Perth Water *Buneenboro* Landscape & Planting Guideline

April 2024

GOVERNMENT OF WESTERN AUSTRALIA

Department of **Biodiversity, Conservation and Attractions**

Ngala kaaditj Whadjuk moort keyen kaadak nidja boodja

The Department of Biodiversity, Conservation and Attractions acknowledges the Whadjuk Noongar people as the Traditional Owners of the land and waters in the Perth Water Buneenbooro locality. We pay our respects to Country, Culture and Elders past, present and emerging

Contents

Acknowledgements

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Native Plants WA
Natural Area Consulting Management Services
Noongar Land Enterprise
Nuts About Natives
Trillion Trees Australia
Vivienne Hansen
Westgrow Farm Trees
Workpower

A note on Noongar Cultural Knowledge

Noongar cultural information of plants used in the Perth Water *Buneenboro* Landscape and Planting Guidelines, and supporting appendices, is Indigenous Cultural Intellectual Property, and should not be reproduced without permission from Vivienne Hansen who has provided these insights, or a cultural authority from Whadjuk Aboriginal Corporation.

Preface

Buneenboro (Perth Water) has long been a place of immense cultural, physical and spiritual connection to country for Whadjuk-Noongar people. This significance endures today and situates the locality as an iconic element in the city's urban fabric.

Recognising this, key managers of the locality came together to form the Perth Water Vision Group (PWVG) made up of the Department of Biodiversity, Conservation and Attractions (DBCA), Department of Planning, Lands and Heritage (DPLH), Department of Transport (DoT), DevelopmentWA (DWA), Tourism Western Australia (TWA), City of Perth (CoP), City of South Perth (CoSP), and Town of Victoria Park (ToVP). Informed by rigorous consultation with Traditional Custodians, and focused engagement of the community and other stakeholders, the PWVG commissioned a consultant team to develop the Perth Water Buneenboro Locality Plan (Locality Plan).

Supporting the Locality Plan is the Perth Water Buneenboro Action Plan (Action Plan), a rolling five-year action plan identifying actions and the relevant PWVG members involved in achieving the vision and objectives of the Locality Plan. Both the Locality and Action Plan have been developed to support State Planning Policy 2.10 Swan-Canning River System established under the Planning and Development Act 2005 and to assist in implementing the Swan Canning River Protection Strategy. Further policy context can be found in Appendix C.

The following key themes emerged from the stakeholder engagement:

- Celebrating culture and community
- Let the river breathe and foreshore flourish
- A network of lively places and tranquil spaces
- See, touch, experience river life
- Improving access across and around the river

The Action Plan will address aspects of these themes through the following:

Action 2.2 Landscape and vegetation

b) Develop landscape and planting guidelines for the locality incorporating flora that is indigenous to the locality

The Perth Water Buneenboro Landscape and Planting Guidelines (Guidelines) address the following Locality Plan objectives:

1.2 The cultural landscape, including sites of Aboriginal and non-Aboriginal heritage significance and song lines are conserved and celebrated.

1.3 The local and tourist visitor experience reflects the locality's role as a primary city destination, including Perth's authentic character, environment and natural setting.

1.4 Perth Water *Buneenboro* remains actively used as a space for community celebration and relaxation.

1.6 Views from public spaces are protected and enhanced.

1.7 Development complements the natural landforms and provides opportunities for public access to and enjoyment of the river.

2.1 Enhance the river's natural fluvial and estuarine processes and protecting and restoring the natural ecology of the river and the foreshore.

2.2 Ensure the landscape responds to the natural landforms and vegetation complexes within the locality and creates a natural interface with the river.

2.3 Recognise and expand the natural habitat values of the locality.

2.4 Manage water sustainably.

2.6 Minimimse the use of hard structure - e.g. for asset protection, flood management and drainage scour.

2.7 Informed by research excellence conducted by relevant land managers, the principles of climate resilience are applied to planning and management of the river and foreshore.

The Guidelines will also deliver the Locality Plan development outcomes:

Maintain nature and function of the river

2(a) Development utilises an adaptive approach to the impacts of climate change and risk of flooding through siting and design.

2(c) Outside urban and special use activity nodes, development is designed to accommodate inundation during flood or storm events.

2(d) Outside activity nodes, the foreshore is to be developed with minimal permanent structures and buildings - passive recreation and nature-based uses are preferred along sections of the river between activity nodes.

Water management

2(g) Natural systems (e.g. bio-filtration and living streams) are used to manage stormwater delivering multiple benefits (including water quality improvement and flood management).

2(l) Opportunities are explored to replace turf with native plants and non-irrigated recreational facilities in selected areas to reduce the use of water, fertilisers and pesticides and to increase biodiversity and amenity within the locality.

Landscape and vegetation

2(n) Habitat creation and reinstatement is encouraged as part of all projects.

2(o) Locally native species are used in landscaping and are consistent with the landscaping and planting guidelines for the policy area (note: where landscaping and planting guidelines have not been prepared, advice is to be sought from DBCA and the relevant local authority with respect to appropriate species and planting regime).

2(p) Throughout the foreshore the landscaping:

- promotes Perth as the wildflower capital, in alignment with State policy on Wildflowers WA;
- preferences use of local vegetation types and species;
- provides rehabilitated areas of remnant vegetation;
- establishes vegetated connections between activity nodes;
- increases canopy cover throughout the locality;
- enhances connection to Kings Park *Mooro Karta, Karragatup*; and
- provides a soft interface to the river's edge.

2(q) Green corridors of native vegetation are established connecting the foreshore to the surrounding urban landscape.

2(r) Due to the effects of deciduous trees on waterways, such species are not to be planted on the foreshore or near stormwater infrastructure that discharges to the river.

2(s) Species selection eliminates the need to use organic chemical fertilisers wherever possible.

2(t) Landscape design supports the principles of Crime Prevention through Environmental Design Planning Guidelines (DPLH, 2021), including surveillance; territorial definition; access control; and space management.

Purpose

This information contained within this document has been developed to support the implementation of the Perth Water Buneenboro Locality Plan. It is intended that this Guideline will be used in conjunction with Appendix A - Landscape & Planting Zones; and Appendix B - Plant Species List.

Scope

These guidelines apply to development proposals occurring within the locality area (see figure 1). This includes those relating to residential or commercial developments and public open spaces managed by local government, and other statutory bodies.

Audience

This document has been developed to communicate expectations and standards of landscaping design within the Perth Water Buneenboro locality to designers, developers, local government and other land managers. It is also designed to support both local government and statutory bodies in assessing concept and detailed designs provided as part of the development application process, particularly those impacting the Swan Canning Development Control Area (DCA).

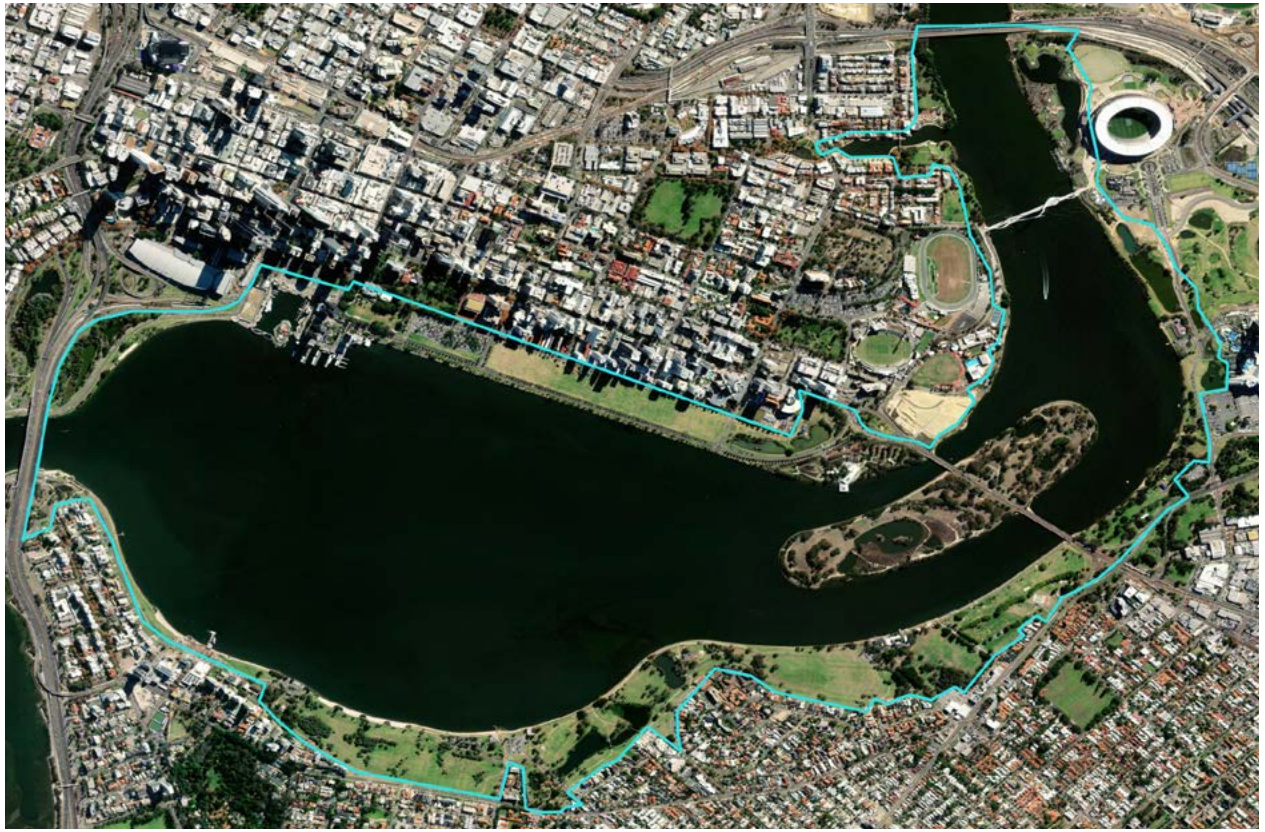


Figure 1 Perth Water *Buneenboro* locality area (boundary in blue)

Objectives

A guiding framework for developers, designers, local governments and other associated professionals that will reinforce the sense of place; improve the function, extent and condition of natural systems; and overall improve visitor experience throughout the Perth Water *Buneenboro* Locality.

The Guidelines will accomplish this by:

- Contributing to the sense of place by celebrating the unique natural features of the locality;
- Complementing the Noongar cultural landscape, and respectfully sharing Noongar cultural meaning with the community and industry;
- Promoting consistency in landscaping and planting standards throughout the locality;
- Encouraging landscaping design choices that preserve and celebrate the locality's unique values, character and uses;
- Showcasing endemic plant species;
- Selecting species that are not locally native, only when they provide valuable natural ecosystems and processes (e.g. food sources, habitat creation and winter solar access), and that are not weed species in this locality;
- Providing greater clarity for designers, developers, local government staff and statutory bodies regarding landscaping design plans and the approval processes;
- Aligning with other standards and documentation (e.g. water sensitive urban design (WSUD), biodiversity sensitive urban design (BSUD), crime prevention through environmental design (CPED), bushfire risk);
- Increasing extent and function of natural areas for providing ecosystem services;
- Maintaining or improving amenity outcomes of the foreshore; and
- Outlining best practice regarding project planning, delivery, monitoring and ongoing maintenance.

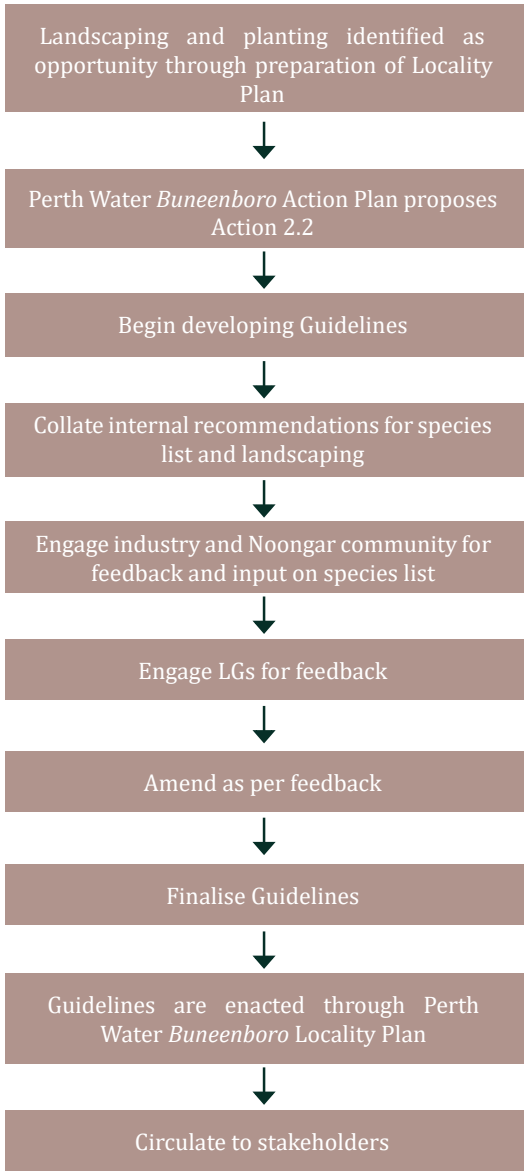


Figure 2 Landscape and planting guideline process map

Core principles

Ecological

a. Retain existing native vegetation, especially in less modified areas where it supports natural hydraulic processes;

b. Prioritise restoration of, and improvements in connectivity between threatened ecological communities and Bush Forever sites;

c. Landscaping should replicate natural plant communities and zones (see Appendix B). If a suitable Bush Forever reference site exists, it may be used to determine appropriate species for inclusion in a landscaping plan;

d. Enhance, expand and connect other existing remnants by planting a range of endemic species appropriate to the complex (see Appendix A);

e. Support ecological connectivity and biodiversity corridors (e.g. between upper and lower foreshore; between the foreshore and surrounding landscape);

f. Reinstate locally native vegetation in areas where it has been lost.

   Locally native plants help support biodiversity and reduces maintenance requirements;

g. Avoid including species: identified on agricultural or environmental weed

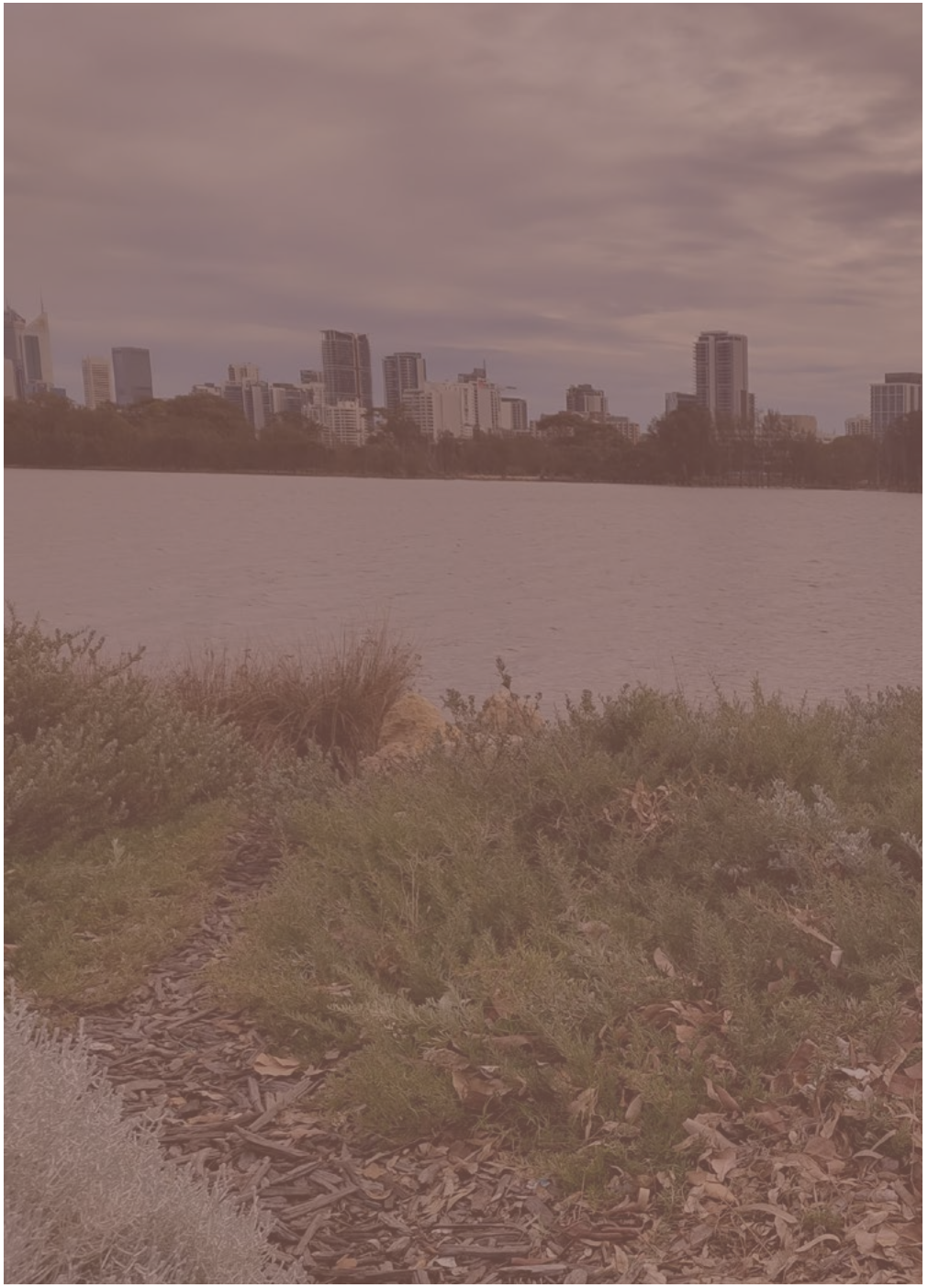
   species lists as being weeds or species with a high potential to become invasive; deciduous species; and species with high nutrient requirements in landscape plans. Avoid including locally native species that exhibit weed-like tendencies under disturbed conditions.

h. Establish appropriate ecological communities in areas that have been reclaimed;

i. Aim for species and structural diversity when selecting plants;

j. Species selection should be cognisant of geology, geomorphology and prevailing conditions (i.e. wind, substrate, inundation - e.g. infill, salinity levels and PASS);

k. Source plants grown from local provenance, where possible;



Core principles cont.

Ecological cont.

l. Establish or maintain a buffer zone - clear separation between natural and landscaped areas, e.g. via pathways or edging - to reduce the impact of turf and exotic species on natural areas;

m. Limit turfed areas due to the higher water, nutrient, pesticide and maintenance requirements. In areas that must be turfed, use hardy, drought-tolerant varieties. Artificial turf is strongly discouraged due to the increased temperatures and waste disposal requirements.

n. Support climate change mitigation and improve climate change resilience through the landscape and revegetation design (e.g. selecting plants that help reduce urban temperatures, provide shade in parks and to buildings, contribute to cool zones, resilient to increasing salinity levels and changing inundation levels, etc);

o. Align landscape design with the principles of biodiversity sensitive urban design (BSUD);

p. Consider the ability of existing weeds to prevent erosion and carefully plan weed removal to avoid exposing large areas of bare soil.

q. Document factors that may influence decisions to use non-locally native species in landscaping plans. This might include providing habitat for threatened species, or selecting species that are better suited to modified/artificial sites. Non-locally native species would need to meet the other principles outlined in this section.

r. Acknowledge the different disturbance levels along the foreshore and tailor species selection in line with the principles described in Appendix 2.

Cultural

a. Ensure landscaping methods support traditional use and practice, and facilitates continuing spiritual and physical connection to Whadjuk Noongar lands and waters;

b. Provide opportunities for education and/or interpretive nodes that share stories about the Aboriginal cultural significance of the area.

Core principles cont.

Hydrological

a. Provide room for natural riverine and estuarine processes, such as inundation from flood events;

b. Incorporate native vegetation in active and/or passive foreshore stabilisation treatments;

c. Manage the quantity and quality of stormwater and controlled groundwater discharges to the river by using water sensitive urban design, such as reducing impervious surfaces, incorporating vegetated stormwater systems and infiltration systems, installing pollutant traps, and providing vegetated overland flowpaths.

d. Plant waterwise plants by incorporating locally native species that are adapted to Perth's climate and have lower water and nutrient demands than exotic species.

e. Reduce turfed areas and apply hydro-zoning.

Social and amenity

a. Align landscaping design choices with how the area is used, i.e. for passive or active recreation, thoroughfare, etc;

b. Provide opportunities for education and/or interpretive nodes that share stories and information about the historical significance of the area;

c. Provide opportunities for foreshore activation, where appropriate;

d. Consider longer-term shading requirements to support continued use in a changing climate;

e. Limit the impact of new infrastructure on existing public viewpoints;

f. Ensure new infrastructure is environmentally sensitive;

g. Support integration, connectivity and equitable access along the foreshore to encourage activity – e.g. along pedestrian and cycle paths;

h. Establish vegetated connections between activity nodes.

Landscaping and planting: time is key

A minimum of 3 years is required for successful landscaping and planting projects. To realise the full potential, a structured 3 - 5 year plan is ideal, and ongoing maintenance, monitoring and improvements are implied. Successful planting can be conceptualised across three stages: site preparation; planting event; and ongoing monitoring and maintenance. These stages are discussed below.

Planning and design

Landscape planning and design needs to be integrated and part of the initial phases of a project. Incorporating landscape design prior to and in parallel with site layout, building and other infrastructure planning will lead to higher quality and more sustainable design outcomes. Seeking the input from landowners, Aboriginal knowledge holders, designers and other key stakeholders with insight on site conditions, and previous experience in managing landscapes in the area, is vital to the long term success of a project. Previous experience in plantings that have worked in the area need to be considered for the design. See APPENDIX B for further planting zone insights.

Site Preparation

Adaptive weed management is critical to plant establishment, and long (i.e., 2-year) timescales can help mitigate weed succession through repeated treatments. A lawned area may contain multiple weed species waiting for the opportunity to emerge, often sprouting up to succeed the former. This is particularly found with bulbous weeds. Land managers can provide this insight, and in some cases, a 1-year weeding program is sufficient.

Establishment

Planting in dynamic spaces with a high concentration of active users (i.e., community recreational areas, in the intertidal zone etc) benefit from a strategic approach to planting. For example, establishing an area with hardier native plants will improve infill planting survival rates in a thoroughfare area, or in an area with high coastal energies. Physical barriers can protect plantings from unmanaged access. Similarly, non-vegetated, mulched areas may also provide the visual cues that would otherwise be provided by physical barriers.

Infill Planting

As each site is unique in conditions and context, this stage of planting should be guided by observations of plant survival. Lessons learned after the Establishment phase can be used to adjust subsequent plantings for improved survival rates.

Monitoring and maintenance

An adaptive management approach is key to a successful landscaping program. This will ensure monitoring programs provide lessons learned that can then be implemented to improve project outcomes/ achieve success criteria.

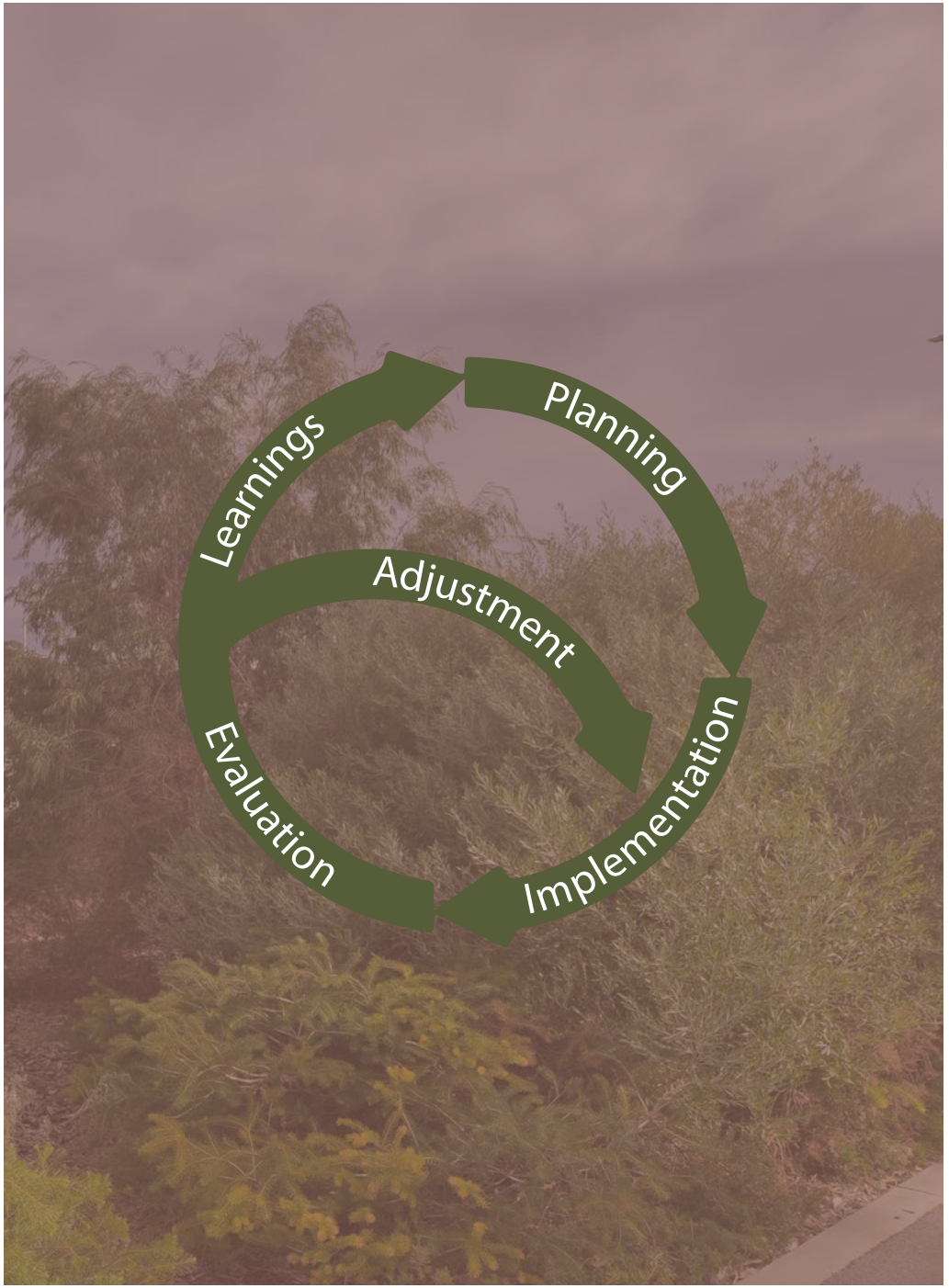
A monitoring schedule is key to the evaluation portion of the adaptive management process. Monitoring of planting should include visual inspections; photopoint monitored plots; and occur at regular intervals (e.g., twelve weeks after planting, after the first summer, after three years) to identify:

- Thriving vegetation;
- Type and location of any dead/ dying vegetation;
- Predation on revegetation from waterbirds;
- Condition of erosion control matting;
- Locations of any erosion control areas requiring remediation or new areas requiring erosion control because of stormwater runoff from the pathway;
- Type and location of weeds present on site; and
- Presence of rubbish or signs of vandalism.

Weed control monitoring should occur two and four weeks after application of control measures.

Maintenance activities will be guided by lessons learned from the evaluation phase that provide insights into the site conditions affecting vegetation. It is recommended that a contractor with expertise in native plants is engaged because maintenance requirements vary (e.g., pruning techniques, fertiliser application, etc). The maintenance program for the site should include:

- Program schedule;
- Duration of infill planting;
- Weed control;
- Watering;
- Handover process (detailing planting works, as constructed drawings, monitoring reports, on-going maintenance program, success criteria etc); and
- Maintenance of erosion control structures and bioengineering.



LANDSCAPE PLAN CHECKLIST

Consider using this checklist as a guide for development applications

PLANNING CONTEXT

- ☐ Reserve name
- ☐ Coordinates
- ☐ Cadastral references
- ☐ Land tenure
- ☐ Ownership/ vesting
- ☐ Zoning within and adjacent to management area
- ☐ TPS and MRS zones
- ☐ Summary of other associated information relevant to the landscape plan
- ☐ Lot No. and Plan No. along with existing and proposed formal management arrangements
- ☐ Supporting documents (listed/ attached as appendices)

PROJECT CONTEXT

- ☐ Rationale and objectives - desired impacts, milestones, monitoring and success criteria
- ☐ Site info - veg. complex; site condition; prior surveys; use history; soil types; high and low water mark; planting zones
- ☐ Site preparation - i.e. site stabilisation, weeding regime
- ☐ Site access and traffic management requirements. Will access be restricted/ altered during the project?
- ☐ Implementation timeline, including responsibilities for each activity and when it will be undertaken
- ☐ Fencing requirements
- ☐ Chemical use, such as fertilisers and herbicides, and their management within a river environment
- ☐ Ongoing Maintenance activities, schedule and responsibilities following completion of works

MAP INFORMATION

- ☐ Title and location boundary, site level contours, scale/dimensions, orientation, drawing date and legend. Clearly identify the managed area from its surrounds and delineate the area to be modified
- ☐ Site features, including ecological assets such as vegetation, woody debris or rock formations, mulched areas and built structures - existing and proposed; and any other significant features
- ☐ Areas where different treatments are applied (i.e. shoreline planting vs dryland planting). This may include soil type, hydrological zones, and seasonal tidelines. *See Appendix A and B for more information*
- ☐ Indicative drawings showing the number of plants (and species) to be removed. **Note:** any native plants should be relocated where possible
- ☐ Plant list detailing botanical and common names of the species to be used, their quantity, pot size and location, planting ratios and ensuring a minimum ratio of 3:1 is applied for each plant removed as part of works
- ☐ Size, materials and finishes of all structures, bioengineering, rock and sand, if used
- ☐ Detail the type of irrigation, if required, its location and method of operation
- ☐ The location and detail of any earthworks or infrastructure requiring planning approvals

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GOVERNMENT OF WESTERN AUSTRALIA

Department of **Biodiversity, Conservation and Attractions**

Perth Water *Buneenboro* Appendix A- Plant Species List

April 2024

Development of the plant species list

This species list has been developed based on a hierarchical approach that considers the level of degraded native vegetation in the existing landscape, the predominant land use, soil qualities, hydrological zone and the objectives and principles outlined in the Landscape and Planting Guidelines. This plant species list contains species that are generally accepted throughout the Perth Water Buneenboro locality. However, specific site conditions must be considered when choosing plant species. The Guidelines recommend working closely with land managers to this end.

Nurseries

This list has been cross-referenced with local nurseries to ensure capacity to respond to demand. Consider the following information when ordering from nurseries:

- Nurseries generally require orders by the end of July for delivery in the following winter. See below for further detail. The general rule applies - **the earlier the better**;
- Rows that have been coloured in **Yellow** denote advanced ordering requirements - the end of March for delivery in the following winter;
- Plants can be sold as tubestock @50mm, 130mm, 140mm, 175mm, 200mm, 305mm, and in 45L bags, depending on the species and supplier;
- Plant orders and palettes should remain flexible and acknowledge substitution may be required because propogation failure might be encountered.

Whadjuk Noongar cultural knowledge

The information that has been provided is Indigenous Cultural Intellectual Property, and provides a surrounding context for the plants spcies. Permission to use this cultural information in landscape designs should be sought from Vivienne Hansen, who has provided these insights, or from a cultural authority from Whadjuk Aboriginal Corporation.

Plants have a range of purposes in the Noongar community, and many are multi-functional. Some plant species used one word to cover all of the different types of plants in the same species. As the Noongar language is primarily an oral language, various spellings are used throughout the Noongar community.

Vegetation themes

Geology, landform and climate affect soil formation, which in turn primarily influences vegetation composition and distribution. Further influences include disturbance such as fire and water regimes, weed invasion and land clearing and modification.

The Perth Water Buneenboro Locality lies within the Swan Coastal Plain and broadly includes the following vegetation themes based on pre-existing landscape character of the vegetation complexes, soils, geology and hydrology, shown in figure 1.

A note on modified landscapes

All sites within the policy area have been modified to some degree. While vegetation complexes have guided preparation of the species list, the list has been extrapolated from the overall landform information and prevalent soils to provide a globally acceptable species selection.

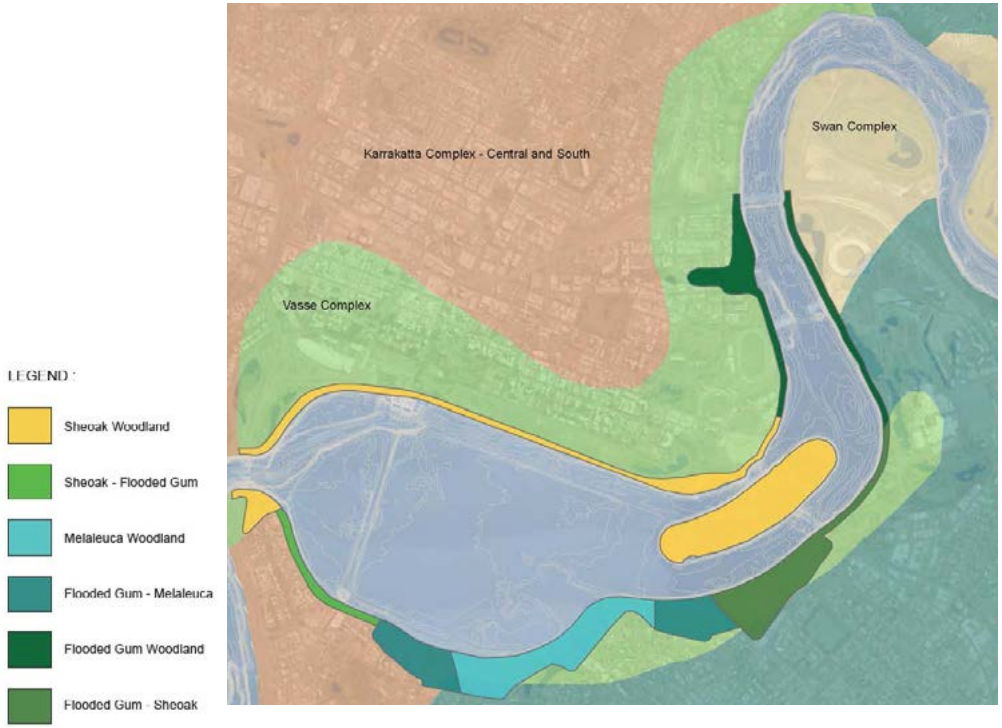


Figure 1 Vegetation Themes (Source: Syrinx report for *Perth Water Buneenboro Locality Plan*, 2019)

Vasse Complex

Mixture of the closed scrub of *Melaleuca* species fringing woodland of *Eucalyptus rudis* (Flooded Gum) – *Melaleuca* species and open forest of *Eucalyptus gomphocephala* (Tuart) – *Eucalyptus marginata* (Jarrah) – *Corymbia calophylla* (Marri).

Bassendean Complex

Vegetation ranges from woodland of *Eucalyptus marginata* (Jarrah) – *Allocasuarina fraseriana* (Sheoak) – Banksia species to low woodland of *Melaleuca* species, and sedgelands on the wetter sites. This area includes the transition of *Eucalyptus marginata* (Jarrah) to *Eucalyptus todtiana* (Pricklybark) in the vicinity of Perth.

Swan Complex

Fringing woodland of *Eucalyptus rudis* (Flooded Gum) – *Melaleuca rhaphiophylla* (Swamp Paperbark) with localised occurrence of low open forest of *Casuarina obesa* (Swamp Sheoak) and *Melaleuca cuticularis* (Saltwater Paperbark).

Karrakatta Complex

Predominantly open forest of *Eucalyptus gomphocephala* (Tuart) – *Eucalyptus marginata* (Jarrah) – *Corymbia calophylla* (Marri) and woodland of *Eucalyptus marginata* (Jarrah) – *Banksia* species.

Planting zones

Different plant species have specific hydrological requirements, and are better suited for either drier or wetter conditions. Plants should be selected and planted according to the different zones found across the foreshore. Plant selection should also be cognisant of anticipated changes to soil conditions effected from climate change (e.g., rising sea levels, occasional flooding, increased salinity).

Dryland

The lands outside of the floodplain that rarely interact with the river. Dryland plants will benefit from having a low-phosphorous, slow-release fertiliser added to the base of the planting hole. The addition of soil wetter to the fertiliser will improve water penetration into non-wetting soils.

Riparian zone

The lands directly adjacent creeks and rivers, including the riverbank, wetlands and parts of the river floodplain that interact with the river seasonally or during flood events. Riparian plantings should be conditioned for moister soil, and saline conditions.

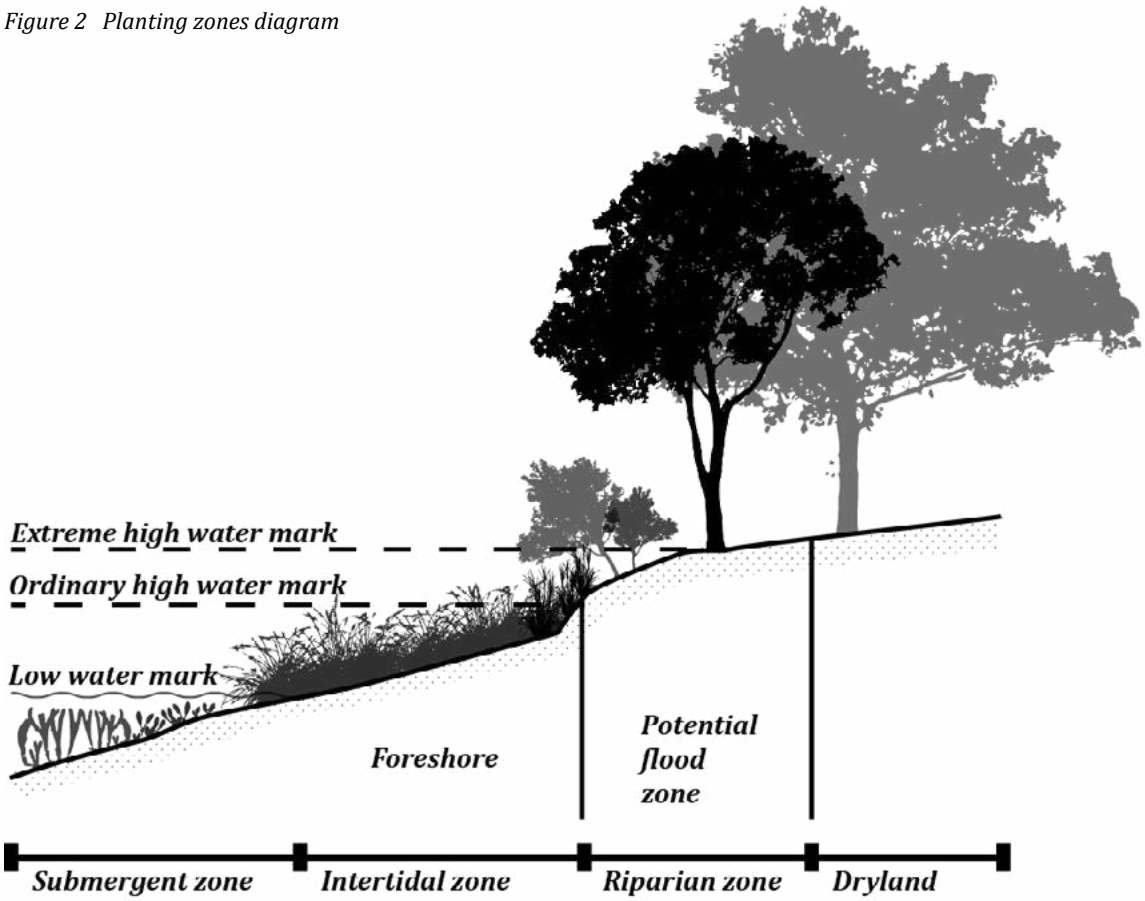
Intertidal zone

The foreshore lands within the tidal range. These lands are above the water at low tide, and are underwater at high tide. Plantings in this zone will be subject to frequent inundation and seasonal variation in salinity.

Submergent zone

Perennially wet with standing water at fluctuating levels most of the year. Submergent plants grow under the water, often with leaf parts above the water level. This plant species list does not specify species for the submergent zone.

Figure 2 Planting zones diagram



Other resources

Further information relevant to foreshore revegetation can be found in Chapter 2 of *Best Management Practices for Foreshore Stabilisation* (DBCA, 2021).

Guidelines for creation of a stormwater biofilter can be found in *Vegetation guidelines for stormwater biofilters in the south-west of Australia* (Oversby, B., Payne, E., Fletcher, T., Byleveld, G., Hatt, B., 2014).

Planting density considerations

Planting densities depend on plant form (e.g., tree, shrub, sedge), anticipated survival rates, and location (e.g., dryland, riparian or intertidal zone). Some general information on densities is provided below. See Appendix B - Planting Zones for further information on planting locations.

Trees
Tree planting densities are normally associated with container size and the desired level of canopy shade when mature. Trees should be planted at a maximum density of 1/3m^2 when using tubestock. Tree planting densities can be as low as 1 every 10m^2 or even lower when using mature stock (10L bags and larger).

Sedges
Rushes and sedges should generally be planted at 6-9/m^2 with tufted species inclined to the higher density. Species should be planted in single-species groups to avoid competition loss and to mimic natural patterns of growth. The planting densities provided for sedges are suitable for 140mm pots. Tubestock should be planted at higher densities to allow for higher plant losses. Account for inundation limits of each species when planting within shorelines.

Shrubs
Shrub planting densities relate to the average width of the mature plant, aiming to provide complete cover. Planting densities are around 4/m^2 depending on mature plant size.

Groundcover
Groundcover planting densities should be in relation to the rate of growth. Rapid spreading species can be planted as low as 1/m^2 or even lower. Slow growing species can be planted at 3/m^2.

Grasses and grass-like plants:
Grasses and grass-like plants are planted at densities relating to the diameter of the mature plant. Most species in this category form tussocks and do not spread. To achieve complete cover, densities may be as high as 6-8/m^2.

How to use this plant species list

Species information has been provided to guide selection based on desired outcome, as detailed in Appendix B - Landscape & Planting Zones. The Plant Species List acknowledges that sites within the locality are highly modified, with varying qualities of infill. Species choice may vary according to the site specific conditions. Land managers should be consulted to further advise appropriate species selection.

Information on the following sheets can be interpreted in the following ways:

Yellow coloured rows:

River pea	*Gastrolobium ebracteolatum*	
Spider flower/ Grey grevillea/ Toothbrush	*Grevillea vestita*	Ngutek (common name for Grevilla species)
Corkybark	*Gyrostemon ramulosus*	
Variable-leaved hakea	*Hakea varia*	Kodjet

A number of nurseries have been consulted to understand their capacity to meet demand for plant species, and to identify species that require advance notice for ordering. Species in the **Yellow** coloured rows have a longer lead time and should be ordered by the end of March, the year before delivery for the following winter. All other rows should be ordered by the end of July for delivery for the following winter.

Landscaping qualities:

Noongar name	Flowering time	Flower colour	Height	Landscaping Qualities	Planting stage
Munyuret/ Woolya Wah/ Wilyawa/ Bulyee	Sep - Dec or Jan - May	Yellow	0.8-4m	✓	1st
	Aug - Oct	Yellow	1-4m		1st

These plant species have been identified for shading or windbreaking qualities.

Planting stage:

Scientific name	Noongar name	Flowering time	Flower colour	Height	Landscaping Qualities	Planting stage
Acacia rostellifera		Jul - Oct or Dec	Yellow	1-6m		1st
Agonis flexuosa	Wonil	Jul - Dec or Jan	White	up - 10m	✓	1st

Provides guidance on whether this species should be planted in the 1st year of works, subsequent years of infill planting, or is dynamic and suitable at any stage.

Planting zone:

Common name	Scientific name	Noongar name	Flowering time	Flower colour	Height	Landscaping Qualities	Planting stage	Planting zones
Redheart/ Limestone marlock	*Eucalyptus decipiens*	Moit	Aug - Dec or Jan	White	1.5-15m	✓	1st	(D), (R)
Tuart	*Eucalyptus gomphocephala*	Duart/ Morrool/ Mooarn/ Moorun/ Mouarn/ Tooart	Jan - Apr	White	10-40m	✓	1st	(D)

Based on planting zones discussed above, species are indicated as Dryland **(D)**, Riparian **(R)**, or Intertidal **(I)**.

Fauna information:

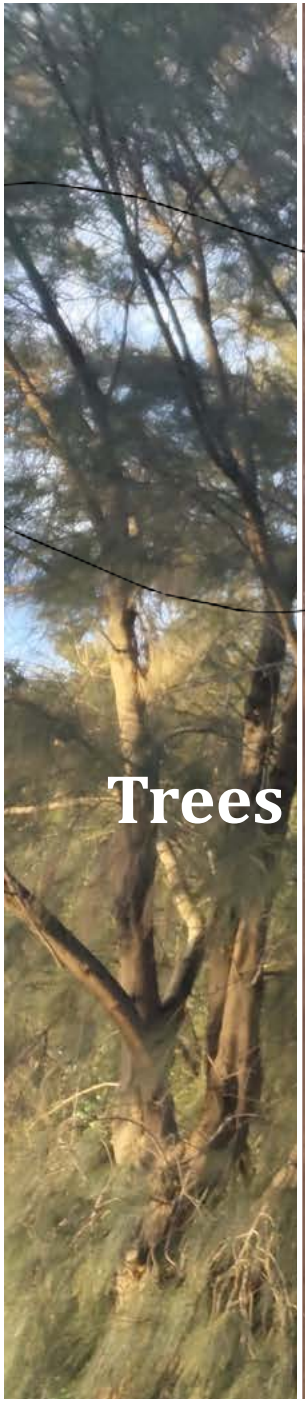
Aug - Dec or Jan	White - cream	0.2-4m	✓	1st	(D)	
Sep - Dec or Jan	White/ pink/ pink - purple	0.5-5m	✓	1st	(D)	

Indicates other ecosystem services of the plant in providing food and or habitat for fauna species (i.e., insects, birds, mammals).

Whadjuk uses:

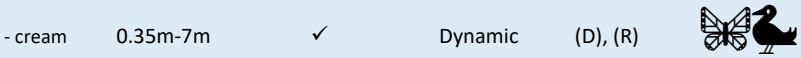
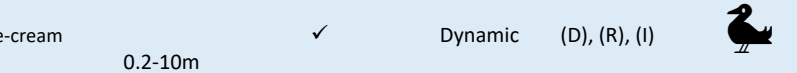
Noongar name	Flowering time	Flower colour	Height	Landscaping Qualities	Planting stage	Planting zones	Fauna information	Whadjuk uses
	Jul - Oct or Dec	Yellow	1-6m		1st	(D)		✓
Wonil	Jul - Dec or Jan	White	up - 10m	✓	1st	(D), (R)		✓

Indicates whether the plant species has a culinary, medicinal or other utility use for Whadjuk Noongar peoples. Further detail, and permission for use of this cultural information, should be sought from Vivienne Hansen, or other cultural authority recommended by the Whadjuk Aboriginal Corporation.



Trees

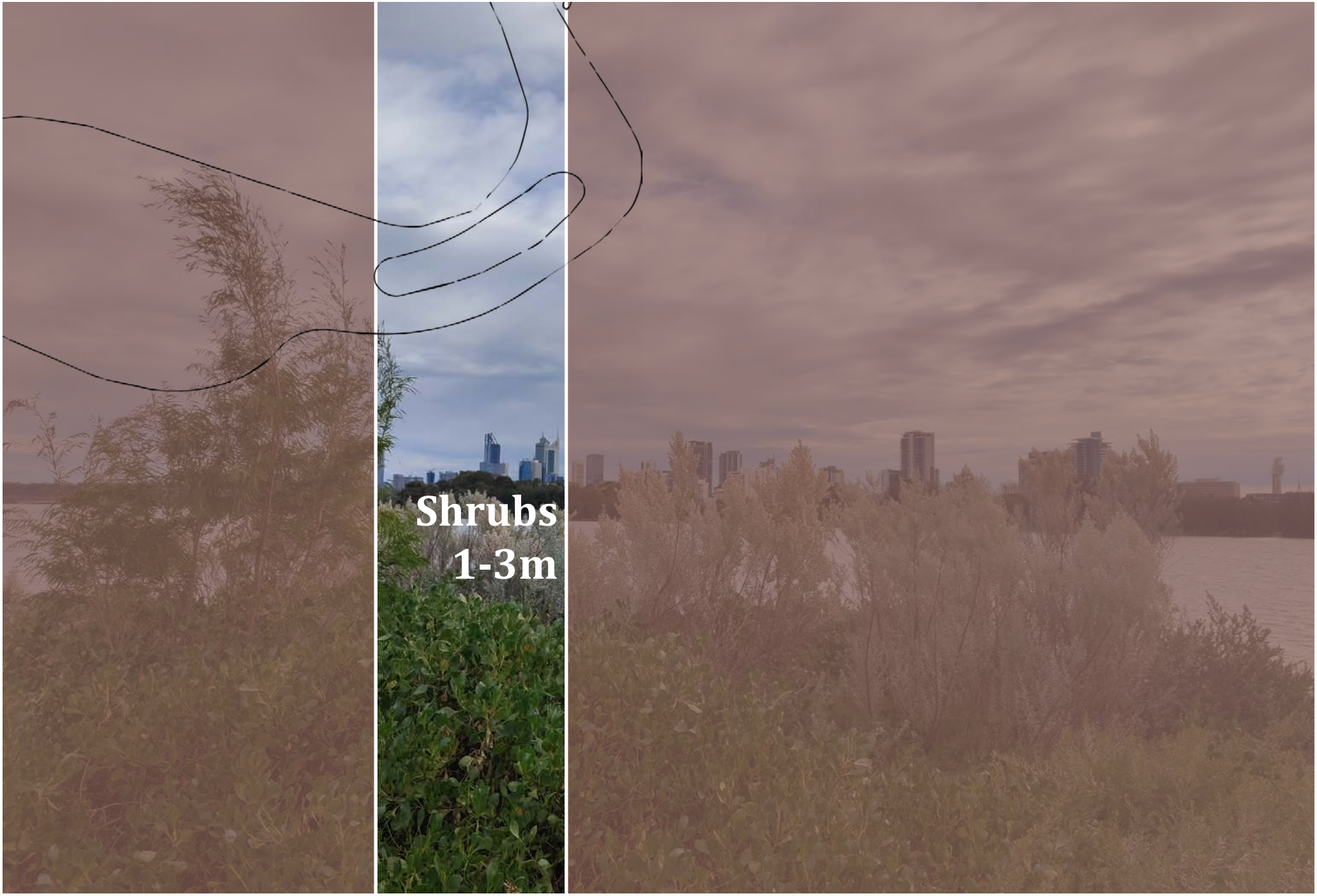
Common name	Scientific name	Noongar name	Flowering time	Flower colour	Height	Landscaping Qualities	Planting stage	Planting zones	Fauna information	Whadjuk uses
Summer-scented wattle	*Acacia rostellifera*		Jul - Oct or Dec	Yellow	1-6m		1st	(D)		✓
Peppermint	*Agonis flexuosa*	Wonil	Jul - Dec or Jan	White	up - 10m	✓	1st	(D), (R)		✓
Sheoak/ Western sheoak/ Common Sheoak	*Allocasuarina fraseriana*	Kondil/ Condil/ Kulli/ Gulli/ Quail/ Kwell	May - Oct	Brown	5-15m	✓	1st	(D)		✓
Little summer candles/ Slender banksia	*Banksia attenuata*	Piara/ Biara/ Bealwra/ Peera/ Piras/ Binda	Oct - Dec or Jan - Feb	Red	0.4-10m		1st	(D)		✓
Bull banksia	*Banksia grandis*	Mungite/ Poolgarla/ Mangij/ Mungytch/ Beera	Sep - Dec or Jan	Yellow - green	1.5-10m		1st	(D)		✓
Holly-leaved banksia	*Banksia ilicifolia*		Jan - Dec	Yellow/red/ orange/cream	up - 12m		1st	(D)		✓
Swamp banksia	*Banksia littoralis*	Pungura/ Boongura/ Boora/ Boorarup/ Mimidi	Mar - Aug	Yellow - orange/ yellow	1.5-12m		1st	(D), (R)		✓
Firewood banksia	*Banksia menziesii*	Mungyte/ Mungite	Feb - Oct	Pink/red/yellow	1.3-7m		1st	(D)		✓
Little Kalbarri candles	*Banksia prionotes*	Manyret	Feb - Aug	Cream - orange	up - 10m		1st	(D)		✓
Parrotbush	*Banksia sessilis*	Pulgart/ Budjan/ Pudjak	Apr - Nov	Yellow - cream	0.5-8m	✓	1st	(D)		✓
Lesser bottlebrush/ Scarlet bottlebrush/ Fiery bottlebrush	*Callistemon phoeniceus*	Tubada	Sep - Dec or Jan	Red	1-6m	✓	1st	(D), (R)		✓
Rottnest Island pine	*Callitris preissii*	Maro	Oct - Dec or Jan	Yellow/ brown/ orange	1-9m	✓	1st	(D)		✓
Swamp sheoak	*Casuarina obesa*		Jan - Dec		1.5-10m	✓	1st	(D), (R)		
Marri	*Corymbia calophylla*	Mari/ Marril/ Marree/ Mundup/ Nandup/ Nundup/ Kurrden/ Kardan/ Cardau/ Gardan/ Grydan/	Dec or Jan - May	White - pink	up-60m	✓	1st	(D), (R)		✓

Common name	Scientific name	Noongar name	Flowering time	Flower colour	Height	Landscaping Qualities	Planting stage	Planting zones	Fauna information	Whadjuk uses
Redheart/ Limestone marlock	*Eucalyptus decipiens*	Moit	Aug - Dec or Jan	White	1.5-15m	✓	1st	(D), (R)		✓
Tuart	*Eucalyptus gomphocephala*	Duart/ Morrool/ Mooarn/ Moorun/ Mouarn/ Tooart	Jan - Apr	White	10-40m	✓	1st	(D)		✓
Jarrah	*Eucalyptus marginata*	Cherring/ Chiaragl/ Djara/ Djarrail/ Djarryl/ Djerral/ Dyerral/ Gharrahel/ Jarrail/ Jarral/ Jeerilya/ Jeril/ Jerrail/ Jerral/ Jerryl/ Yarrah	Jun - Dec or Jan	White - cream/ pink	up-40m	✓	1st	(D)		✓
Flooded gum	*Eucalyptus rudis*	Kulurda/ Gulurto	Jul - Sep		5-20m	✓	Dynamic	(D), (R)		✓
Pricklybark/ Coastal blackbutt	*Eucalyptus todtiana*	Dwutta	Jan - Apr	White - cream	2-15m	✓	1st	(D)		✓
Saltwater paperbark	*Melaleuca cuticularis*	Bibool/ Yaularung/ Bewel/ Koll/ Mudurda	Aug - Nov	White - cream	0.35m-7m	✓	Dynamic	(D), (R)		✓
Moonah	*Melaleuca preissiana*	Moonah	Nov - Dec or Jan - Feb	White - cream - yellow	2-9m	✓	Dynamic	(R), (I)		✓
Swamp paperbark	*Melaleuca rhaphiophylla*	Yowarl/ Bibool Boorn/ Yeymbac/ Yiembak/ Yawl	Jul or Sep - Dec - Jan	White-cream	0.2-10m	✓	Dynamic	(D), (R), (I)		✓
Christmas tree	*Nuytsia floribunda*	Moodja/ Mungai/ Mooja/ Mungah/ Moondjak/ Moodgar	Oct - Dec or Jan	Yellow - orange	up- 10m		Infill	(D)		✓


Shrubs
3-5m

Common name	Scientific name	Noongar name	Flowering time	Flower colour	Height	Landscaping Qualities	Planting stage	Planting zones	Fauna information	Whadjuk uses
Coastal wattle	*Acacia cyclops*	Munyuret/ Woolya Wah/ Wilyawa/ Bulyee	Sep - Dec or Jan - May	Yellow	0.8-4m	✓	1st	(D)		✓
White-stemmed wattle	*Acacia xanthina*		Aug - Oct	Yellow	1-4m		1st	(D)		
Common woollybush	*Adenanthos cygnorum*	Boyur	Jul - Dec or Jan	White - cream - pink - green	up - 4m	✓	1st	(D)		
Recherche astartea	*Astartea fascicularis*		Jan - Jul or Oct - Dec	White / cream	0.3-5m		1st	(D), (R)		
Geraldton wax	*Chamelaucium uncinatum*		Jun - Nov	Pink / white	0.5-4m	✓	1st			
Tree smokebush	*Conospermum triplinervium*	Boyur	Aug - Dec or Jan	White	0.5-4.5m		1st	(D)		✓
Coast hop-bush	*Dodonaea aptera*		Apr - Jul		0.5-3.5m	✓	1st	(D)		
Hackett's hop-bush/ Perth hop-bush	*Dodonaea hackettiana*		Jul - Oct	Yellow - green/ red	1-5m	✓	1st	(D)		
Narrow-leaved red mallee/ Fremantle mallee	*Eucalyptus foecunda*		Aug or Jan - Feb	White - cream	up - 5m	✓	1st	(D)		✓
River pea	*Gastrolobium ebracteolatum*		Oct - Dec	Purple / yellow / red	up - 4m		1st	(R)		
Spider flower/ Grey grevillea/ Toothbrush	*Grevillea vestita*	Ngutek (common name for Grevilla species)	Jan - Nov	White - cream	0.5-4.5m		1st	(D)		✓
Corkybark	*Gyrostemon ramulosus*		May - Oct	White / green - yellow	0.5-5m		Infill	(D)		
Variable-leaved hakea	*Hakea varia*	Kodjet	Jul - Nov	White / cream - yellow	1-4m	✓	1st	(D), (R)		✓
Grey stinkwood	*Jacksonia furcellata*		Oct - Dec or Jan - Mar	Yellow - orange	0.4-6m		1st	(D), (R)		
Stinkwood	*Jacksonia sternbergiana*	Kabbur	Jan - Dec	Yellow - orange	1.5-5m		1st	(D), (R)		
Coral vine	*Kennedia coccinea*	Waalin	Aug - Nov	Orange - pink / red - pink - purple		✓	Infill	(D)		
Spearwood/ Yellow kunzea/ Native tea	*Kunzea glabrescens*	Kitja boorn/ Poorndil Condi/ Pondil	Jul or Sep - Dec	Yellow / white - cream	0.4-4m		1st	(R)		✓

Common name	Scientific name	Noongar name	Flowering time	Flower colour	Height	Landscaping Qualities	Planting stage	Planting zones	Fauna information	Whadjuk uses
Tangling melaleuca	*Melaleuca cardiophylla*		Aug - Dec or Jan	White - cream	0.2-4m	✓	1st	(D)		✓
Chenille honeymyrtle	*Melaleuca huegelii*		Sep - Dec or Jan	White/ pink/ pink - purple	0.5-5m	✓	1st	(D)		✓
Grey honeymyrtle	*Melaleuca incana*		May - Nov	White - cream - yellow	0.4-5m		1st	(D), (R)		✓
Mohan	*Melaleuca viminea*		Jul - Nov	White - cream	0.6-5m	✓	1st	(D), (R)		✓
Blueberry tree/ Southern boobialla	*Myoporum insulare*	Boobialla	Jul - Dec or Jan - Feb		0.25-5m		1st	(D)		✓
Basket bush	*Spyridium globulosum*		Jun - Nov	White	0.3-5m		1st	(D)		
	Taxandria linearifolia		Mar - May or Sep - Dec	White	up-5m		1st	(D), (R)		
Cockies tongue	*Templetonia retusa*	Yackal Djarr/ Injid	Apr - Nov	White - yellow / red	0.3-4m		1st	(D)		✓
Swishbush	*Viminaria juncea*	Koweda	Oct - Dec or Jan	Yellow	1-4m		1st	(D), (R)		


Shrubs
1-3m

Common name	Scientific name	Noongar name	Flowering time	Flower colour	Height	Landscaping qualities	Planting stage	Planting zones	Fauna information	Whadjuk uses
Winged wattle	*Acacia alata*		Apr - Dec	White - cream/ yellow/ pink	0.3-2.1m	✓	1st	(D), (R)		✓
Rigid wattle	*Acacia cochlearis*	Galyang	Jul - Oct	Yellow	0.3-3m		1st	(D)		✓
	Acacia dentifera		Aug - Nov	Yellow	0.6-3m		1st	(D)		
Dune moses	*Acacia lasiocarpa*	Panjang	May - Oct	Yellow	0.15-2.5m		1st	(D), (R)		
Prickly moses	*Acacia pulchella*	Mindaleny	May - Dec	Yellow	0.3-3m		1st	(R)		
Narrow winged wattle	*Acacia stenoptera*		Mar - Dec	Yellow - cream	0.2-1.5m		1st	(D)		
Basket flower	*Adenanthos obovatus*		May - Dec	Red - orange	0.3-2m		1st	(D), (R)		
Dwarf sheoak	*Allocasuarina humilis*		May - Nov	Red / brown - orange	0.2-2m	✓	1st	(D)		
Common astartea	*Astartea scoparia*			White	up-1.8m		1st	(D)		
Prickly dryandra	*Banksia armata*		Jun - Oct	Cream - yellow	0.2-1.5m		1st	(D)		✓
Honeypot dryandra	*Banksia nivea*	Bulgalla	Apr or Jul - Nov	Red - brown / cream - yellow - orange - pink	0.15-1.5m	✓	1st	(D)		✓
Elegant beaufortia	*Beaufortia elegans*		Aug - Dec or Jan - Feb	Red / purple / pink / white	0.3-2m	✓	1st	(D), (R)		
Purple beaufortia	*Beaufortia purpurea*		Oct - Dec or Jan - Feb	Red - purple	0.3-1.5m	✓	Infill	(D)		

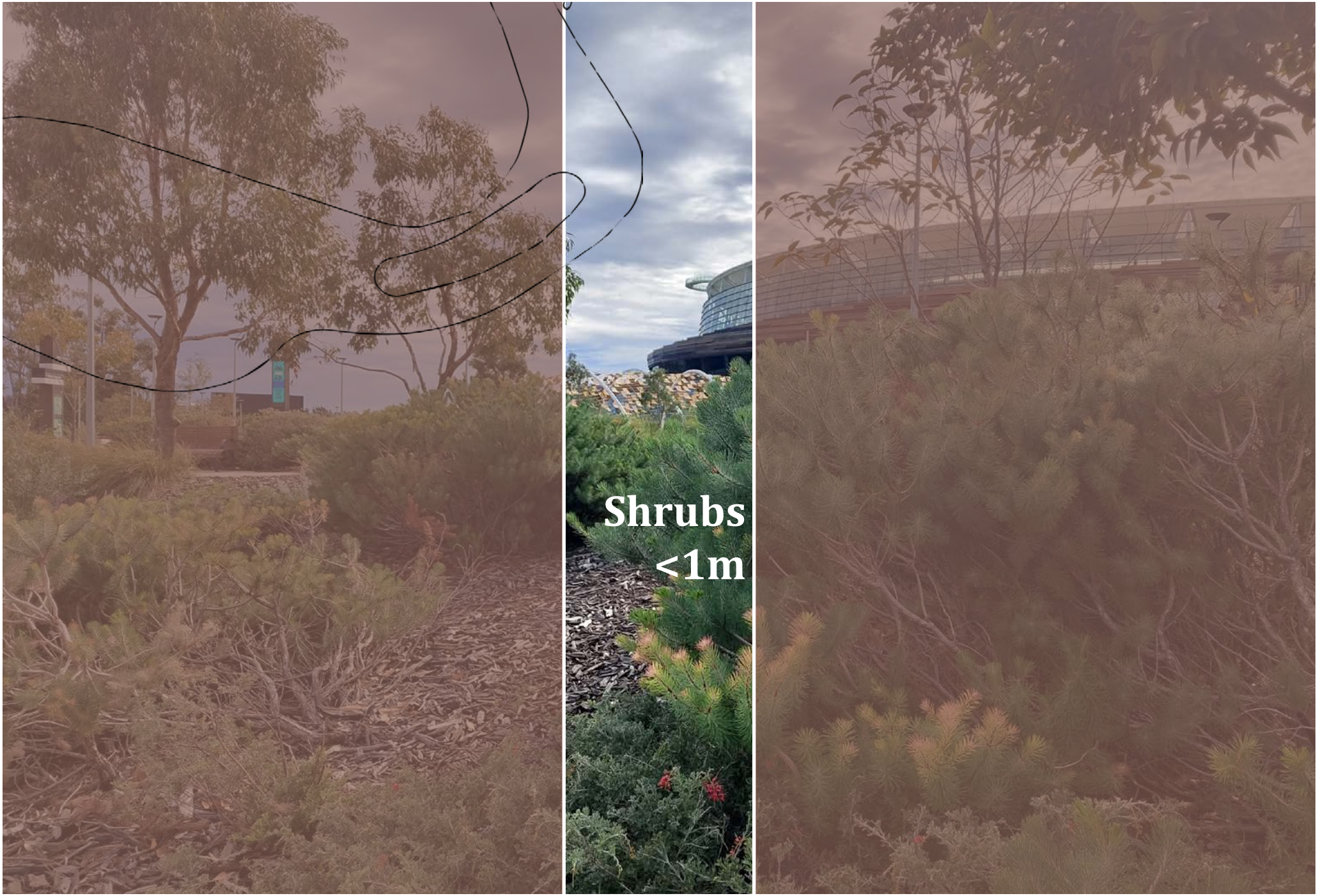
Common name	Scientific name	Noongar name	Flowering time	Flower colour	Height	Landscaping qualities	Planting stage	Planting zones	Fauna information	Whadjuk uses
	Billardiera variifolia		Oct - Dec or Jan - May	Yellow - cream - blue - purple	up - 2.5m		Infill	(D)		
Aniseed boronia	*Boronia crenulata*	Komorup	May - Dec or Jan - Feb	Red - pruple - pink	0.25-1.2m	✓	Infill	(D), (R), (I)		
Hairy claw flower	*Calothamnus hirsutus*		Sep - Dec or Jan - Feb	Red	0.3-1.5m	✓	1st	(D)		
One-sided bottlebrush	*Calothamnus quadrifidus*	Kwowdjard/ Quietjat	Jun - Dec	Red / white - yellow	0.5-3m	✓	1st	(D), (R)		✓
Silky-leaved blood flower	*Calothamnus sanguineus*	Bin-dak/ Pin-dak	Mar - Nov	Red	0.2-2m		1st	(D)		✓
Pink summer calytrix	*Calytrix fraseri*		Nov - Dec or Jan - Aug	Yellow - pruple - pink / pink	0.2-2m		Infill	(D)		
Summer smokebush	*Conospermum crassinervium*	Booyer	Oct - Dec or Jan - Apr	White	0.6-1.5m		Infill	(D)		✓
Common smokebush	*Conospermum stoechadis*		Jul - Dec	White	0.3-2m		1st	(D)		
Lemon-scented darwinia	*Darwinia citriodora*		May - Dec	Red / green - yellow	0.2-3m		Infill	(D)		✓
Marno	*Daviesia divaricata*	Marno	Jun - Nov	Yellow/ brown/ orange/ red/ pruple	0.3-3m		1st	(D)		
Southern diplolaena	*Diplolaena dampieri*		Jul - Nov	Red - orange	0.5-2m		1st	(D)		
	Diplopeltis huegelii		Apr - Dec	White - pruple - pink	0.1-1.5m		Infill	(D)		
Orange-flowered erermaea	*Eremaea pauciflora*		Jul - Dec	Yellow / orange	up - 2m		1st	(D), (R)		

Common name	Scientific name	Noongar name	Flowering time	Flower colour	Height	Landscaping qualities	Planting stage	Planting zones	Fauna information	Whadjuk uses
Purple-flowered eremaea	*Eremaea purpurea*		Oct - Dec or Jan - Feb	Pruple - pink / white	0.4-2m		1st	(D)		
Tar bush	*Eremophila glabra*	Berrung	Mar - Dec	Yellow - orange - green - red - brown	0.1-3m		1st	(D)		✓
	Gompholobium confertum		Aug - Dec or Jan - Mar	Blue - pruple	0.15-1.2m		1st	(D)		
Green Carpet	*Grevillea crithmifolia*	Berrung	Jun or Aug - Nov	White - pink / white	0.3-2m		1st	(D)		✓
Obtuse leaved grevillea	*Grevillea obtusifolia*		Apr or Aug - Nov	Red - pink / red	0.2-2m		1st	(D), (R)		
Seaspray	*Grevillea preissii*		Jun - Sep	Red	0.15-1.7m		1st	(D)		✓
Spider net grevillea	*Grevillea thelemanniana*		May - Nov	Red - pink	0.3-1.5m		1st	(D)		
	Guichenotia ledifolia		Jul - Oct	Blue - pruple - pink	0.4-2m		1st	(D)		
Horned leaf hakea	*Hakea ceratophylla*		Sep - Dec	Brown - red	0.3-2m		1st	(D)		✓
Honey bush	*Hakea lissocarpha*	Djanda	May - Sep	White - cream / yellow / pink	0.4-3m		1st	(D)		✓
Harsh hakea	*Hakea prostrata*	Berrung/ Pulgur/ Doolgur/ J	Jul - Oct	White - cream	1-3m		1st	(D)		✓
Candle hakea	*Hakea ruscifolia*		Dec or Jan - Apr or Jun	White	0.5-3m		1st	(D)		✓
Two-leaf hakea	*Hakea trifurcata*	Dulgar/ Tulga	Apr - Oct	White / cream - pink	1.5-3m	✓	1st	(D)		✓

Common name	Scientific name	Noongar name	Flowering time	Flower colour	Height	Landscaping qualities	Planting stage	Planting zones	Fauna information	Whadjuk uses
Cutleaf hibbertia	*Hibbertia cuneiformis*		Jan - Mar or Jun - Nov	Yellow	0.5-3m		1st	(D), (R)		
Orange stars	*Hibbertia stellaris*		Aug - Dec	Yellow - orange / orange / yellow	0.15-1.5m		Infill	(R)		
Devil's pins	*Hovea pungens*	Pooyinak	May - Nov	Blue - pruple	0.2-1.8m		Infill	(D)		
White myrtle	*Hypocalymma angustifolium*	Koodgeed/ Kudjidi	Jun - Oct	White - cream	up - 1.5m	✓	1st	(D), (R)		✓
Swan River Myrtle	*Hypocalymma robustum*		Jun - Nov	Pink - red/ pink	0.4-1.5m		1st	(D)		
	Kunzea recurva	Kitja boorn/ Poorndil Condi	Aug - Dec	Pink / red - pruple	0.3-2m		1st	(D)		✓
Many-flowered honeysuckle	*Lambertia multiflora*	Moncart/ Paarluc	Jun - Dec	Yellow / orange - red	0.5-2.5m		1st	(D)		✓
	Leptospermum spinescens		Sep - Dec	White - cream	0.3-1.5m		1st	(D)		
Zamia	*Macrozamia riedlei*	Djiridji/ Biana/ Quinnin/ Jeeriji			0.5-3m		1st	(D)		✓
Robin redbreast bush	*Melaleuca lateritia*		Sep - Dec or Jan - Apr	Orange - red	up-2.5m		1st	(D), (R)		✓
Coast honey-myrtle	*Melaleuca systena*		Feb - Mar or Aug - Dec	Yellow - cream	0.25-3m		1st	(D)		✓
	Melaleuca thymoides		Sep - Dec or Jan	Yellow - cream	0.2-2m		1st	(D)		✓
Slender myoporum	*Myoporum caprarioides*		Feb or Apr or Jun or Aug - Dec	White / white - blue - pink	0.3-3m		1st	(D), (R)		

Common name	Scientific name	Noongar name	Flowering time	Flower colour	Height	Landscaping qualities	Planting stage	Planting zones	Fauna information	Whadjuk uses
Coastal daisybush	*Olearia axillaris*	Kwiyoowal	Jan - Jul or Nov - Dec	White - cream - yellow	0.2-3m		1st	(D)		✓
Rough daisybush/ Bristly daisybush	*Olearia rudis*		Jul - Nov	Blue - pruple / blue - yellow	0.25-1.3m		1st	(D)		
Swamp tea tree	*Pericalymma ellipticum*		Oct - Dec or Jan	White - pink	up-3m		1st	(D), (R)		
Snottygobble	*Persoonia saccata*	Kadgeegurr/ Bgowdik/ Cadg	Jul - Dec or Jan	Yellow - green/ yellow	0.2-1.5m		Infill	(D)		✓
	Petrophile macrostachya		Jul - Nov	Yellow - cream	0.3-1.2m		Infill	(D)		
	Petrophile serruriae		Jul - Dec	Yellow / cream / pink	0.2-1.5m		Infill	(D)		
Pepper and salt	*Philotheca spicata*		Jun - Nov	White / purple - blue - pink	0.2-1.2m		Infill	(D)		
False boronia	*Phyllanthus calycinus*		Jun - Dec or Jan	White - cream / pink	0.2-1.2m		1st	(D)		
Coast banjine	*Pimelea ferruginea*		Aug - Dec or Jan - Feb	Pink	0.3-1.5m		1st	(D)		
	Platytheca galioides		Jul - Nov	White / purple - blue - pink	0.2-1.5m		Infill	(D), (R)		
	Regelia ciliata		Jan - Dec	Purple - pink	0.3-3m		1st	(D)		
	Regelia inops		Jan or Mar or Jun or Oct - Dec		0.75-2.5m		1st	(D)		
Berry saltbush/ Sea berry saltbush	*Rhagodia baccata*		Feb or Apr - May or Oct - Dec	Green / yellow - cream	0.3-2m		1st	(D)		✓

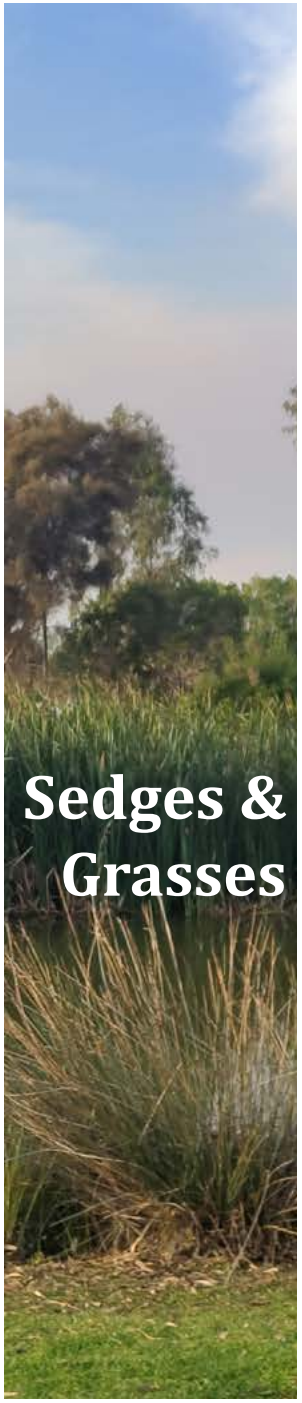
Common name	Scientific name	Noongar name	Flowering time	Flower colour	Height	Landscaping qualities	Planting stage	Planting zones	Fauna information	Whadjuk uses
Thick-leaved fan-flower	*Scaevola crassifolia*		Jul - Decemner or Jan - Feb		0.1-1.5m		1st	(D)		
Shining fanflower	*Scaevola nitida*		Aug - Dec	Purple - blue	0.3-3m		1st	(D)		
Spiked scholtzia	*Scholtzia involucrata*		Jan - May or Aug - Sep or Nov - Dec	White - pink	0.2-1.5m		1st	(D)		
Blueboy	*Stirlingia latifolia*		Aug - Oct	Yellow/yellow-brown/red-brown	0.2-1.5m		1st	(D)		
	Trymalium ledifolium		Jun - Nov	White - cream	0.3-2.5m		1st	(D)		
	Verticordia acerosa		Aug - Nov	Yellow / orange - red - brown	0.2-1.7m		1st	(D)		
Compacted featherflower	*Verticordia densiflora*		Sep - Dec or Jan - Feb	White - purple - pink / cream	0.25-2m		1st	(D)		
Drummond's featherflower	*Verticordia drummondii*		Dec or Jan - Apr	Purple - pink	0.3-1.5m		1st	(D)		
Morrison featherflower	*Verticordia nitens*	Kotyeningara	Oct - Dec or Jan - Feb	Orange - yellow	0.5-2m		1st	(D)		✓
Plumed featherflower	*Verticordia plumosa*		Jul - Dec or Jan - Feb	White - red - blue - pink	0.2-1.5m		1st	(D)		
Native rosemary	*Westringia dampieri*		Jun - Dec or Jan	White	0.1-2.5m		1st	(D)		✓


Shrubs
<1m

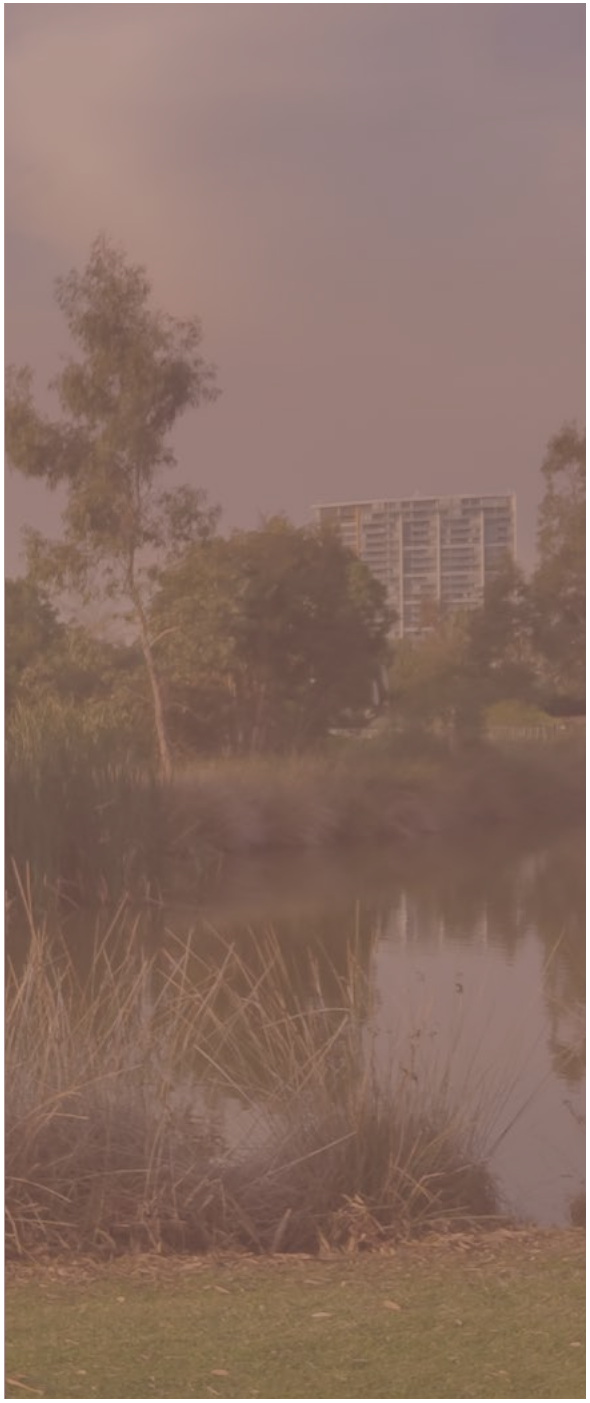
Common name	Scientific name	Noongar name	Flowering time	Flower colour	Height	Landscaping qualities	Planting stage	Planting zones	Fauna information	Whadjuk uses
	Acacia huegelii		Oct - Dec or Jan - Feb	White - cream	0.2-1m		1st	(D)		
Grass wattle	*Acacia willdenowiana*		May - Oct	White - cream/ yellow	0.3-1m		Infill	(D)		
	Andersonia involucrata		Sep - Dec	White - pink	0.1-0.5m		Infill	(D), (R)		
	Andersonia lehmanniana		May - Sep	White - cream - pink - blue - purple	0.15-0.6m		Infill	(D)		
Camphor myrtle	*Babingtonia camphorosmae*				up - 0.7m		Infill	(D)		
	Banksia blechnifolia		Apr - Jul - Nov	Red - brown / cream - yellow - orange - pink	up - 0.7m	✓	Infill	(D)		✓
Couch honeypot	*Banksia dallanneyi*	Pudjarn/ Bulgalla/ Yonga Kwan	May - Oct	Yellow - cream - brown - pink - green	up-0.3m		1st	(D)		✓
Common brown pea	*Bossiaea eriocarpa*		Jul - Nov	Red / brown - yellow	0.2-1m		Infill	(D)		
Summer starflower	*Calytrix flavescens*		Jan - Dec	Yellow	0.3-0.8m		Infill	(D)		
Plume smokebush	*Conospermum incurvum*		Jul - Nov	White	0.4-1m		1st	(D)		
Waxy cryptandra	*Cryptandra arbutiflora*		May - Nov	Red / pink / white	0.05-1m		Infill	(D)		
Terete-leaved dampiera	*Dampiera teres*		Aug - Nov	Blue / pruple	0.15-0.6m		Infill	(D)		
	Daviesia triflora		May - Sep	Yellow - orange / red - black	0.25-0.6m		Infill	(D)		

Common name	Scientific name	Noongar name	Flowering time	Flower colour	Height	Landscaping qualities	Planting stage	Planting zones	Fauna information	Whadjuk uses
Seaheath	*Frankenia pauciflora*		Jun - Dec or Jan - Feb	White / pink	0.08-0.5m		1st	(D)		
Bacon and eggs	*Gastrolobium capitatum*		Jun - Sep	Yellow - orange	up - 1m		1st	(D)		
	Gompholobium aristatum		Jul - Dec	Yellow	0.1-0.8m		1st	(D)		
Hairy yellow pea	*Gompholobium tomentosum*		Jul - Dec or Jan	Yellow	0.15-1m		1st	(D)		
Snakebush	*Hemiandra pungens*		Jan - Dec	Blue - pruple / white / pink	0.05-1m		1st	(D)		
Stalked guinea flower	*Hibbertia racemosa*		Jul - Dec	Yellow	0.1-0.75m		Infill	(D)		
Common hovea	*Hovea trisperma*	Buyenak	May - Nov	Blue - pruple	0.1-0.7m		Infill	(D)		
Granny bonnets	*Isotropis cuneifolia*		Jul - Nov	Orange - red/ yellow	0.05-0.3m		Infill	(D)		
Waldjumi	*Jacksonia sericea*	Waldjum	Dec or Jan - Feb	Orange - red	up-0.6m		1st	(D)		
Lance-leaved cassia	*Labichea punctata*		Jul - Oct	Yellow	0.15-1m		1st	(D)		
Free-flowering leschenaultia	*Leschenaultia floribunda*		Aug - Dec	White - blue	0.15-1m		1st	(D)		
Cushion bush	*Leucophyta brownii*		Dec or Jan - Feb	Yellow	up - 1m		1st	(D)		
	Macarthuria australis		May - Feb	White/white-cream	0.15-0.75m		1st	(D)		

Common name	Scientific name	Noongar name	Flowering time	Flower colour	Height	Landscaping qualities	Planting stage	Planting zones	Fauna information	Whadjuk uses
	Melaleuca seriata		Aug - Dec	Pink - red - pruple	0.25-1m		1st	(D)		✓
	Melaleuca trichophylla		Aug - Dec	Purple / pink	0.15-1m		1st	(D)		✓
Dog weed	*Opercularia vaginata*		Jul - Dec	Green/green-yellow	0.04-0.45m		1st	(D)		
Pixie mops	*Petrophile linearis*		Aug - Dec	White / pink	0.2-1m		Infill	(D)		
Rose banjine	*Pimelea rosea*		Jul - Dec	Pink / purple - red	0.3-1m		Infill	(D)		
Yellow banjine	*Pimelea sulphurea*		Jul - Nov	Yellow	0.15-0.7m		Infill	(D)		
Coast bonefruit	*Threlkeldia diffusa*		Oct - Nov	Green	0.1-0.4m		1st	(D)		



Sedges & Grasses



Common name	Scientific name	Noongar name	Flowering time	Flower colour	Height	Landscaping qualities	Planting stage	Planting zones	Fauna information	Whadjuk uses
Bare twigrush	*Baumea juncea*		Oct - Dec or Jan - Mar	Brown	up - 1.2m		Dynamic	(R)		
Twig rush	*Baumea rubiginosa*		Aug - Dec or Jan - Mar	Brown	up - 4m		Dynamic	(R)		
Tall sedge	*Carex appressa*		Sep - Oct	Brown	up - 2m		Dynamic	(R)		
	Carex tereticaulis		Sep - Oct	Brown	0.7m			(D)		
Spiny flat-sedge	*Cyperus gymnocaulos*		Jul - Dec or Jan or Mar	Brown	up - 1m		1st	(R)		
Knotted club rush/ Knobby club rush	*Ficinia nodosa*	Yangjet	Oct - Dec or Jan	Brown/cream	up - 1m		Dynamic	(R), (I)		✓
Sea rush	*Juncus kraussii*		Oct - Dec or Jan	Brown/red	up - 1.2m		Dynamic	(R), (I)		
Pale rush	*Juncus pallidus*	Tangil	Oct - Dec	Green	up - 2m		Dynamic	(R)		✓
Finger rush	*Juncus subsecundus*		Oct - Dec or Jan		up - 1m		Dynamic	(D), (R)		
Coast sword-sedge	*Lepidosperma gladiatum*	Kerbein	Nov - Dec or Jan - May	Brown	up - 1.5m		1st	(D), (R)		✓
Pithy sword sedge	*Lepidosperma longitudinale*		May - Jun or Aug - Oct	Brown	0.5-2m		Dynamic	(D), (R), (I)		
	Lepidosperma squamatum		Mar - Nov	Brown	up - 1m		Infill	(D), (R)		
Hairy spinifex	*Spinifex hirsutus*		Oct - Dec or Jan	Green-white	up - 0.9m		Dynamic	(D)		
Beach spinifex	*Spinifex longifolius*		Apr - Dec or Jan	Green/brown	up - 2m		Dynamic	(D)		
Lake club-rush	*Schoenoplectus tabernaemontani*	Waargyl Ngarnak			1-3m		Dynamic	(D), (R)		✓
Marine couch	*Sporobolus virginicus*		Jan - Dec	Green-purple	0.1-0.5m		Dynamic	(D), (R), (I)		


Herbs
Groundcover

Common name	Scientific name	Noongar name	Flowering time	Flower colour	Height	Landscaping qualities	Planting Stage	Planting zones	Fauna information	Whadjuk uses
Catspaw	*Anigozanthos humilis*	Kurulbrang	Jul - Oct	Yellow-orange-red	up - 1m		Infill	(D)		✓
Mangles kangaroo paw	*Anigozanthos manglesii*	Kurulgrang/ Nollamara/ Yonga Marra/ Knulbora	Aug - Nov	Green/red	up - 1.1m		1st	(D)		✓
Green kangaroo paw	*Anigozanthos viridis*	Koroylbardany/ Kroylbardang	Aug - Oct	Green-yellow/ green	up - 0.85m		1st	(D)		✓
Feather speargrass	*Austrostipa elegantissima*		Aug - Dec or Jan	Other	up - 3m		1st	(D)		
Speargrass	*Austrostipa flavescens*		Sep - Oct	Green-yellow	up - 1.2m		1st	(D)		
Bearded speargrass	*Austrostipa semibarbata*		Aug - Nov	Green-purple	up - 1.1m		1st	(D)		
Elegant pronays	*Billardiera fraseri*		Dec or Jan - Feb	Purple/pink			Infill	(D)		
Australian bluebell	*Billardiera heterophylla*	Gumug/Kuruba/Namman	Dec or Jan - Feb	Blue/white/pink			Infill	(D)		✓
Swan River daisy	*Brachyscome iberidifolia*		Jul - Nov	White-blue-purple	up - 0.45m		1st	(D), (R)		
Milkmaids	*Burchardia congesta*	Kara			up - 0.8m		Infill	(D)		✓
Coastal pigface	*Carpobrotus virescens*	Bain	Jun - Dec or Jan	Purple-pink/white	up - 0.3m		1st	(D)		✓
Centella	*Centella asiatica*		Aug - Apr	Pink/purple	0.05 - 0.4m		Dynamic	(D), (R)		
Blue squill/ Blue stars	*Chamaescilla corymbosa*		Jul - Dec	Blue	up - 0.2m		Infill	(D)		✓
Small-leaved clematis/ Old man's beard/ Slender Clematis/ Traveller's joy	*Clematis linearifolia*	Taaruk	Jul - Oct	White-cream			Infill	(D)		✓
Common clematis	*Clematis pubescens*		May - Nov	White-cream	up - 5m		Infill	(D), (R)		
Prickly conostylis	*Conostylis aculeata*		Aug - Nov	Yellow	up - 0.6m		1st	(D), (R)		

Common name	Scientific name	Noongar name	Flowering time	Flower colour	Height	Landscaping qualities	Planting Stage	Planting zones	Fauna information	Whadjuk uses
Grey cottonhead	*Conostylis candicans*		Jul - Nov	Yellow	up - 0.4m		1st	(D)		
	Conostylis juncea		Jul - Sep	Yellow/green-yellow	0.1-0.4m		1st	(D)		
Bristly cottonhead	*Conostylis setigera*		Aug - Nov	Yellow/red	up - 0.3m		Infill	(D)		
Common dampiera	*Dampiera linearis*		Jul - Dec	Blue	up - 0.6m		1st	(D)		
Prickly bitter-pea	*Daviesia decurrens*		Jun - Sep	Orange/ red	up - 1m		1st	(D), (R)		
	Desmocladus flexuosus		Jul - Oct		up - 1.5		1st	(D)		
Blueberry lily/ Spreading flax-lily/ Black-anther flax-lily	*Dianella revoluta*	Mangard/ Mangarel	Aug - Dec or Jan or Apr	Blue-purple-violet	up - 1.5m		1st	(D)		✓
Purple lily	*Dichopogon capillipes*	Adjiko	Sep - Dec or Jan or Mar		up - 1.5m		Dynamic	(D)		✓
Nodding chocolate lily	*Dichopogon preissii*		Aug - Oct	Purple-pink	up - 0.5m		Dynamic	(D)		✓
Ruby saltbush	*Enchylaena tomentosa*						1st	(D), (R)		✓
Fuschia grevillea	*Grevillea bipinnatifida*		May - Dec or Jan or Mar	Orange - red	up - 1m		1st	(D)		
Mardja	*Haemodorum paniculatum*	Mardja/ Madja	Oct - Dec	Green & brown & yellow	up - 1.8m		Infill	(D)		✓
Bohn	*Haemodorum spicatum*	Mardja/ Boon/ Bhon/ Matje/ Bohrn/ Djanbar/ Koolung/ Quirting	Oct - Dec or Jan	Black/brown-black/yellow-brown	up - 2m		Infill	(D)		✓
Native wisteria	*Hardenbergia comptoniana*		Jul - Oct	Blue-purple/white	Climber		1st	(D)		
Scarlet runner; running postman	*Kennedia prostrata*	Wollung/ Pulbarn/ Kuralo/ Wollong	Apr - Nov	Red			1st	(D)		✓
Angled lobelia	*Lobelia anceps*		Sep - Dec or Jan - May	Blue/blue-purple/white	up - 1.2m		1st	(D), (R)		

Common name	Scientific name	Noongar name	Flowering time	Flower colour	Height	Landscaping qualities	Planting Stage	Planting zones	Fauna information	Whadjuk uses
Slender lobelia	*Lobelia tenuior*		Oct - Dec or Jan	Grey/white	up - 0.5m		Infill	(D)		
Foxtail mulga grass	*Neurachne alopecuroidea*		Jul - Nov	Green-other	up - 0.8m		1st	(D)		
Morning iris	*Orthrosanthus laxus*		Aug - Nov	Blue	up - 0.55m		Infill	(D)		
Purple flag	*Patersonia occidentalis*	Kom-ma	Aug - Dec or Jan	Purple	up - 1.5 m		1st	(D)		
Yellow flags	*Patersonia umbrosa*		Aug - Dec	Blue-violet/yellow	up - 0.9m		Infill	(D)		
Creeping brookweed	*Samolus repens*		Jul - Dec or Jan	White/pink	up - 1m		Dynamic	(D), (R)		
Candle cranberry	*Styphelia discolor*		May-Oct	Purple-red/red-black	up - 0.3m		Infill	(D)		
Fringed lily	*Thysanotus manglesianus*	Adjiko/ Tunguri	Aug - Nov	Purple	up - 2m		Infill	(D)		✓
Many-flowered fringe lily	*Thysanotus multiflorus*		Aug - Dec or Jan	Purple	up - 0.8m		Infill	(D)		
Fringe lily	*Thysanotus thyrsoideus*	Adjiko	Sep - Nov	Purple	up - 0.35m		Infill	(D)		✓
Blue lace flower	*Trachymene coerulea*		Oct - Dec or Jan - Mar	Blue/white/purple	up - 2m		1st	(D)		

Samphires

Common name	Scientific name	Noongar name	Flowering time	Flower colour	Height	Landscaping qualities	Planting stage	Planting zones	Fauna information	Whadjuk uses
Thick-head glasswort	*Salicornia blackiana*				up - 0.8m		1st	(R), (I)		
Beaded glasswort	*Salicornia quinqueflora*	Milyu			up - 0.5m		1st	(R), (I)		✓
Seablite/ Austral seablite	*Suaeda australis*		Jan or Mar or Oct	Green	up - 0.9m		Dynamic	(R), (I)		✓
Shrubby samphire	*Tecticornia halocnemoides*		May - Aug		up - 0.5m		1st	(R), (I)		
Brown-head samphire	*Tecticornia indica*	Milyu			up - 0.5m		1st	(R), (I)		✓

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GOVERNMENT OF WESTERN AUSTRALIA

Department of **Biodiversity, Conservation and Attractions**

Perth Water *Buneenboro* Appendix B - Landscape Zones

April 2024

Figure 1 Landscaping zones

Zone classifications

Indicative landscaping intentions based on the site conditions, current and anticipated land uses are colour coded and described adjacent.

Landscape zonings

Zones are described below. Although landscape zoning delineations occur along straight lot boundaries, improved aesthetic and ecological function will be achieved with an integrated, overlapped approach.

Natural Interfacing

Explore oppportunities to create a high-quality environmental interface with vegetation, bioengineering and minimal hard infrastructure. See Appendix A - Plant Species list for plant species suitable in the riparian and intertidal zones.

Purple : native vegetation corridors

Revegetate with the aim of linking urban areas to the foreshore.

Yellow : public view corridors

Revegetate while maintaining public view corridors.

Green : Enhancement & protection

Opportunities to enhance and protect improve ecological function.

Cyan : Landscaping with constraints

Focus on supporting biodiversity connections, while providing amenity value through play and educational initiatives, and recognising constraints such as river and city views from public points.

Class	Zone	Description
	1. Riverside Drive & Langley Park	**Short Term** – Aim to improve linkages between the urban area, the foreshore and the estuary, while incorporating a diverse mix of low vegetation near identified public viewing corridors and providing opportunities for shade where appropriate; – Consider how landscaping can improve diversity while enhancing amenity value and integrating water sensitive urban design; – Species associated with the Vasse Complex are encouraged, however, species from within the Perth Water Buneenboro Plant Species List are acceptable. **Long Term** – Should Riverside Drive be relocated landward, the characterisation of this area shifts from revegetation with constraints to revegetation: a wide foreshore buffer should be created by planting species to improve ecological function and habitat value, and support bioengineering and other stabilisation activities.
	2. Point Fraser	– Revegetate using species to improve foreshore stability and ecological function. **Other considerations** – Any activities will need to factor in the aims of the Draft Riverfront Masterplan and allow for landscaping and foreshore treatments proposed/ implemented by the Causeway Pedestrian and Cyclist Bridge.

Class	Zone	Description
	3. Heirisson Island	– Promote as ecological and cultural sanctuary to enhance and buffer Threatened Ecological Communities (TEC) and support bioengineering to stabilise the foreshore. **Other considerations** – Any activities will need to factor in the aims of the Draft Riverfront Masterplan and allow for landscaping and foreshore treatments proposed/ implemented by the Causeway Pedestrian and Cyclist Bridge.
	4. Waterbank to Matagarup Bridge	– Improve ecological and aesthetic function of foreshore. Integrate full strata planting to promote biodiversity connection and increase amenity/shade. – Native vegetated corridors are to lead from urban areas into the foreshore and balance: a. plantings which promote structure, provide biodiversity connection and create shade; with b. plantings of lower vegetation between vegetated corridors to protect strategic views from the public realm. – Species are predominantly associated with the Vasse Complex, however, similar foreshore species from within the Perth Water Buneenboro Plant Species List are acceptable.
	5. Victoria Gardens	– Native vegetated corridors are to lead from urban areas into the foreshore. Focus on installing plantings which promote structure, support bioengineering, provide biodiversity connection and create shade. – Species associated with the Vasse Complex are encouraged, however, species from within the Perth Water Buneenboro Plant Species List are acceptable. **Other considerations** – The northern portion of this zone (adjacent to river entrance of Claisebrook Cove) is sometimes used to host events. – South of the project is approximately 150m of untreated foreshore. – These considerations should also include the high-density housing immediately adjacent, which may impose constraints on the size of trees.
	6. Mardalup Park	– Large extent of the shoreline has undergone erosion control works with a mix of hard structure and bioengineering. This obscures the complex determination. – Increase vegetation coverage and as exotic deciduous trees senesce, replace with native species. – Species are associated with the Vasse Complex are encouraged, however, species from within the Perth Water Buneenboro Plant Species List are acceptable.

Class	Zone	Description
	7. Optus Stadium Parklands	– Aim to create and strengthen biodiversity linkages, improve diversity and structure. Ensure foreshore species can withstand frequent inundation, supporting bioengineering and enhancing biodiversity. – Species associated with the Swan Complex are encouraged, however, species from within the Perth Water Buneenboro Plant Species List are acceptable.
	8. Burswood Park	– Revegetation is to support bioengineering and enhance biodiversity. – Species associated with the Bassendean Complex Central and South are encouraged, however, species from within the Perth Water Buneenboro Plant Species List are acceptable.
	9. Charles Paterson Vasse Sheoak and Flooded Gum Woodland	– Planting at this location is to support amenity and environmental values. A diverse mix of low vegetation near identified public viewing corridors is suitable, providing opportunities for shade where appropriate. – Species associated with the Vasse Complex are encouraged, however, species from within the Perth Water Buneenboro Plant Species List are acceptable. **Other considerations** – Portions of this zone are used for events (i.e., Telethon Cinemas). – A Riverpark Interpretation node will be developed in the southern portion of this site.
	10. McCallum Park	– Planting at this location is to support amenity and environmental values. A diverse mix of low vegetation near identified public viewing corridors is suitable, providing opportunities for shade where appropriate. – Species associated with the Vasse Complex are encouraged, however, species from within the Perth Water Buneenboro Plant Species List are acceptable. **Other considerations** – Any activities will need to factor in the aims of the Draft Riverfront Masterplan and allow for landscaping and foreshore treatments proposed/ implemented by the Causeway Pedestrian and Cyclist Bridge.
	11. Taylor Reserve	– Planting at this location is to support amenity and environmental values. A diverse mix of low vegetation near identified public viewing corridors is suitable, providing opportunities for shade where appropriate. – Species associated with the Vasse Complex are encouraged, however, species from within the Perth Water Buneenboro Plant Species List are acceptable. **Other considerations** – Portions of this zone are used for events

Class	Zone	Description
	12. Sir James Mitchell Park - East (Hurlingham Rd to Douglas St)	– Planting should be undertaken to enhance wetlands and support increased amenity and integrate with bioengineering and water sensitive stormwater and drainage systems. – Large opportunity to recreate the original fringing vegetation. Low shrublands or rushbeds could be used in the high use areas.
	13. Sir James Mitchell Park - Central (Douglas St to Alexandra St)	– Increase shade and vegetation diversity close to the foreshore. – Species associated with the Vasse and Karrakatta – Central and South complexes are encouraged, however, species from within the Perth Water Buneenboro Plant Species List are acceptable. – Potential to recreate rushbeds adjacent to the foreshore to recreate original feel of the area. – Large opportunity to recreate the original fringing vegetation. Low shrublands or rushbeds could be used in the high use areas.
	14. Sir James Mitchell Park - West (Alexandra St to Esplanade)	– Revegetation should be undertaken with a view to increase biodiversity and amenity while including provision of water sensitive stormwater and drainage systems. Planting should be aimed at conserving, enhancing and buffering Threatened Ecological Communities and providing a linkage towards the estuary. – Species associated with the Karrakatta – Central and South complexes are encouraged, however, species from within the Perth Water Buneenboro Plant Species List are acceptable.
	15. Mends St to Millers Pool	– Introduce planting beds using low vegetation – and strategically placed native tree planting to improve amenity and maintain views to river and city skyline. – Species associated with the Karrakatta – Central and South complexes are encouraged, however, species from within the Perth Water Buneenboro Plant Species List are acceptable.
	16. Millers Pool	– Revegetate using a mix of low vegetation near identified public viewing corridors and providing opportunities for shade where appropriate. – Species associated with the Vasse Complex are encouraged, however, species from within the Perth Water Buneenboro Plant Species List are acceptable.
	17. David Carr Memorial Park	– Planting should be undertaken to provide continuity with adjacent wetlands, support passive recreation, and integrate water sensitive stormwater and drainage systems.

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