risks. Aging and/or disability can prevent some residents from being able to manage the debris from trees, requiring the use of private gardening services. The greening of activity centres can contribute to a healthier and more comfortable place.

Bayside Council's *Disability Action Plan 2021-2025* states that over 14,000 people living in Bayside have a disability and over 4,000 people need assistance in their day-to-day lives. This assistance is required because of disability, long-term health conditions or old age.

There are also various benefits that leaf debris and plant litter provide to the natural environment. Plant litter provide shelter and food for many animals and assists in natural regeneration and the growth of new seedlings. Plant litter is also vital as it supplies nutrients to the soil and reduces soil erosion.

Safety

There are a number of elements that contribute to people feeling unsafe, including low visibility and lack of passive surveillance from nearby residents and/or other groups. Within streets, Council plants and maintains trees to ensure there is no foliage to block sight lines. Trees can contribute to this problem if not managed correctly as they have the potential to block visibility from the street.

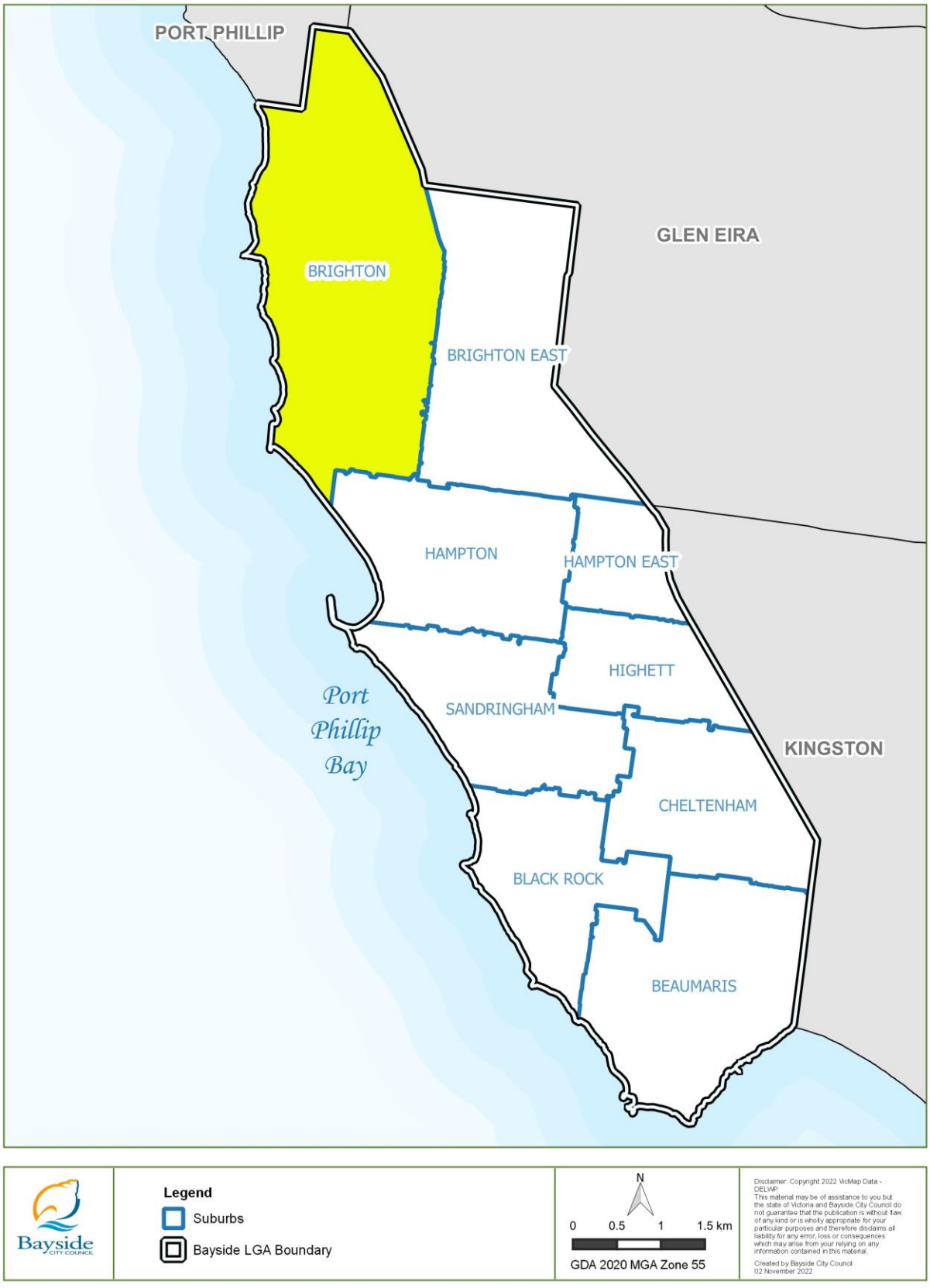
What will the Precinct Plans achieve?

A key action from the Bayside *Urban Forest Strategy* is the preparation of Precinct Plans. Each Precinct Plan will be informed by community consultation and will provide set targets to respond to the individual needs, challenges, and aspirations of the locality.

The Precinct Plans will help guide the implementation of the Bayside *Urban Forest Strategy* in Bayside and direct Council's focus to areas with low vegetation, to protect and enhance neighbourhood character and help achieve the objectives of the Bayside *Urban Forest Strategy.* The prime objective of the Precinct Plan is to prioritise areas of greatest need, including areas with the lowest existing percentage canopy tree cover, as well as areas that are strategically located to mitigate urban heat island effects (including within major activity centres that are experiencing increased density and construction activity), areas of declining canopy or aging trees, highly trafficked pedestrian routes and gaps or vacancies in public planting.

Within this document, specific direction is provided on the selection of appropriate trees for the precinct. The Precinct Plans are performance-based in that they establish the desired outcomes for streets but do not prescribe specific species for each location. Park and significant boulevard trees will be planted using existing master plans and site- specific plans to respond to the individual needs, challenges, and aspirations of the locality. This document focuses on the suburb of Brighton.

Map 1: Brighton's location within Bayside



Suburb Profile – Brighton

Information in this Suburb Profile was accessed from Profile.id which utilises 2021 census data from the Australian Bureau of Statistics and population, household and age structure forecasts.

Population

Brighton is a changing suburb, both physically and demographically. Similar to most suburbs across Bayside, Brighton is experiencing moderate population growth, having increased by 333 people from 23,401 in 2016 to 23,734 in 2021. It is forecasted that the population will continue to grow to 24,934 by 2041. Brighton's proximity to essential services, transport, the CBD and its gateway to the foreshore is valued by its residents and visitors.

Age structure

By 2041, it is anticipated that over 43% of residents in Brighton will be above 60 years of age, in comparison to the current 31.8% (2021). Brighton has a higher percentage of seniors (15%) and elderly aged (4.1%) residents compared to the whole of Bayside. It is expected that older populations will have greater difficulty maintaining gardens. Future housing will need to accommodate for an ageing population by providing a diverse housing typology, with a particular focus ensuring lone person households are accessible and adaptable for all ages. The provision of higher density housing provides residents living alone or with limited abilities the opportunity to live in smaller properties that require minimal garden maintenance.

Residential developments

Residential development forecasts assume the number of dwellings in Brighton will increase by an average of 82 dwellings per annum to 12,196 in 2041. In Brighton, there is a higher percentage of high density housing (16%) compared to Bayside (9%). This is due to a significant proportion of Middle and North Brighton being zoned in the Residential Growth Zone. This zone is applied to land identified as suitable for increased residential development. This reduces the available permeable surfaces to plant and allow for trees to grow to maturity, which would typically provide for large canopies. While population growth is moderate, it is a factor contributing to increased housing development that in turn impacts existing tree canopies and vegetation.

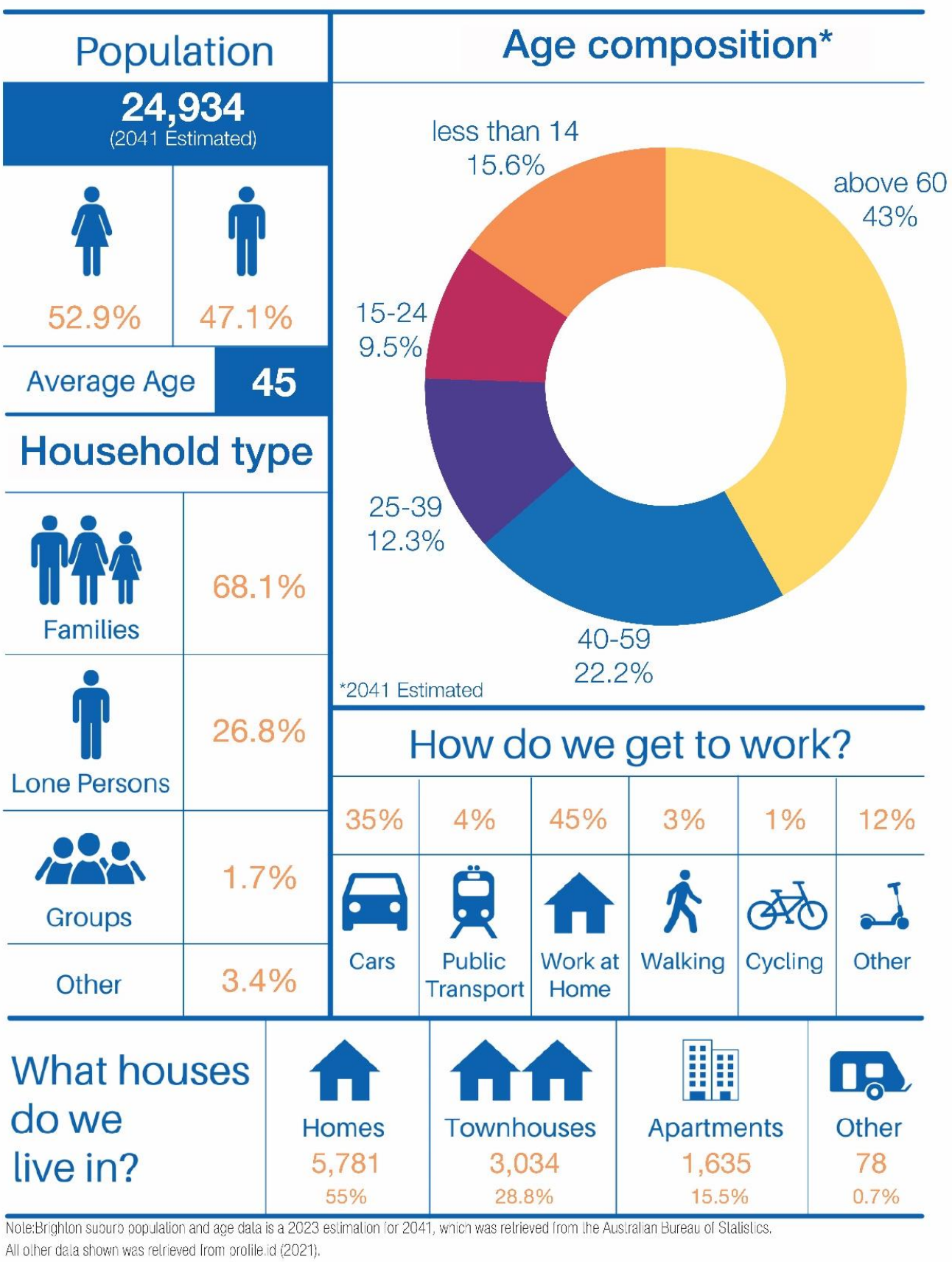
Climate change

The effects of climate change are anticipated to significantly impact tree canopy and vegetation. Due to climate change, there will be an increase in severe weather events including more intense rainfall over summer, leading to more frequent and severe flooding events. Trees can play an important role in mitigating the impacts of a flooding event. The soil under trees and vegetation absorbs water as opposed to urban impervious surfaces where the water just runs (such as pavement and roofs). The leafy canopy of trees also spreads out the rainfall and slows it down. This gives more time for the soil underneath to absorb the rainfall, resulting in less and slower runoff. As a result, the risk of flooding is reduced. When flooding does still occur, the volume and speed of the flood will be reduced. This will also reduce the need for larger stormwater gutters and pipes.

Mode of transport

In 2016, 35.4% of Brighton residents travelled to work by car compared to 49.7% in Greater Melbourne. Brighton is serviced by the Middle Brighton, North Brighton, Brighton Beach, and Gardenvale railway stations that form a part of the Sandringham line. There are also a range of bus services that run to the Melbourne CBD and Monash University. Transport hubs provide a great opportunity to increase street tree and understorey planting.

Brighton Forecast for 2041



Note:Brighton suburb population and age data is a 2023 estimation for 2041, which was retrieved from the Australian Bureau of Statistics.
All other data shown was retrieved from profile.id (2021).

Aerial of Brighton

The Vision for Brighton's Urban Forest
Brighton will be home to a healthy and vibrant urban forest that celebrates the diversity of indigenous, native and exotic species. Future plantings will enhance the existing established gardens and create a linkage between private spaces and the foreshore.

Planning controls applying to Brighton

All of the planning controls applying to Brighton have been identified in Map 2: Planning Controls in Brighton.

Planning Zones
As seen in Map 2, Planning Zones applying to Brighton include:

- Commercial 1 Zone for the Bay Street and the Church Street Major Activity Centres
- General Residential Zone for land which is in proximity to these Major Activity Centres.
- Residential Growth Zone applying to a discrete land parcel at 538 New Street, Brighton. Residential growth within this zone takes the form of higher density housing such as townhouses, multi-dwelling developments or apartment buildings.
- Mixed Use Zone applies to the small commercial centre adjacent to the Brighton Beach Train Station.
- Public Use Zone applies to specific sites through Brighton, recognising their public land use for public utility and community services and facilities. It also provides for associated uses that are consistent with the intent of the public land reservation or purpose.
- Public Park and Recreation Zone applying to Yalukit Willam Nature Reserve (formerly Elsternwick Park), the extensive Bayside reserve and smaller parks through the suburb.

The majority of Brighton's' residential land is zoned as Neighbourhood Residential Zone (NRZ) which is applied to areas where there will be minimal residential growth. The NRZ has a maximum building height of two-storey limit. Much of the residential growth in Brighton takes the form of dual occupancy, the redevelopment of detached dwellings or small multi-dwelling developments.

Planning Scheme Overlays applying to Brighton

Vegetation Protection Overlay
The Vegetation Protection Overlay Schedule 1 (VPO1), which aims to protect areas of significant vegetation. VPO1 is found along the foreshore in Brighton, and it aims to retain, protect, and enhance vegetation in coastal areas. Along the Brighton foreshore, remnant vegetation forms an integral component of vegetation character and overall ecosystem biodiversity. Biodiversity conservation of remnant vegetation is an essential component of responsible environment and natural resource management and is fundamental to the protection of ecosystems an environmental health.

Heritage and Built Form Overlays
There are several Heritage Overlays (HO) and Design & Development Overlays (DDO) applying to land within the suburb that shape the way new development is delivered. Heritage Overlays, in particular, provide for the protection of heritage significant buildings and places.

Erosion Management Overlay
The purpose of the EMO is to protect areas, located along the coast, which are prone to erosion and landslip by minimising land disturbance and inappropriate development.

Flooding Overlay
The Special Building Overlay is applied to areas liable to inundation by overland flows from the urban drainage system as determined by, or in consultation with, the floodplain management authority, Melbourne Water.

Development Contribution Plan Overlay
The DCPO identifies areas which require the preparation of a development contributions plan for the purpose of levying contributions for the provision of works, services and facilities before development can commence.

Environmental Audit Overlay
The EAO identifies sites that have known, identified or reasonably suspected contamination or potential contamination.

Neighbourhood Amenity Local Law 2021
Local Laws are laws utilised by Council to respond to issues and community needs within a local context. Within Bayside's Local Laws are guidelines around trees on private land. The law determines that any tree on private land is protected if the *"single or combined tree trunk circumference is 155 centimetres or more at one metre above ground level."* If a tree is protected it means that a permit must be acquired from council in order to remove or prune it. The same permit requirements apply to any tree on Council's Significant Tree Register.

Landscape Guidelines
A review of Bayside's Landscape Guidelines was adopted in December 2023. The changes have been made in response to the adopted Urban Forest Strategy action which outlines that Council must provide further guidance on species selection, sizes, and trees suitable for private property.

The revised landscape guidelines focus on improving the quality of tree plantings through soil type and volume, site characteristics, and correct species selection. This way, it can be ensured that canopy tree plantings that are selected are the largest and most ideal species for its location. This will provide the trees with a better chance of growing to maturity. By focusing on canopy spread, species selection can be refined for better canopy coverage and consideration of a tree's location.

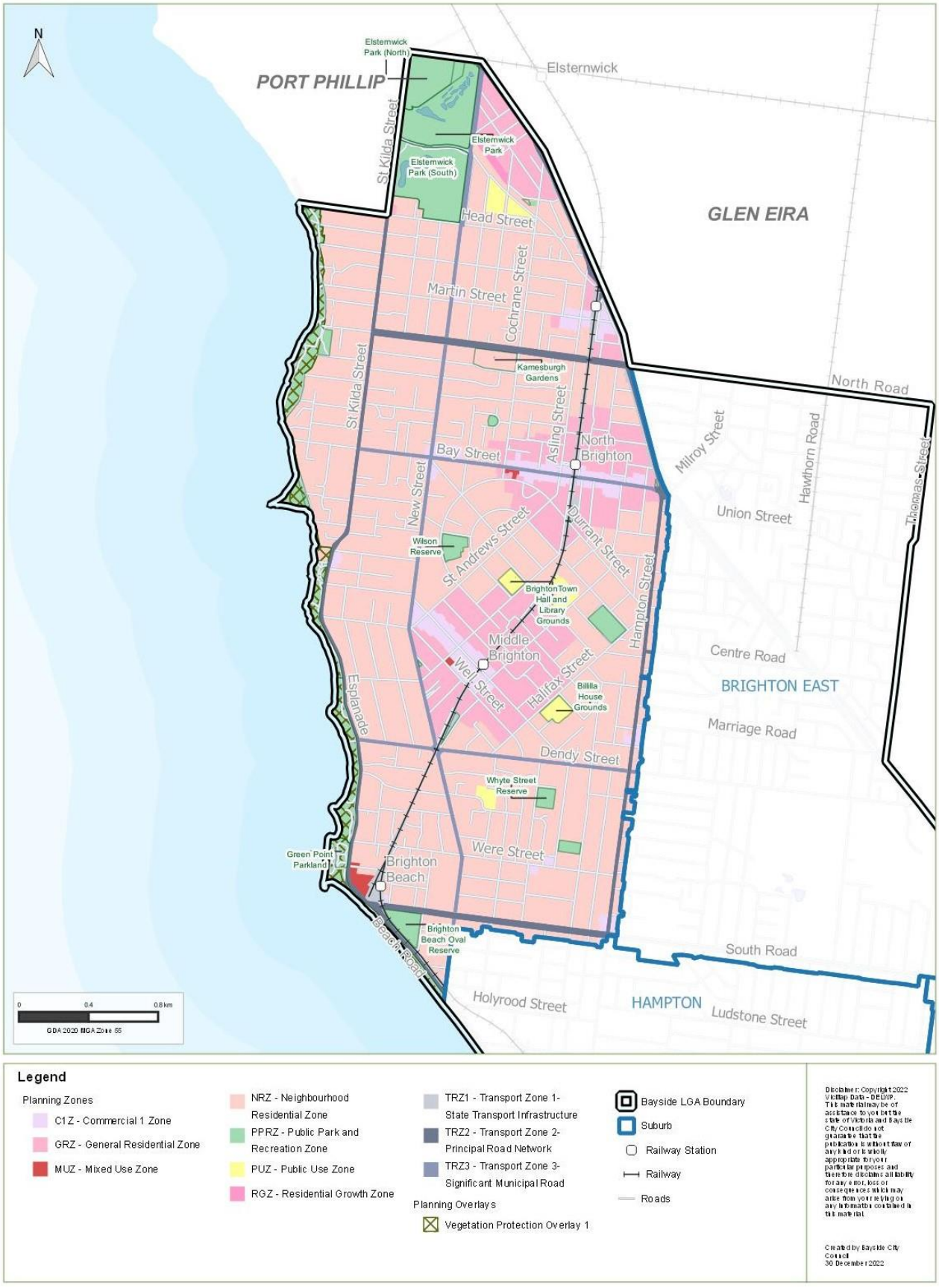
The changes to Bayside's Landscape Guidelines require new development to provide increases to the number of canopy trees and high-quality landscape outcomes. Furthermore, the Species Palette listed in the Appendix 3 to this Precinct Plan has also been utilised as the list of species to encourage selection from when preparing a Landscape Plan.

Local Law Review
A key action of the Urban Forest Strategy includes reviewing the Management of Tree Protection on Private Property Policy. An update to the Local Laws Guidelines will protect more trees and strengthen alignment between planning and local law permit applications for tree removal.

The updated Local Law Guidelines will protect more trees by removing some permit assessment considerations, such as consideration for the number of other protected trees on the site, or neighbours support for removal. Trees will also now be assessed for its habitat value to native wildlife.

For tree removal permit applications, special circumstances including medical conditions, disability, access safety or financial hardship will be referred to Council's Community Care unit. The Community Care unit will establish what support may be available to vulnerable resident and whether there is any reasonably practicable way to manage issues directly related to the tree other than removal.

Map 2: Planning Controls in Brighton



Community Engagement Findings

Community engagement was undertaken for a total of seven weeks from 28 August to 15 October 2023. The community engagement period consisted of pop-up sessions, online survey, presentations to community groups, opportunity to provide written submissions and 1:1 meetings with Council.

Overall, there were a total of 368 contributors from the pop-up events and 111 online survey participants. Of the 111 survey participants, 21 (18.92% of the total respondents) were from Brighton.

Survey participants that live in Brighton were asked how they feel about the plan overall. Brighton participants provided the following responses:

- 18.18% loved the plan
- 22.71% liked the plan
- 13.64% thought the plans were ok
- 18.18% had some concerns
- 18.18% had many concerns
- 9.09% did not like the plan

Table 1: Comments made by survey participants regarding Brighton

Comments	Number of participants who raised concern
The need for increased canopy cover	2
Would like increased canopy using native and indigenous planting to improve habitat and combat climate change	5
Comment to provide more canopy trees around large developments	1
Comment for more action for urban heat areas	1
Comment to plant suitable hardy exotic species	1
Comment about trees and infrastructure damage	1
Comment to plant more trees and provide permeable surfaces	1
Would like to see more ovals for recreational sport.	1

The eight face-to-face engagement sessions were an opportunity for community members to provide feedback on priority planting locations and preferred species. The pop-up events were held at various locations, these included:

- Bayside Community Nursery
- Middle Brighton Baths
- Black Rock Gardens
- Youth FriYay Session
- Bayside Farmer's Market
- Thomas Street Playground

- Bay Road Heathland Reserve
- Bayside Community Nursery -Gala Day

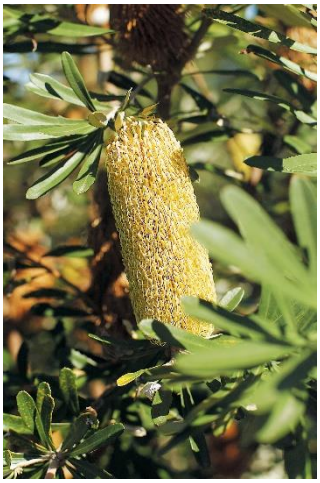
For each pop-up session participants were asked which plants they would love to see more of in their neighbourhood. The sticker boards were separated into three categories these were:

- *Indigenous* – species that were native to Bayside
- *Native* – species that were native to Australia
- *Exotic* – species that have been introduced to Australia

The following images show the indigenous, native and exotic species that Brighton residents would like to see more of in their neighbourhood.

Top Indigenous Plantings – Brighton

Banksia marginata (Silver Banksia)

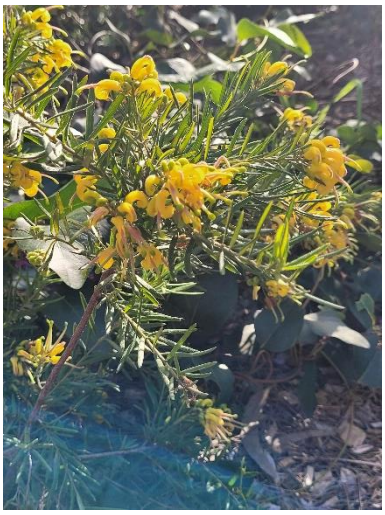


Banksia integrifolia (Large Coastal Banksia)

Indigofera australis (Austral Indigo)

Top Native Plantings – Brighton

Eucalyptus spp. (Gum trees)



Grevillea spp (Grevillea)

Grevillea spp (Grevillea Cultivar)

Top Exotic Plantings – Brighton

Coleonema plutellid sp (Diosma)

Osteospermum sp. (African Daisy)

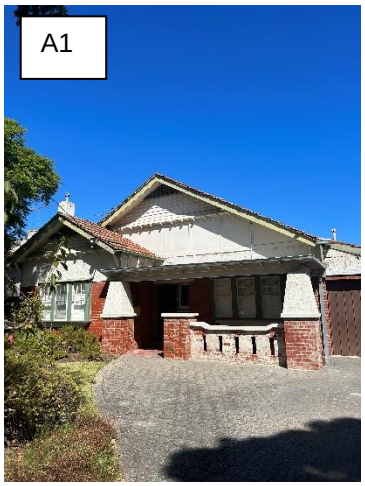
Kniphofia sp (Red Hot Poker)

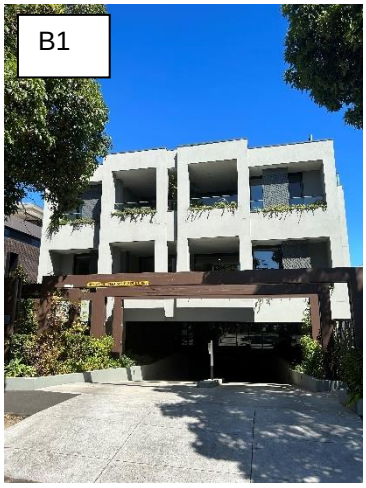
Brighton Neighbourhood Character

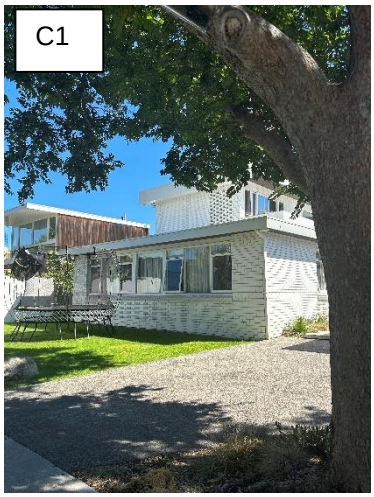
Brighton is home to an array of architectural styles, large parks and reserves, beaches and busy commercial areas as shown in the images below. Residents have and continue to be attracted to the leafy and coastal character of Brighton, enjoying the comfortable and well-established lifestyles attached. This is why it is important that new development respects, supports and enhances the cherished characters of their surrounding neighbourhood. Clause 15.01-5L 'Bayside preferred neighbourhood character' in the Bayside Planning Scheme provides general objectives and policy guidelines for neighbourhood character precincts that have been set across the municipality.

Brighton is one of the oldest suburbs within Bayside and is home to dwellings that are of varying eras and styles including the Victorian and Edwardian styles, Italianate Estate Homes, California Bungalows, Mid-century Modern and art deco post-war style homes and more recently the development of new detached dwellings, dual occupancies and multi-dwelling apartments that have a more contemporary style and design. The construction of modern and higher density development has been increasing in and around Brighton's activity centres, specifically within the Church Street Major Activity Centre and the Bay Street Major Activity Centre. Along the foreshore, original dwellings are being replaced by larger contemporary dwellings and multi-dwelling apartments that maximise the view of the bay. Front setbacks vary from 5 to 9m, and side setbacks fall between 1 to 1.5m on one side with garages, carports or driveways to the boundary on the other.

Brighton is well-renowned for its leafy neighbourhood character, and the suburb is home to a mixture of indigenous, native, and exotic tree and vegetation. Established private gardens, manicured public parks, remnant foreshore vegetation and tree-lined streets all contribute to this much appreciated leafy neighbourhood character.







Map 3: Brighton Neighbourhood Character Precincts

The Urban Forest of Brighton

In Brighton, there is approximately 16.55% of tree canopy cover and 14.49% of understorey cover (2019). The urban forest of Brighton is quite diverse and expansive. Home to gum trees, English oaks, peppercorns, canary island palms and more, Brighton has a variety of native, indigenous and exotic tree species that all contribute to the unique and strong urban forest.

History

Before European settlement, Brighton was inhabited by the Bunurong peoples of the Kulin Nation. Renowned for its coastal environment and proximity to the central business district of Melbourne, substantial residential and commercial development continued throughout Brighton during the 19th century. This growth distinguished Brighton as an established and well-heeled suburb of Melbourne, becoming home to many large estates, grand homes, and exquisite gardens.

Historically, the Brighton urban forest has been dominated by Coast tea tree, Moonah, Coast banksia and drooping she-oak trees. The established area of Coast tea tree on the southern side of North Road consists of trees that are over 120 years old. By 1999, street trees dominated the streetscape with an overriding character of exotic species. Vegetation tended to change towards the foreshore with a shift to smaller-scale species and younger street tree plantings.[2] Over time, Brighton has become well-recognised for its established boulevards and streets lined with exotic species. These species form an integral part of Brighton's urban forest and reflect significant time periods.

There are several canopy trees and garden plantings that have been recognised over time for their local heritage significance. In Brighton, these include established gardens such as Billila, Kamesburgh and Brighton Beach gardens green point as well as several trees that are of varying species (Sugar gums, English oak, Variegated elm, Bunya bunya pines, Moreton Bay figs, Red ironbark, Eucalyptus and Bhutan cypress). Today, Brighton is still admired for its coastal environment, leafy and green streetscapes, and well-established neighbourhood character.

Contemporary issues impacting Brighton's Urban Forest

There are a number of contemporary issues impacting the Urban Forest of Brighton which are causing a decline in canopy cover. These issues are associated with climate change, and its flow on effects such as the urban heat island effect and erratic weather events, are impacting and damaging the health and viability of tree and ground cover vegetation. Increasing tree and vegetation cover will help alleviate rising temperatures and dramatic changes in climatic conditions by providing shade and cooling effects.

For new developments on private and public land, Council considers all possible design solutions and ensures the application has met all relevant criteria. However, even with these measures in place, the removal of tree and understorey vegetation is an issue facing the entirety of Bayside and is a consequence of the increases in infill development which poses limitations on the provision of the permeable surfaces required for tree planting.

The removal of established gardens, large trees and understorey plantings is contributing to a loss of Brighton's distinct vegetation character and is impacting biodiversity. Other issues impacting the urban forest include:

- As previously mentioned in this document, Brighton is home to a diverse array of native, indigenous and exotic species which contribute to the unique urban forest of the suburb. Balancing the use of exotic species alongside native and indigenous species can be challenging, especially when considering community values, existing neighbourhood character and future neighbourhood character objectives and the benefits certain types of trees and vegetation can offer to improve habitat within certain parts of the suburb.

[2] Bayside City Council, 'Vegetation Character Assessment – City of Bayside' by John Patrick Landscape Architects Pty Ltd, 1999.

- Trees nearing the end of their useful lifespan can also create safety issues particularly for more vulnerable residents. As a tree becomes older it loses its vitality as it is prone to falling or losing limbs. Council monitors the health of its trees to ensure any hazardous trees are removed. Council, however, cannot monitor the health of trees on private property as that is the responsibility of the landowner.

- Vandalism of public and private trees is another issue contributing to tree canopy loss across Bayside. Illegal removal, lopping or poisoning of trees occurs throughout Bayside by members of the public for personal gain. A hotspot of this activity is along Beach Road where canopy trees are vandalised to gain better views of Port Phillip Bay. Another common example is the vandalism of trees to limit fruit, berry or leaf drop on footpaths and private property. Unpermitted removal, destruction, pruning and interference with trees and vegetation is illegal in Bayside. To deter vandals, Council has adopted a strong stance on vandalism and has installed signs and advertised on social media platforms an offering of rewards for information when and where an act of vandalism has occurred.

- Trees and vegetation play a vital role in mitigating coastal erosion and protecting Brighton's foreshore. Removal (whether it be legal or illegal) of trees along the foreshore only further impact the environment and the ability to reduce coastal erosion. Legal removal of trees upon the foreshore should only be undertaken where considered necessary and appropriate.

Image 1. Kamesburgh Gardens

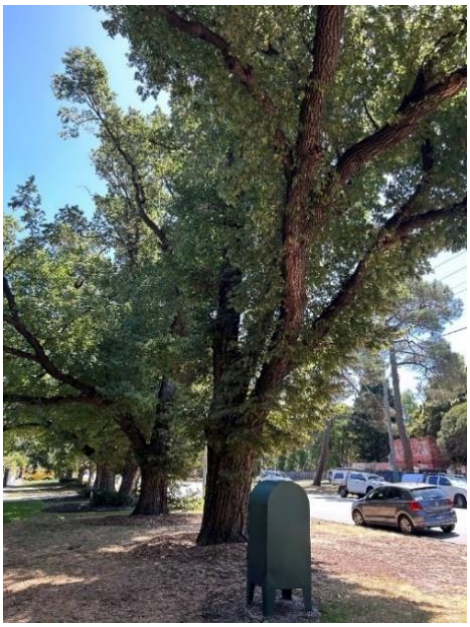


Image 2. North Road

Image 3. Elsternwick Park

Tree canopy cover across Brighton and various land uses

As indicated previously in this document, Brighton has approximately 16.55% tree canopy cover and 14.49% understorey cover (2019). Of the 17% of tree canopy cover within Brighton:

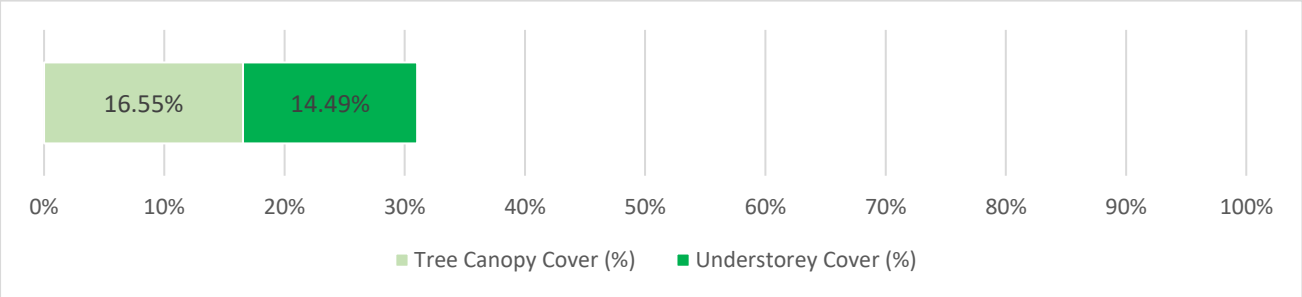
- 61.23% is located upon private residential and mixed-use areas;
- 29.1% is located upon streets;
- 5.04% is located upon open spaces and reserves;
- 2.91% is located upon public use areas
- 1.72% is located upon 'other' areas.

The number of trees on private residential property and public streets is significantly high, particularly in comparison to other suburbs. There appears to be less tree canopy coverage on open spaces which is likely due to the designated recreational uses of open spaces. Furthermore, and as previously identified in the Bayside Open Space Strategy 2012, Brighton has limited accessibility to useable open space in comparison to other suburbs, which is also contributing to the limited canopy cover in these areas.

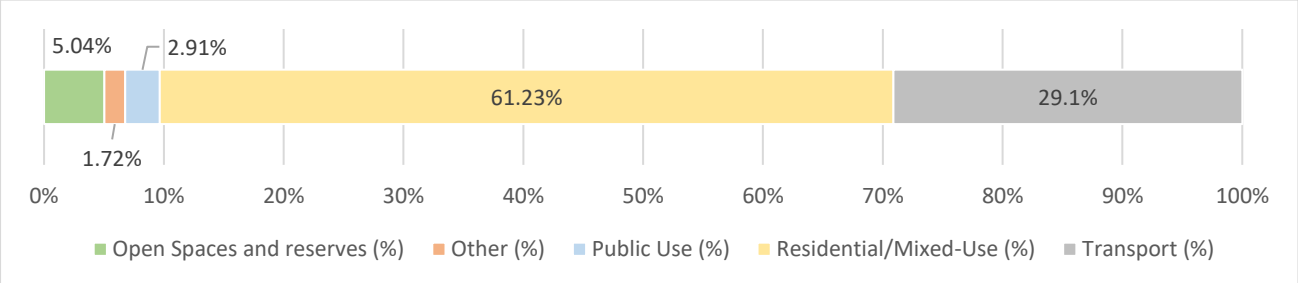
In 2022, there were 14,161 trees managed and maintained by Council throughout Brighton, with over 11,501 street trees, 2,647 park trees and 13 other locational-specific trees. Monitoring the age, health and useful life expectancy of these trees is important to ensuring that Council understands the local conditions, maintains tree and understorey plant populations, and effectively plans for future planting programs and strategies across Brighton.

In Brighton, there is approximately 16.55% tree canopy cover and 14.49% understorey cover. The suburb of Brighton will be a major contributor towards achieving Council's goal of 30% tree canopy cover by 2040 and the enhancement of understorey cover within the public and private realm.

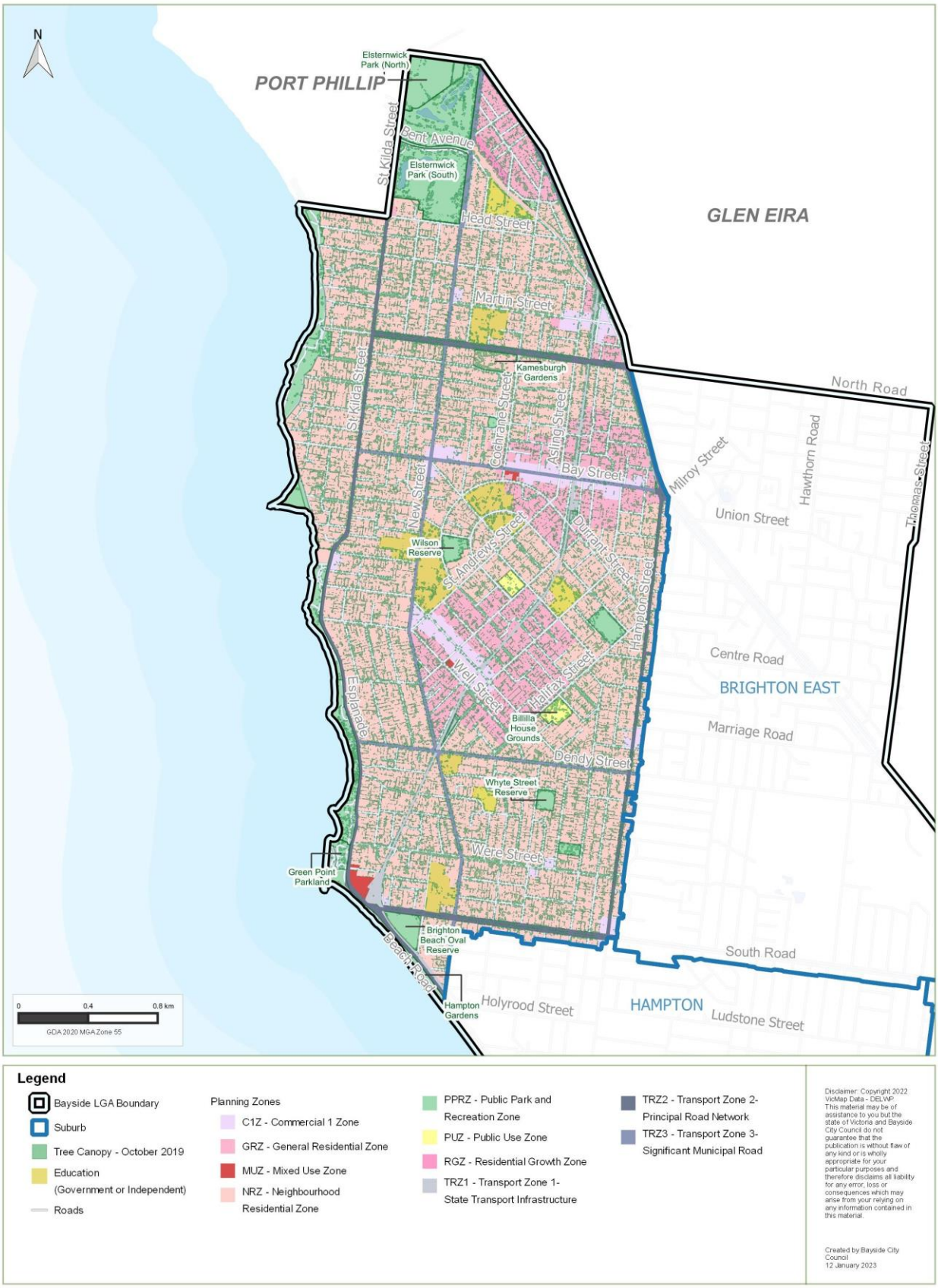
Graph 1. Total tree canopy cover in Brighton



Graph 2. Tree canopy cover over various land uses in Brighton



Map 4: Tree Canopy Cover across Brighton



Council-managed Tree Population

Useful life expectancy (ULE)

Estimating the useful life expectancy of the council-managed tree population is regularly undertaken and informs the future management options for trees that have a limited useful life due to their age and/or health. The assessment of a tree's useful life expectancy provides an indication of health and tree appropriateness and involves an estimate of how long a tree is likely to remain in the landscape is based on the tree's species, stage of life (cycle), health, amenity, environmental contribution, conflicts with adjacent infrastructure and risk to the community.[3] It is not a measure of the biological life of the tree within the natural range of the species, but more a measure of the health status and the tree's positive contribution to the urban landscape.[3] The tree locations are depicted in Map 5: Location of trees with low ULE in Brighton.

There are approximately 8.84% of council-managed trees may not survive in Brighton after the next 10 years. By 2040, a total of 88.51%) council-managed trees may have reached the end of their useful life expectancy and may need to be replaced.

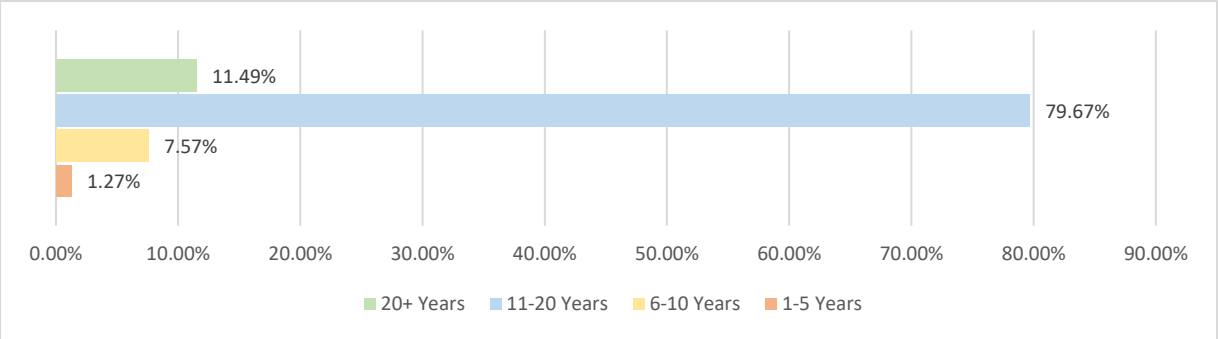
Where trees reaching the end of their useful life expectancy have been assessed and are no longer providing a benefit to the surrounding habitat, removal may be required. Where it has been found that trees reaching the end of their useful life still provide benefit and habitat, it should be retained as habitat tree as per the Tree Risk Assessment Tool (TRAQ).

Where replacement of trees is required, new trees should be selected based on the existing surrounding vegetation, landscape character and ability to enhance habitat. Where there is a large concentration of trees required for replacement, this should be undertaken intermittently to enable varying ages and maturity.

The locations where there is a high concentration of trees which may require replacement within the next 10 years include Hampton Street, Dendy Street, Asling Street, Cowper Street, Dawson Avenue and Yalukit Willam Nature Reserve (Elsternwick Park).

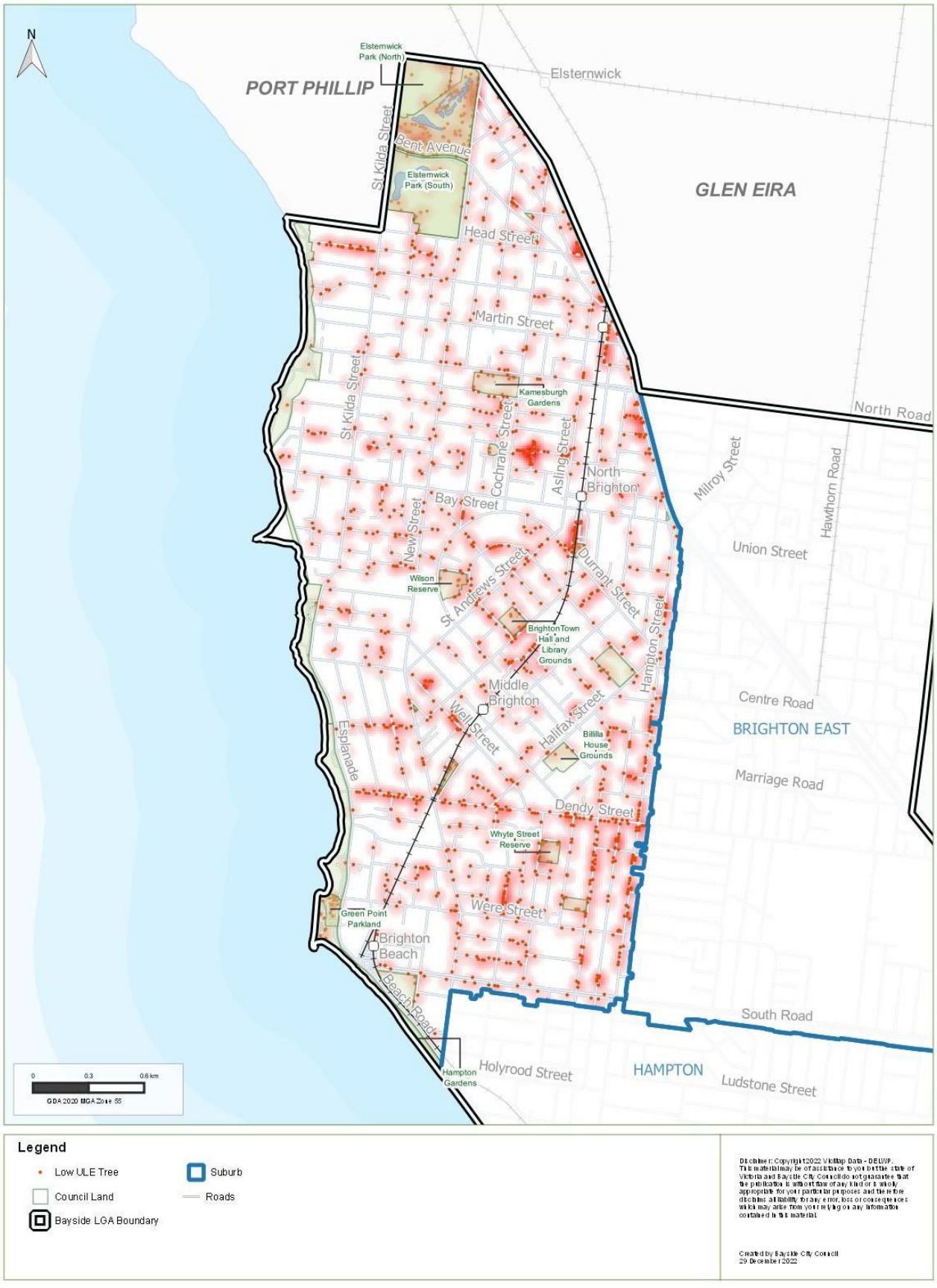
In Brighton, approximately 8.84% of council managed trees are anticipated to reach the end of their Useful Life Expectancy over the next 10 years. Map 5 shows the location of trees with low ULE and the locations where the concentration of these trees is high.
Where it has been found that trees reaching the end of their useful life still provide benefit and habitat, it should be retained as habitat tree as per the Tree Risk Assessment Tool (TRAQ).

Graph 3. Useful Life Expectancy of Council owned trees in Brighton



[3] Department of Health and Human Services, 'Arboricultural Assessment Holland Court, Flemington– 3.7 Useful Life Expectancy(ULE)', 2017, Available at https://www.planning.vic.gov.au/__data/assets/pdf_file/0011/105500/SHRP-SH1-15.a.-Tree-Logic-Rpt_Holland-Court,-Flemington.pdf

Map 5: Location of trees with low ULE in Brighton



Tree health and age

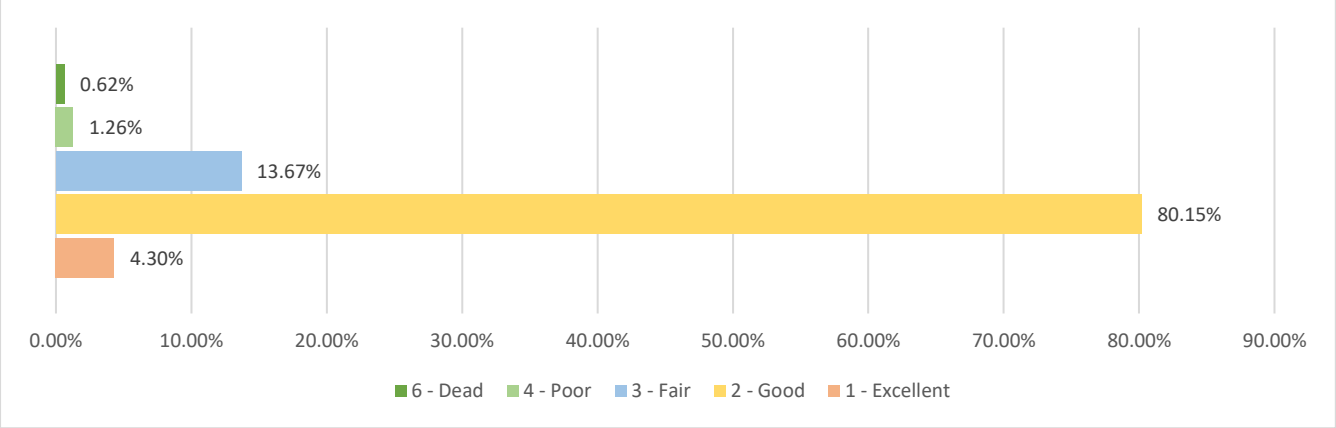
Approximately 80.15% of the council-managed street and park trees in Brighton were classified as being in good health, while 4.3% were classified as excellent. Trees that are classified as poor, dangerous or dead make up 1.88% of street and park trees in Brighton.

There is a reasonable level of diversity in the age of trees within the suburb. As seen in Graph 5, the highest proportions are semi-mature and mature, making up 37% and 24% respectively.

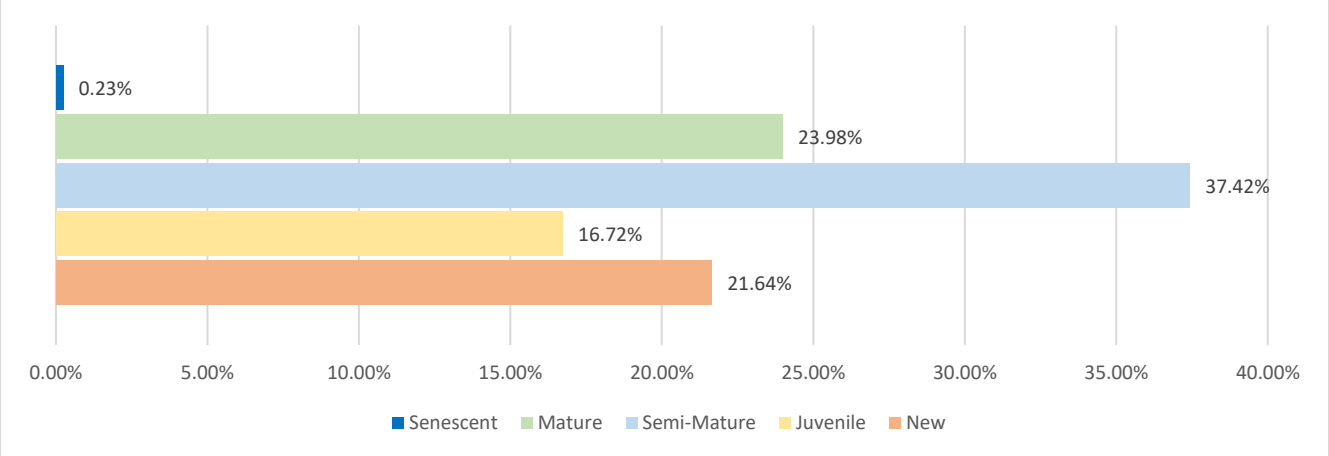
Map 6 provides the location of those trees that are in poor health, dangerous or dead. Trees that have been identified as dangerous or dead are mostly located along the foreshore, in open spaces alike Yalukit Willam Nature Reserve, Wilson Reserve and Billila House grounds and along roads such as North Road and the Nepean Highway. Street trees that are dead should be removed, but dead or dying trees with natural hollows on the foreshore and in parks can provide habitat for fauna. Map 6 shows concentration of dead trees on foreshore that are providing habitat. Through the continued use of the Tree Risk Assessment Tool, Council will retain those trees and vegetation that provide a service to the ecosystem.

In 2022, 80% of the council-owned street and park trees in Brighton, were classified as being in 'good health'. Trees that are classified as poor, dangerous or dead make up for 1.88%. Through the continued use of the Tree Risk Assessment Tool, the council will retain the trees and vegetation that provide a service to the ecosystem.

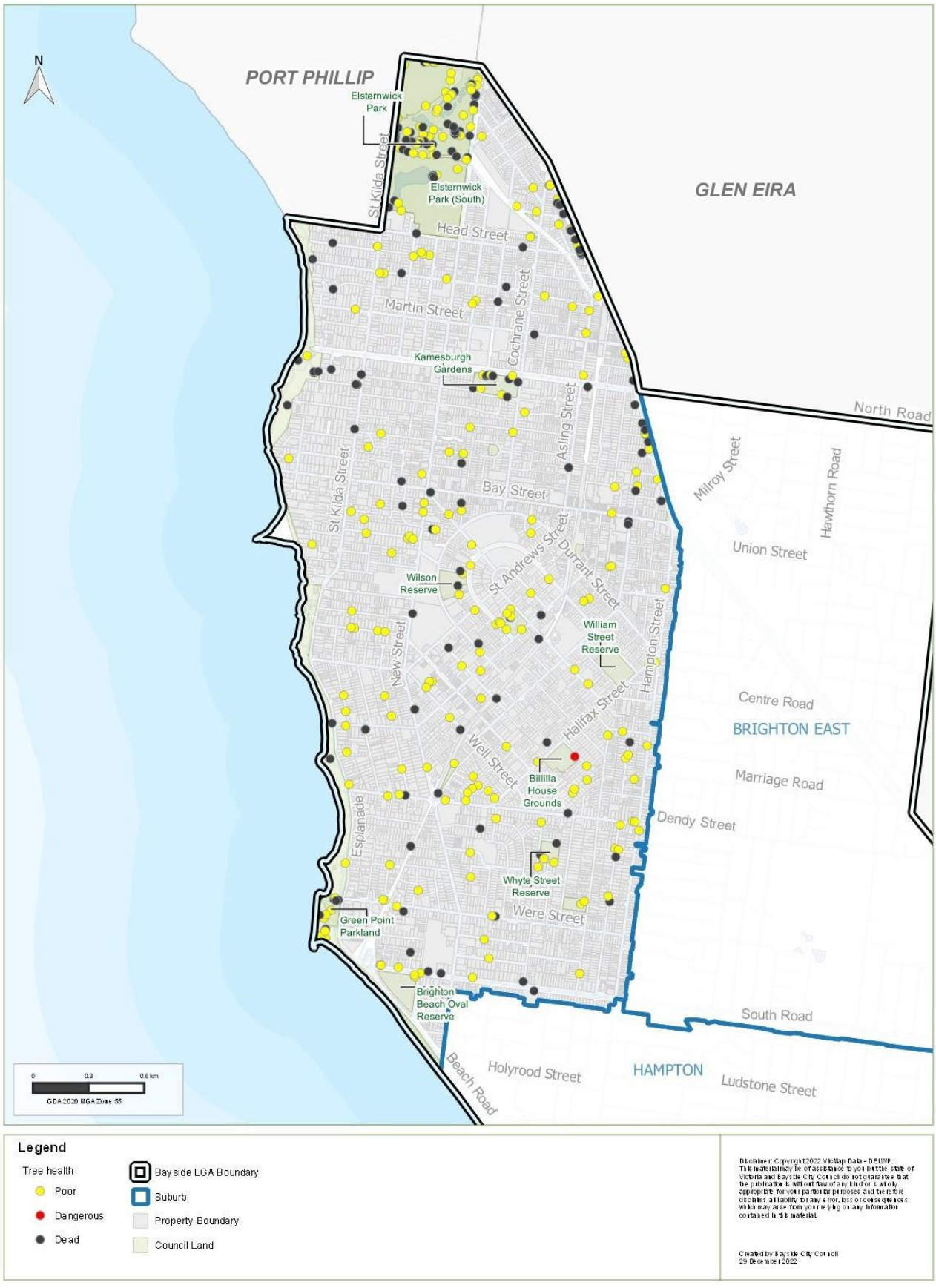
Graph 4. Tree health in Brighton



Graph 5. Tree age in Brighton

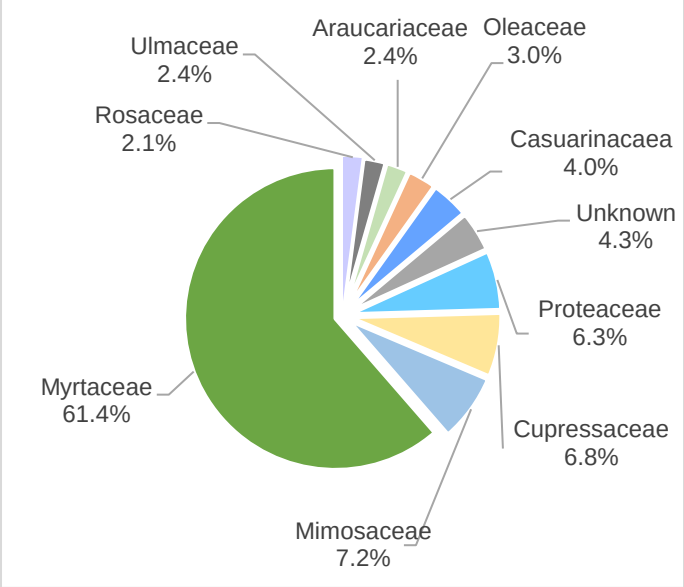


Map 6: Tree Health in Brighton

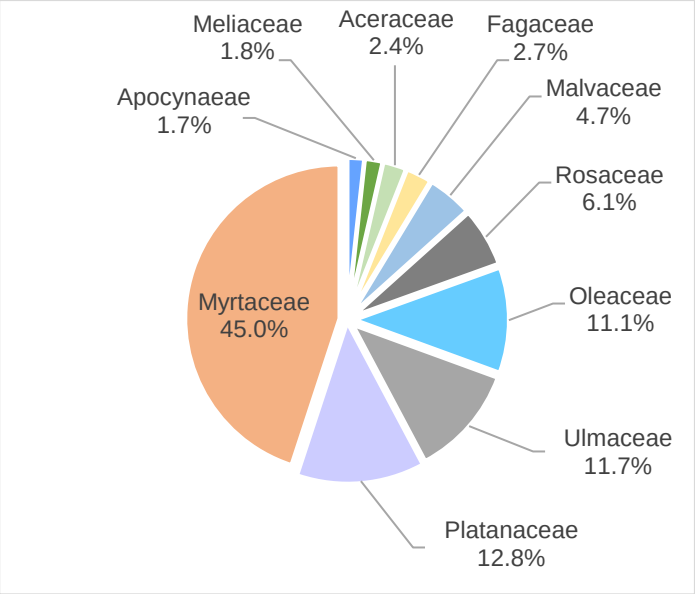


Species diversity

A resilient urban forest has a diverse range of species from different families. As seen in graph 6 and 7, Council-managed Street and park trees are largely dominated by *Myrtaceae,* making up to 45% of all street trees and 61% of all park trees. The *Platanaceae* family follows, making up 13% of all street trees and *Mimosaceae* makes up 7% of all park tree. Other families making up about 42% of street trees and 31% of park trees. About 4% of council-managed trees in Brighton are unknown species.



Graph 6. Diversity of park tree species in Brighton



Graph 7. Diversity of street tree species in Brighton

The reliance of a small number of species, and a lack of spatial diversity in species distribution, leaves the urban forest vulnerable to threats from pests and disease. Diversification of the family composition of the urban forest was a key challenge that was previously identified in the Bayside *Street and Park Tree Guide* and reiterated within the Bayside *Urban Forest Strategy.*

The inclusion of exotic species within Brighton allows for a great mix of species and diversity within the suburbs' urban forest. Future planting within Brighton will continue to preference this mix.

Brighton has many significant tree-lined streetscape canopies consisting of exotic trees, such as the avenue of large mature *Maritime Pines* (*Pinus pinaster*) along North Road in Brighton. Exotic trees may be replanted along streets like North Road to retain consistency with the existing street trees. Other locations where exotic trees also form part of the character within Brighton include the Billila Homestead and Kamesburgh Gardens.

The following families currently form part of the overall tree population in Brighton's streets and parks at a significantly lower percentage than the *Myrtaceae* family. The inclusion and increase of these families should be targeted through the actions and implementation of this Precinct Plan, ensuring that different types of trees align with the neighbourhood character of the surrounding locality:

- *Ulmaceae*
- *Rosaceae*
- *Araucariaceae*
- *Meliaceae*
- *Apocynaeae*
- *Aceraceae*

Through the Park Improvement and Habitat Linkage Plan, Council will undertake tree and vegetation planting to support specific habitat locations, encourage the rebuilding of ecological foundations and improve species diversity in Bayside.

Currently, the Brighton street and park tree population is largely dominated by the *Myrtaceae* family (*eucalyptus* etc.), making up 61% of park trees and 45% of all street trees.

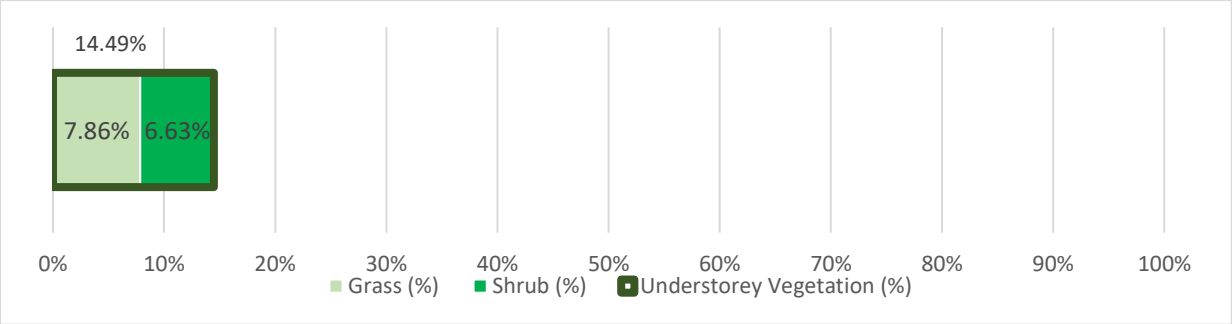
Understorey planting in Brighton

This section investigates the potential habitat and biodiversity corridors in Brighton across public and private land to understand where further opportunities are to increase habitat connectivity and improve biodiversity.

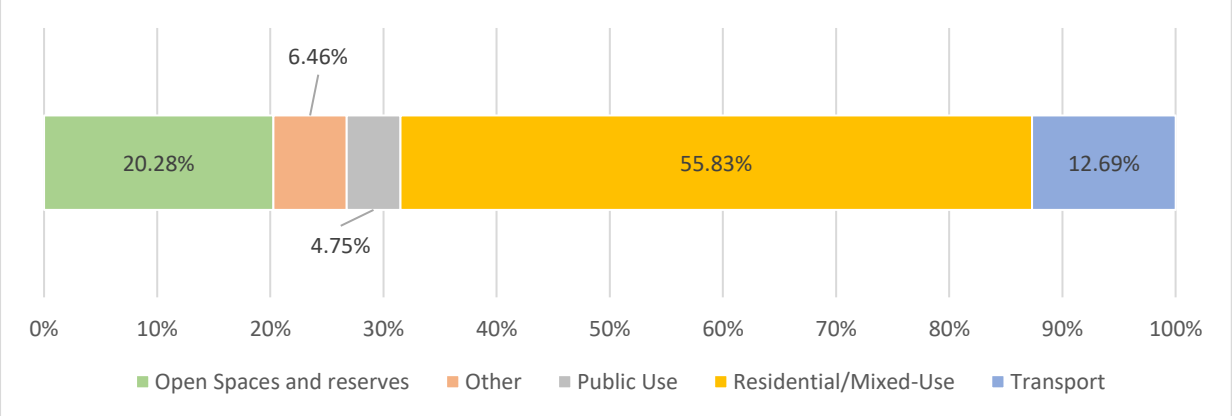
Understorey vegetation includes small trees, shrubs, herbs, grasses, mosses and lichens that occupy the vegetation layers below the canopy of taller trees.[4] Bayside's *Urban Forest Strategy* has three major goals to ensure the increase and improvement of the urban forest and the functions it serves. Two of these goals recognise the importance of understorey plantings. In addition, one of the strategic objectives of the Bayside *Urban Forest Strategy* is to support and enhance our local biodiversity and protect locally endangered and native species. This will be achieved by improving habitat connectivity and the protection and planting of Ecological Vegetation Classes (EVCs) through the implementation of the *Park Improvement and Habitat Linkage Plan* 2022 which involves identifying the suitable locations to prioritise understorey planting.

There is currently 14.49% understorey vegetation coverage in Brighton, with 55.83% being located within residential / mixed use areas within the suburb. Open spaces and reserves then make up 20.28% of understorey cover and 12.69% on streets. Opportunities exist to increase understorey planting upon all land uses, with particular priority on those areas that have a very low percentage of understorey planting (0-10%). These locations have been identified in Map 7 and include sections of St Kilda Street, Well Street, Bay Street, Hampton Street and North Road.

Graph 8. Percentage distribution of understorey vegetation as grass and shrubs

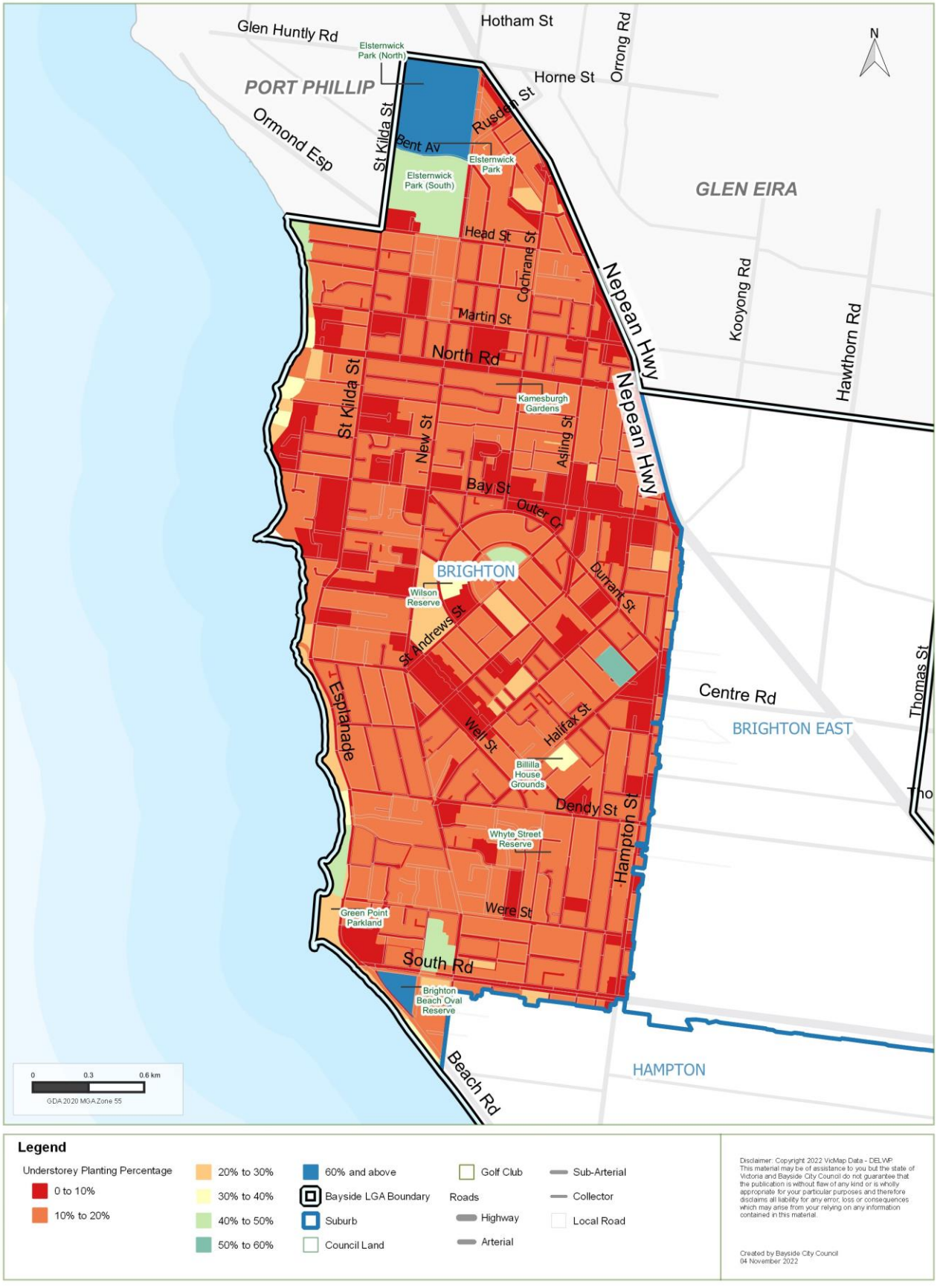


Graph 9. Percentage distribution of understorey vegetation in different land uses



[4] Land for Wildlife Queensland, 'The Value of Understorey Vegetation' Note V6, available at: https://www.lfwseq.org.au/wp-content/uploads/2016/11/The-Value-of-Understorey-Vegetation.pdf

Map 7: Understorey Planting in Brighton



Urban Heat Island

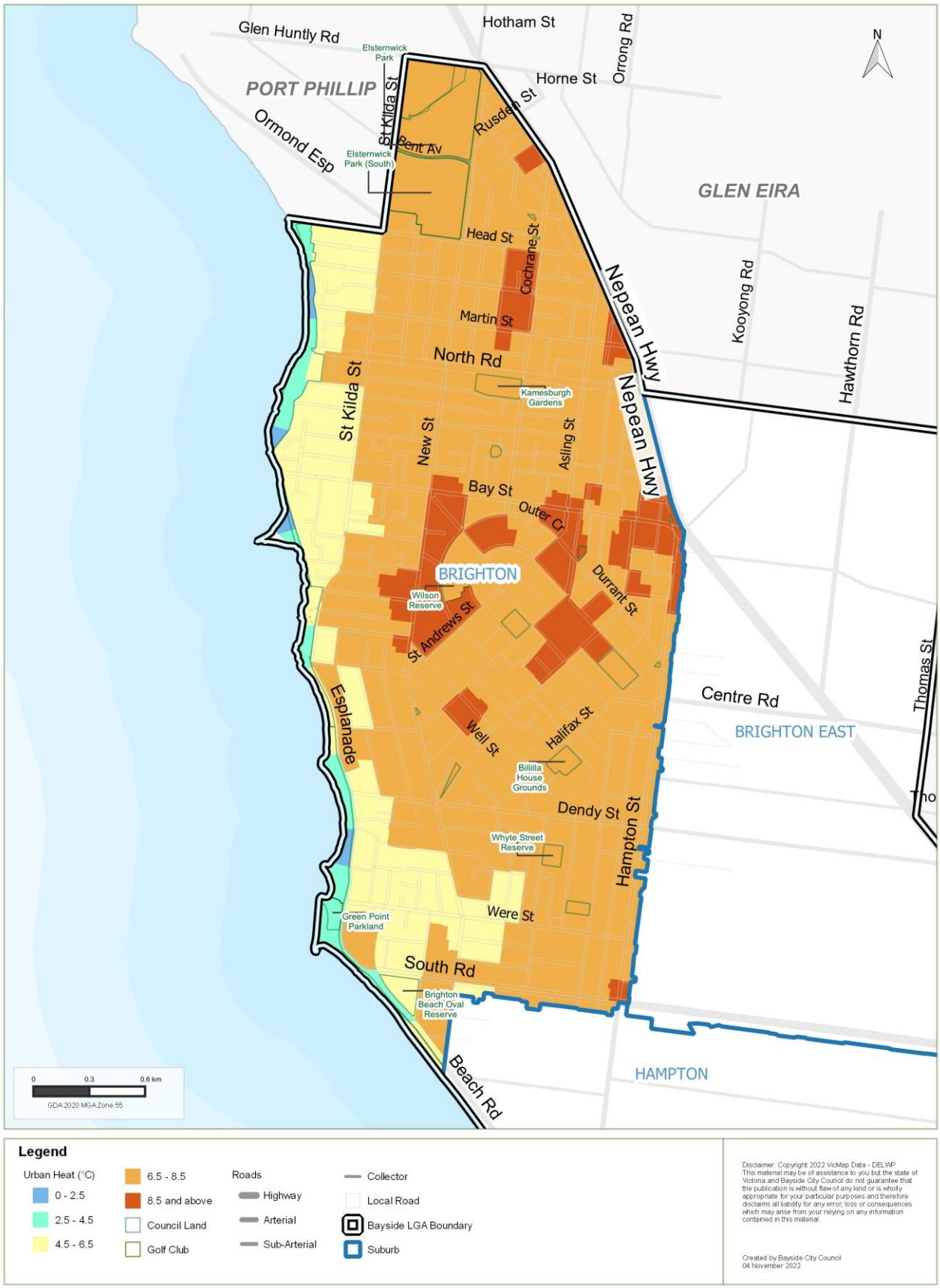
Urban heat island effect in Brighton

Urban heat island effect is the phenomenon of dense urban areas having significantly warmer air and land surface temperatures than surrounding areas.[5] It is primarily a result of impervious hard surfaces that generate heat and low vegetation cover that fails to provide adequate shade and natural cooling. Urban heat data was captured in 2018 and provided in Map 8 below. The results are relatively moderate, with areas along the foreshore being least impacted. Areas within activity centres that provide for increased residential outcomes were seen to have increased temperature levels. Council will prioritise planting on Council land that is most impacted by urban heat island effects. Innovative techniques such as green roofs and walls should also be explored and encouraged in places where more traditional approaches to increasing vegetation may be difficult to achieve (Bay Street, St Andrews Street, Well Street and Cochrane Street).

Due to larger areas that have impervious hard surfaces, that generate heat, and low percentage of understorey planting, the northern, there may be moderate impacts from urban heat island effect in and around activity and commercial areas of Brighton.

[5] Resilient Melbourne and The Nature Conservancy, 'Living Melbourne – Our metropolitan Urban Forest',2019, Available at https://livingmelbourne.org.au/wp-content/uploads/2022/10/Strategy_online.pdf

Map 8 - Urban Heat



Biodiversity Assessment

To help inform the Bayside *Urban Forest Strategy*, Council undertook a desktop biodiversity assessment across the entire municipality. The purpose of the desktop biodiversity assessment was to assess and identify the existing ecological values present within the municipality and identify key areas where biodiversity could be improved. This section of the Precinct Plan will focus on the findings of this assessment within the suburb of Brighton.

Strategic Biodiversity Value Score

The Strategic Biodiversity Value (SBV) is a ranking system developed by DELWP that ranks the biodiversity contribution that a location has to Victoria's overall biodiversity. The SBV is presented as a score ranging between 0 and 1 and is mapped across all areas of Victoria.[6]

56 areas with SVB scores were identified within Bayside. A review of the SBV scores mapped within the Council municipality was undertaken, with the results shown on Map 9. While the majority of Brighton did not present an SBV score, there were a few key areas that had a high conservation value:

- Green Point Costal Reserve had a score between 0.8 and 1
- A large proportion of the foreshore reserve and Yalukit William Nature Reserve Lake has a SBV score between 0.2 and 0.4, where native vegetation exists surrounding bodies of water.

Future planting within these areas should focus on ensuring the SBV scores modelled within these areas do not decrease, by promoting native restoration and plantings in these areas when required.

Ecological Vegetation Classes (EVCs)

As part of this study, a review of Ecological Vegetation Classes (EVCs) model was undertaken. A total of 8 EVCs were modelled within the Bayside area. The modelled distribution of the 2005 DELWP (now DEECA) mapping extent, highlights that the majority of the study area has been cleared and no longer represents the EVCs. This is largely due to the extensive residential development that has occurred, and the associated road, rail and commercial development.

Of the 8 EVCs modelled within Bayside, three were present within Brighton, specifically the Coast Banksia Woodland / Coastal Dune, the Coastal Headland Scrub / Coast Banksia Woodland, and the Dam Sands Herb-rich Woodland. These identified EVCs have informed the species palette in Appendix 3 to this Precinct Plan. The species palette provides guidance on species of trees and vegetation that should be planted in order to enhance the character and enhance the ecological values of the urban forest.

[6] Desktop Biodiversity Assessment for the Urban Forest Strategy, Bayside City Council (2022)

Map 9 - Biodiversity Value Score

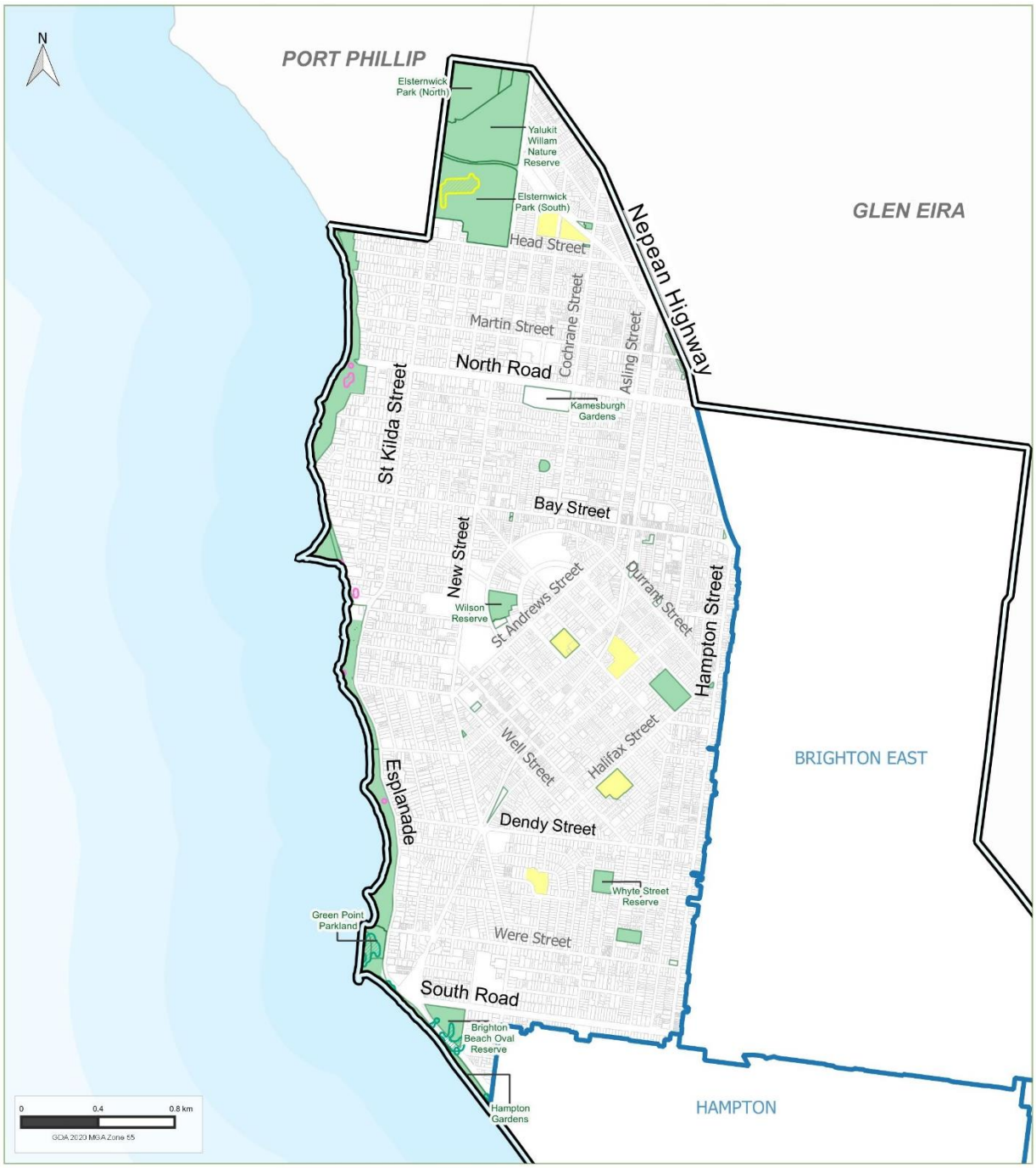
Figure 4a
Strategic Biodiversity Value
Biodiversity Assessment for Bayside Urban Forest Strategy

Legend
Study Area
Strategic Biodiversity Value
0.1 - 0.2
0.2 - 0.4
0.8 - 1.0

0 260 520
Metres

Map Scale: 1:27,000 @ A4
Coordinate System: GDA2020 MGA Zone 55

Map 10 – Historic Ecological Vegetation Classes



Legend

- Bayside LGA Boundary
- Suburb
- Council Land
- Property Boundaries

Modelled 2005 Ecological Vegetation Classes

- Coast Banksia Woodland / Coastal Dune Scrub Mosaic (EVC 921)
- Coastal Headland Scrub / Coast Banksia Woodland Mosaic (EVC 919)
- Damp Sands Herb-rich Woodland (EVC 3)

Planning Zones

- PPRZ - Public Park and Recreation Zone
- PUZ2 - Public Use Zone - Education
- PUZ6 - Public Use Zone - Local Government

Created by Bayside City Council
27 April 2023

Park Improvement and Habitat Linkage Plan 2022

The *Park Improvement and Habitat Linkage Plan* 2022 was undertaken by Council as a way to improve species diversity within Bayside and understand what species (trees and vegetation) would best support specific locations in Bayside and encourage the rebuilding of ecological foundations. The objective of the plan is to assist in increasing the diversity of indigenous and native plantings in council-owned open spaces outside the conservation reserve system and strengthen the connections between natural areas.

Two major actions identified in the *Park Improvement and Habitat Linkage Plan* that correspond to the Brighton Precinct Plan are:

1. Streetscapes – Wherever possible, increase the extent of indigenous understorey vegetation in verges, nature strips, roundabouts, traffic islands and edges of carparks or other less frequented or unused areas.
2. Parklands – Expand on areas of existing native vegetation (both patches and individual trees) with dense understorey plantings, or identify locations for additional native plantings, to create structurally diverse 'habitat planting zones'

Conservation reserve in Brighton

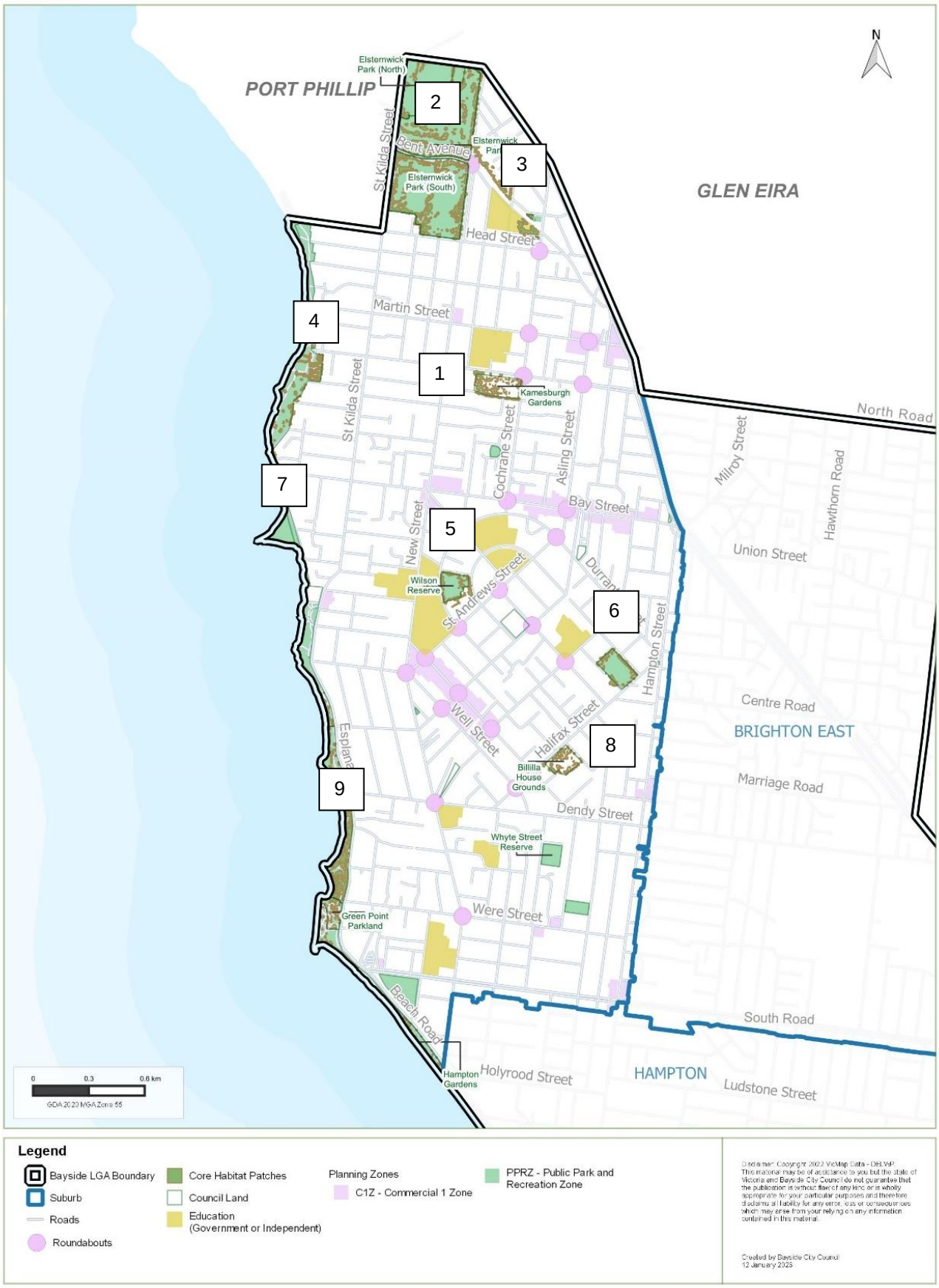
- Brighton Dunes

Core habitat patches

As per Map 11, Nine core habitat patches have been identified within Brighton as areas where planting should occur to implement new or improve existing links to areas of open space and provide habitat corridors:

1. Kamesburgh Gardens
2. Yalukit Willam Nature Reserve (Elsternwick Park)
3. Elster Canal Linear Reserve
4. Brighton Costal Reserve
5. Wilson Reserve
6. William Street Reserve
7. Foreshore
8. Billila Mansion
9. Green Point Costal Reserve.

Map 11 – Core Habitat Patches in Brighton



Priority Habitat Improvement Areas

Priority habitat locations are primarily associated with parks or reserves that currently support High-quality habitat values (such as bushland or foreshore reserves) or have the potential to provide core habitat with further investment through on-ground plantings and complimentary habitat structures.[7] As per Map 12, Priority Habitat Improvement Areas identified in Brighton are:

- Yalukit Willam Nature Reserve (Elsternwick Park)
- Elster Canal Linear Reserve and adjoining land, including Cross Street Reserve and Lewis Reserve
- Kamesburgh Gardens
- Foreshore
- Green Point Costal Reserve.

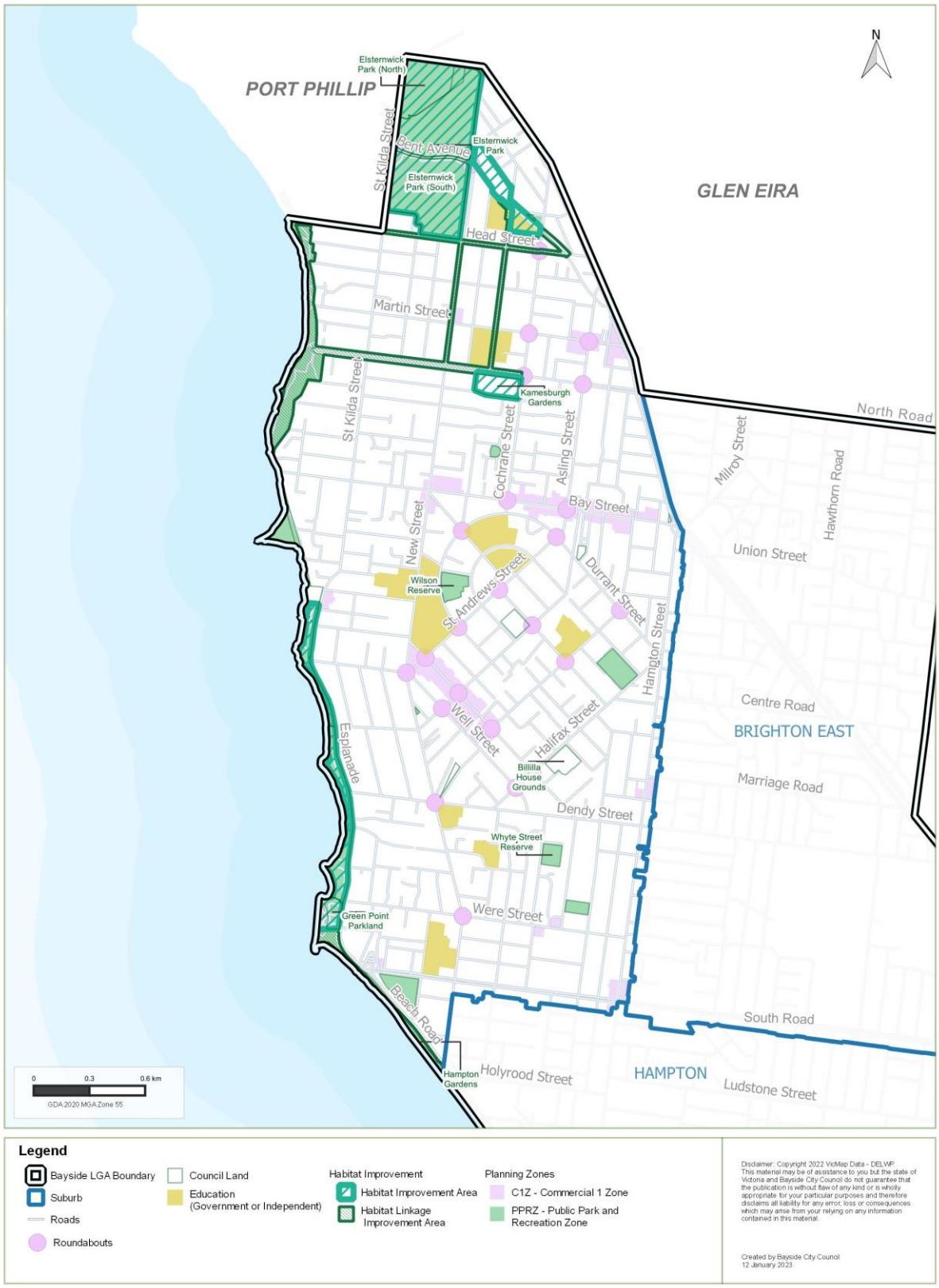
Priority Linkage Improvement Areas

Linkage Improvement Areas are primarily associated with public road reserves with the objective being to increase the functional diversity of vegetation within these areas to improve connectivity a broader range of species.[7] Locations of priority linkages identified across the municipality have been restricted to public land, except for limited instances within privately owned golf courses, see Map 12.

- Brighton Beach Foreshore to Picnic Point Foreshore
- Elster Canal Linear Reserve to Kamesburgh Gardens via Brickwood Street
- Yalukit Willam Nature Reserve (Elsternwick Park) to Kamesburgh Gardens via Head Street/ New Street
- Kamesburgh Gardens to Foreshore via North Road.

[7] Park Improvement and Habitat Linkage Plan, Bayside City Council (2022)

Map 12: Habitat Linkages and Improvement in Brighton



Trees on Private Land

While we encourage and support the increase of tree canopy cover on private land, it is recognised that the uptake of tree planting on private land can only be enforced through better planning mechanisms, education, advocacy and commitment from the community.

The objectives of the Bayside *Urban Forest Strategy* is to prioritise and strengthen the support for retaining existing trees on public and private land and to strengthen Council's ability to retain and monitor trees on both public and private land.

Regulations involving trees on private land

Under the Neighbourhood Amenity Local Law 2021, a permit is required for the removal of a tree that is on the Significant Tree Register or a canopy tree that has a single or combined trunk greater than 155 centimetres measured at 1 metre above ground level.

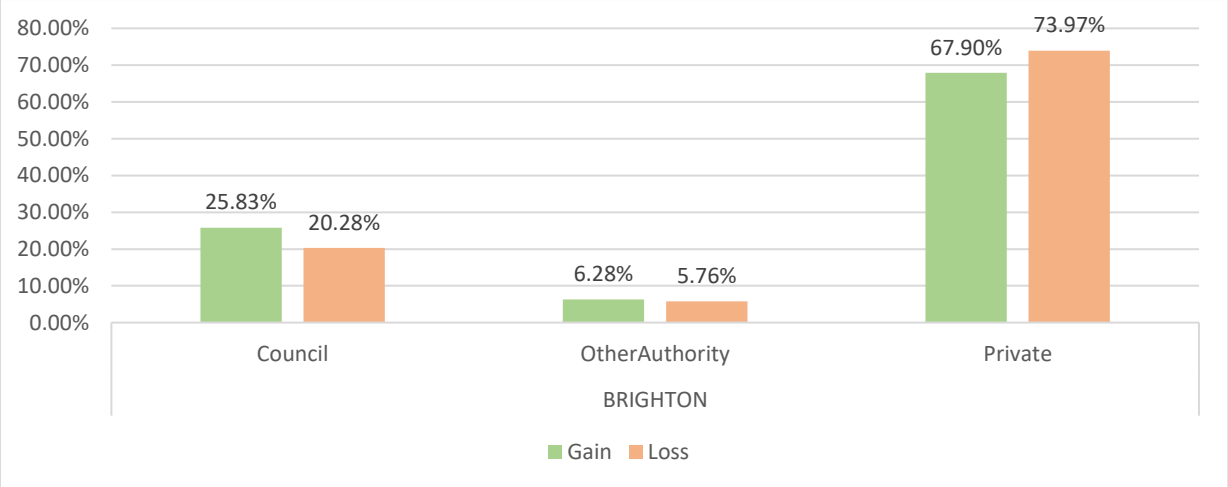
There are several mechanisms currently in place within the Bayside Planning Scheme that require a planning permit to be granted for tree removal. These mechanisms include but are not limited to the Vegetation Protection Overlay (VPO), Significant Landscape Overlay (SLO) and the Heritage Overlay (HO). There is currently no land within Brighton that is within the Significant Landscape Overlay, however there are several trees and vegetation protected by the Heritage Overlay.

It is difficult to approximate the number of trees removed from private land each year under a planning permit as this is not separately recorded (and one application can be for multiple tree removals), let alone the extent of tree removal that is legal or illegal.

Tree loss and gain in Suburb on private land

Map 13 shows tree canopy loss and gained in Brighton from 2015 to 2019. The source aerial photography datasets were obtained from the State Government's Coordinated Imagery Program (CIP). The datasets from 2015 and 2019 were further compared by Council's GIS team to identify changed areas of vegetation.

As indicated in Graph 10, while private land contributed to 68% of tree canopy gains in Brighton, it also contributed to 74% of tree canopy losses. Conversely, Council-owned land contributed 26% to tree canopy gain versus 20% of tree canopy losses. Losses and gains were calculated by comparing 2015 and 2019 canopy cover data.



Graph 10: Tree canopy across various land ownerships

Encouragement of trees on private land

As mentioned in the Bayside *Urban Forest Strategy*, community engagement will be essential in growing the urban forest on private land and Council will continue to be proactive in communicating the benefits of trees and vegetation on private land.

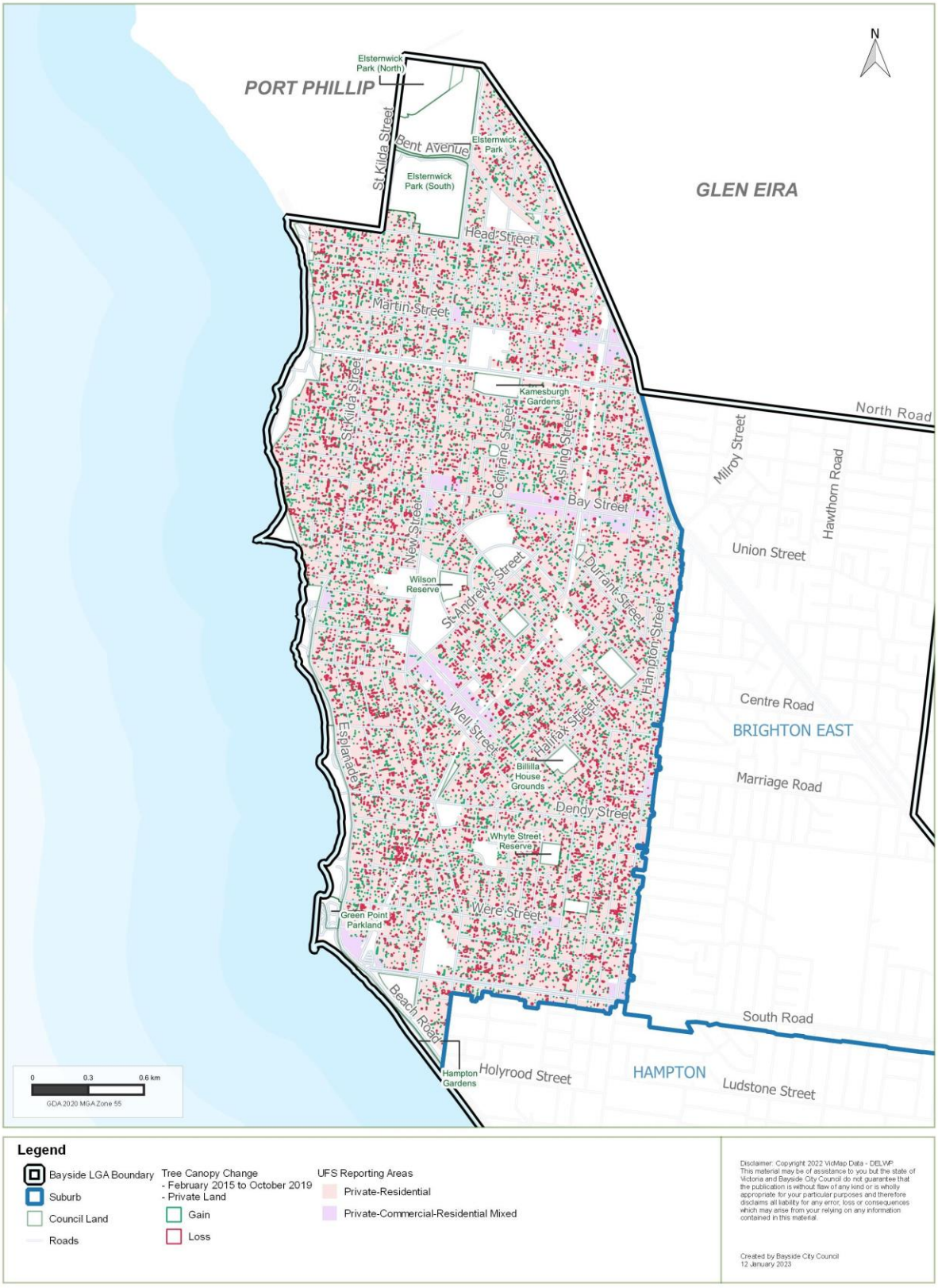
Council will also investigate opportunities to provide free tree and vegetation giveaways to residents. This will provide Council with a pathway to influence the tree and vegetation cover that exists on private land and help residents maintain the health of their trees and gardens. Bayside already has a strong network of 'Friends of' groups and community volunteers who carry out tree and vegetation plantings and would be great allies in this work.

Council will encourage landowner participation in greening, particularly for areas identified as having less canopy cover. This is being undertaken through communications and engagement actions that has a focus on education, awareness on the benefits of vegetation, and participation in increased tree planting through various education programs.

There has been a greater interest from the younger population of Bayside to participate in increasing vegetation cover. Council will continue to run educational programs within schools and work alongside the community to reach the *Urban Forest Strategy* target of 30% canopy cover across Bayside by 2040.

As part of the Bayside *Urban Forest Strategy* Implementation Plan, Council is exploring opportunities to include further policies and planning mechanisms within the Bayside Planning Scheme with an aim to maintain and increase tree canopy and vegetation on private land.

Map 13 - Vegetation loss and gain on private land in Brighton



Brighton in Images

The following images show examples of low, medium and high tree canopy coverage in Brighton.

Image 6. Beach Road, an example of a road with low tree canopy coverage.

Image 7. Barkly Street, an example of a road with medium tree canopy coverage.

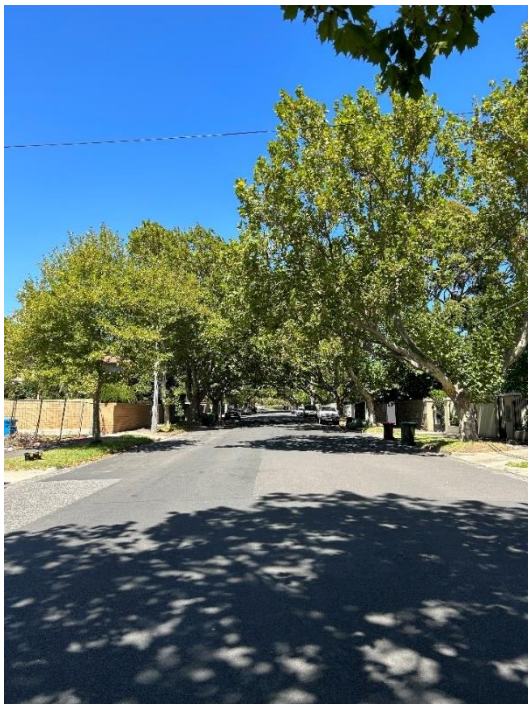


Image 8. Collins Street, an example of a road with high tree canopy coverage.

Key Constraints – Infrastructure

Finding locations for street and park tree planting can be challenging as it is important to ensure trees do not compromise the existing above and below infrastructure, as well as the existing uses and accessibility of the space.

Tree trimmed under powerlines

Certain pieces of infrastructure can cause constraint and impact the ability to plant trees. Street and park tree selection for trees growing under powerlines needs to consider a particular species' tolerance for pruning. For example, a tree that has a natural branching habit and a good wound response to mechanical damage would be considered an appropriate tree species for growing under powerlines.

In streets that have small or narrow nature strips, a smaller tree species will be considered for the powerline side of the street. In those circumstances, the trees on both sides of the street should have similar foliage and form to provide a consistent vegetation character for the street.

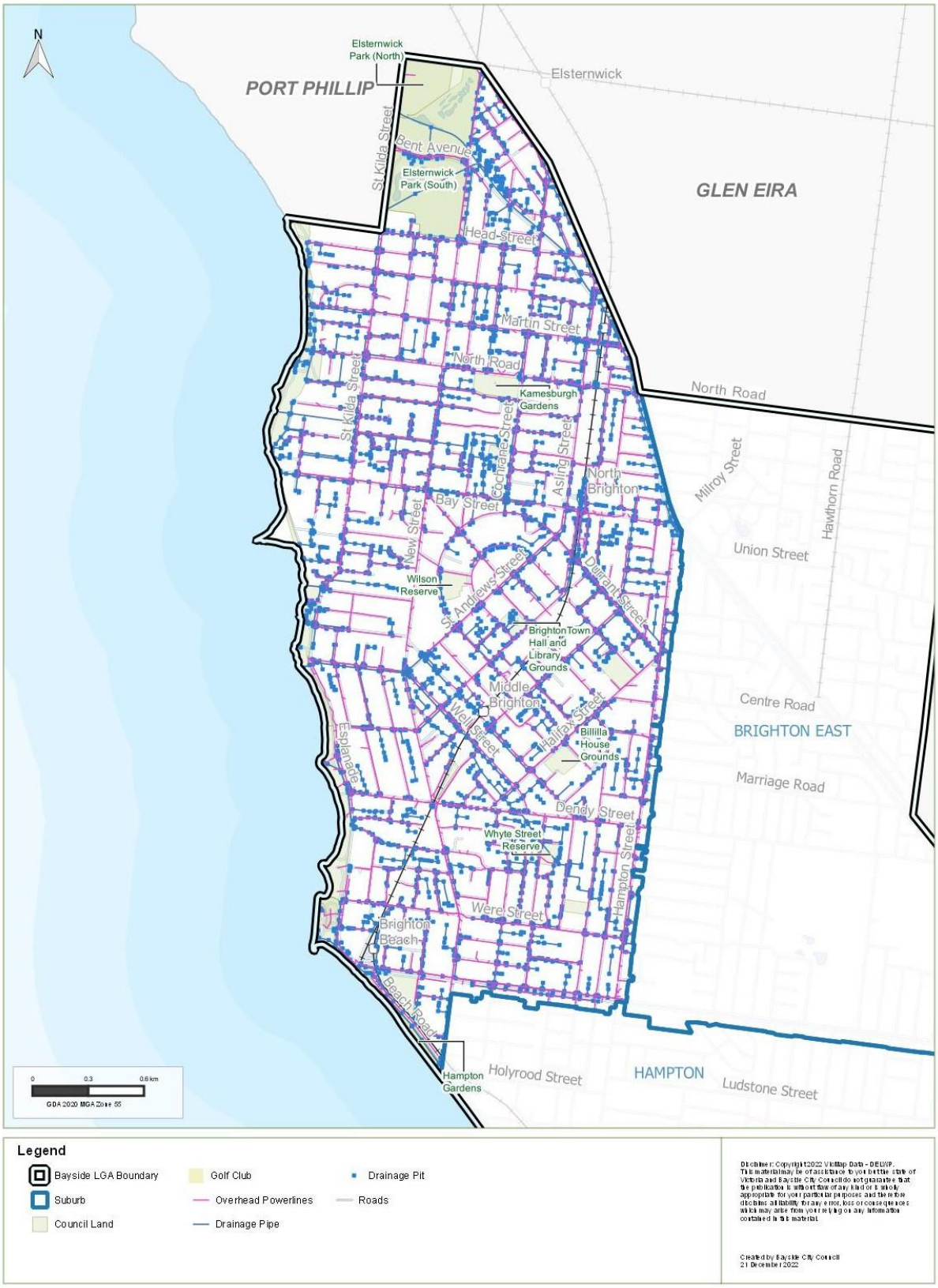
As a phase 1 action of this plan, Council will facilitate the negotiations between the residents and relevant authorities to support the undergrounding of powerlines (and other services) if there is sufficient interest in a street. Council will also advocate to VicRoads and other authorities for undergrounding the powerlines and plant vegetation on the Principal Transport Network. Map 14 identifies infrastructure that must be considered when undertaking tree and vegetation planting including:

- Footpaths
- Kerb and channel
- Roadways
- Playgrounds
- Pathways
- Private infrastructure
- Public infrastructure.

When selecting tree species for planting, Council officers should consider which species will be the least destructive to underground infrastructure. Council will work with utility providers where required to ensure infrastructure can be successfully maintained. This will ensure that Council can increase vegetation cover whilst protecting existing infrastructure and reducing demand for maintenance.

It is also important to note that infrastructure can also be constrained due to weather events. The *Climate Emergency Action Plan* 2020 requires that new infrastructure be designed to higher environmental standards and is located with consideration to future flood and storm surge risk. Existing infrastructure has to be retrofitted to reduce environmental impact and to improve resilience. It is critical to consider how each piece of new infrastructure can contribute to a more resilient built environment. Adapting to climate change requires taking actions to lessen its adverse consequences and increase capacity to withstand the stresses and shocks associated with natural hazards and extreme weather events. Investing in climate change adaption helps to embed economic, social, and environmental resilience to protect the most vulnerable to the consequences of climate change.

Map 14 – Infrastructure servicing across Brighton



Key Opportunities

Greening Brighton
Increasing tree canopy cover to reach 30% and vegetation cover to reach 30% across Brighton by 2040.

Biodiverse suburb
Create a diverse and healthy urban forest that reinforces greater outcomes for biodiversity.

Improve monitoring and maintain
Improve the ability to monitor and track along with maintaining our existing canopy cover and avoid further decline.

Encourage residents and private owners
Learn together, educate each other, encourage and celebrate greater care and protection.

Nature strips
In terms of tree planting, the Street and Park Tree Management Policy states that: *'Council aims to have 100% of suitable sites within Bayside planted with a tree to contribute to the municipality's leafy character. Most property frontages in Bayside can accommodate at least one tree within the nature strip.'*

Council-owned projects
There is a significant opportunity to increase vegetation cover in Brighton through council-owned projects like the renewal or development of community buildings and sports clubs. Each Council project has site-specific issues and opportunities that need to be considered as a part of the project scope. Examples of this include having a buffer around Council buildings and sporting ovals to ensure new plantings do not hinder future projects. When planting near sporting ovals maintenance of future trees must be considered to ensure sporting events can still run. The following projects are being completed by Council in Brighton.

- Brighton Recreational Centre Redevelopment
- Yalukit Willam Nature Reserve & Wetlands (Elsternwick Park)
- Dendy Street Beach Redevelopment

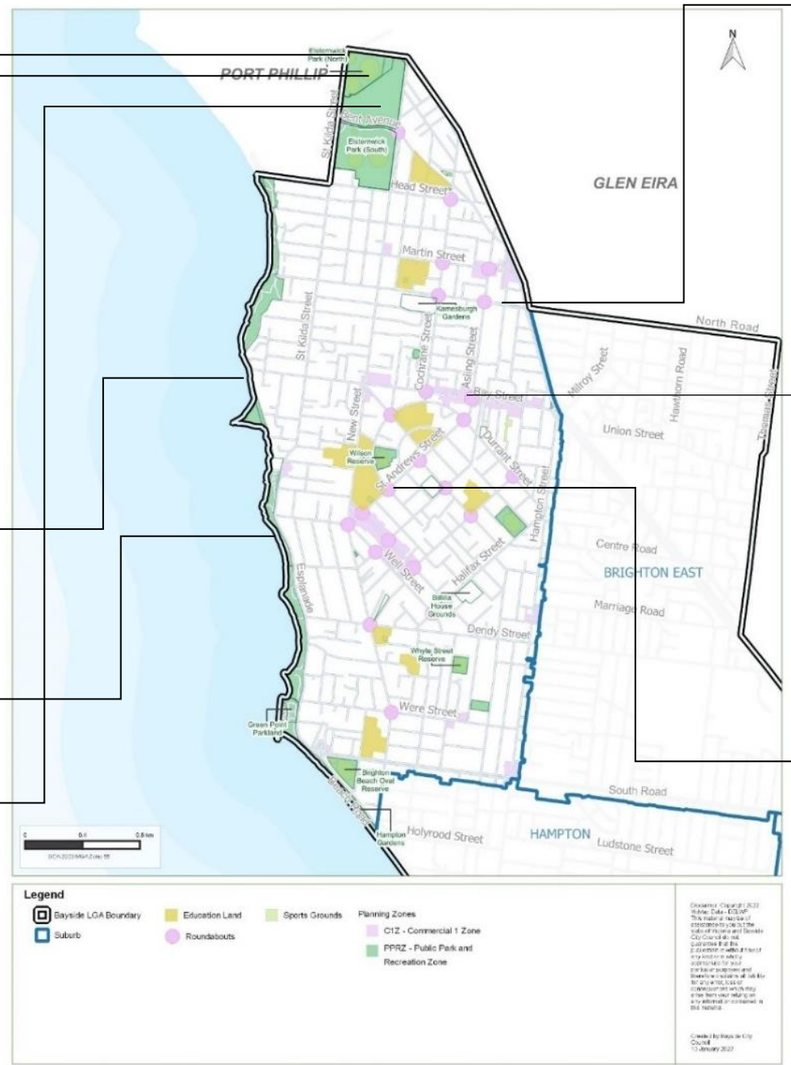
Brighton Foreshore
The Brighton Foreshore is home to habitat and significant remnant vegetation, particularly at the Brighton dunes near Dendy Street. Opportunities to investigate further maintenance and enhancement of habitat and biodiversity along the foreshore will continue to be a Council priority.

Understorey planting
Where possible, planting and maintaining understorey vegetation is encouraged to assist fauna to forage over a longer period of time.

Priority Linkage Improvement Areas:

- Brighton Beach Foreshore to Picnic Point Foreshore
- Elster Canal Linear Reserve to Kamesburgh Gardens via Brickwood Street
- Yalukit Willam Nature Reserve (Elsternwick Park) to Kamesburgh Gardens via Head Street/ New Street
- Kamesburgh Gardens to Foreshore via North Road.

Map 15 – Key Opportunities in Brighton



Roundabouts:
Roundabouts provide opportunity to plant canopy trees and understorey planting where appropriate. New plantings must not affect sight lines, safety or accessibility for larger vehicles. To ensure future planting is appropriate, a Road Safety Audit will be completed before and after installation.
Understorey planting will be prioritised on roundabouts that currently do not have vegetation such as the Church Street / Male Street roundabout.

Commercial areas
Across Brighton there are various areas zoned for commercial use:

- Church Street and Bay Street Major Activity Centres
- Martin Street Large Neighbourhood Activity Centre
- Dendy Village Small Neighbourhood Activity Centre
- Brighton Beach (Were Street) Small Neighbourhood Activity Centre
- South Road and Esplanade Avenue Small Commercial Activity Centre
- New Street and Bay Street Small Neighbourhood Activity Centre
- Esplanade and Grosvenor Street Small Neighbourhood Activity Centre
- New Street and Martin Street Small Neighbourhood Activity Centre
- New Street and Lewis Street

The character of these commercial centres can be improved by increasing the amount of vegetation. This will create more appealing centres that will attract a greater number of visitors and therefore increase business for local traders. When planting trees in commercial areas conflicting priorities such as the demand for car parking, footpath activation, shop awnings, street lighting and road signage must be considered. Innovative techniques such as green roofs and walls and replacing trees in poor health should be explored and encouraged to increase vegetation.

Educational Land
Continue to run student and community educational programs to increase awareness around vegetation planting and protection. Schools within Brighton include:

- Elsternwick Primary School
- St James Catholic Primary School
- Star of the Sea College
- Firbank Grammar
- Brighton Grammar
- Brighton Primary School
- St Joan of Arc Primary School
- Brighton Beach Primary School

Prioritising Trees and Vegetation

Planting will focus on habitat linkages and core habitat patches identified in the Park Improvement and Habitat Linkage plan (Action 1 of the Implementation Plan). Focus will also be given to streets that have low canopy cover.

Encouraging planting on private property will prove to be more challenging. The species palette listed in this Precinct Plan is also provided within the revised Bayside Landscaping Guidelines and selection from this list will be encouraged as part of the Planning and Local Law tree removal application and approval process for Landscape Plans. Council will also work with private property owners to seek enhanced landscaping outcomes on nature strips.

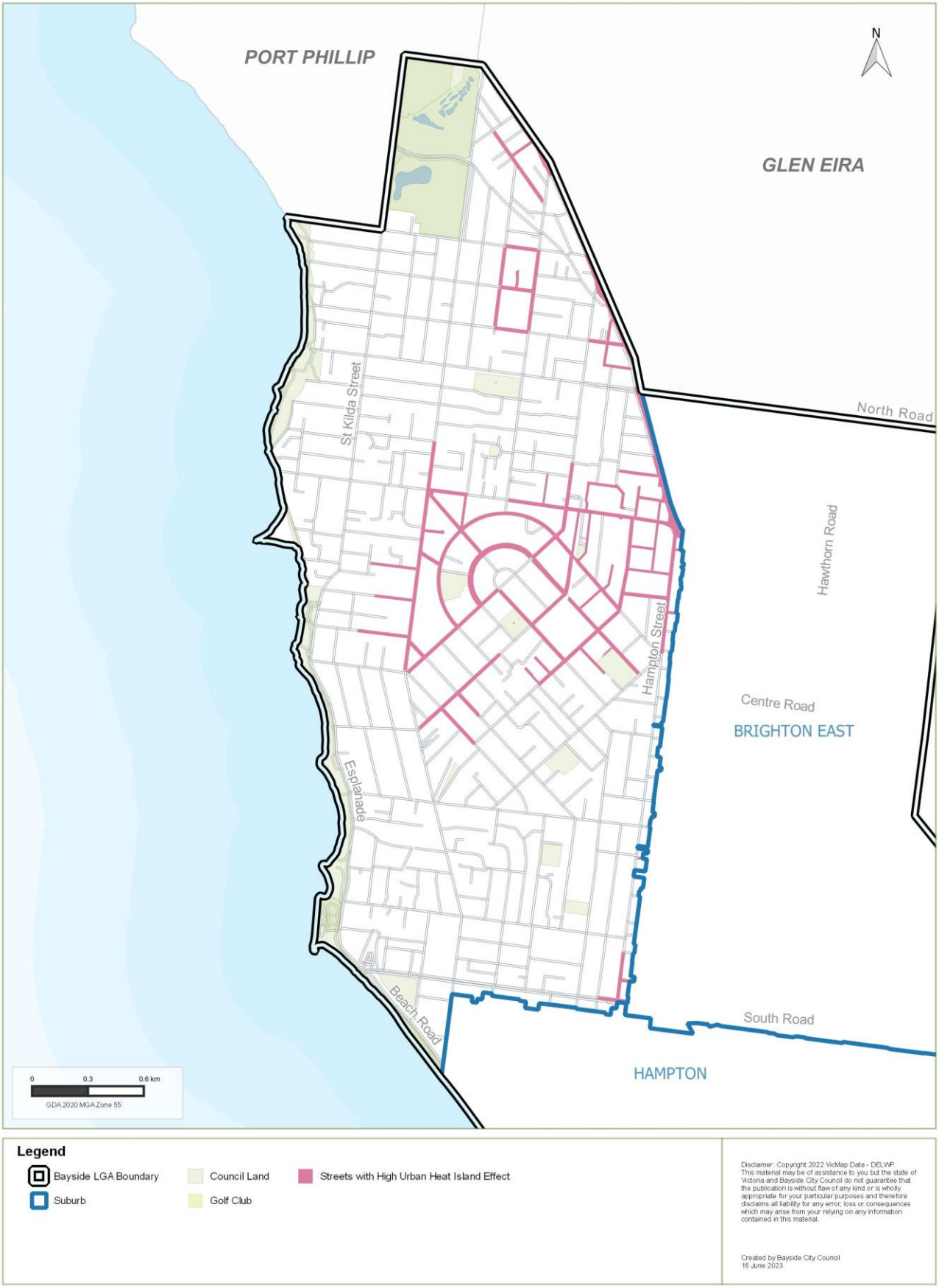
As a response to the Bayside *Urban Forest Strategy*, Council is committed to increasing tree planting every year.

Maps 17 to 20 identify priority locations to be targeted in Council's Annual Tree Planting program. The Annual Tree Planting Program provides a great opportunity to increase species diversity, habitat and local character. A general rule of thumb that should be applied is the 10:20:30 rule, where the urban tree population includes no more than 10% of any one species, 20% of any one genus, or 30% of any family.

Map 16 – Location of Tree Replacements required in next 10 years in Brighton

Map 17 – Streets with less than 20% Tree Canopy Cover in Brighton

Map 18 – Streets with High Urban Heat Island Effect in Brighton



Implementation Plan

The following set of actions specifically identifies outcomes for trees and vegetation planting. They provide the framework for change within Brighton with outcomes informed by all of the other factors outlined in previous sections of this Precinct Plan.

Phase	Objective	Action	Responsibility	Timeframe	Resources required	Measure
Create a diverse and healthy urban forest that reinforces greater outcomes for biodiversity.						
Action 1 Phase 1	Prioritise and increase planting on identified habitat and biodiversity corridors across public land to enhance habitat linkages.	Investigate opportunities to provide increased understorey planting in areas identified as part of Council's *Park Improvement and Habitat Linkage Plan* (Map 10 - 11), including: **Priority Habitat Improvement Areas:** • Yalukit Willam Nature Reserve (Elsternwick Park) • Elster Canal Linear Reserve and adjoining land, including Cross Street Reserve and Lewis Reserve • Kamesburgh Gardens • Foreshore • Green Point Costal Reserve. **Priority Linkage Improvement Areas:** • Brighton Beach Foreshore to Picnic Point Foreshore • Elster Canal Linear Reserve to Kamesburgh Gardens via Brickwood Street • Yalukit Willam Nature Reserve (Elsternwick Park) to Kamesburgh Gardens via Head Street/ New Street • Kamesburgh Gardens to Foreshore via North Road. **Core habitat patches:** • Kamesburgh Gardens • Yalukit Willam Nature Reserve (Elsternwick Park) • Elster Canal Linear Reserve • Brighton Costal Reserve • Wilson Reserve • William Street Reserve • Foreshore • Billila Mansion • Green Point Costal Reserve.	Open Space	Year 1 & 2	Budget allocated for 2022/23 and 2023/24 financial years.	*Park Improvement Habitat Linkage Plan* and the Urban Forest Strategy Annual Reporting Program.
Action 2 Phase 1	Enhance biodiversity outcomes on private land.	Encourage private landowners to plant vegetation on private property and nature strips and provide support and tools to assist. To ensure new plants enhance habitat and biodiversity, Council officers should recommend appropriate plants listed in Appendix 3 Species Palette of this document.	Urban Strategy, Communication and Engagement	Ongoing	Budget will be required.	Utilise engagement evaluation matrix to measure success. Number of community members involved in activities. Demand from residents for vegetation outside their house.
Action 3 Phase 1 & 2	Create new open space, pocket parks, micro-forests in the suburb seeking new biodiversity or habitat corridors.	Investigate opportunities to create new public open space, pocket parks, micro forests, and habitat corridors, ensuring that the design of these spaces are contributing to Bayside's urban forest outcomes and the existing Ecological Vegetation Community.	Open Space	Ongoing	This can be considered as part of the Open Space Strategy review and can be considered with the resourcing of that project.	Council to prepare list of potential open space sites as part of the adoption of the Open Space Strategy review.
Action 4 Phase 1	Ensure humans and wildlife can simultaneously and safely access densely vegetated areas, streets and reserves	Support the undergrounding of powerlines where it is at the request of the community and at their full cost. Facilitate the negotiations between the residents and relevant authorities to support the undergrounding of powerlines (and other services) if there is sufficient interest in a street.	Asset Protection	Ongoing	No budget required	Number of streets where undergrounding of powerlines has been implemented
Action 5 Phase 1	Ensure open space opportunities along the Sandringham train line are considered.	Council will work with the Port Phillip Emergency Climate Action Network (PECAN) to seek the increase of vegetation cover along the Sandringham rail line from North Brighton Station to Sandringham Station as a Stage 2 of the Green Line Project.	Open Space, Urban Strategy, Climate, Sustainability, Waste and Transport	Ongoing	No budget required.	Confirmation that planting along the Sandringham line will commence.

Phase	Objective	Action	Responsibility	Timeframe	Resources required	Measure
Enhance landscape outcomes and increase tree and vegetation cover to reach 30% across Brighton by prioritising areas in greatest need						
Action 6 Phase 1	Increase tree and understorey cover at areas with greatest need to enhance landscape outcomes, provide for heating and cooling benefits and combat climate change.	Investigate opportunities to increase canopy tree and understorey planting at the following streets which have been identified as having low canopy cover (less than 20%): • New Street, • Bay Street; and • Dendy Street • Burrow Street Park In addition, investigate opportunities to increase tree and understorey cover at the following streets which have been identified as hot spots due to potential impacts from Urban Heat Island effects: • Glendora Avenue, Cochrane Street, Head Street • Martin Street, Brickwood Street, Cole Street • Spink Street, Nepean Highway, Hampton Street • South Road, Well Street, Church Street • Carpenter Street, Male Street, Bleazby Avenue • Valda Grove, Wilson Street, William Street • Durrant Street,York Street, Alverna Grove • St Andrews Street, Outer Crescent, Bay Street • Middle Crescent, Barkly Street, New Street • Crowther Place, Allee Street, Parliament Street • Cadby Street, Grosvenor Street, Normanby Street • Marion Street, Asling Street, Clarkson Avenue • Warleigh Grove, Nepean Highway, Warriston Street • Hillcrest Avenue, Cowra Street, Southey Street • Byron Street, Bent Street, Blanche Street	Open Space	Year 1 to 5	Budget and resources will be required to increase the number of trees and understorey plants to be planted.	In line with the review of the Precinct Plans, a comparison should be undertaken for all streets that currently have less than 20% canopy cover.
Action 7 Phase 1	Planting canopy trees and understorey vegetation on roundabouts that currently do not have vegetation to enhance landscape outcomes.	Investigate opportunities to provide canopy cover and/or understorey planting at the following roundabouts (as per Map 15): • Church Street / Male Street New plantings must not affect sight lines, safety or accessibility for larger vehicles.	Open Space, Urban Strategy, Integrated Transport. Integrated Transport team to undertake internal safety assessment before and after planting.	Year 1 to 5	Budget and resources will be required to increase the number of trees and understorey plants to be planted.	Number of plants planted. In line with the review of the Precinct Plans, a comparison should be undertaken for all roundabouts that currently do not have vegetation.
Action 8 Phase 2	Increase utilisation of green walls and green roofs in Activity Centre area.	Investigate opportunities to introduce mechanisms to increase green roofs and walls within Activity Centres.	Development Services, Strategic Planning	Year 5 to 10	Resources will be required to initiate a Planning Scheme Amendment.	Number of green walls implemented. Urban Forest Strategy Annual Reporting Program.
Action 9 Phase 1 and 2	Reframe Council's approach to major council-owned projects, capital infrastructure renewal projects as opportunity to increase urban forestry outcomes.	Explore opportunities within road reconstruction projects to provide new tree plots as boulevard planting or in between car parking bays to enhance tree and vegetation cover upon local streets.	Project Services, City Assets	Ongoing	Budget will be considered as part of the project scope.	Number of plants planted. Urban Forest Strategy Annual Reporting Program.
Action 10 Phase 1	Increase tree canopy cover by prioritising vacant tree sites.	As part of the Annual Tree Planting Program, prioritise planting at vacant sites.	Open Space, Urban Strategy	Ongoing	Budget and resources will be required to increase the number of trees and understorey plants to be planted.	Number of trees planted. Urban Forest Strategy Annual Reporting Program.

Phase	Objective	Action	Responsibility	Timeframe	Resources required	Measure
Action 11 Phase 1	Ensure our urban forest is healthy and resilient.	As part of the Annual Tree Planting Program, Council should continue to choose species that are resilient and adaptive to the effects of climate change and increasing urban development. Property owners are also encouraged to select species that are resilient and adaptive through the planning and local law application processes.	Open Space, Development Services and Urban Strategy	Ongoing	Budget allocation as part of the Annual Tree Planting Program	Species planted. Urban Forest Strategy Annual Reporting Program.
Learn together, educate each other, encourage and celebrate greater care and protection of the Bayside Urban Forest						
Action 12 Phase 1	Increase planting on State owned roads that have less than 20% tree canopy cover.	Advocate to VicRoads and other authorities for increased planting on St. Kilda Street, Nepean Highway, North Road, South Road, and Hampton Street.	Open Space, Urban Strategy, Communications and Engagement	Ongoing	Budget will be required for any additional planting or maintenance should Council take on those functions for land in State ownership.	A commitment made to plant trees on the streets maintained by VicRoads.
Action 13 Phase 1	Increase awareness amongst the community around the importance of vegetation through various programs and communication material.	Continue to run student and community educational programs to increase awareness around vegetation planting and protection.	Urban Strategy, Communication & Engagement	Ongoing	Budget may be required to create and implement educational programs.	Number of educational programs undertaken every year.
Action 14 Phase 1 and 2	Ensure humans and wildlife can simultaneously and safely access densely vegetated areas, streets and reserves.	Advocate to VicRoads and other authorities for the undergrounding of powerlines.	Urban Strategy	Ongoing	No budget required.	Funding received and/or partnerships created.
Maintain our existing canopy cover across Brighton and avoid any further decline where possible						
Action 15 Phase 2	Ensure our urban forest is healthy and resilient.	Continue to assess trees that have limited useful life expectancy or are dead for potential retention as habitat trees using TRAQ (Tree Risk Assessment Tool).	Open Space	Year 5 to 10	Budget and resources will be required to assess the trees and plant understorey to support the habitat tree.	Number of replacement plants planted, and number of those trees retained for habitat. Urban Forest Strategy Annual Reporting Program.
Action 16 Phase 1 and 2	Increase Council's ability to protect trees from vandalism.	Explore additional opportunities to minimise vandalism, particularly along the foreshore: Consider the preparation of a communications and engagement strategy targeted to private property owners and the wider community.	Local Laws, Open Space, Communications and Engagement	Year 1 to 5	Budget and resources will be required to explore opportunities.	Utilise engagement evaluation matrix to measure success.
Action 17 Phase 2	Provide safer and cleaner streets for our residents and visitors	As vegetation cover increases with time, ensure future maintenance contracts appropriately fund the clean-up of tree leaves and debris on roads, public land and in activity centres.	City Asset, Open Space	Ongoing	Additional budget will be required for maintenance contract.	The number of requests for additional service.
Action 18 Phase 1	Strengthen requirements and advocacy to maintain and increase vegetation on private land.	Prepare Planning Scheme Amendments to strengthen the protection of vegetation on private land.	Development Services, Urban Strategy	Year 1 to 5	Planning Scheme Amendment process to be funded via operation budget. Budget may be required to prepare detailed background information.	Preparation of Planning Scheme Amendments

Appendix 1: Guiding Principles and Considerations

Council is responsible for the management of road reserves, parks, public spaces, and foreshore reserves and has an active tree planting and maintenance program, which is guided by the *Park and Street Tree Management Policy*. As such, Council has a greater degree of control and influence over the tree population on council-managed land.

Planting in streets and parks presents a variety of challenges and there are important principles to use in responding to those challenges that will help to meet the *Urban Forest Strategy* targets. A complete and expanded set of these principles is included in the *Street and Park Tree Selection Guide 2016* and should be referred to when designing or planting any streetscape.

Brighton has a distinctive character including a mixture of natives, local indigenous and exotic species. While exotic species are an integral part of Brighton's urban forest for historical and ecological reasons (and do provide habitat and food sources), future planting of exotic species will be based on local conditions and which species is the most appropriate for the area.

Planting types and locations in streets

1. **Large canopy trees**

A single large canopy tree provides greater benefits in terms of cooling, rainwater interception and other ecosystem services than multiple small trees totalling the same canopy extent. Prioritise the use of large canopy trees in wider nature strips or tree islands, where there will be low impact to adjacent infrastructure

We recognise that there are restrictions where medium or small size trees would be more appropriate due to competing infrastructure. Understorey planting in these locations is also encouraged.

2. **Constrained planting spaces**

a.) *Cut-outs.* Planting in cut-outs in the road or footpaths provides a useful alternative where there may be insufficient space on the nature strip. Suitability for planting in the road or footpath will depend on road or footpath width and other factors such as traffic volume and impact to on-street.

b.) *Planting in road reserve.* Designing in-road tree pits where there is an opportunity to plant trees in between on-street parking spaces, traffic islands and buffer areas like street corners.

c.) *Narrow streets:* Narrow streets, including narrow footpaths and no nature strips, are best landscaped via tree planting within the parking lanes to either side, although this is partly limited by the need to maintain car parking spaces.

3. **Roundabouts**

Roundabouts will be considered as opportunities to plant canopy trees and understorey planting when appropriate. New plantings must not affect sight lines, safety or accessibility for larger vehicles. To ensure future planting is appropriate a Road Safety Audit will be completed before and after installation.

4. **Boulevards**

For the boulevards, consider inter-planting with large canopy trees and shrubs to enhance the existing canopy cover.

5. **Streets and powerlines:**

a.) *Residential streets.* Low voltage overhead wires are present on one side of most residential streets. Where medians exist for large canopy tree planting, medium trees on the side overhead constraints should be selected. Council will continue to investigate engineering and horticultural solutions to manage larger trees under powerlines.

b.) *Streets with small nature strip and powerlines:* In streets that have small or very small nature strips, a smaller growing tree will be considered for the powerline side of the street. In those circumstances, the trees on both sides of the street should have similar foliage and form to provide a consistent theme for the street.

c.) *Tree pruning:* In streets where footpath trees provide the only canopy, medium to large trees that can be effectively pruned around powerlines should be selected. Street and park tree selection for trees growing under power lines will consider the species' tolerance for pruning. For example, a tree that has a natural branching habit and a good wound response to mechanical damage would be considered an appropriate tree for growing under powerlines.

d.) *Underground powerlines.* Although overhead powerlines are typically more economical, they are susceptible to damage from windborne tree branches, debris, and high wind conditions from extreme weather.

Council will facilitate the negotiations between the residents and relevant authorities to support the undergrounding of powerlines (and other services) if there is sufficient interest in a street.

6. Planting patterns and species choice

Brighton's urban forest character is quite varied, with many of the council-managed spaces having a significant amount of gum trees, while exotic species are more prominent as street trees and upon private residential land. In terms of opportunities to increase diversity in streets, kerb out stands, roundabouts and road ends should be considered as opportunities to plant species drawn from a wider palette that are unique to that location or intersection and provide visual interest. These areas should also be considered as opportunities to create landmark feature landscapes and to support understorey planting.

7. Important Facades

In streets with important public buildings or building that have heritage importance, deciduous trees should be given preference so that building façades are exposed over winter.

The convention of planting avenues, or consistent lines of a single species, can limit species diversity. However, avenue plantings are important to local character in many streets and open spaces. To balance these two conflicting pressures, it is important to identify ways to minimise the extent of homogeneous avenue planting while maintaining a strong design outcome.

8. Selection criteria for street trees:

The following factors can be considered for selection of suitable street tree species:

- Relationship with local landscape character
  - garden character, surrounding streetscape
  - vegetation protection overlays, heritage values
  - maintain existing landscape character by selection of low fruiting cultivators where possible
  - replacing difficult to replace existing species with species demonstrating similar characteristics, e.g. growth habit, foliage colour and size.
- Ability to tolerate and thrive in a site's environmental conditions: species that have or can adapt to local conditions like climate, soil, coastal and salt tolerances, pests and diseases.
- Possible future damage to infrastructure as assessed against identified current issues with footpaths, kerb and channel, roadways, private infrastructure and powerlines.

9. Permeable surfaces

Impermeable surfaces such as pavements, roofing and building coverage increase the risk of flooding in urban areas. Comparatively, permeable surfaces are made of porous materials that allow stormwater to flow though, which reduces the volume of stormwater runoff that enters the drainage system. This helps improve water quality as it reduces the number of pollutants that enter waterways and habitats.

For new private residential development, at least 20% of the site should have surfaces that can absorb water such as lawns, garden beds or permeable paving. The council has developed the *Integrated Water Management Plan 2019-2039*, called ‘Water for Bayside’, to provide clear direction to deliver high priority integrated water management and water sensitive urban design (WSUD) activities. A key technique to improve water management is to increase permeability and incorporate WSUD into new developments and council projects.


1


2a


2b


2c


3


4

5a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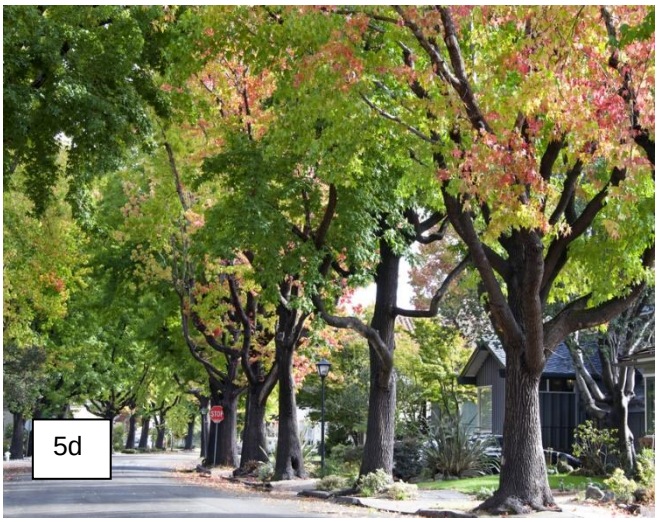
5b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Appendix 2: Case Studies

The following case studies showcase high-quality landscaping. A precinct's landscape helps define its character in much the same way as architecture or urban design because trees and other vegetation physically define a place. Landscapes are the setting for many everyday recreational and leisure activities and help forge a sense of connection to place.

1. Church Street

Bayside Council has provided an example of how understorey planting and canopy trees can be incorporated to enhance the visual appeal of a popular commercial precinct. Plane trees and grasses have been planted to improve the visual amenity of the streetscape, promote safety and increase vegetation. Church Street shows how vegetation can be integrated into a commercial area with high pedestrian and vehicle traffic.

1. Church Street, Brighton

2. Billila Gardens

Billila House and Gardens has been recognised by Bayside Council and the local community as a significant historical site within Bayside. The residence was built by Robert Wright in 1878 with established gardens that are open for public use. The garden has retained much of its original layout, and it still contains several heritage-listed trees, a traditional parterre and a magnificent rose garden. Billila gardens consists of a diverse mix of native and exotic species such as Canary Island Pines. Billila provides a unique example of how the council is preserving vegetation in public open spaces and the importance of manicured gardens within Brighton. The gardens are maintained with their original exotic planting palette to reflect the historical eras that they represent.

2. Billila Gardens, Brighton

3. North Road

At the beach end of North Road, there is excellent understorey planting comprising of Indigenous plantings. The mix of bushy shrubs, succulents and grasses contribute to habitat facilitation and the iconic aesthetics of Brighton.

3. North Road, Brighton

4. **Grantham Court**

This case study is located on the corner of Grantham Court and North Road. It comprises of exotic succulents. Where this could be improved is the removal of the Ivy, which impacts the tree vitality and could become an environmental weed.

4. Grantham Court, Brighton

5. **Village Zero – Sandringham**

'Village Zero' is a community-driven initiative with the goal of regenerating the Sandringham Village Major Activity Centre through sustainable solutions.

The action group has identified seven areas of focus, these are:

1. Renewable Energy
2. Waste
3. Green Spaces
4. Transport
5. Water
6. Art
7. Culture

The relevant action to the Precinct Plans is Green Spaces.

This focus area aims to:

- Connect green and open spaces to surrounding pollinator corridors, to promote biodiversity and support local ecosystems. This could include planting native flowers and shrubs, and creating habitats for bees, butterflies, and birds. This includes investigating the viability of green infrastructure, such as creating green roofs, and vertical gardens for apartment buildings;
- Increase access to green and open spaces, maximising flexibility of spaces for multiple uses and users, in accordance with Bayside Council's "Open Spaces" policies. Prioritise accessibility for people living with disabilities, youth and the elderly in the design and development of green and open spaces. This could include incorporating features such as raised garden beds, wheelchair-accessible pathways, and age-appropriate playground equipment. Improved accessibility will interface with other infrastructure initiatives such as crossing improvements at Abbott Street, across Station Street, and Beach Road;
- Coordinate with the community to increase the uptake of Bayside Council's tree-planting commitment for nature strips;
- Increase community enjoyment of streets, open and green spaces through community building events and activities;
- Align with and enabling other partners in supporting and nurturing green spaces;
- Engage the community in the planning, design, and maintenance of green and open spaces. This could include activities such as community clean-ups, volunteer gardening days, and educational workshops;
- Create and connect community gardens and orchards, which allow for community members to grow their own produce and educate the community on sustainable food production and consumption.

Council will continue to assist the 'Village Zero' project and will support any future initiatives that focus on increasing vegetation cover in activity centres.

6. Green Line Project – Sandringham Train Line

The Green Line project is a community-driven proposal for a linear park that will follow along the Sandringham rail line from South Yarra Station to Gardenvale Station. The Port Phillip Emergency Climate Action Network (PECAN) developed the Green Line project in response to City of Port Phillip's Draft Public Open Space Strategy.

The Green Line project will connect existing open space and rehabilitate underutilised spaces to create a biodiverse urban green space that will improve pedestrian and cycling accessibility. Gardenvale Station is located along the border of the Bayside municipality and the project presents an opportunity to increase planting and tree canopy cover.

Bayside City Council supports this project and will advocate for the project to be extended along the remaining Sandringham rail corridor. Council will also advocate for increased open space connectivity along the Frankston railway line.

Appendix 3: Brighton Species Palette

Species Palette

The following species provided are of guidance only. *Eucalyptus, Oaks, Pines* and other species are key genera across Brighton, forming an important part of the character of the suburb's urban forest. Species from many other genera will also be planted to increase the diversity of tree species, with the aim to reduce the vulnerability of Brighton's urban forest. In the suburb of Brighton, the EVCs found are Damp Sands Herb-rich Woodland (3), Coast Banksia Woodland/ Coastal Dune Scrub (921) and Coastal Headland Scrub/Coast Banksia Woodland Mosaic (EVC 919). If available, these species can be planted where soil conditions are suitable, in representation of the EVCs that were historically present within the suburb.

When selecting tree and vegetation species for planting on Council-managed streets, parks and reserves, Council considers which species will be the least destructive to underground infrastructure. This will ensure that Council can increase vegetation cover whilst protecting existing infrastructure and reducing demand for maintenance.

Bayside City Council utilises the Street and Park Tree Management Policy and the Street and Park Tree Selection Guide when planting in streets, parks, and reserves or as part of capital infrastructure projects.

A high diversity of plant species improves the chance of local ecosystems to survive destructive events or processes such as weed and pest animal invasion and climate change. Planting of specific species will depend on the geographic and environmental conditions, as well as the surrounding neighborhood character.

The following list of Indigenous, native and exotic plants is provided as guidance only. The list is split into 8 categories:

- Large canopy trees
- Medium canopy trees
- Small canopy trees
- Medium to large shrubs
- Small shrubs
- Grasses & tussocks
- Groundcovers & wildflowers
- Climbers

Each list is accompanied by a key which categorises each plant based on its characteristics (Height and spread at maturity, Uses/traits, habitat, tolerances, sunlight, flowering period, flowering colours and EVC number if applicable).

Indigenous Plants

Council promotes the use of indigenous plants as they occur naturally within Bayside and have adapted to the conditions within the local environment (soil and climate) whilst also providing habitat and food for local birds, insects, and other native animals. There are a number of indigenous trees listed within the Street and Park Tree Selection Guide which are planted as part of Council's Annual Tree Planting Program.

Indigenous plants are the original flora, or plants that occur naturally, in a given location. Indigenous plants have adapted to the soils, topography and climate of the local area because they have evolved to the conditions within the local environment. Indigenous species also help to maintain the ecological balance of the local ecosystem, as plants and animals depend upon one another for their survival.

Native and Exotic Plants

Native species are plant species that did not historically originate within the bayside region but were extant in other regions within the Australian continent. Exotic species are those plants that have been introduced and are not native to Australia and therefore did not historically occur within Bayside.

Bayside's urban forest is a mix of native, indigenous, and exotic species. While priority is placed on increasing the use of indigenous species, the historic planting of exotic, native and indigenous species is a core element of the character in certain areas of Bayside.

The use of native and exotic plants in this list is encouraged in areas where it is considered to have a positive impact on the surrounding environment and neighbourhood. This is of relevance where the existing plant(s) enhances the neighbourhood character. In these areas replanting like for like is encouraged.

Council utilises native and exotic species as part of its annual planting program. To ensure long term resilience and increase survival rates, native and exotic species adapted to Bayside's forecast climate will be considered for planting. Council utilises the Street and Park Tree Selection Guide to inform the annual tree planting program.

Species Palette 1 – Large Trees

INDIGENOUS TO PROVIDENCE *(Grown at nursery/within Bayside)*		Uses/traits key	Habitat Key		
INDIGENOUS *(Grown Outside Bayside)*		R - Robust and Hardy	H – Heath/Woodland		High = tolerates well without damage.
NATIVE TREES (From Australia)	**Full Sun = FS**	LM - Low Maintenance	M - Moist/Closed forest	complete range	Fair= can tolerate medium levels
EXOTIC (From outside Australia)	**Part Shade=PS**	S - Shade	C – Coast – dune scrub & woodland	acid to neutral	Moderate = tolerates somewhat with some effects in low levels
Additional Species	**Shade = FSh**	F - Feature	D – Prefers dry, well drained soils & tolerates dryness once established.	acid	Low = suffers serious damage to death if exposed
*PLEASE NOTE THE BELOW INFORMATION IS A GUIDE ONLY		Sh – Prefers or tolerates full shade	W – Prefers or tolerates moist soils, wetness, periodic inundation	Alkaline to neutral	**E=Evegreen** Please contact your local nursery or a horticultural professional for further advice.
Use of any of the below species is preferred but not limited to these species			A – Adaptable, growing well in most soil types		**D=Decidious** All indigenous plants provide habitat & food for local birds, insects & animals.

Species capable of reaching 9m+ and canopy spreads greater than 8m+					EVC= Ecological Vegetation Class		Tolerances											
BOTANICAL NAME	**COMMON NAME**	**Mat. HEIGHT**	**Mat. CANOPY**	**Growth Rate**	**EVC**	**Sunlight**	**Wind**	**Salinity**	**Sea Spray**	**Drought**	**Waterlogging**	**Compaction**	**PH**	**Flowering Months**	**Flower colours**	**E/D**	**Habitat**	**Uses/Traits**
Acacia melanoxylon	Blackwood	12	8	Moderate	719, 3	SS-FS	Fair	Moderate	Moderate	Fair	High	Moderate	Acid	Jul-Oct.	Pale yellow/White	E	ADW	LM, S, R, Bird attracting, Hedging, Screening, Toxic or allergenic
Eucalyptus camaldulensis	River Red Gum	20	15	Moderate	n/a	FS	High	High	Moderate	High	High	Fair	Complete Range	Dec.	White	E	HA	LM, S, Windbreak, Erosion control, Robust, Structural, Attractive Bark, Bird-attracting, Aromatic
Eucalyptus melliodora	Yellow Box	16	12	Moderate	n/a	FS	High	Moderate	Moderate	High	Low	Low	Complete Range	Mar/Sep-Dec.	White	E	HA	LM, S, R, Fragrant flowers, Aromatic leaves, Bird-attracting
Eucalyptus ovata	Swamp Gum	10	8	Moderate	707	FS	Moderate	Low	Moderate	Moderate	High	High	Acid	Mar-Jun.	White	E	HW	LM, S, R, Attractive bark, Bird attracting, Aromatic leaves
Eucalyptus radiata	Narrow-leaved Peppermint	15	10	Moderate	892	FS	Moderate	Low	Moderate	High	Moderate	Moderate	Complete Range	Jan/Oct-Dec	White	E	HD	LM, S, R, Bird attracting, Aromatic leaves
Eucalyptus viminalis subsp.pryoriana	Manna Gum	15	12	Fast	919,719,892,3	FS	Moderate	Low	Moderate	Moderate	Moderate	Fair	Acid to Neutral	Mar-May	White	E	HCD	LM, S, R, Attractive bark, Bird attracting, Aromatic leaves
Eucalyptus cephalocarpa	Silver-leaved Stringybark	13	11	Moderate-slow	n/a	FS	Fair	Moderate	Moderate	High	Fair	Fair	Acid to Neutral	May-Jul.	Creamy-White/yellow	E	MW	R, LM, bird-attracting, aromatic leaves, shading, screeening, cut flower, bush garden
Eucalyptus leucoxylon subsp. Connata	Yellow Gum	12	10	Moderate-slow	n/a	FS	Moderate	Moderate	Moderate	High	Moderate	High	Complete range	May-Sep.	Creamy-White/yellow	E	MW	R, LM, attractive bark, bird attracting, aromatic leaves
Agonis flexuosa	Weeping Willow Myrtle	12	12	Moderate-slow	n/a	PS-FS	Moderate	Fair	Fair	High	Low	Low	Acid to Neutral	Sep-Dec.	White	E	CA	Aromatic leaves, folourful foliage, screening, shading, bush garden
Angophora costata	Smooth-barked Apple	15	12	Moderate	n/a	FS	Fair	Moderate	High	High	Low	Fair	Acid to Neutral	Dec.	Bright Cream/White	E	CHD	LM, S, R, Attractive Bark
Angophora floribunda	Rough Barked Apple	15	12	Moderate	n/a	FS	Fair	Moderate	Fair	Fair	Low	Moderate	Complete Range	Sep-Dec.	Bright Cream/White	E	HMW	LM, S, R
Corymbia Citriodora (native)	Lemon-Scented	20	12	Fast	n/a	FS	Moderate	Low	Moderate	Fair	Moderate	Moderate	Acid to Neutral	Jul-Nov.	White	E	CHD	R, LM, Aromatic leaves, attractive bark, architectural form, street tree
Corymbia eximia	Yellow Bloodwood	15	8	Moderate	n/a	FS	Fair	Moderate	Fair	High	Moderate	Moderate	Acid	Nov-Dec.	Bright White/Cream	E	HA	LM, S, R, Bird attracting
Corymbia ficifolia	Red-flowering Gum	15	12	Slow-Moderate	n/a	FS	Fair	Moderate	Fair	High	Low	Low	Complete Range	Mar	Bright Red/Oink/Orange	E	DW	LM, S, R, Bird attracting, Screening
Corymbia maculata	Spotted Gum	18	8	Fast	n/a	FS	Moderate	Moderate	Fair	Fair	High	High	Complete Range	Apr-Jun.	White	E	DA	LM, S, R, Attractive Bark, Bird attracting, Street tree
Eucalyptus baxteri	Brown Stringybark	20	10	Moderate-Fast	n/a	FS	Moderate	Moderate	Moderate	Moderate	Low	Moderate	Acid to Neutral		White			
Eucalyptus cinerea	Mealy Stringybark	12	10	Moderate-slow	n/a	FS	Fair	Fair	Moderate	High	Fair	Fair	Acid to Neutral	May-Jul.	White	E	HD	R, LM, bird-attracting, aromatic leaves, shading, screeening, cut flower, bush garden
Eucalyptus cornuta	Yate	10	10	Moderate	n/a	FS	Fair	Fair	Fair	Fair	Fair	Unknown	Acid to Neutral	Sep-Nov.	Yellow	E	CD	R, LM, attractive bark, bird-attracting, aromatic leaves, screening, shading, bush garden
Eucalyptus largiflorens	Black Box	14	12	Slow	n/a	FS	High	High	Fair	High	Moderate	Unknown	Complete range	All	White	E	MW	Screening, shelter
Eucalyptus mannifera	Red Spotted Gum	12	10	Moderate-fast	n/a	FS	Moderate	Moderate	Moderate	High	Moderate	Moderate	Complete range	Apr-Jun.	White	E	HD	R, LM, attractive bark, bird-attracting, aromatic leaves, shading, accent tree, bush garden
Eucalyptus microcarpa	Grey Box	15	10	Moderate	n/a	FS	High	Moderate	Moderate	High	Fair	Fair	Complete Range	Feb-Jul.	White	E	HD	LM, S, R, Bird attracting, Aromatic leaves
Eucalyptus nicholii	Narrow-leaved Black Pepper	14	12	Moderate	n/a	FS	Moderate	Moderate	Moderate	Fair	Fair	Fair	Acid	Apr, May-Sep.	Creamy-White/White	E	HD	attractive bark, foliage interest, bird-attracting,shading, bush garden, aromatic leaves
Eucalyptus polyanthemos subsp. vestita	Red Box	10	8	Moderate	n/a	FS	High	Low	Moderate	High	Moderate	Moderate	Complete Range	Sep-Nov.	White	E	AW	S, R, Interesting Silver Foliage, Attractive bark, Bird attracting, Aromatic leaves
Eucalyptus rubida	Candlebark Gum	9	9	Fast	n/a	FS	High	Low	Low	Fair	Moderate	Low	Complete Range	Nov-Feb.	White	E	DA	S, Feature for Large Gardens, Interesting Bark, Fauna Attracting
Eucalyptus saligna	Sydney Blue Gum	10	15	Very Fast	n/a	FS	Fair	Low	Fair	Fair	Moderate	Low	Complete Range	Jan-Apr.	White	E	MW	LM, S, R, Attractive Bark, Bird attracting
Eucalyptus scoparia	Wallangarra White Gum	12	10	Fast	n/a	FS	Moderate	Moderate	Moderate	High	Moderate	Unknown	Acid to Neutral	Dec.	White	E	HD	attractive bark and foliage, bird-attracting, aromatic, shading, accent tree, bush garden
Eucalyptus sideroxylon	Red Ironbark	15	8	Moderate	n/a	FS	High	Low	Moderate	High	Moderate	Moderate	Complete Range	May-Aug.	Red or Pink	E	DH	LM, S, R, Attractive bark, Bird attracting, Winter interest, Aromatic leaves, Screening, Accent
Eucalyptus tereticornis	Forest red gum	15	12	Fast	n/a	FS	Low	High	High	High	Moderate	Low	Acid to Neutral	Mar-May/June-Nov.	White	E	CW	S, Sheltering, Ornamental, Wildlife attracting, Large flowering period
Ficus macrophylla	Moreton Bay Fig	60	10	Fast	n/a	FS	High	Moderate	High	High	Moderate	High	Complete Range	Sept-April	reddish purple fruit	E	MCA	R,LM Attracts seed eating birds and bats.
Ficus rubiginosa	Port Jackson Fig	10	10	Moderate	n/a	FS-PS	Moderate	Moderate	Moderate	Moderate	Low	Moderate	complete range	Sep-Dec.	Yellow fruit over summer	E	C,D,A	C,A, Feature tree. Fruit eaten by birds, bats and flying foxes
Grevillea robusta	Silky Oak	20	15	Fast	n/a	FS	Moderate	High	Moderate	Moderate	Low	Low	complete range	Nov-	Orange-Red	E	D	C,D,A, Important source of food for nectar feeding birds and fruit bats and bees
Lophostemon confertus	Brush Box	13	12	Moderate-fast	n/a	FS	Moderate	Moderate	Moderate	Fair	Moderate	Fair	Acid	Sep-Dec.	White	E	CA	R, LM, attractive bark, shading, street tree, bush garden
Wollemia nobilis	Wollemi Pine	20	10	Fast	n/a	SS-FS	Fair	Low	Low	Low	Low	Low	Acid	N/A	Cones	E	MW	F, Architectural form, foliage interest, Accent tree, Container
Araucaria heterophylla	Norfolk Island Pine	20	15	Fast	n/a	FS	High	Fair	High	Fair	Moderate	Fair	Complete Range	N/A	Cones	E	CD	LM, R, Architectural form, Accent tree, Contained
Cedrus deodara	Deodar Cedar	18	15	Moderate-Fast	n/a	FS	Moderate	Moderate	Moderate	Moderate	Moderate	Low	Complete Range	N/A	Cones	E	HD	S, Architectural form, Accent tree
Fraxinus 'Raywood'	Claret Ash	12	9	Moderate-fast	n/a	FS	Moderate	Moderate	Moderate	High	Moderate	High	Complete range	Nov-Dec.	Green	D	HW	autumn colour, clourful foliage, shading, accent tree
Fraxinus pensylvanica	Green Ash	12	10	Moderate	n/a	FS	High	Moderate	High	High	High	Unknown	Complete range	Sep-Nov,	Green	D	MW	Street tree, Good form, adaptable to site
Gleditsia triacanthos	Honey Locust	12	12	Fast	n/a	FS	Moderate	Fair	Moderate	Fair	Low	High	Complete range	Oct-Nov.	Greenish-yellow	D	HD	colourful foliage, attractive bark, autumn colour, allergenic, spiny
Liquidambar styraciflua	American Sweetgum	15	10	Moderate-Fast	n/a	SS-FS	Moderate	Low	Moderate	Moderate	High	Fair	Acid to Neutral	Oct.	Greenish-white	D	MW	aromatic leaves, autumn colour, shading, street tree, decidious
Magnolia grandiflora	Bull Bay	12	12	Moderate	n/a	PS-FS	Moderate	Low	Moderate	Moderate	Moderate	Low	Complete range	Nov-Dec.	Creamy-white	E	MW	Interesting foliage, fragrant flowers, screeening, shading
Platanus × acerifolia	London Plane	16	15	Moderate-Fast	n/a	FS	Moderate	Moderate	Moderate	Fair	Fair	High	complete range	Sept.	Green	D	HW	attractive bark, Screening, shading, street tree, decidious
Quercus coccinea	Scarlet Oak	13	12	Moderate	n/a	PS-FS	Moderate	Moderate	Moderate	Moderate	Moderate	Unknown	Acid	Sep.	Yellow-Green	D	HD	autumn colour, screening, shading, green flowers, red leaves
Quercus palustris	Pin Oak	15	12	Moderate-Fast	n/a	SS-FS	Moderate	Low	Moderate	Moderate	High	High	Complete Range	Sept.	Yellowish-Green	D	MW	S, Autumn colour, Interesting foliage, Screening
Quercus rubra	Northern Red Oak	14	12	Moderate	n/a	PS-FS	Moderate	High	Moderate	Moderate	High	Moderate	Complete range	Sep.	Reddish Green	D	HD	autumn colour, shading, screening
Schinus molle	American Pepper	12	12	Moderate-fast	n/a	FS	Fair	Low	Moderate	High	Moderate	Moderate	Complete range	Sep-Dec.	White/yellow	E	CD	Aromatic leaves, colourful fruit, interesting foliage, attractive bark
Sequoia sempervirens	Coast Redwood	20	10	Moderate	n/a	SS-FS	Moderate	Low	Moderate	Moderate	High	Low	Acid	N/A	Cones,Yellow/Brown/Green	E	MW	F, Accent tree, Architectural form
Tilia cordata cultivars	Small-leaved Linden	15	10	Moderate	n/a	FS	Moderate	Moderate	Moderate	Low	Moderate	Moderate	Complete Range	Nov-Dec.	Yellowish White	D	HW	S, Fragrant flowers, autumn colour, Architectural form, Accent tree
Ulmus glabra 'Lutescens'	Golden Wych Elm	12	12	Moderate	n/a	FS	Moderate	Moderate	Moderate	Fair	Fair	Unknown	Complete range	Sep.	Brown	D	HW	colourful foliage, shading, accent tree
Ulmus parvifolia	Chinese Elm or Lacebark	12	12	Moderate-fast	n/a	PS-FS	High	Moderate	Fair	Fair	Moderate	Moderate	Complete range	Mar-May.	Green	D	HW	attractive bark, screening, shading, street tree
Ulmus procera	English Elm	16	12	Moderate	n/a	FS	Moderate	Moderate	Moderate	Moderate	High	High	Complete Range	Sept.	Reddish-Purple	D	HD	S, Autumn colour, Architectural form
Zelkova serrata	Japanese Zelkova	14	12	Moderate-fast	n/a	FS	Moderate	Moderate	Moderate	Moderate	Moderate	Fair	Complete range	Sep-Nov.	Yellow-Green	D	HW	attractive bark, autumn colour, shading

Species Palette 2 – Medium Trees

INDIGENOUS TO PROVIDENCE *(Grown at nursery/within Bayside)*		Uses/traits key	Habitat Key
INDIGENOUS *(Grown Outside Bayside)*		R - Robust and Hardy	H – Heath/Woodland
NATIVE TREES (From Australia)	**Full Sun = FS**	LM - Low Maintenance	M - Moist/Closed forest **UPL= Under Power Lines**
EXOTIC (From outside Australia)	**Part Shade=PS**	S - Shade	C – Coast – dune scrub & woodland
Additional Species	**Shade = FSh**	F - Feature	D – Prefers dry, well drained soils & tolerates dryness once established.
*PLEASE NOTE THE BELOW INFORMATION IS A GUIDE ONLY		Sh – Prefers or tolerates full shade	W – Prefers or tolerates moist soils, wetness, periodic inundation
Use of any of the below species is preferred but not limited to these species			A – Adaptable, growing well in most soil types

	High = tolerates well without damage.
complete range	Fair= can tolerate medium levels
acid to neutral	Moderate = tolerates somewhat with some effects in low levels
acid	Low = suffers serious damage to death if exposed
Unknown	**E=Evegreen** Please contact your local nursery or a horticultural professional for further advice.
	D=Deciduous All indigenous plants provide habitat & food for local birds, insects & animals.

Species that grow to a height greater than 9m+, and canopy greater than 6m+ at maturity					**EVC= Ecological Vegetation Class**		**Tolerances**												
BOTANICAL NAME	**COMMON NAME**	**Mat. HEIGHT**	**Mat. CANOPY**	**Growth Rate**	**EVC**	**Sunlight**	**Wind**	**Salinity**	**Sea Spray**	**Drought**	**Waterlogging**	**Compaction**	**PH**	**Flowering Months**	**Flower colours**	**E/D**	**Habitat**	**Uses/Traits**
Acacia mearnsii	Black Wattle	9	6	Fast	719, 3	FS	High	Low	Moderate	High	Fair	High	Acid	Sep-Nov.	Pale yellow or Cream	E	MW	R, LM, bird-attracting, screening, shading, bush garden, fragrant flowers
Allocasuarina littoralis	Black She-oak	9	6	Slow	719, 3	PS-FS	High	High	High	High	Moderate	Moderate	Complete range	Apr-May.	Red	E	CA	R, LM, foliage interest, screening, shading, bush garden, bird-attracting
Allocasuarina verticillata	Drooping She-oak	9	6	Moderate-slow	n/a	FS	High	High	High	High	Fair	Fair	Complete range	Mar-Dec.	Red	E	HD	architectural form, foliage interest, bird-attracting, screening, UPL, street tree, bush garden
Banksia integrifolia	Coast Banksia	10	6	Moderate	919, 921	FS	High	High	High	High	Moderate	Moderate	Complete range	Mar-Sep.	Lemon yellow to Red	E	CD	R, bird-attracting, foliage interest, Screening, Shading, Street tree
Eucalyptus ovata	Swamp Paperbark	10	6	Moderate	707	FS	Moderate	Low	Moderate	Moderate	High	High	Acid	Mar-Jun,	Creamy-White	E	MW	LM, S, R, Attractive bark, bird-attracting, aromatic
Eucalyptus pauciflora	Snow Gum	10	7	Moderate-fast	n/a	FS	High	Moderate	Moderate	Moderate	Fair	Moderate	Acid	Aug-Nov.	White or Cream	E	HD	LM, S, R, attractive bark and foliage, bird-attracting, Aromatic, Accent tree
Allocasurina torulosa	Rose She-oak	10	7	Fast	n/a	FS	High	High	Fair	Fair	Moderate	High	Acid to Neutral	Mar-Aug.	Red and brown	E	HD	Wind break, unique sound, screening, windbreak, decorative fruit
Brachychiton populneus (Native)	Kurrajong	15	6	Fast	n/a	FS	High	Moderate	Moderate	High	Low	Low	Complete Range	Sep-April	White, red, pink	E	C,D	R,F, LM, Attracts bees, seed eating birds, butterflies, insects.
Brachychiton rupestris (Native)	Queensland bottle tree	15	6	Slow	n/a	FS	High	Moderate	Moderate	Moderate	Low	Low	Complete Range	Oct-Dec	Cream	D	C,D	R,LM,F, Bird attracting flowers.
Brachychiton acerifolius	Illawarra flame tree	12	6	Fast	n/a	FS	Moderate	Low	Low	Moderate	Low	Low	Acid	Sep-Dec.	Red	D	DW	Attracts bees, nectar eating birds, butterflies, other insect
Melia azedarach (Native)	White cedar	10	6	Fast	n/a	FS	Moderate	High	High	High	Moderate	Moderate	Complete range	Sep-Nov	Lilac flowers	D	CDWA	R,LM,S,F, Bird and bats are attracted to the berries.
Syzygium paniculatum (Native)	Brush cherry	15	8	Voderate to Fast	n/a	FS-PS	Low	Moderate	Moderate	High	Moderate	High	Acid to Neutral	Nov-Jan.	White	E	M,C,A	LM, S, R, Bird and bee attrafting
Syzygnium australe (native)	Lilly Pilly	10	6	Fast	n/a	FS	High	High	Low	Moderate	Low	Low	Complete Range	Sep-Oct	White/cream	E	WA	RL Flowers and berries attracts birds and bats.
Acer rubrum 'Brandywine'	Maple, Autumn Flame	9	6	Moderate	n/a	PS-FS	Moderate	Low	Moderate	Moderate	High	Moderate	Acid	Sep-Oct.	Bright Red	D	MW	S, Autumn Colour - Oange to purple-red, foliage interest, Ornamental
Acer rubrum 'October Glory'	Maple, Lipstick Tree	12	9	Moderate	n/a	PS-FS	Moderate	Low	Moderate	Moderate	High	Moderate	Acid	Sep-Oct.	Red or orange	D	MW	S, Foliage interest, Ornamental, Autumn colours - *superior if grown in full sun
Acer x freemanii	Armstrong	12	6	Moderate	n/a	PS-FS	Moderate	Low	Moderate	Moderate	High	Moderate	Acid	Sep-Oct.	Red	D	MW	S, Autumn Colour, foliage interest, Ornamental
Catalpa bignonioides	Indian Bean Tree	10	7	Fast	n/a	FS	Low	Low	Low	Fair	Moderate	Unknown	Complete range	Nov-Dec.	White	D	MW	interesting foliage, autumn colour, shading, accent
Celtis occidentalis	Hackberry	8	8	Moderate	n/a	FS	Moderate	Moderate	Moderate	Moderate	Moderate	Unknown	Complete range	Sep-Nov.	Yellowish Green	D	HD	S, Autumn colour. Attractive bark
Fraxinus excelsior 'Aurea'	Golden Ash	10	7	Moderate	n/a	FS	Moderate	Low	Moderate	Moderate	High	High	Complete range	Sep-Oct.	Green	D	HW	LM, S, R, Colourful foliage, Autumn colour
Jacaranda mimosifolia	Jacaranda	12	8	Slow	n/a	PS-FS	Moderate	Low	Moderate	Moderate	Low	Fair	Complete range	Oct-Nov.	bluish-purple	D	CD	interesting and aesethic foliage, blue flowers, shading, accent tree
Metrosideros excelsa	Pohutukawa	10	8	Moderate-slow	n/a	FS	High	Moderate	High	High	Moderate	Moderate	Complete range	Dec.	Crimson and yellow	E	CA	R, LM, attractive bark, bird-attracting, hedging, screening, shading
Pyrus calleryana and other cultivars	Flowering Pear	10	4-8	Fast	n/a	PS-FS	Moderate	Low	Moderate	Fair	High	High	Complete range	Sep-Oct.	White	D	HW	S, Screening, Street tree, Autumn colour

Species Palette 3 – Small Trees

INDIGENOUS TO PROVIDENCE *(Grown at nursery/within Bayside)*		Uses/traits key	Habitat Key
INDIGENOUS *(Grown Outside Bayside)*	**UPL=Under Power Lines**	R - Robust and Hardy	H – Heath/Woodland
NATIVE TREES (From Australia)	**Full Sun = FS**	LM - Low Maintenance	M - Moist/Closed forest
EXOTIC (From outside Australia)	**Part Shade=PS**	S - Shade	C – Coast – dune scrub & woodland
Additional Species	**Shade = FSh**	F - Feature	D – Prefers dry, well drained soils & tolerates dryness once established.
*PLEASE NOTE THE BELOW INFORMATION IS A GUIDE ONLY		Sh – Prefers or tolerates full shade	W – Prefers or tolerates moist soils, wetness, periodic inundation
Use of any of the below species is preferred but not limited to these species			A – Adaptive, can grow in most soil types

	High = tolerates well without damage.
complete range	Fair= can tolerate medium levels
acid to neutral	Moderate = tolerates somewhat with some effects in low levels
acid	Low = suffers serious damage to death if exposed
Unknown	Please contact your local nursery or a horticultural professional for further advice.
	All indigenous plants provide habitat & food for local birds, insects & animals.

SMALL CANOPY TREES - Species that reach 6-8metres in height and a spread of 4m @ maturity					**EVC= Ecological Vegetation Class**		**Tolerances**												
BOTANICAL NAME	**COMMON NAME**	**Mat. HEIGHT**	**Mat. CANOPY**	**Growth Rate**	**EVC**	**Sunlight**	**Wind**	**Salinity**	**Sea Spray**	**Drought**	**Waterlogging**	**Compaction**	**SOIL PH**	**Flowering Months**	**Flower colours**	**E/D**	**Habitat**	**Uses/Traits**
Acacia implexa	Lightwood	8	4	Moderate	n/a	PS-FS	Fair	Moderate	Moderate	High	Fair	Fair	Acid	Dec	Cream-white	E	HDA	R, LM, S, Bird-attracting, attractive bark, screening,
Leptospermum laevigatum	Coast Tea-tree	6	3	Moderate	919, 921	FS	High	High	High	High	Moderate	Moderate	Complete Range	Aug-Oct.	White	E	CDA	R, LM, Bird-attracting, hedging, screening
Bursaria spinosa	Sweet Bursaria	6	3	Moderate-Fast	n/a	PS-FS	Fair	Fair	Fair	High	Fair	Fair	Acid to Neutral	Mar-Dec	Cream-white	E	FDA	R, LM, Fragrant, thorns, hedging, screening, UPL
Banksia marginata	Silver Banksia	5	3	Moderate	719, 892, 3	PS-FS	High	High	Fair	High	Fair	Moderate	Acid to Neutral	Mar, May-Nov.	Pale Yellow	E	HCDA	R, LM, S, Bird-attracting, Winter features, Screening, UPL
Melaleuca squarrosa	Scented Paperbark	3	1.5	Moderate	n/a	PS-FS	High	Moderate	Fair	Moderate	High	High	Complete range	Sep-Dec.	Cream-White	E	HMW	R, LM, S, Bird-attracting, Fragrant, screen, UPL,Ornament pond
Acacia pendula	Weeping Myall	6	3	Slow-Moderate	n/a	FS	High	Low	High	Moderate	Moderate	Fair	Complete range	May, Jul-Oct.	Yellow/Creamy white	E	CD	R, LM, Fragrant, thorns, hedging, screening,UPL
Angophora hispida (Native)	Dwarf apple gum	7	5	Moderate	n/a	FS	High	High	High	Moderate	Low	Low	Acid - neutral	Sep-Dec	Cream-White	E	CDA	R,LM,F, Attracts honey eaters and other nectar eating birds
Banksia grandis	Bull Banksia	8	4	Moderate	n/a	FS	High	High	High	High	Low	Low	Mild acidic to Mild alkaline		Crème, Yellow	E		
Banksia serrata	Saw Banksia	5	5	Slow	n/a	PS-FS	High	High	High	High	Moderate	Moderate	Mild acidic to Mild alkaline	Mar,May, Aug-Dec.	Yellow-Creamy green	E	MW	R, LM, S, Bird-attracting, Winter features, Screening, UPL
Callistemon viminalis (native)	Weeping Callistemon	4	4	Fast	n/a	FS-PS	Moderate	Moderate	Moderate	High	High	Moderate	Complete range	Sep-Oct.	Red	E	WA	R,F, Attractive new foliage, showy bird attractant flowers
Cupaniopsis anacardioides (native)	Tuckeroo	7	4	Fast	n/a	FS-PS	Moderate	High	High	Moderate	Low	Low	Complete range	Sep-Oct.	White	E	DA	R,LM, bird attractant
Eucalyptus viridis	Green mallee	8	4	Slow-Moderate	n/a	FS	Moderate	Moderate	Unknown	High	Moderate	Moderate	Mild acidic to Mild alkaline	Dec-Mar	White	E	CDA	R,LM, attractive small eucalypt, attracts bees and nectar eating birds.
Geijera paviflora (naative)	Wilga	8	6	Slow	n/a	FS	High	High	Moderate	High	Low	Low	Alkaline	June-Nov	Whiate	E	DA	R,LM, ornamental, hardy species that attracts birds, butterflies, lady beetles.
Hakea spp. (native)	Hakea	6	4	Moderate to Fast	n/a	FS	Moderate	Moderate	Moderate	High	Low	Moderate	Acid	May, Jul-Oct.	various	E	CD	RF, bird and butterfly attracting,cockatoos, Iconic australian native
Hymenosporum flavum (Native)	Native frangipani	8	4	Slow - Moderate	n/a	FS-PS	Moderate	Low	Moderate	High	Low	Low	Acid - neutral	March to July	Blue-black edible fruit	E	MW	R, bird attracting, screening, decorative fruit, foliage used for flower arranging
Melaleuca ericifolia	Melaleuca	5	2	Moderate		FS-PS	High	Moderate	Moderate	High	High	Moderate	Acid - neutral	Aug-Nov	Cream	E		
Stenocarpus sinuatus	Firewheel tree	8	5	Slow	n/a	FS-PS	Low	Moderate	Low	High	Moderate	Low	Acid	Sep	Orange, Red	E	W	L,MF Summer flowering tree that provides nectar and shelter for birds
Taxandria juniperina (native)	Native cedar	7	4	Fast	n/a	PS	High	Moderate	Moderate	Moderate	Low	Moderate	Complete range	March-June	White	E	C,A	R, LM Aromatic foliage, attracts insect eating birds.
Tristaniopsis laurina	Kanooka, Water gum	5	5	Slow-Moderate	n/a	PS-FS	Moderate	Low	Moderate	Fair	High	High	Acid-Neutral	Dec.	Yellow	E	MW	R, LM, aesthetic, bird-attracting, under powerline, shading, screening
Waterhousia floribunda (native)	Weeping lilypilly	6	4	Moderate to Fast	n/a	FS-PS	Low	Moderate	Moderate	High	Moderate	High	Acid to Neutral	Nov-Jan.	White	E	M,C,A	LM, S, R, Bird and bee attrafting
Acer campestre	Field Maple	7	6	Moderate	n/a	PS-FS	Moderate	Low	Moderate	Moderate	High	Moderate	Acid	Sep-Oct.	yellow-green	D	MW	S, Autumn Colour, foliage interest, Ornamental
Acer negundo	Flamingo	5	4	Slow-Moderate	n/a	PS-FS	Moderate	Low	Moderate	Moderate	High	Moderate	Acid	Sep-Oct.	yellow-green	D	MW	S, Autumn Colour, foliage interest, Ornamental
Acer palmatum 'Atropurpureum'	Japanese Maple	4	3	Slow-Moderate	n/a	PS-FS	Moderate	Low	Moderate	Moderate	High	Moderate	Acid	Sep-Oct.	Red	D	MW	S, Autumn Colour, foliage interest, Ornamental,
Acer rubrum 'Bowhall'	Red Maple	8	4	Moderate	n/a	PS-FS	Moderate	Low	Moderate	Moderate	High	Moderate	Acid	Sep-Oct.	Pale Orange	D	MW	S, Autumn Colour, foliage interest, Ornamental
Kalamata olive	Olive	6	3	Slow-Moderate	n/a	FS	High	Fair	High	Fair	Fair	Moderate	Complete range	Sep-Nov.	White	E	DA	R, LM
Koelreuteria paniculata	Golden Rain Tree	8	8	Slow	n/a	PS-FS	Moderate	Fair	Moderate	High	Moderate	Fair	Complete range	Nov-Jan.	Bright yellow	D	D	R, LM, F
Lagerstroemia indica	Crepe Myrtle	6	7	Moderate	n/a	FS	Low	Moderate	Moderate	Fair	Low	Low	Acid-Neutral	Mar-Apr.	Pink/Purple/White	D	CD	R, LM, Sh, F
Olea europaea subsp. europaea	Olive	8	6	Slow-Moderate	n/a	FS	High	Fair	High	High	Fair	Moderate	Complete range	Sep-Nov.	Creamy white	E	DA	R, LM
Photinia robusta	Photinia	15	4	Slow-Moderate	n/a	FS	High	Moderate	Moderate	High	Low	Low	Complete range	Oct-Nov	White	E	C,D,A	R,LM,S,F, Bird attractant
Rhododendron arboreum	Rhododendron	12	4	Moderate	n/a	PS	Moderate	Low	Low	Low	Low	Low	Acid	June-Nov	Various	E	WM	Grown for showy flowers, All parts of the Rhododendron are considered toxic.

Species Palette 4 – Medium to Large

INDIGENOUS TO PROVIDENCE *(Grown at nursery/within Bayside)*
INDIGENOUS *(Grown Outside Bayside)*
NATIVE TREES (From Australia)
EXOTIC (From outside Australia)
Additional Species
*PLEASE NOTE THE BELOW INFORMATION IS A GUIDE ONLY
Use of any of the below species is preferred but not limited to these species

Full Sun = FS | **UPL=Under Power Lines**
Part Shade=PS
Shade = FSh

Uses/traits key
R - Robust and Hardy
LM - Low Maintenance
S - Shade
F - Feature
Sh – Prefers or tolerates full shade

Habitat Key
H – Heath/Woodland Ri = Riparian forest (interface between land and river/stream)
M - Moist/Closed forest
C – Coast – dune scrub & woodland
D – Prefers dry, well drained soils & tolerates dryness once established.
W – Prefers or tolerates moist soils, wetness, periodic inundation
A – Adaptable, growing well in most soil types

complete range
acid to neutral
acid
Alkaline
Unknown

High = tolerates well without damage.
Fair= can tolerate medium levels
Moderate = tolerates somewhat with some effects in low levels
Low = suffers serious damage to death if exposed
Please contact your local nursery or a horticultural professional for further advice.
All indigenous plants provide habitat & food for local birds, insects & animals.

MEDIUM TO LARGE SHRUBS	Species that reach 2-5 metres in height			EVC= Ecological Vegetation Class			Tolerances								Evergreen/Deciduous			
BOTANICAL NAME	**COMMON NAME**	**Mat. HEIGHT**	**Mat. CANOPY**	**Growth Rate**	**EVC**	**Sunlight**	**Wind**	**Salinity**	**Sea spray**	**Drought**	**Waterlogging**	**Compaction**	**pH Range**	**Flowering period**	**Flower colours**	**E/D**	**Habitat**	**Uses/Traits**
Acacia longifolia subsp. sophorae	Coast Wattle	4	4	Very Fast	n/a	PS-FS	High	High	High	High	Moderate	Moderate	Complete	Jun-Oct.	Pale Yellow	E	CW	R, LM, A, Bird-attracting, winter interest, screening, UPL
Acacia oxycedrus	Spike Wattle	4	3	Moderate	n/a	PS-FS	High	Moderate	Fair	Fair	High	Moderate	Acid-Neutral	Jul-Oct.	Bright Yellow	E	HWD	R, LM, A, bird-attracting, Winter features, Screening, foliage interest
Acacia paradoxa	Hedge Wattle	3	2	Moderate	719	PS-FS	High	Low	Moderate	Fair	Fair	High	Acid-Neutral	Aug	Bright Yellow	E	HCD	A,bird-attracting, winter Features, spiny or thorny
Acacia stricta	Hop Wattle	4	2	Fast	n/a	PS-FS	High	Moderate	Fair	Fair	Moderate	Low	Acid-Neutral	May-Oct.	Pale Yellow	E	HCMW	R, LM, A, Sh, architectural form, bird attracting, Screening, UPL
Alyxia buxifolia	Sea Box	2	2	Slow	n/a	PS-FS	High	High	Fair	Fair	Moderate	Unknown	Complete	Mar, Oct-Dec.	Orange to White cream at tip	E	HCD	Colourful fruit, allergenic, Screening, Hedging
Cassinia longifolia	Long-leaf Cassinia	3	2	Fast	n/a	PS-FSh	Moderate	Moderate	Moderate	Moderate	Fair	Moderate	Acid	Nov-Dec.	White	E	HMDW	Sh, Aromatic leaves, Screening, Under powerlines
Exocarpos cupressiformis	Cherry Ballart	4	3	Slow-Moderate	719, 3	PS-FS	Moderate	Moderate	Moderate	High	Moderate	Unknown	Acid-Neutral	n/a	n/a	E	HD	Screening, Under powerlines, interesting foliage, colourful
Cassinia aculeata	Common Cassinia	2	1	Moderate	719, 3	PS	Moderate	Low	Moderate	Fair	Fair	Unknown	Complete	Nov-Dec.	Creamy white/white	E	HD	A, Screening, Aromatic leaves
Indigofera australis	Austral Indigo	2	1.5	Fast	n/a	PS-FS	Moderate	High	Moderate	Fair	Moderate	Unknown	Acid-Neutral	Aug, Oct-Dec.	Pinkish/Soft Purples	E	HMW	A, interesting foliage, allergenic, Pink/Purple flowers, Screening, Shrub border
Kunzea leptospermoides	Yarra Burgan	3	2	Moderate	n/a	PS-FS	Moderate	Moderate	Low	High	Low	Low	Complete	Nov-Feb.	White	E	HWRi	A, R, Screening, Bird/Butterfly attracting
Leptospermum continentale	Prickly Tea-tree	3	2	Moderate	719, 892, 707, 3	PS-FS	High	High	High	Fair	Fair	Unknown	Acid	Oct-Dec.	White, rarely pale pink	E	HCW	A, Attractive Bark, Bird-Attracting, Screening
Leucopogon parviflorus	Coast Beard-heath	3	2	Slow	919, 921	PS-FS	High	High	High	High	Low	Unknown	Complete	Jul-Nov.	White	E	HCDW	Edible, Hedging, Screening
Myoporum insulare	Common Boobialla	5	3	Moderate	n/a	PS-FS	High	High	High	High	Fair	Fair	Complete	Jul-Oct.	White, Occasionally pale pink	E	CD	R, LM, A, bird-attracting, attractive bark,allergenic, hedging, screening, UPL, Shade
Olearia axillaris	Coast Daisy-bush	2	2	Moderate	n/a	PS-FS	High	High	High	High	Moderate	Unknown	Acid	Mar-Jul, Nov-Dec.	Cream- Greenish or crimson tinge	E	CD	Silver foliage, shrub mass, screening, shrub or mixed border
Olearia glutinosa	Sticky Daisy-bush	2	2	Moderate	n/a	PS-FS	Moderate	Moderate	High	High	Low	Low	Unknown	Nov-Feb.	Cream-white	E	CD	R, A, Long flowering, background
Ozothamnus ferrugineus	Tree Everlasting	3	2	Moderate	n/a	PS-FS	Unknown	High	High	Moderate	Low	Fair	Unknown	Nov-Feb.	White	E	MDW	R, A
Pomaderris paniculosa	Shining Coast Pomaderris	2	1.5	Moderate	n/a	PS-FS	Moderate	Moderate	High	Moderate	Moderate	Low	Unknown	Jul-Nov.	Yellow	E	HMW	R, LM, F, Screening, Attracts birds and butterflies
Solanum laciniatum	Large Kangaroo Apple	2	2	Moderate	n/a	PS-FS	High	High	Low	Low	Low	Low	Acid-Neutral	Sep-Mar.	Purple-Blue	E	HCD	R, LM, A, Sh
Viminaria juncea	Golden Spray	4	2	Fast	n/a	FS	Moderate	High	High	High	High	High	Complete	Oct-Feb.	Yellow-Orange, with red markings	E	W	R, LM, A, Sh
Xanthorrhoea thorntonii	Grass Tree	3	1.5	Slow	n/a	PS-FS	Moderate	High	High	Moderate	Low	Unknown	Unknown	Aug-Dec.	Cream-white	E	HD	R, LM,Sh
Xanthorrhoea australis	Grass Tree	3	2	Slow	n/a	PS-FS	High	Moderate	Low	High	Low	Low	Acid-Neutral	Jul-Dec.	White or cream	E	HDM	R, LM,Sh
Adenanthos cunninghamii	Albany wollybush	2	3	Moderate	n/a	FS	High		High	High	Moderate	Low	ld Acid-Mild Alkali	Mar-Oct	Red,Pink	E	CDA	R,LM,S,F, Attracts small nectar eating birds
Erimophila longifolia	Long-leaved Eremophila	3	3	Moderate	n/a	FS	Moderate	Unknown	Unknown	High	Low	Low	Acid-Neutral	All year	Pink to brick red	E	HD	R,LM, Attracts bees and small birds, particuarly for winter flowering
Calothamnus quadrifidus	One sided bottlebrush	3	5	Fast	n/a	FS	High	Low	Low	High	Moderate	Moderate	Mild Acid-Alkaline	June-Dec	Red,White	E	CDA	R,LM, ideal hedging and screening plant, atracts birds
Chamelaucium spp.	Geralton Wax	3	3	Fast	n/a	FS/PS	Moderate	Unknown	High	High	Low	Low	Acid-Neutral	Aug-May	White,Pink,Purple	E	CD	R,LM, flowers attract nectar eating birds, butterflies
Xanthorrhoea preissii	Grass tree / Balga	3	1	Very Slow	n/a	FS	High	Moderate	Fair	High	Low	Low	Complete range	No Set time	Cream to White	E	HCD	bird and butterfly attracting,cockatoos, Iconic australian native
Grevillea spp. (N)ative)	Grevillea	2	2	Fast	n/a	FS	Moderate	High	Moderate	Moderate	Low	Low	complete range	Nov-May	Orange-Red	E	DC	R,LM,F important source of food for nectar feeding birds and fruit bats and bees
Hakea spp.	Needle bush	4	3	Moderate to Fast	n/a	FS	Moderate	Moderate	Moderate	High	Low	Moderate	Acid	May, Jul-Oct.	Red, Pink, Yellow	E	CD	RF, bird and butterfly attracting,cockatoos, Iconic australian native
Westingeria fruticosa	Coastal Rosemary	2	4	Fast	n/a	FS	High	High	High	High	Low	Moderate	Alkaline	Sep-Dec	White,Mauve	E	CD	R,LM,A, attracts birds
Escallonia Iveyi €	Escallonia	2	2	Fast	n/a	FS	High	High	High	High	Low	Low	Alkaline	Jan-Mar;Oct-Nov	White	E	CDA	LM,S,F bird attractant, scented flowers, long flowring period
Hibiscus sinensis	Hibiscus	3	3	Moderate	n/a	FS	Moderate	Moderate	Moderate	High	Low	Low	Acid-Neutral	Sep-Dec;Mar-June	Various	E	DA	R,LM,F, Flowers attract bees and small birds
Myrtus communis	Common Myrtle	5	3	Slow-Moderate	n/a	FS	Low	Moderate	Moderate	High	Low	Low	Alkaline	Sep-Dec	White	E	DA	R,LM, Bees attracted to flowers and birds attracted to the berries
Juniperus communis	Common juniper	5	4	Slow	n/a	FS	High	Moderate	High	Moderate	Low	Low	Complete	May-June	Cone - Berries	E	CDA	R,LM, attracts bees and nectar eating birds

Species Palette 5 – Small Shrubs

INDIGENOUS TO PROVIDENCE *(Grown at nursery/within Bayside)*
INDIGENOUS *(Grown Outside Bayside)*
NATIVE TREES (From Australia) — Full Sun = FS
EXOTIC (From outside Australia) — Part Shade=PS
Additional Species — Shade = FSh
*PLEASE NOTE THE BELOW INFORMATION IS A GUIDE ONLY
Use of any of the below species is preferred but not limited to these species

Uses/traits key
R - Robust and Hardy
LM - Low Maintenance
S - Shade
F - Feature
Sh – Prefers or tolerates full shade

Habitat Key
H – Heath/Woodland   Ri = Riparian forest (interface between land and river/stream)
M - Moist/Closed forest
C – Coast – dune scrub & woodland
D – Prefers dry, well drained soils & tolerates dryness once established.
W – Prefers or tolerates moist soils, wetness, periodic inundation
A – Adaptable, growing well in most soil types

High = tolerates well without damage.
complete range — Fair= can tolerate medium levels
acid to neutral — Moderate = tolerates somewhat with some effects in low levels
acid — Low = suffers serious damage/Could be fatal
Unknown

Please contact your local nursery or a horticultural professional for further advice.
All indigenous plants provide habitat & food for local birds, insects & animals.

SMALL SHRUBS	Species that reach 50cm to 2 metres in height			EVC= Ecological Vegetation Class			Tolerances							Evergreen/Deciduous				
BOTANICAL NAME	**COMMON NAME**	**Mat. HEIGHT**	**Mat. SPREAD**	**Growth Rate**	**EVC**	**Sunlight**	**Wind**	**Salinity**	**Sea spray**	**Drought**	**Waterlogging**	**Compaction**	**pH Range**	**Flowering period**	**Flower colours**	**E/D**	**Habitat**	**Uses/Traits**
Acacia brownii	Heath Wattle	1	1	Moderate	n/a	PS	Moderate	Moderate	Moderate	High	Moderate	Unknown	Acid-Neutral	Jun-Oct.	Yellow	E	HD	Ground cover and shrub, interesting foliage
Acacia suaveolens	Sweet Wattle	2	2	Moderate	n/a	PS-FS	Moderate	Moderate	High	High	Low	Moderate	Acid-Neutral	Apr-Sept.	Pale Yellow & White	E	HCD	R, Long flowering period, Attractive features, Fauna attracting
Acacia ulicifolia	Juniper Wattle	1	1	Moderate	n/a	PS	Moderate	Moderate	Moderate	Moderate	Fair	Unknown	Acid	Apr-Oct.	Pale Cream	E	HCW	A, R, LM, Bird attracting, screening
Allocasuarina paradoxa	Green She-oak	1.5	1.5	Slow	3	PS-FS	High	Moderate	High	Fair	High	Moderate	Acid	Mar-Oct.	Red	E	HD	R, LM, Interesting foliage, Sh, Under powerlines, Bird attracting
Aotus ericoides	Common Aotus	1	1	Fast	n/a	PS-FSh	Moderate	Moderate	Low	Moderate	Low	Moderate	Acid-Neutral	Aug-Nov.	Gold with red & orange	E	HWD	Sh, R, LM, Ornamental
Atriplex cinerea	Coast or Grey Saltbush	2	2	Moderate	n/a	FSh-PS	High	High	High	High	Moderate	Moderate	Complete	Mar,Sep-Dec.	Red & White	E	CD	LM, R, ground cover, hedge, soil rehabilitation, erosion and stabilisation
Bossiaea cinerea	Showy Bossiaea	1	1	Fast	n/a	FS-PS	High	Moderate	Moderate	High	Low	Low	Unknown	Aug-Nov.	Gold/yellow to Red/purple brown	E	HCD	Ornamental, R, Hedge, screening, attractive, cuttings
Correa alba	White Correa	1	1	Moderate	n/a	FS-PS	High	High	High	High	Moderate	Moderate	Complete	Mar-Sep. Nov.	Pink & White	E	C	A, R, LM, Aromatic, Power lines, hedging, cover, shrub mass
Correa reflexa	Common Correa	1	1	Moderate	n/a	FS-PS	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Acid	Mar-Sep.	Green & Red	E	H	R, Sh, A, Winter aesthetic, shrub mass, bird attracting
Daviesia ulicifolia	Gorse Bitter-pea	1	50cm	Fast	n/a	FS-PS	High	Low	Moderate	High	Low	Unknown	Complete	Aug-Dec.	Red & Yellow	E	H	A, Bird attracting
Dillwynia cinerascens	Grey Parrot-pea	60cm-1.5	50cm-1.5	Moderate	n/a	FS-PS	Moderate	Low	Low	High	Low	Moderate	Complete	Jul-Nov.	Yellow & Orange	E	HD	Sh, Ornamental, floral display
Dillwynia glaberrima	Heath or Smooth Parrot-pea	1	50cm	Moderate	719, 892, 3	FS-PS	Moderate	Low	Low	Moderate	Low	Low	Acid-Neutral	Aug-Dec.	Yellow, red centre	E	HD	Sh, Attractive, cut flowers, container plant, tolerates heavy pruning
Epacris impressa	Common Heath	1	50cm	Moderate	719, 892, 3	FS-PS	Moderate	Low	Low	Moderate	Low	Low	Acid	May-Nov.	White, Pink & red	E	HCDW	A, F, R, Attractive, Cut flowers, container plant, revegetion works, nectar
Goodenia ovata	Hop Goodenia	1	1	Fast	n/a	FS-PS	High	Fair	Fair	Fair	Fair	Moderate	Complete	Aug-Feb.	Bright yellow, red centre	E	HC	A, R, LM, F, Cut flower, container plant, revegatation
Gompholobium huegelii	Common Wedge-pea	30cm-1	30cm-1m	Moderate	n/a	FS-PS	Moderate	Low	Low	Moderate	Low	Low	Acid-Neutral	Sep-Apr.	Cream to Yellow & Greenish	E	HCD	Sh, Attractive, A, F, R
Hibbertia fasciculata var. prostrata	Stalked/Bundled Guinea-flower	50cm	30cm	Moderate	892	FS-PS	High	Moderate	Moderate	High	Low	High	Complete	Sep-Dec.	Bright Yellow	E	HD	LM, A, R, F, hedge
Hibbertia riparia	Erect Guinea-flower	50cm	50cm	Moderate	719, 3	FS-PS	Fair	Low	Low	Fair	Fair	Low	Complete	Sep-Dec.	Yellow	E	HW	A, Attractive, R, LM, F
Hibbertia sericea	Silky Guinea-flower	30cm-1	60cm	Slow	n/a	FS-PS	High	High	High	High	Low	Moderate	Complete	Aug-Nov.	Bright Yellow	E	HCD	R, LM, A, F
Isopogon ceratophullus	Horny Cone-bush	20cm-60cm	50cm	Slow	n/a	FS	High	Low	Low	High	Low	Low	Complete	Sep-Nov.	Yellow	E	HCD	R, LM, A, F
Lasiopetalum baueri	Slender Velvet-bush	1	1	Moderate	n/a	FS-PS	High	Low	Low	High	Low	Low	Complete	Jun-Nov.	Pink & White	E	CD	H, A, Ornamental, Hedge, F, Screening, Bird attracting
Leptospermum myrsinoides	Heath or Silky Tea-tree	1.5	1	Moderate	719, 892, 3	FS-PS	High	Moderate	Moderate	High	Moderate	Low	Acid-Neutral	Jun-Nov.	Pink & White	E	H	A, Screen, Hedge, F, Bird attracting, Soil control
Leucophyta brownii	Cushion Bush	50cm	50cm	Moderate	919	FS	High	High	High	High	Low	Low	Complete	Dec-Feb.	Yellow, Silver, Grey-Brown	E	HCD	A, R, LM, edge defining, insect attracting
Leucopogon virgatus	Common Beard-heath	50cm	50cm	Moderate	719, 892, 3	FS-PS	High	Moderate	Moderate	High	Moderate	Low	Complete	Jul-Dec.	Pink & White	E	HCD	A, R, LM, F, Bird attracting, hedge
Monotoca scoparia	Prickly Broom-heath	30cm-1.2	30cm-1.2	Moderate	892	FS-PS	High	Moderate	Moderate	High	Moderate	Low	Complete	Mar-Jul,	Pink & White	E	HCD	A, R, LM, Screen, barrier, hedge, Soil Control
Myoporum petiolatum	Sticky Boobialla	1.5	1.5	Moderate	n/a	FS	High	High	High	High	Moderate	Low	Complete	Oct-Feb.	White	E	HCD	A, R, LM, F, Soil control
Olearia ramulosa	Twiggly Daisy-bush	1.5	1	Moderate	n/a	FS-PS	High	Moderate	Moderate	High	Moderate	Low	Complete	Sep-Nov.	Blue	E	HCD	A, R, LM, Ornamental
Rhagodia candolleana subsp. Candolleana	Seaberry Saltbush	1	2	Moderate	919, 921	FS	High	High	High	High	Moderate	Low	Complete	Sep-Feb.	Green	E	HCD	A, R, LM, soil control, habitat refuge
Ricinocarpus pinifolius	Wedding Bush	1-3	1	Moderate	n/a	FS	High	Low	Low	High	Low	Low	Acid-Neutral	Sep-Feb.	White	E	HD	A, R, LM, F, Nectar, Hedge, Screen
Sambucus guadichaudiana	White Elderberry	2	2	Moderate	919, 921	PS	Moderate	Low	Low	Moderate	High	Low	Acid-Neutral	Sep-Feb.	White	D	HMW	LM, Sh, Bird attracting
Suaeda australis	Austral Seablite	50cm	50cm	Moderate	n/a	FS	High	High	High	High	High	Low	Complete	Sep-Feb.	Green & Red	E	HCW	A, R, LM, periodic inundation, bird attracting, can make dyes with foliage
Eremophila nivea	Emu bush or Silky Ememophila	1.5	1.5	Moderat-Fast	n/a	FS	High	Moderate	High	High	Low	Low	Complete	Sep-Jan	Purple	E	CD	R,LM, Attracts birds and butterflies, tolerant of frost and responds well to pruning.
Grevillea spp.	Grevillea	1.5	1.5	Fast	n/a	FS	High	High	High	High	Low	Low	Acid-Neutral	All year	red, orange or yellow	E	CDA	R,LM, attracts bees and nectar eating birds
Philotheca myoporoides	Long-leafed Wax flower	1	1	Fast	n/a	FS	Moderate	Low	Low	Moderate	Low	Low	Acid-Neutral	Sep-Dec.	White	E	D	R,LM, attracts bees, butterflies and nectar eating birds
Prostanthera rotundifolia	Native mint bush	2	2	Fast	n/a	FS	Moderate	Low	Low	High	Low	Low	Acid-Neutral	Sep-Dec.	Purple	E	DA	R,LM, Flowers attract bees and beneficial insects to garden
Juniperus communis subsp.	Common juniper	2	4	Slow	n/a	FS	High	Moderate	High	Moderate	Low	Low	Complete	May-June	Cone - Berries	E	DC	R,LM,F, berries can attract birds
Salvia subsp.	Salvia	1	60cm	Fast	n/a	FS/PS	High	High	High	High	Low	Moderate	Acid	Sep-June	various	E	CDA	R,LM, attracts bees and nectar eating birds
Lavandula spp.	Lavendar	1	1	Fast	n/a	FS	High	Low	High	High	Low	Moderate	Alkaline	Sep-June	Lavender	E	CDA	R,LM,F, attracts bees
Choisya spp.	Mexican orange blossom	1	1.5	Fast	n/a	FS/PS	Low	Moderate	High	Moderate	Low	Low	Complete	Aug-Nov.	White	E	CDA	S,Sh, ornamental plant, can be trained to a hedge
Gardenia spp.	Gardenia	1.5	1.5	Slow	n/a	FS/PS	Low	Low	Low	High	Low	Low	Acid	Nov-May	Creamy white	E	M	F, ornamental shrub with highly frangant flowers
Rhaphiolepsis spp.	Indian hawthorn	2	1.5	Slow	n/a	FS	High	High	High	High	Low	Low	Complete	Sep-Jan	White-Pink	E	CDA	R,LM,F
Hebe buxifolia (	Hebe	1	1	Fast	n/a	FS	High	High	High	High	Low	Low	Alkaline	June-Sep	/hite,pink,blue,deep purple, crimsc	E	CD	R,LM, attracts bees and butterflies
Sedum spp.	Stonecrop	0.6	1	Fast	n/a	FS-PS	High	High	High	High	Low	High	acid to neutral	Dec-March	Yellow, orange, pink or white	CDA	Attracts	Attracts bees, butterflies

Species Palette 6 – Grasses and Tussocks

INDIGENOUS TO PROVIDENCE *(Grown at nursery/within Bayside)*
INDIGENOUS *(Grown Outside Bayside)*
NATIVE TREES (From Australia)
EXOTIC (From outside Australia)
Additional Species
*PLEASE NOTE THE BELOW INFORMATION IS A GUIDE ONLY
Use of any of the below species is preferred but not limited to these species

Additional Species
Full Sun = FS
Part Shade=PS
Shade = FSh

Uses/traits key
R - Robust and Hardy
LM - Low Maintenance
S - Shade Tree
F - Feature Tree
Sh – Prefers or tolerates full shade

Habitat Key
H – Heath/Woodland Ri = Riparian forest (interface between land and river/stream)
M - Moist/Closed forest
C – Coast – dune scrub & woodland We=Wetland
D – Prefers dry, well drained soils & tolerates dryness once established.
W – Prefers or tolerates moist soils, wetness, periodic inundation
A – Adaptable, growing well in most soil types

complete range
acid to neutral
acid

High = tolerates well without damage.
Fair= can tolerate medium levels
Moderate = tolerates somewhat with some effects in low levels
Low = suffers serious damage to death if exposed
Unknown

Please contact your local nursery or a horticultural professional for further advice.
All indigenous plants provide habitat & food for local birds, insects & animals.

GRASSES AND TUSSOCKS — **EVC= Ecological Vegetation Class** — **Tolerances**

BOTANICAL NAME	COMMON NAME	Mat. HEIGHT	Mat.SPREAD	Growth Rate	EVC	Sunlight	Wind	Salinity	Sea spray	Drought	Waterlogging	Compaction	pH Range	Flowering period	Flower colours	Habitat	Uses/Traits
Austrostipa flavescens	Coast Spear-grass	50cm	50cm	Fast	921	FS	High	High	High	Fair	Low	Moderate	Complete	Sep-Feb.	Brown	HCD	A, R, LM,
Austrostipa mollis	Soft Spear-grass	30cm	30cm	Fast	719, 921, 3	FS	High	High	High	High	Low	High	Complete	Sep-Dec.	Green or purple/Strawed	HCD	A, R, LM, F, Habitat
Austrostipa stipoides	Prickly Spear-grass	1	1	Moderate	n/a	FS	High	High	High	Fair	Moderate	Unknown	Complete	Sep-Feb.	White	HCD	A, R, LM, F, Habitat, wildflower garden, Bird attracting
Baumea rubiginosa	Soft Twig-rush	1m	Spreading	Moderate	707	FS-PS	Moderate	Moderate	Moderate	Moderate	High	Moderate	Complete	Sep-Mar.	Reddish Brown	RiWeM	A, R, LM, F, Habitat
Caesia parviflora	Pale Grass-lily	50cm	25cm	Moderate	n/a	FS-PS	Moderate	Low	Low	Moderate	Moderate	Low	Complete	Sep-Feb.	Greenish white-Blue	HM	A, LM, Ornamental, F, Habitat
Carex pumila	Strand Sedge	80cm	80cm	Moderate	n/a	FS	High	High	High	High	Moderate	High	Complete	Apr-Jul.	yellow/brown/red glumes	CDW	A, R, LM, F, Habitat
Deyeuxia quadriseta	Reed Bent-grass	15cm	40cm	Fast	719, 3	FS-PS	Moderate	Low	Low	Moderate	High	Low	Complete	Sep-May.	Pale Green/Purple	RiM	A, R, LM, F, Habitat
Dianella brevicaulis	Small-flower Flax-lilly	60cm	50cm	Moderate	919	FS-PS	Moderate	Low	Low	Moderate	Low	Low	Complete	Sep-Feb.	Blue-Purple	HM	A, LM, Ornamental, F, Habitat
Dianella laevis	Pale Flax-lily	60cm	50cm	Moderate	n/a	FS-PS	Moderate	Low	Fair	Fair	Fair	Low	Acid to Neutral	Aug-Jan.	Blue and Yellow	HM	A, LM, Ornamental, F, Habitat
Dianella longifolia	Arching Flax-lily	1.3	1m	Moderate	n/a	FS-PS	Moderate	Low	Fair	Fair	Fair	Low	Complete	Aug-Jan.	Blue to Violet	HM	A, LM, Ornamental, F, Habitat
Dianella revoluta	Black-anther Flax-lily	50cm	spreading	Fast	719, 3	FS-PS	Fair	Moderate	Moderate	Fair	Fair	Fair	Acid	Sep-Dec.	Blue or Purple	HM	A, LM, Ornamental, F, Habitat
Dichelachne crinita	Long-hair Plume-grass	20cm	30cm	Moderate	n/a	FS-PS	High	Fair	Fair	Fair	Moderate	Low	Complete	Oct-Dec.	Green to Purple	HM	A, LM, F, Habitat
Distichlis distichophylla	Australian Salt-grass	10cm	10cm	Slow	n/a	FS	High	High	High	Fair	High	High	Complete	Sep-Nov.	Green growth	CDW	A, R, LM, F, interesting foliage, Bloom in response to rain
Eragrostis brownii	Common Love-grass	20cm	20cm	Fast	n/a	FS-PS	High	Low	Moderate	Fair	Fair	Low	Complete	Sep-Apr.	Green growth	HM	A, LM, F, Bird attracting, turf, groundcover, can flower most of year
Ficinia nodosa	Knobby Club-sedge	50cm	50cm	Moderate	919	FS	High	High	High	Fair	High	High	Complete	Sep-Feb.	Brown	RiWeM	A, R, LM, F, Habitat, pond, Can flower throughout year
Gahnia radula	Thatch Saw-sedge	2	1.5	Slow	719, 892, 3	PS-FS	Moderate	Low	Moderate	Moderate	High	High	Acid to Neutral	Sep.Feb.	Brown to Black	MRi	A, R, LM, F, Habitat
Gahnia siberiana	Red-fruit Saw-sedge	1.5	2	Moderate	892	FSh-FS	High	Low	Moderate	Moderate	High	High	Acid to Neutral	Sep.Feb.	Yellow-Deep Red	MRi	A, R, LM, F, Habitat
Hypolaena fastigiata	Tassel Rope-rush	50cm	1.5	Moderate	892	FS-PS	Moderate	Low	Low	Moderate	High	Low	Complete	Aug-Dec.	Reddish Brown	MRi	A, R, LM, F, Habitat, Can flower most of year
Juncus pallidus	Rush	1	50cm	Moderate	n/a	FS-PS	High	Low	Fair	Fair	High	Fair	Acid to Neutral	Oct-Jan.	Green	E	A, R, LM, F, Habitat, bird attracting, pond, flowers most of year
Lachnagrostis billardierei	Coast Blown-grass	80cm	20cm	Moderate	n/a	FS-PS	Moderate	Low	Low	Moderate	High	Low	Complete	Sep-Nov.	Green/Purple Spikelets	MRi	A, R, LM, F, Ground cover, turf
Lepidosperma concavum	Sandhill Sword-sedge	60cm	2	Moderate	719, 892, 921, 3	PS-FS	High	High	High	Moderate	High	Fair	Complete	Sep-Feb.	Yellow	C,HRi,We	A, R,, LM, R, Groundcover
Lepidosperma laterale	Variable Sword-sedge	1.5	2	moderate	719, 3	FS-PS	Moderate	Low	Low	Moderate	High	Low	Complete	Sep-Feb.	Red to grey/brown	MRi	A, R, LM, F, Frog Habitat
Lomandra filiformis	Wattle Mat-rush	50cm	30cm	Slow	719, 3	FS-FSh	High	Moderate	Fair	Fair	High	Fair	Acid to Neutral	Oct-Nov.	Yellow	HD	A, R, LM, Ornamental, F, Habitat, FSh
Lomandra longifolia	Spiny-headed Mat-rush	1	1	Moderate	719, 707, 3	FS-PS	Moderate	Moderate	Fair	Fair	High	High	Complete	Aug-Feb.	Yellow, Purple centre	MRi	A, R, LM, F, Habitat, ground cover, edge.
Lomandra multiflora	Many-flowered Mat-rush	30cm	30cm	Moderate	n/a	FS	Moderate	Low	Low	Moderate	Low	Low	Complete	Jun-Nov, Jan.	Creamy Yellow	HM	A, LM, Ornamental, F, Habitat, Erosion control
Microlaena stipoides var stipoides	Weeping Grass	30cm	50cm	Moderate-Fast	719, 3	PS-FS	High	High	Moderate	Moderate	Moderate	Moderate	Acid to Neutral	Oct-Dec.	Green growth	HC	A, R, LM, Turf/lawn or groundcover
Patersonia occidentalis	Long Purple-flag	40cm	40cm	Moderate	n/a	FS	Fair	Fair	Fair	Moderate	High	Moderate	Acid	Sep-Dec.	Purple	HDW	LM, Wildlife attracting, Wildflower, Attractive foliage,
Poa labillardierei	Common Tussock-grass	50cm	50cm	Moderate	n/a	PS-FS	High	Fair	Moderate	Low	High	High	Acid to Neutral	Oct-Dec.	Golden	HC	A, R, LM, Bird attracting, Attractive, Ornamental, groundcover, erosion control
Poa poiformis	Coast or Blue Tussock-grass	50cm	50cm	Moderate-Fast	919	FS-PS	High	Fair	High	Fair	Moderate	High	Complete	Dec.	Golden	HC	A, R, LM, Bird attracting, Attractive, Ornamental, groundcover, erosion contro
Poa sieberana	Tussock-grass	30cm	30cm	Moderate-Fast	719, 3	FS-PS	High	Moderate	Moderate	High	Moderate	Moderate	Complete	Oct-Mar.	Green or Purplish	HD	R, A, Ornamental, border plant, Bird/butterfly attracting
Rytidosperma caespitosum (syn.Austrodanthonia caespitosa)	Common Wallaby-grass	40cm	40cm	Moderate-Fast	n/a	FS-PS	High	Moderate	Moderate	High	Moderate	Moderate	Complete	Oct-Dec.	White	HC	A, R, LM, Rockeries, Bird-attracting, lawn alternative
Rytidosperma geniculatum (syn.Austrodanthonia geniculata)	Kneed Wallaby-grass	15cm	15cm	Slow	921	FS-PS	High	Moderate	Fair	High	Fair	Moderate	Complete	Oct-Dec.	White	HCD	R, LM, Ornamental, Rock planting, Lawn grass, bird attracting
Rytidosperma racemosum	Clustered Wallaby-grass	20cm	20cm	Moderate-Fast	n/a	FS-PS	High	Moderate	Moderate	High	Moderate	High	Complete	Oct-Dec.	White	HCDW	A, R, LM, Feature, Revegetation, Lawn alternative, thrives in poor soil, rockeries
Rytidosperma setaceum	Bristly Wallaby-grass	60cm	40cm	Moderate	n/a	FS-PS	High	Moderate	Fair	High	Fair	Moderate	Complete	Oct-Dec.	White	HCDW	A, R, LM, Feature, Revegetation, Lawn alternative, thrives in poor soil, rockeries
Schoenus brevifolius	Zig-zag Bog-sedge	90cm	30cm	Moderate	892	FS-PS	Moderate	Moderate	Moderate	Low	High	Low	Complete	Sep-Feb.	Red-brown	WeMW	Shiny dark red-brown foliage, ornamental, bird attracting,
Spinifex sericeus	Hairy Spinifex	30cm	Spreading	Moderate	n/a	FS	High	High	High	High	Moderate	Low	Complete	Nov-Dec.	Yellow and Brown	CDW	R, LM, Bush, Groundcover
Sporobolus virginicus	Salt or Sand Couch	10cm	Spreading	Moderate	n/a	FS	High	Fair	Fair	High	High	Low	Complete	Dec-May.	Green-purple	CWeW	A, LM, coastal and low dune stabilizer
Tetrarrhena juncea	Forest wire-grass	Climber	4m	Moderate-Fast	719, 3	PS-FS	Moderate	Low	Low	High	Moderate	Low	Complete	Nov-Apr.	Purplish	WHD	A, Habitat, Climber, High management, Wombat attracting
Themeda triandra	Kangaroo Grass	50cm	50cm	Moderate	719, 3	FS-PS	High	Moderate	Fair	Moderate	Fair	Fair	Complete	Sep-Dec.	Purple-Red	HMW	A, R, LM, Accenting, wildflower
Thelionema caespitosum	Tufted Blue Lily	20cm	1.3m	Moderate	n/a	FS-PS	Moderate	Low	Fair	Moderate	Fair	Moderate	Complete	Sep-Dec.	Blue, White and Yellow	HWeW	A, Rockeries, border planting
Tricoryne eliator	Yellow Rush-lily	30cm	50cm	Slow/Difficult	n/a	FS	Moderate	Low	Low	Low	Moderate	Low	Complete	Oct-Mar.	Bright Yellow	HDW	A, ground cover, Rockeries
Triglochin striatum	Streaked Arrowgrass	10cm	20cm	Moderate	n/a	FS-PS	Moderate	High	Fair	Moderate	High	Moderate	Complete	Aug-Apr.	Dark Green	CW	Can tolerate poor drainage well, erosion protection, semi-aquatic
Xanthorrhoea minor subsp. lutea	Small Grass-tree	50cm	50cm	Slow	719, 892, 3	PS-FS	Moderate	Moderate	Moderate	Moderate	Low	Low	Complete	Dec-Feb.	White/creamy-pale yellow	HCD	A, R, LM, Ornamenetal, F, Habitat, bird attracting, architectural foliage
Knifofia uvaria	Red hot poker	90cm	90cm	Moderate-Fast	n/a	FS-PS	High	Moderate	Moderate	High	Low	Low	complete	Nov-Apr.	Various	CDA	Attracts birds, butterflies, bees
Liriope muscari	Lily turf	50cm	40cm	Moderate-Fast	n/a	FS-PS	High	High	High	High	Low	Low	Acid to Neutral	Nov-Jan	Purple	RLM	Atractive foliage, can be used as lawn substitute ground cover

Species Palette 7 – Groundcovers and Wildflowers

INDIGENOUS TO PROVIDENCE *(Grown at nursery/within Bayside)*		Uses/traits key		Habitat Key			High = tolerates well without damage.
INDIGENOUS *(Grown Outside Bayside)*	Additional Species	R - Robust and Hardy		H – Heath/Woodland	**Ri = Riparian forest (interface between land and river/stream)**		Fair= can tolerate medium levels
NATIVE TREES (From Australia)	**Full Sun = FS**	LM - Low Maintenance		M - Moist/Closed forest	**G=Grassland**	complete range	Moderate = tolerates somewhat with some effects in low levels
EXOTIC (From outside Australia)	**Part Shade=PS**	S - Shade Tree		C – Coast – dune scrub & woodland		acid to neutral	Low = suffers serious damage to death if exposed
Additional Species	**Shade = FSh**	F - Feature Tree		D – Prefers dry, well drained soils & tolerates dryness once established.		Acid	
PLEASE NOTE THE BELOW INFORMATION IS A GUIDE ONLY		Sh – Prefers or tolerates full shade		W – Prefers or tolerates moist soils, wetness, periodic inundation		Alkaline to neutral	Unknown
Use of any of the below species is preferred but not limited to these species				A – Adaptable, growing well in most soil types			

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GROUND COVERS AND WILDFLOWERS AND CLIMBERS — **EVC= Ecological Vegetation Class** — **Tolerances**

BOTANICAL NAME	COMMON NAME	Mat. HEIGHT	Mat. SPREAD	Growth Rate	EVC	Sunlight	Wind	Salinity	Sea spray	Drought	Waterlogging	Compaction	pH Range	Flowering period	Flower colours	Habitat	Uses/Traits
Acaena novae+RC:R[52]C-zelandiae	Bidgee-widgee	Prostrate	1m	Moderate	n/a	FSh-FS	High	High	High	Fair	High	Moderate	Complete	Sep-Dec.	Brown	CShA	R, LM, Thorns, wildflower, bush
Acrotriche serrulata	Honey Pots	30cm	1m	Moderate	719, 3	PS-FS	Moderate	Moderate	Moderate	High	Low	Moderate	Complete	May-Oct.	Greenish	HD	Fruiting, Habitat, Mixed bed use, Rockeries, Bird attracting, fragrant
Actites megalocarpa	Dune Thistle	60cm	60cm	Moderate to Fast	n/a	FS	High	High	High	Moderate	Low	Moderate	Complete	Sep-Jun.	Yellow/Pale Purple	CD	R, Coastal garden, habitat
Amperea xiphoclada var. xiphoclada	Broom Spurge	40cm	40cm	Moderate	719, 892, 3	FS	Moderate	Low	Low	High	Low	Low	acid to neutral	Sep-Feb.	Cream and brown	HMD	Rockeries and underplanting, mass planting,hedge feature, unique leaves
Apium prostratum ssp prostratum	Sea Celery	20cm	50cm	Moderate to fast	n/a	PS-FS	Fair	High	High	High	Low	Moderate	Complete	Oct-Apr	White	CW	Attractive container, ferny foliage, Cultural, habitat, native animal attracting
Arthropodium strictum	Chocolate Lily	30cm	30cm	Slow to Moderate	n/a	PS-FS	Moderate	Moderate	Moderate	Moderate	Fair	Moderate	Acid	Sep-Dec.	Purple	HA	Wildflower, fragrant, container plant, decidious, mass planting aesthetic
Astroloma humifusum	Cranberry Heath	50cm	1.5m	Slow	719, 3	PS-FS	Moderate	Fair	Fair	High	Moderate	Moderate	Acid	Apr-Sep.	Red	HD	Bird attracting, winter foliage, container plant, native bush garden
Bossiaea prostrata	Creeping Bossiaea	10cm	50cm	Slow to Moderate	719	PS-FS	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Alkaline to neutral	Sep-Dec.	Yellow/Red-brown	HD	Weed suppression, erosion control, ornamental, embankments, rockeries.
Brachycome parvula	Coast Daisy	20cm	20cm	Moderate to Fast	n/a	PS-FS	High	High	High	High	Moderate	Unknown	Complete	Sep-Dec.	Purple	CW	R, LM, Interesting foliage
Burchardia umbellata	Milkmaids	30cm	10cm	Slow to moderate	n/a	PS-FS	Moderate	Unknown	Unknown	Fair	Moderate	Unknown	Acid	Sep-Nov.	White	HDW	Decidious, Wildflower and bushgarden, container planting
Carpobrotus rossii	Karkalla	10cm	1m	Moderate to Fast	921	PS-FS	High	High	High	High	Moderate	Unknown	Complete	Sep-Dec.	Purple	CD	R, LM, interesting foliage
Centella cordifolia (S)	Centella	Prostrate	2m	Moderate	707	PS-FS	Moderate	Moderate	Moderate	Low	High	Unknown	Complete	Aug-Dec.	White/pink	C,Ri,W,M	Pond, Ornamental, wetland, bushy
Chamaescilla corymbosa	Blue Stars	10cm	10cm	Moderate	n/a	PS-FS	Moderate	Moderate	Moderate	Fair	Fair	Unknown	Complete	Aug-Nov.	Blue	HW	Wildflower/Bush Garden, container planting
Chrysocephalum apiculatum	Common Everlasting	20cm	50cm	Moderate	n/a	FS	High	High	High	High	Low	Fair	Complete	Sep-Dec.	Yellow	HD	Silver foliage, Wildflower/bushgarden, container planting
Coronidium scorpioides	Button Everlasting	30cm	30cm	Moderate	n/a	PS-FS	Moderate	Low	Moderate	High	Low	Low	Complete	Sep-Dec.	Pale/Lemon yellow	HD	Rockeries, Attracts pollinators, Resilient planting
Dichondra repens	Kidney-weed	Prostrate	indefinite	Moderate to Fast	919, 719, 921, 3	FSh-FS	Fair	Moderate	Moderate	Low	Fair	Unknown	Complete	Sep-Dec.	White/Pale yellow/Green	HCA	R, LM, Interesting foliage, Bush garden, container planting
Disphyma crassifolium subsp. Clavellatum	Rounded Noon-flower	Prostrate	1m	Moderate	919	FS	High	High	High	High	Moderate	Unknown	Complete	Oct-Dec.	Pink	CA	R, LM, Interesting foliafe, bush garden
Drosera whittakeri subsp. Aberrans	Scented Sundew	20cm	20cm	Moderate	719, 3	PS	Moderate	Moderate	Moderate	Moderate	Moderate	Unknown	Acid	Jul-Oct.	White	HM	Perennial, decidious, wildflower/bushgarden,container,fragrant,carnivorous
Drosera peltata subsp. Auriculata	Tall Sundew	80cm	20cm	Slow to Moderate	719, 892, 3	PS-FS	Fair	Fair	Fair	Fair	High	Unknown	Acid	Aug-Dec.	Pink and white	HWG	bushgarden, container planting, carniverous
Einadia nutans	Nodding Saltbush	20cm	1m	Moderate to Fast	n/a	PS-FS	High	High	High	High	Fair	Fair	Complete	Sep-Dec.	White	HCDA	R, LM, Colourful fruit
Enchylaena tomentosa	Ruby Saltbush, Barrier Saltbush	Prostrate	1m	Moderate	n/a	PS-FS	High	High	High	High	Fair	Fair	Complete	May-Sep	Red with pink fruit	CD	R, LM, Bird attracting, bush garden
Epilobium billardierianum	Variable Willow-herb	1m	70cm	Moderate	707	PS-FS	Moderate	Moderate	Moderate	Low	Fair	Unknown	Complete	Sep-Feb.	Purple/pink	RiW	Rockeries, watercourses, damp area planting
Frankenia pauciflora	Southern Sea-heath	10cm	50cm	Moderate	n/a	FS	Fair	High	High	High	Fair	Unknown	Alkaline to neutral	Jun-Oct.	Pink	CD	interesting foliage, shrubbing, hedging, container planting, bush garden
Geranium solanderi	Austral Cranesbill	20cm	30cm	Moderate to Fast	719, 3	PS	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Complete	Aug-Dec.	Pale pink/white yellow	HWA	R, Rockeries, pot plant, can grow quickly and spread in always wet soil
Gonocarpus humilis	Shade Raspwort	50cm	70cm	Moderate	892	PS	Moderate	Low	Low	Moderate	High	Moderate	Unknown	Oct-Dec.	Yellow-greeen	CHMW	Perennial herb, prostrate and sprawling
Gonocarpus micranthus	Creeping Raspwort	Prostrate	50cm	Moderate	n/a	PS-FS	Moderate	Low	Low	Moderate	High	Moderate	Unknown	Dec-Feb,	Red	W	Prostrate, ascending or erect, many branched
Gonocarpus tetragynus	Poverty Raspwort	20cm	30cm	Moderate	3	PS-FS	Moderate	Low	Low	Moderate	Moderate	Moderate	Unknown	Dec-Feb,	Reddish-pink	HA	Wirey, erect perennial herb. Good understorey below established trees
Goodenia hummilis	Swamp Goodenia	10cm	1m	Moderate	919, 707	PS-FS	Moderate	Low	Low	Moderate	High	Moderate	Unknown	Nov-Mar.	Yellow	W	dainty, little herb, good for moist sunny locations, eg besides pools
Goodenia geniculata	Bent Goodenia	10cm	50cm	Moderate	n/a	PS-FS	Moderate	Moderate	Low	Moderate	Moderate	Moderate	Alkaline to neutral	Sep-Jan.	Yellow	HA	Can be planted as colourful foreground for natives,beds, weed suppressing
Goodenia radicans	Shiny Swamp-mat	10cm	50cm	Moderate	n/a	PS-FS	High	High	High	Low	High	Unknown	Complete	Mar-Dec.	White	CW	Ornamental pond, bush garden
Gratiola pubescens	Glandular Brooklime	20cm	20cm	Moderate	707	PS	Moderate	Low	Low	Moderate	High	Moderate	Unknown	Oct-mar.	pale pink with yellow	RiW	Ornamental pond edges and rockeries, useful in waterlogged environments
Haloragis brownii (N)	Swamp Raspwort	50cm	50cm	Moderate	919, 921	PS-FS	Moderate	Low	Low	Moderate	High	Moderate	Unknown	Oct-Feb.	Reddish Brown	CRiW	watercourse edging, damp locations
Hibbertia acicularis	Prickly Guinea-flower	30cm	50cm	Moderate	n/a	PS-FS	Moderate	Low	Low	Moderate	Moderate	Moderate	Unknown	Sep-Dec.	Bright yellow	HD	Attractive planting for open soils, cottage gardens, and rockeries
Hydrocotyle laxiflora	Stinking Pennywort	40cm	1-2m	Moderate to Fast	719, 3	PS-FS	Fair	Moderate	Moderate	Moderate	Fair	Unknown	Alkaline to neutral	Oct-Dec.	Green	HDW	Wildflower/bush garden, ornamental pond
Isotoma fluviatilis	Swamp Isotoma	Prostrate	1m	Moderate	n/a	PS-FS	Moderate	Low	Low	Low	High	Unknown	Acid	Oct-Nov.	Blue	W	Ornamental pond, wildflower/bush garden, allergenic
Kennedia prostrata	Running Postman	Prostrate	1m	Moderate	n/a	PS-FS	High	Fair	Fair	High	Moderate	Unknown	Complete	Apr-Dec.	Red	HCD	Interesting foliage, bird attracting, Wildflower/Bush Garden
Lachnagrostis billardierei	Coast Blown-grass	50cm	20cm	Moderate	919	FS	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Unknown	Sep-Dec.	Straw yellow	CW	Coastal garden, erosion control, visual interest, tufted, adds texture
Lagenophora stipitata	Common Bottle-daisy	5cm	20cm	Moderate	n/a	FSh-FS	Moderate	Low	Low	Moderate	Moderate	Moderate	Unknown	Sep-Feb.	Blue	HCA	Great groundcover over bare earth, container planting, frost tolerant
Laxmannia orientalis	Dwarf Wire Lily	5cm	10cm	moderate	n/a	PS-FS	Moderate	Low	Low	Moderate	Moderate	Moderate	Unknown	Sep-Dec.	Red, Brown and White	HD	Border for dedicated remnant reserves
Lobelia anceps	Angled Lobelia	Prostrate	50cm	Moderate	919, 921	PS	Moderate	Moderate	Moderate	Moderate	Fair	Unknown	acid to neutral	Mar-Dec.	Blue, White	HW	Ornamental pond, wetland, bush garden, allergenic
Lobelia pratioides	Poison Lobelia	Prostrate	50cm	Moderate	n/a	PS-Fsh	High	Low	Low	Low	High	Moderate	acid to neutral	Oct-May.	Blue-lilac and white	HW	Toxic. Excellent groundcover for bog, Useful in ferneries when not too dark
Opercularia ovata	Broad Stinkweed	10cm	20cm	Moderate	n/a	PS-Fsh	High	Low	Low	Low	High	Moderate	acid to neutral	Sep-Dec.	Greenish	HWA	Toxic.Excellent groundcover for bog, Useful in ferneries when not too dark
Opercularia varia	Variable Stinkweed	25cm	30cm	Moderate	719, 3	PS-Fsh	High	Low	Low	Low	High	Moderate	acid to neutral	Jun-Mar.	Green or Purple	MWH	Toxic. Unpleasant smell when cushed
Orndduffia reniformis (syn Villarsia reniformis)	Running Marsh flower	1m	1m	Moderate to Fast	707	PS-FS	Moderate	Low	Low	Low	High	Unknown	Acid	Mar-Dec.	Yellow	RiW	Ornamental pond, wetland, bush garden, allergenic
Pelargonium australe	Austral Stork's-bill	50cm	50cm	Moderate	n/a	PS-FS	Moderate	Moderate	Moderate	Fair	Low	Unknown	acid to neutral	Mar-Dec.	Pink	CA	Edging, Wildflower/bush garden, container planting
Pelargonium inodorum	Kopata	30cm	30cm	Moderate	n/a	PS-FS	Moderate	Low	Low	Moderate	Low	Low	acid to neutral	Dec-Feb.	White/pink	HA	Open border plant, needs replaceing annually, regenerates via fire
Pimelea humilis	Common Rice-flower	30cm	40cm	Moderate	n/a	PS-FS	Fair	Fair	Fair	Fair	Low	Unknown	Complete	Sep-Jan.	White	HA	Dainty, Wildflower/Bush Garden, container, allergenic, heavy pruning
Pimelea octophylla	Woolly Rice-flower	1m	50cm	Moderate	n/a	PS-FS	Moderate	Low	Low	Moderate	Low	Low	acid to neutral	Oct-Dec.	Cream-pale yellow	HD	wooly appearance,small gardens, rockeries in open soil, warm positioning
Platylobium obtusangulum	Common Flat-pea	40cm	1m	Slow to Moderate	892	PS-FS	Moderate	Moderate	Moderate	High	Low	Unknown	Acid	Sep-Dec.	Orange	HD	Wildflower/bush garden, container planting, foliage interest
Platysace heterophylla	Slender Platysace	30cm	30cm	Slow	PS	FS-PS	Moderate	Low	Low	Moderate	Low	Low	acid to neutral	Aug-Jan.	White	HDW	Shortlived, required fire to stimulate regeneration
Podotheca angustifolia	Sticky-Long Heads	30cm	30cm	Moderate to fast	n/a	FS	Moderate	Low	Low	Moderate	Low	Low	acid to neutral	Sep-Oct.	Green and yellow	HD	Shortlived, annual herb
Poranthera microphylla	Small Poranthera	10cm	30cm	Moderate	719, 3	PS	Fair	Moderate	Moderate	Fair	Moderate	Unknown	Acid	Mar,Apr,Aug-Dec.	White	CH	Wildflower/Bush garden
Pterostylis longifolia	Tall Greenhood	70cm	20cm	Moderate	719, 3	PS	Moderate	Low	Low	Moderate	Low	Low	acid to neutral	Apr-Sep.	Green	CHD	Decidious, perennial herb, underground tubers
Pteridium esculentum	Austral bracken	1.5m	1.5m	Moderate	919, 719, 892, 921, 3	PS-FS	High	Fair	Fair	High	High	Unknown	Acid	Jun-Oct.	Green	HMCDW	A, R, LM, interesting foliage, allergenic, bush garden
Sarcocornia quinqueflora	Beaded Glasswort or Samphire	Prostrate	50cm	Slow to Moderate	919, 921	FS	High	High	High	Moderate	High	Unknown	Complete	Nov-Mar.	Cream	CW	R, LM, Colourful foliage
Senecio minimus	Shrubby Fireweed	1.5m	50cm	Fast	919, 921	PS	Moderate	Low	Low	Moderate	Low	High	acid to neutral	Dec-Apr.	Pale yellow	MW	A, butterfly attracting (caterpillar food) Colonoiser for disturbed soils
Stylidium graminifolium	Grass Trigger-plant	30cm	30cm	Slow to Moderate	n/a	PS-FS	Fair	Fair	Fair	Moderate	Low	Unknown	Acid	Sep-Dec.	Pink	HDW	Container planting, Wildflower/bush garden, architectural form
Tetragonia implexicoma	Bower Spinach	Prostrate	1m	Moderate to Fast	919, 921	PS-FS	High	High	High	High	Moderate	Unknown	Complete	Aug-Dec.	Yellow	CA	Bush garden, bird attracting, fragrant flowers
Tetragonia tetragonioides	New Zealand Spinach	Prostrate	1m	Fast	n/a	FS-PS	Moderate	High	High	High	Low	Moderate	Complete	Dec-Feb.	Yellow	CA	Excellent pot herb or 'gapfiller' for groundcover
Thysanotus patersonii	Twining Fringe-lily	1m	1m	Slow to Moderate	n/a	PS-FS	Moderate	Moderate	Moderate	Fair	Moderate	Unknown	Acid	Aug-Nov.	Purple	HDW	Wildflower/bush garden, container planting, decidious
Thysanotus tuberosus	Common Fringe-lily	60cm	15-20cm	Moderate	n/a	PS	Moderate	Unknown	Unknown	Moderate	Moderate	Unknown	Acid	Oct-Dec.	Purple	HD	Decidious, Wildflower and bushgarden, container planting
Tracymene composita	Wild Parsnip	80cm-1.5m	1m	Moderate	n/a	Fsh-FS	Moderate	Low	Low	Moderate	High	Moderate	Unknown	Sep-Feb.	White	HD	Distinct flowershape, all light levels, unique flower.
Triglochin proceum	Water Ribbons	60cm	2m	Slow to fast	707	FS-PS	Low	Moderate	Low	High	High	Low	acid to neutral	Aug-Apr	greenish yellow	RiWMA	graminoid, dense spiked flowers, aquatic, ornamental pond, oxygenating
Viola hederacea	Ivy-leaf ed Violet or Native violet	10cm	1m	Moderate	919, 719, 921, 3	PS	Moderate	Moderate	Moderate	Moderate	High	Low	acid to neutral	Mar-Dec.	Purple and white	HCWSh	Wildflower/bush garden
Myoporium parvifolium	Plectranthus	0.5	1.5	Fast	n/a	FS	Moderate	Moderate	Unknown	High	Low	Low	Complete	Jan-Mar	Bluish-white	MWA	SH,A, Bird attracting
Eremophila glabra	Kalbarri carpet	0.5	2	Moderate	n/a	FS	High	Moderate	High	High	Low	Low	Alkaline to neutral	June-Sep	Yellow	CD	R,LM , winter flowering, attracts nectar eating birds and insects
Myoporium parvifolium	Creeping boobialla	0.3	3	Fast	n/a	FS	High	Moderate	High	High	Low	Low	acid to neutral	Sep-March	White	CDA	R,LM, Attracts birds
Brachyscome multifida	Cut -leaf Daisy	0.4	1	Moderate to Fast	n/a	FS-PS	Moderate	High	Moderate	High	Moderate	Moderate	Complete	All year	Pale purple	CDWA	R,LM - attracts small mammals, lizards and insects
Scaevola aemula	Fan flowers	0.35	0.8	Fast	n/a	FS	High	Low	High	High	Low	High	Complete	Sep-May	Blue-mauve	CDWA	R,LM - attracts birds and insects
Ajuga repens	Blue bugle	0.3	3	Fast	n/a	FS-PS	High	Low	Low	Moderate	Low	Moderate	Id acidic to Mild alkali	Sep-March	Blue	RLM	R,LM, Attract butterflies. Can be used as a lawn alternative in shady areas
Ophiopogon japonicus	Mondo grass	0.15	0.3	Moderate	n/a	FS-PS	High	High	High	High	Moderate	Moderate	acid to neutral	Nov-Jan	White	CDA	R,LM, can be used as a lawn alternative in low pedestrian traffic areas
Sedum spp.	Stonecrop	0.15	1.5	Fast	n/a	FS-PS	High	High	High	High	Low	High	acid to neutral	Dec-March	Yellow, orange, pink or white	CDA	Attracts bees, butterflies

Species Palette 8 – Climbers

INDIGENOUS TO PROVIDENCE *(Grown at nursery/within t* | Additional Species | Uses/traits key | Habitat Key | | High = tolerates well without damage.
INDIGENOUS *(Grown Outside Bayside)* | | R - Robust and Hardy | H – Heath/WoodlancRi = Riparian forest (interface between land and river/stream) | | Fair= can tolerate medium levels
NATIVE TREES (From Australia) | **Full Sun = FS** | LM - Low Maintenance | M - Moist/Closed forest | complete range | Moderate = tolerates somewhat with some effects in low levels
EXOTIC (From outside Australia) | **Part Shade=PS** | S - Shade Tree | C – Coast – dune scrub & woodland | acid to neutral | Low = suffers serious damage to death if exposed
Additional Species | **Shade = FSh** | F - Feature Tree | D – Prefers dry, well drained soils & tolerates dryness once established. | acid | Unknown
*PLEASE NOTE THE BELOW INFORMATION IS A GUIDE ONLY | | Sh – Prefers or tolerates full shade | W – Prefers or tolerates moist soils, wetness, periodic inundation | | Please contact your local nursery or a horticultural professional for further advice.
Use of any of the below species is preferred but not limited to these species | | | A – Adaptable, growing well in most soil types | | All indigenous plants provide habitat & food for local birds, insects & animals.

CLIMBERS				EVC= Ecological Vegetation Class			Tolerances										
BOTANICAL NAME	COMMON NAME	Mat. HEIGHT	Mat. SPREAD	Growth Rate	EVC	Sunlight	Wind	Salinity	Sea spray	Drought	Waterlogging	Compaction	pH Range	Flowering period	Flower colours	Habitat	Uses/Traits
Billardiera mutabilis (syn. B. scandens)	Common Appleberry	1	1	Moderate	719, 3	FS	Moderate	Moderate	Moderate	Fair	Moderate	Unknown	Acid	Mar-Dec.	Green, White, Yellow	HD	A, Bird attracting
Cassytha glabella (W)	Slender Dodder-laurel	Climber	indefinite	Moderate to Fast	892	FS-PS	Moderate	Moderate	Low	High	Moderate	Moderate	Unknown	Aug-Nov.	Creamy white/cream	HDMA	Parasitic, feeding off other plants.R, climber
Clematis microphylla var.microphylla	Small-leaved Clematis	5	5	Moderate to Fast	919, 921	PS-FS	Fair	Fair	Fair	Fair	Low	Unknown	acid to neutral	Aug-Oct.	White	HCA	Winter aesthetic, interesting foliage, screening
Comesperma volubile	Love Creeper	Climber	indefinite	Slow	719, 3	SP-FS	Moderate	Moderate	Moderate	Moderate	Moderate	Unknown	Acid	Aug-Dec.	Blue & Purple	HCDW	A, Contrainer
Galium australe	Tangled Bedsttraw	Climber	indefinite	Fast	919, 921	PS-FS	High	Moderate	High	High	Low	Moderate	Unknown	Sep-May.	White	HCD	Scrambler, trailing, groundcover
Hardenburgia violacea	Purple Coral Pea	Climber	indefinite	Fast	n/a	PS-FS	High	Moderate	High	High	Moderate	Moderate	Unknown	Jul-Sep.	pink or white	HDG	Scrambler, Will not negatively impact plants it climbs, pruning required after flowering
Muehlenbeckia adpressa	Climbing Lignum	Climber	indefinite	Fast	n/a	PS-FS	High	Moderate	High	High	Moderate	Moderate	Complete	Dec-Mar	Greenish white	HCDSh	plant as groundcover, house plant, potplant, can become invasive, pruning required
Aphanopetalum resinosum	Gum vine	Climber	3m x 3m	Fast	n/a	FSh	Low	Low	Low	High	Moderate	Low	ld Acid-Mild Alkali	Sep	Greenish yellow	MW	LM,Sh, attractive climber for shady positions, attracts native birds and insect
Hardenbergia comptoniana	Native Wisteria	Climber	indefinite	Fast	n/a	PS-FS	High	Moderate	High	High	Moderate	Moderate	Unknown	Jul-Sep.	pink or white	HDG	Scrambler. Will not negatively impact plants it climbs, pruning required after flowering
Hibbertia scandens	Golden guinea flower	Climber	indefinite	Fast	n/a	FS	High	Low	High	High	High	Low	acid to neutral	Aug-Dec.	Yellow	CDA	R,LM, attracts solitary native bees
Pandorea pandorana	Wonga wonga vine	Climber	indefinite	Fast	n/a	FS	Low	Low	Low	High	Low	Moderate	acid to neutral	Sep-May.	White, crea, Yellow, gold, purple	WA	LM, attracts bees and birds, vigorous climber with attractive scented flowers.
Trachelospermum jasminoides	Chinese star jasmine	Climber	indefinite	Fast	n/a	FS-PS	Moderate	Low	Low	Moderate	Low	Low	acid to neutral	Sep-May.	White	D,W,A	LM, Highly scented flowers, Attracts bees and butterflies.

Glossary

Biodiversity: 'All components of the living world: the number and variety of plants, animals, and other living things (including fungi and micro-organisms) across our land, rivers, coast, and ocean. It includes the diversity of their genetic information, the habitats, and ecosystems within which they live, and their connections with other life forms and the natural world'.[8]

Canopy cover is the layer formed by the branches and crowns of plants or trees. The cover can be continuous, as in primary forests, or discontinuous - with gaps as in an urban area. Canopy is defined in Living Melbourne as vegetation above three metres in height.[9]

Canopy tree: A tree which has, or at maturity is likely to have, sufficient height and canopy characteristics to make a positive contribution to local amenity, sense of place, micro climate and/or biodiversity. Minimum 8 x 4 metres.[10]

Climate change refers to a change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer.[11]
Climate change adaptation is the process of adjustment to actual or expected climate and its effects.[12]

Climate change mitigation is the human intervention to reduce the sources or enhance the sinks of greenhouse gases.[12]

Climate Emergency refers to the catastrophic changes to the climate brought about by human activity that poses a dangerous threat to all life on the planet.[12]

Environmentally Sustainable Development refers to development that is designed, constructed, and managed to optimise climate resilience, energy efficiency, integrated water management, indoor environment quality, the circular economy, low carbon transport and urban ecology.[13]

General Residential Zone (GRZ) is applied to land in areas where growth and housing diversity is anticipated. It is expected that the type of housing provided will evolve over time to provide more diverse forms of housing, but not at the expense of existing open garden character.[14]

Greenways are a form of landscape planning. They are linear open space corridors in the built or natural environment, which preserve biodiversity or other aspects of a sustainable environment, and generally engage the community in recreational use.[15]

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[8] The State of Victoria Department of Environment, Land, Water and Planning, 'Protecting Victoria's Environment – Biodiversity 2037', 2017, Available at https://www.environment.vic.gov.au/biodiversity/biodiversity-plan
[9] CID Bio-Science, 'Forest and Plant Canopy Analysis – Tools and Methods', 2019, Available at https://cid-inc.com/blog/forest-plant-canopy-analysis-tools-methods/
[10] Bayside City Council, 'Local Law Guidelines, Neighbourhood Amenity Local Law 2021', 2021, Available at https://www.bayside.vic.gov.au/sites/default/files/2022-05/Neighbourhood%20Amenity%20Local%20Law%202021%20Guidelines%20-%20Final.pdf
[11] Definition has been sourced from 'Bayside's Climate Emergency Action Plan 2020-2025 – Glossary', 2019, Available at https://www.bayside.vic.gov.au/sites/default/files/sustainability_and_environment/climate_emergency_action_plan_v1.2_140920_for_web.pdf
[12] Department of Health and Human Services, 'Arboricultural Assessment Holland Court, Flemington– 3.7 Useful Life Expectancy(ULE)', 2017, available at https://www.planning.vic.gov.au/__data/assets/pdf_file/0011/105500/SHRP-SH1-15.a.-Tree-Logic-Rpt_Holland-Court,-Flemington.pdf
[13] Bayside Sustainable Building and Infrastructure Policy (updated 2021)
[14] Victorian Planning Authority, 'Reformed Residential Zones – General Residential Zone', 2017, Available at https://www.planning.vic.gov.au/__data/assets/pdf_file/0023/103865/General-Residential-Zone.pdf
[15] University of New South Wales, 'The future of greenways in Sydney,' by P. Crawshaw, 2009, available at: https://www.be.unsw.edu.au/sites/default/files/upload/pdf/schools_and_engagement/resources/_notes/5A2_41.pdf

Habitat: All the physical and biological things that collectively make up the place where a plant or animal lives.[16]

Habitat Corridor: A habitat corridor is a linear two-dimensional landscape element that differs from the surrounding vegetation, in both vegetation structure and form, and connects two or more patches, of otherwise isolated, habitat that have been connected in historical time, this is meant to function as a conduit for both plants and animals.[17]

Heat Vulnerability Index: The heat vulnerability index (HVI) is represented by a scale of 1 to 5 based on quintiles, with 1 representing low exposure, low sensitivity or high adaptive capacity and 5 representing high exposure, high sensitivity or low adaptive capacity. We integrated indicators of heat vulnerability to calculate a Heat Vulnerability Index (HVI) at SA1 level. The index consists of three component layers: heat exposure, sensitivity to heat, and adaptive capability. Integration was accomplished by adding the scores from the three vulnerability components, dividing the SA1s into quintiles, and attributing SA1s with a Heat Vulnerability Rating scaled from 1 to 5.[18]

Neighbourhood Residential Zone (NRZ) is applied to land that has been identified as having specific neighbourhood, heritage, environmental or landscape character values that distinguish the land from other parts of the municipality or surrounding area.[19]

Permeability: The readiness with which a surface, whether man-made (such as a paved road) or natural (such as soil or rock) allows water, air or plant roots to penetrate or pass through.[20]
Residential Growth Zone (RGZ) is considered a substantial change area where medium density housing growth and diversity of housing types is encouraged, for example town houses and apartments around activity centres and close to train stations.[21]
Resilience: The capacity of individuals, institutions, businesses and systems within a city to adapt, survive and thrive no matter what kind of chronic stresses and acute shocks they experience.[12]

SEIFA: Socio-Economic Indexes for Areas (SEIFA) measures the relative level of socio-economic disadvantage and/or advantage based on a range of Census characteristics.[22]

Senescence is the process by which cells irreversibly stop dividing and enter a state of permanent growth arrest without undergoing cell death.[23]

Significant Landscape Overlay (SLO): The Significant Landscape Overlay (SLO) is the most appropriate planning scheme tool for protecting and managing significant landscapes. Its purpose is to identify significant landscapes, and conserve and enhance their character. The SLO can require a permit to construct a building or construct or carry out works, construct a fence, and remove, destroy, or lop any vegetation.[24]

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[16] Resilient Melbourne and The Nature Conservancy, 'Living Melbourne – Our metropolitan Urban Forest',2019, Available at https://resilientmelbourne.com.au/wp-content/uploads/2019/05/LivingMelbourne_Strategy_online.pdf
[17] Definition as used in 'Corridors for Habitat and Biodiversity Conservation in the Act with Links to the Region' from 'The theory of wildlife corridor capability – in Nature Conservation 2: The role of corridors', 1991 by Soulé, M. E. and M. E. Gilpin, Available at https://www.parliament.act.gov.au/__data/assets/pdf_file/0008/381077/PE_06_Environment_attach.pdf
[18] Department of Environment, Land, Water and Planning, Victorian Government 'Urban Vegetation, Urban Heat Islands and Heat Vulnerability Assessment in Melbourne, 2018', Available at https://www.planning.vic.gov.au/__data/assets/pdf_file/0018/440181/UHI-and-HVI2018_Report_v1.pdf
[19] Victorian Planning Authority, 'Using the residential zones – Planning Practice Note 91, Clause 32.09', 2019, Available at https://www.planning.vic.gov.au/__data/assets/pdf_file/0033/445389/PPN91-Using-the-residential-zones.pdf
[20] DELWP, 'Land for Wildlife' available at: https://www.wildlife.vic.gov.au/protecting-wildlife/land-for-wildlife
[21] Victorian Planning Authority website, 'Frequently Asked Questions – What is a Residential Growth Zone (RGZ)', 2017, Available at https://vpa.vic.gov.au/faq/berwick-residential-growth-zone-rgz/
[22] Id community, 'Demographic Resources', Available at https://profile.id.com.au/bayside/seifa-disadvantage-small-area?WebID=10
[23] CSIRO Linked Data Registry, 'Definition of Senescence', Available at http://registry.it.csiro.au/def/keyword/nature/subjects/senescence
[24] Victorian Planning Authority, 'DPCD South West Victoria Landscape Assessment Study – Regional Overview Report', 2013, Available at https://www.planning.vic.gov.au/__data/assets/pdf_file/0023/94820/ROR-Chapter-5-Implementation-Part-2.pdf

Significant Tree: Some trees, through age, size, and rarity of planting or association with historical events achieve a higher level of importance on private or public land. Identifies the following the categories used to define significant trees as scientific, social, historic and aesthetic.[25]

Tree Canopy: The uppermost trees or branches of trees in a forest, forming an almost continuous layer of foliage. The topmost layer of bioactivity in a forest setting.[5]

Urban Forest encompasses all of the trees, shrubs and grasslands – and the soil and water that support them. An urban forest incorporates vegetation in streets, parks, gardens, plazas, campuses, river and creek embankments, coastal foreshores, wetlands, railway corridors, community gardens, green walls, balconies, and roofs.[5]

Urban Heat Island Effect: The phenomenon of dense urban areas having significantly warmer air and land surface temperatures than surrounding rural areas.[5]

Useful Life Expectancy (ULE): Assessment of useful life expectancy provides an indication of health and tree appropriateness and involves an estimate of how long a tree is likely to remain in the landscape based on species, stage of life (cycle), health, amenity, environmental services contribution, conflicts with adjacent infrastructure and risk to the community. It is not a measure of the biological life of the tree within the natural range of the species. It is more a measure of the health status and the tree's positive contribution to the urban landscape.

Vegetation Protection Overlay (VPO): The VPO focuses on the protection of significant vegetation, including native and introduced vegetation in urban environments. The overlay can be applied to individual trees, groups of trees or areas of significant vegetation. It requires a landowner to obtain a permit to remove, destroy or lop any vegetation specified in a schedule to the overlay subject to a list of exemptions. Some of those exemptions apply to particular types of vegetation and others apply to specific situations, for example, to clear vegetation from electricity lines and to ensure emergency access.[26]

Vulnerability: Exposure to contingencies and stress, and the difficulty in coping with them. This can apply to ecosystems, trees, people, and places.[27]

Water Sensitive Urban Design (WSUD) is a more sustainable approach to urban planning and design to make use of stormwater and reduce the harm it causes to our natural waterways.[28]

[25] Bayside City Council, 'Significant Tree Management Policy 2020', 2020, Available at https://www.bayside.vic.gov.au/sites/default/files/trees_parks_and_beaches/significant_tree_management_policy_2020.pdf

[26] Victorian Law Reform Commission, '4. Planning law and regulation affecting trees on private land - Vegetation Protection Overlay, Available at https://lawreform.vic.gov.au/content/introduction-34

[27] GreenFacts, 'Vulnerability (in ecosystems), available at: https://www.greenfacts.org/glossary/tuv/vulnerability-ecosystems.htm

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