



Department of Biodiversity,
Conservation and Attractions



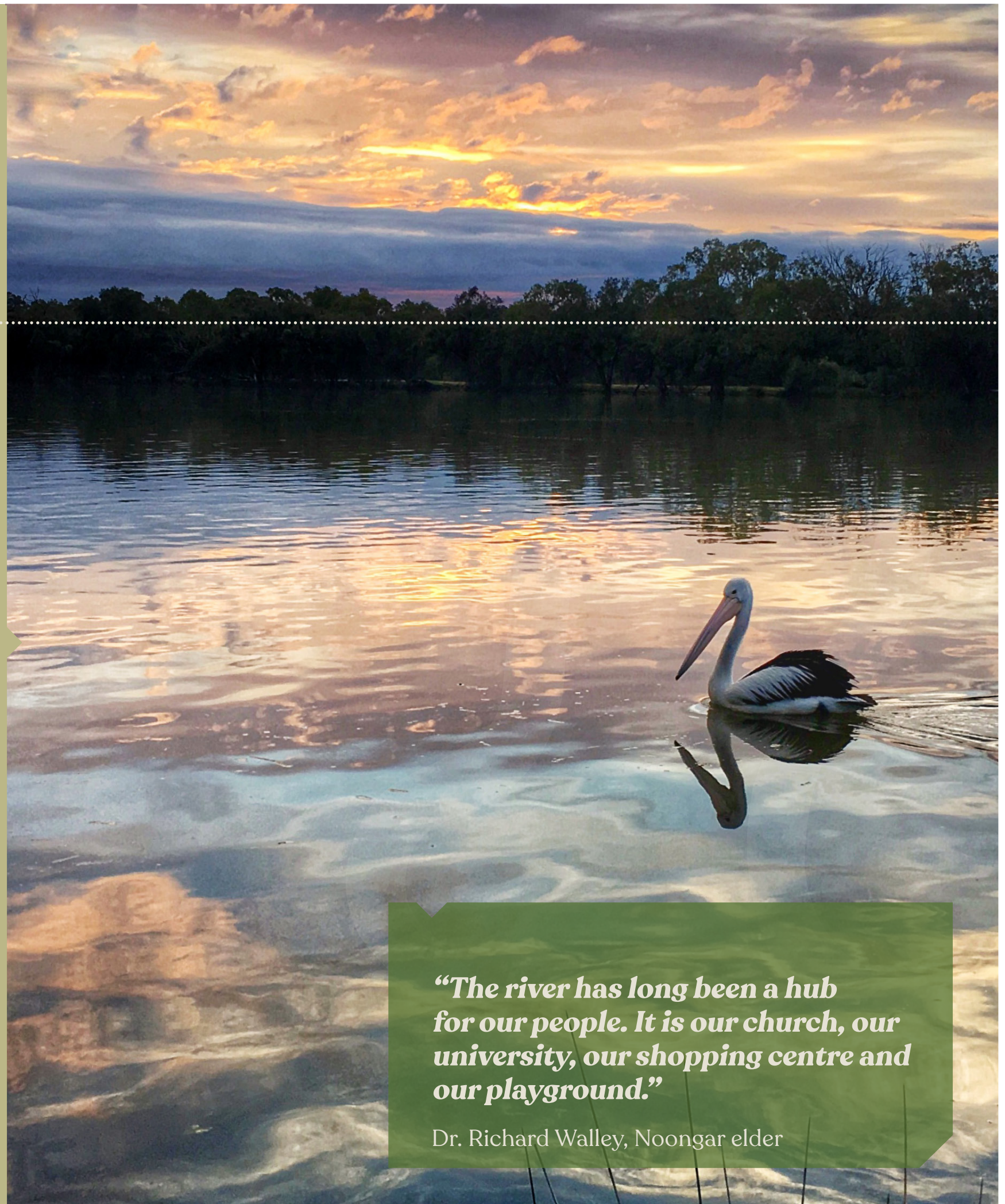
Perth Water *Buneenboro* Locality Plan

August 2021



Ngala kaaditj Whadjuk moort keyen
kaadak nidja boodja

We acknowledge the Whadjuk people
as the original owners of this land



Department of Biodiversity,
Conservation and Attractions



Department of Transport



Development WA

Tourism
WESTERN AUSTRALIA



City of Perth

City of
South Perth

TOWN OF
VICTORIA PARK

Front page image: Tom Proudfoot

***“The river has long been a hub
for our people. It is our church, our
university, our shopping centre and
our playground.”***

Dr. Richard Walley, Noongar elder

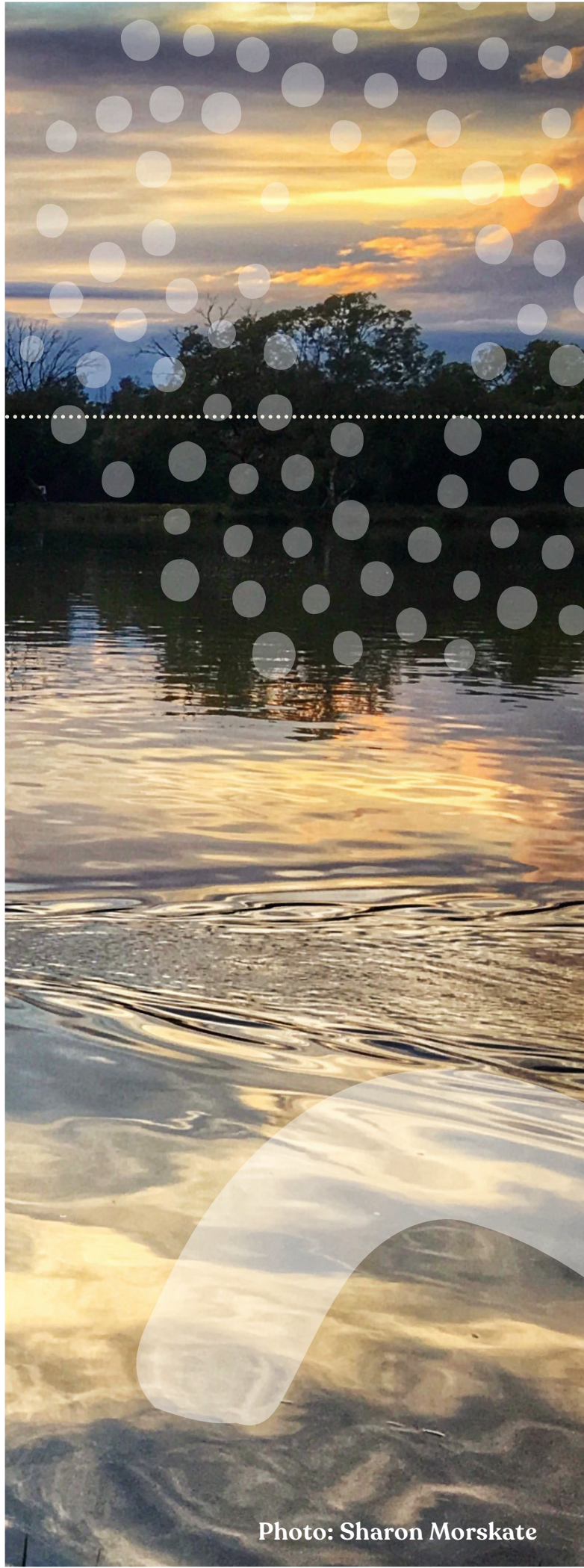


Photo: Sharon Morskate

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Introduction

The Perth Water *Buneenboro* Locality Plan (Locality Plan) is an initiative of the member organisations of the Perth Water Vision Group (PWVG) which comprises eight government agencies, each with an active role in the management of Perth Water *Buneenboro*. The member organisations of the PWVG are listed in Figure 1. The PWVG has been established to improve cross-agency collaboration and guide the Locality Plan's development and implementation.

The Locality Plan is supported by the Perth Water *Buneenboro* Action Plan (Action Plan), a rolling five year action plan which identifies a list of actions which member organisations of the PWVG aim to implement to achieve the vision and objectives of the Locality Plan. The Action Plan will be updated as new actions arise.

These documents have been prepared in support of 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.

The Locality Plan is adopted as policy under the *Swan and Canning Rivers Management Act 2006* and will be given due regard by the Department of Biodiversity, Conservation and Attractions (DBCA) and the Swan River Trust when determining applications and providing advice to other statutory decision makers.

The Action Plan, while not adopted as policy, will be updated on a regular basis and will inform the strategic planning and works programs of the member organisations of the PWVG.

Planning for a Water Sensitive Perth

Planning for Perth Water *Buneenboro* is being undertaken in line with the aspirations of the Vision and Transition Strategy for a Water Sensitive Greater Perth (2018). The

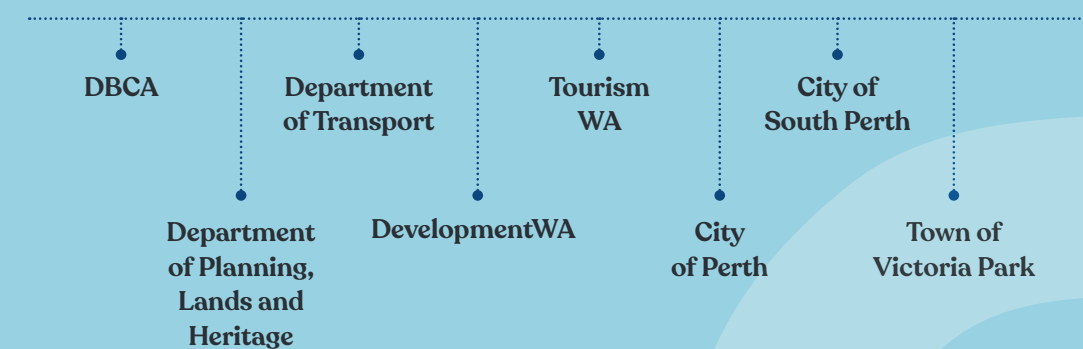


Figure 1 – Perth Water Vision Group
four themes of the Strategy are:

Theme 1: Fostering stewardship of the system

Theme 2: Protecting and enhancing the wellbeing of people and the environment

Theme 3: Integrating and engaging with the built and natural landscape

Theme 4: Sustaining the long-term use of Perth's resources

These themes and their supporting guiding principles underpin the Locality Plan.

Vision

Buneenboro, Perth Water, a place of ancient traditions, enduring connections and the foundation of Perth's identity.

Buneenboro is defined by a network of lively activity nodes, expansive green spaces and open water that is visually and physically accessible to all. A place where people can connect with nature in Western Australia's capital city.

Together we protect our boodjar, country, and draw on our moort and kaartdijin, people and knowledge, to strengthen Buneenboro's weirn, spirit, for years to come.



INTRODUCTION

Policy area

The Locality Plan applies to land contained within the area identified by Figure 2 and generally extends from the Narrows Bridge in the west to Windan Bridge in the east and includes the foreshore adjacent to the Swan River.



Context

Perth Water *Buneenboro* is our city's life force. Since ancient times it has been a source of food and water, a place of healing, ceremony and family time, and has been a vital connection between communities and settlements for commercial activity and exchange.

Part of the Swan Canning River system, it is an integral part of the local lifestyle; generations of Western Australians recount memories of boating, fishing, swimming and connecting with family and friends.


Perth Water *Buneenboro* is a diverse and interconnected living system. Situated between the Narrows Bridge in the west and Windan Bridge in the east, the area includes the adjacent foreshores of the City of Perth, City of South Perth and Town of Victoria Park.

As a backdrop to this unique natural setting, Perth Water *Buneenboro* sits at the epicentre of an energetic, growing city, which has transformed over the last century of economic, commercial and population growth.

As our capital city's 'front garden' this large open body of water is encircled by a ribbon of green, punctuated by established riverside destinations – Barrack Square and Barrack Street Jetty, Coode Street and Mends Street. New places including Elizabeth Quay, Perth Stadium and Matagarup Bridge, and Point Fraser, along with a series of emerging activity nodes will develop over time through public and private sector investment.

New 'on-water' activities and growing infrastructure demands from commercial and entertainment uses have brought new challenges in managing the balance between the river's unique environment and health, while also optimising the significant tourism, recreation and economic development potential.

The focus for this Locality Plan is to fine balance between rehabilitating, protecting and deepening the understanding of Perth Water *Buneenboro*'s natural environment, managing the impacts of a changing climate and providing opportunities for Perth to grow and evolve.



**“We learned to swim
in the river, we fished
and ate jilgies from
the river, we could
see the bottom of the
water it was so clear”**

Whadjuk elder Margaret Collard

Derbarl Yerrigan

The Noongar people are the traditional owners of south west Western Australia, with 14 language groups, each connected to different ecological areas. Whadjuk are the dialectical group for Perth, including Perth Water *Buneenboro*¹. The broader Swan and Canning rivers and their tributaries are of great and enduring importance to Noongar people.

Derbarl Yerrigan, Derbarl meaning estuary, fresh or brackish water² and Yerrigan meaning upper³, was created by the dreamtime spirit rainbow serpent – the Wagyl – who emerged at Mt Eliza and created the river on its way to the ocean⁴. Connected together, the Wagyl’s trails form the shape of Whadjuk Boodjar – Whadjuk Country – and is today looked after by powerful spirit beings.

This enduring story of creation forms a deep spiritual bond between the Whadjuk-Noongar people and their river, which has for more than 50,000 years been a place of unity and bringing people together, for food, family, healing and special ceremonies – births, weddings, funerals and other sacred rituals.

It is understood that the Whadjuk people who lived close to the river were of four main groups led by elders who were both respected and feared by European settlers. The Mooro were led by Yellagonga, the Beeliar led by Midgegooro and Yagan, the Beeloo by Munday and to the north-east, the Wurerup led by Weeip. The rivers created natural boundaries of these groups but they were not part of the land estate and instead ‘owned’ by the Wagyl.

Noongar see Derbarl Yerrigan as an interconnected landscape and unifier of life. It has no beginning or end and is a life source that brings together people and animals, paths, trails, water and sky.

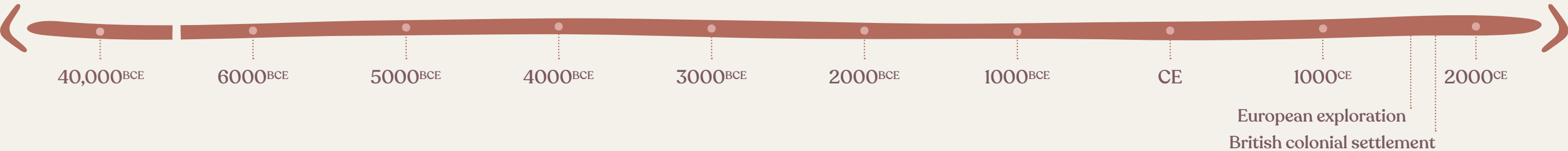
Buneenboro has always been a hive of activity, bringing people together as a place for commerce and trading goods – ochre, arms and particularly food – and for water supplies, to camp and care for each other. The spiritual connection – weirn – is most important and sacred.

This continues today as a point of contact for the entire Noongar community for congregation, learning, celebration and as a place to recognise the past, enjoy the present and look to the future.

The future is one of looking after each other and working together in custodianship of *Buneenboro*, sharing deep knowledge, history and connections in Derbarl Yerrigan’s modern-day management.

1. www.noongarculture.org.au/whadjuk
2. <https://archive.org/details/diaryoftenyearse00mooriala/page/18>
3. <https://archive.org/details/diaryoftenyearse00mooriala/page/82>
4. Hughes-Hallet, D., (2010) Indigenous history of the Swan and Canning rivers, Western Australia

WHADJUK-NOONGAR BOODJAR



CONTEXT

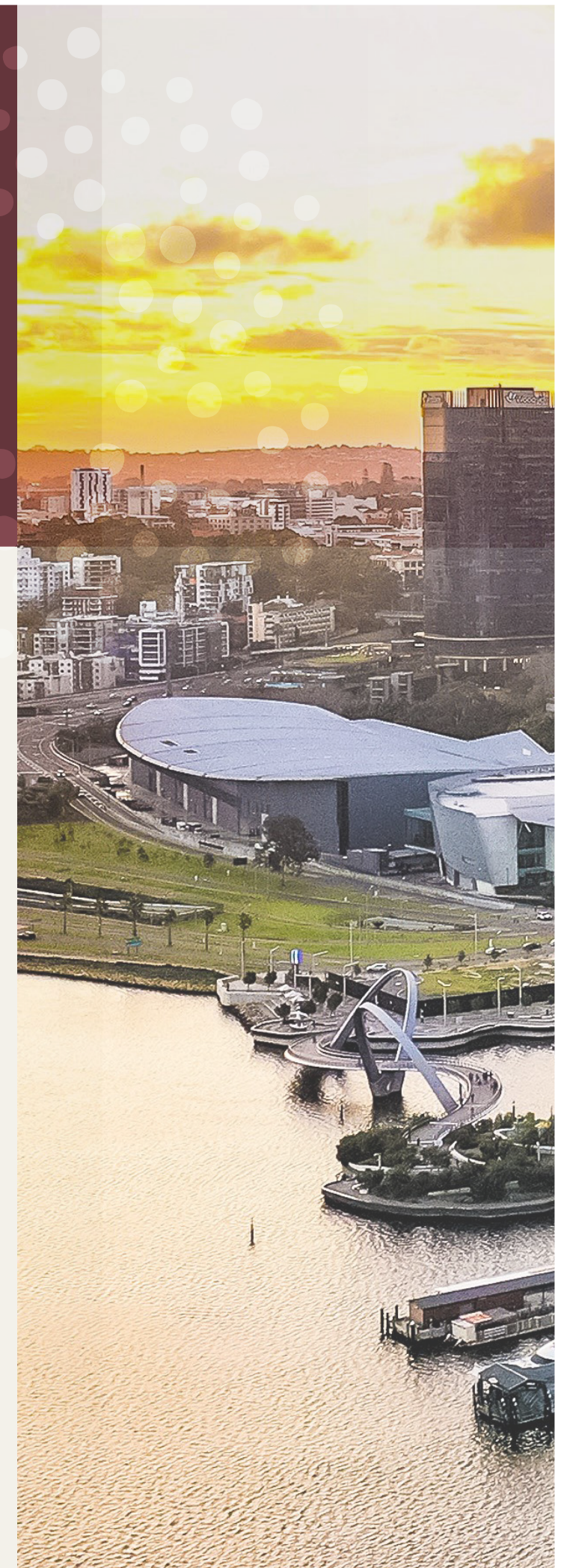
Capital city

From European settlement in 1829, Perth Water *Buneenboro* became the focal point for the city's development and a place of significant events in the capital's evolution.

Perth's base camp was established on the Swan River's northern banks, chosen for its proximity to water, river transport and views of Mount Eliza and the Darling Scarp – view lines that are still highly valued.

Today, Perth Water *Buneenboro* frames and unifies the capital city, creating a memorable and iconic setting with its growing urban skyline. The Locality Plan aims to develop and maintain strong physical, cultural and social connections between Perth Water *Buneenboro* and the CBD and create provisions for future uses that are commensurate with the role and function of a capital city. These include defining the framework for activity nodes and supporting uses both on and off water.

The Locality Plan seeks to enhance the core cultural recreational and environmental values of Perth Water *Buneenboro* while also enabling environmentally sensitive and responsible growth and diversification of different uses.





Engagement summary

Perth Water *Buneenboro* is our city's life force. Since ancient times it has been a source of food and water, a place of healing, ceremony and family time, and has been a vital connection between communities and settlements for commercial activity and exchange.





The Locality Plan’s vision, objectives and other policy provisions align with the outcomes of an extensive stakeholder and community engagement program, implemented from April 2018 to October 2019. The program was designed to gain a deeper understanding of the primary values, issues and opinions of those who use, manage, visit, do business in or live close to Perth Water *Buneenboro*. Supported by an integrated communications campaign designed to drive awareness and participation, the engagement program targeted four primary stakeholder groups comprising key government stakeholders, Whadjuk-Noongar community, general community and local area stakeholder and interest groups.

The findings from stakeholder consultation are summarised in the following table.

Key themes	Key findings (from stakeholder engagement)
Celebrating culture and community	<ul style="list-style-type: none">Respecting and celebrating Whadjuk-Noongar spirituality and connection should be a foundation principle – opportunities for improved catchment management, education, tourism and Aboriginal employment are significant.Unique WA tourism experiences should be promoted (e.g. Whadjuk-Noongar culture, eco-tourism, WA wildlife, tranquility of cityscape, City of Lights).
Let the river breathe and foreshore flourish	<ul style="list-style-type: none">Working to restore the river’s health is integral, including improving water quality and supporting biodiversity through native landscaping and sensitive development.Softer foreshore treatments – plantings, beaches etc. should be used instead of river walls and revetments where possible.
A network of lively places and tranquil spaces	<ul style="list-style-type: none">A diverse mix of active and quieter places should be encouraged.Denser mixed-use offerings should be contained within existing/identified urban nodes, while local nodes should be low-impact and sensitive to the foreshore environment.The continuous public open space around Perth Water <i>Buneenboro</i> is unique for the city context and should be maintained and celebrated – public access should be maintained.
See, touch, experience river life	<ul style="list-style-type: none">River uses that are permanent, noisy, polluting or have the potential to cause anti-social behaviour are not highly favoured.Lower impact, environmentally friendly uses are widely supported.The future of the WA Powered Sports Area’s exclusive use arrangements resulted in divided opinions and the costs and benefits of alternative management arrangements were highlighted.
Improving access across and around the river	<ul style="list-style-type: none">Support exists for an expanded public ferry system that is fast, affordable, reliable and connects to Coode Street, Perth Stadium and Claisebrook Cove. However, operational and management costs are significant.Shared paths should continue to be upgraded to separate pedestrians from active transport modes (e.g. bicycles, e-bikes, scooters, skateboards) and improve overall safety.The locality should be accessible to all Western Australians, including people with disabilities, their families and carers.

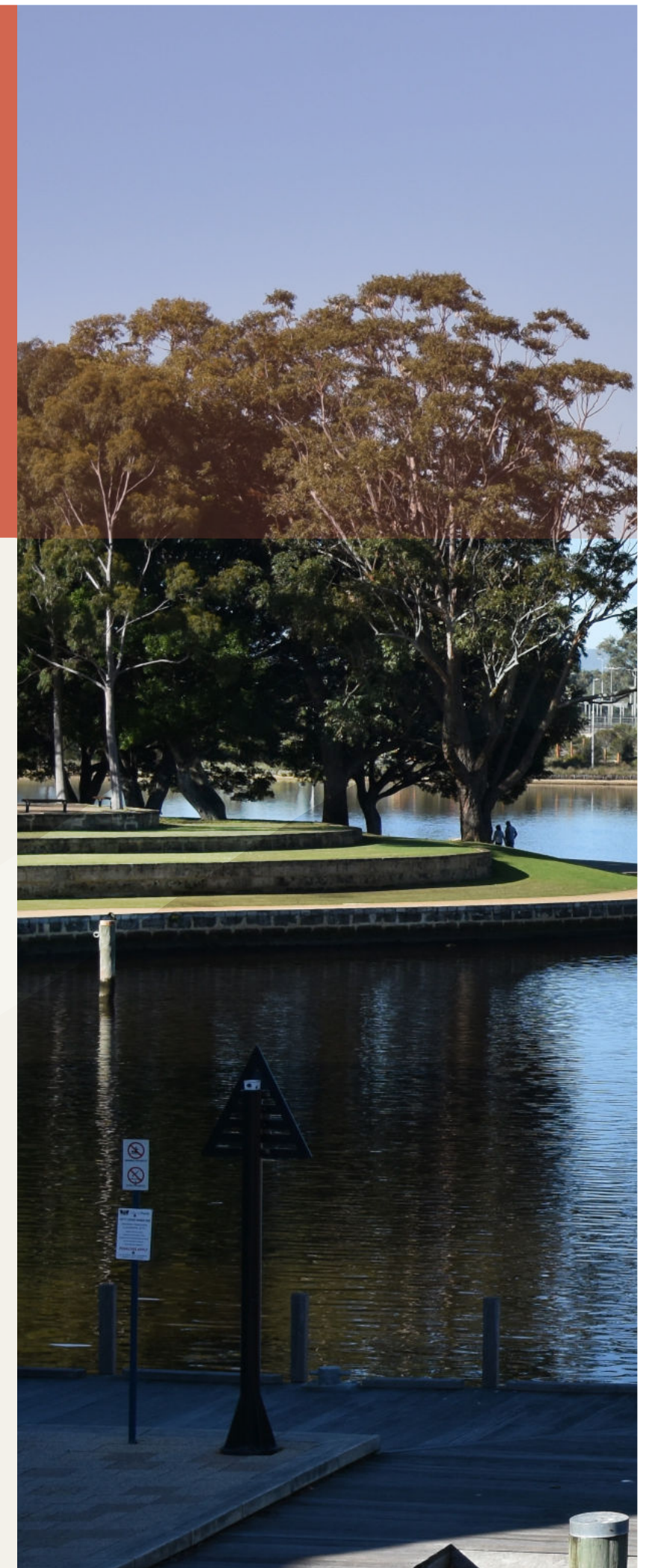
Objectives and outcomes

The Locality Plan has five themes, each articulating different objectives for Perth Water *Buneenboro*.

These include:

1. Culture, tourism and recreation
2. Natural values and resilience
3. Foreshore activation
4. On-water activities
5. Circulation and movement

Overarching statements, objectives and development outcomes have been prepared to guide decision making in relation to the five themes. These are set out in the following section.





1. Culture, tourism and recreation

For more than 50,000 years, Perth Water *Buneenboro* has been a place of powerful cultural significance to Whadjuk-Noongar people and this important spiritual and physical connection endures today.

In recent years, management authorities have worked with Whadjuk-Noongar people to recognise and acknowledge the cultural significance of the locality. Through respectful management of Perth Water *Buneenboro*, opportunities for cultural recognition, community education, reconciliation, catchment co-management, environmental restoration and where possible, economic and employment pathways will continue to be acted on.

As a place of first contact between the Whadjuk-Noongar community and European settlers, it is a significant heritage place and one of the key milestones in the city's development.

Today, local visitors enjoy the locality for its sporting, recreation and community activities, while interstate and overseas visitors marvel at its picturesque, natural setting. There is potential to supplement traditional passive and active recreation activities with new nature-based visitor experiences.

Opportunities centre on authentic acknowledgement of Whadjuk-Noongar enduring spirituality and cultural connection with Perth Water *Buneenboro* (and the Derbarl Yerrigan more broadly), including song lines, interpretation, public art and rehabilitation of natural landscapes. This creates a network of destinations and visitor experiences, with a focus on delivering improvements to infrastructure and amenity in key areas and where it is currently lacking.

Important views in the public realm will be protected and celebrated. In particular day and night time views of strategic landmarks including the Perth City skyline and Kings Park *Mooro Karta*.

OBJECTIVES

- 1.1 Whadjuk-Noongar spirituality and connection to country is recognised and acknowledged throughout Perth Water *Buneenboro*.
- 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.
- 1.5 Open spaces are retained in public ownership with a balance of passive and active recreation and community uses.
- 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.

DEVELOPMENT OUTCOMES

- 1(a) The Whadjuk-Noongar community is actively engaged on significant development proposals at planning inception.
- 1(b) Dual Whadjuk-Noongar place names are actively recognised in all development and land management initiatives, identified in Figure 3.
- 1(c) The activity nodes described in Section 3 are to be the primary focus for new and upgraded community and recreation facilities and amenities.
- 1(d) New development promotes and incorporates cultural interpretation and public art (as appropriate) to celebrate and communicate the relevant history of a site.
- 1(e) Development does not prejudice the:
 - cultural or heritage value of Perth Water *Buneenboro* or the larger Swan and Canning rivers;
 - ability of the community to access and enjoy the locality; and
 - availability of sufficient open space for large community events, sport and recreation activities.
- 1(f) Development complements the visual amenity of the locality.
- 1(g) New development on public land complements and enhances the river environment and contributes to the capital city experience.
- 1(h) Development will achieve the community and cultural features, and aspirations identified in Figure 4.
- 1(i) Proposed development does not have a negative impact on views from the Swan River and parklands to and from the features identified in Figure 5.



Figure 3 – The river edge of Perth Water prior to settlement and Whadjuk-Noongar place names

Figure 4 – Desired outcomes for community, cultural and recreation places



Figure 4 – Desired outcomes for community, cultural and recreation places

- 1 ELIZABETH QUAY**
Continued evolution into a flagship mixed use destination featuring tourism, commercial and residential uses, cultural and civic events, and celebrations.
- 2 BARRACK SQUARE**
Primary port access to Perth CBD to be enhanced with a richer array of retail, dining, recreational tourism and civic experiences.
- 3 CONCERT HALL SOUTH**
Expanded cultural destination with a mix of complementary entertainment, dining and community spaces.
- 4 LANGLEY PARK**
Established as an urban parkland to provide a place of natural refuge within the central city. A variety of spaces where the community can interact within and around *Buneebboro* or can retreat to contemplate. While in other places the parkland functions as Perth's premiere outdoor events space celebrating the vibrancy of Perth.
- 5 POINT FRASER (BOODJARGABELUP)**
Ongoing commitment to conduct celebration and interpretation of Whadjuk-Noongar culture and history within a regenerated native landscape setting.
- 6 HEIRISSON ISLAND (MATAGARUP)**
A place of particular significance for Whadjuk-Noongar people, to be enhanced and strengthened through a defined vision and plan, improved cultural infrastructure and supporting amenity.
- 7 WATERBANK**
Foreshore interfacing with an emerging civic hub at the city's eastern end featuring riverside community spaces and opportunities to access the river for recreation and transport.
- 8 CLAISEBROOK AND MARDALUP PARK**
East Perth's central destination for recreation and community gatherings, complemented with a local mix of commercial, dining and entertainment uses.
- 9 PERTH STADIUM PARKLANDS**
Unique tourism, sporting and cultural experiences to be offered within a landscaped setting which showcases Western Australian culture, the unique flora of the Swan River and Whadjuk-Noongar culture.
- 10 BURSWOOD PARKLANDS**
Continued role of spacious parklands playing host to community activities from small social gatherings and outdoor movies to large celebrations and recreation events.
- 11 MCCALLUM PARK AND TAYLOR RESERVE**
Emerging destination for large-scale community, corporate and charity events, as well as a local place for recreation, swimming and social activities.
- 12 SIR JAMES MITCHELL PARK, ELLAM STREET AREA**
A relaxed natural setting enhanced for passive recreation and formal sporting activities.
- 13 COODE STREET AND JETTY**
Continued role as a space for community recreation and events with expanded opportunities for water-based recreation and environmental conservation facilitating direct interaction with and appreciation of the river.
- 14 SOUTH PERTH PRIMARY EVENT AND CELEBRATION AREA**
Ongoing focal point for civic and cultural events and celebrations.
- 15 MINDEERUP - MENDS STREET AND JETTY**
South Perth's river gateway to undergo transformation into prime meeting space complete with piazza, spaces for events and markets, and stronger connections to Perth Zoo.
- 16 MILLERS POOL**
Continued role as a place for cultural expression and passive recreation amongst an enhanced natural setting.

Figure 5 – Desired outcomes for river views and outlooks



Figure 5 – Desired outcomes for river views and outlooks

CENTRAL PERTH

- 1 William Street, between St Georges Terrace and Riverside Drive
- 2 Barrack Street, between St Georges Terrace and Riverside Drive
- 3 Victoria Ave, between Hay Street and Riverside Drive
- 4 Plain Street, between Hay Street and Riverside Drive

EAST PERTH

- 5 Hay Street to river foreshore
- 6 Claisebrook Cove to/from Perth Stadium

SOUTH PERTH, VICTORIA PARK, BURSWOOD

- 7 Taylor Street, between Canning Highway and water’s edge
- 8 Douglas Avenue, between Mill Point Road and water’s edge
- 9 Coode Street, between Mill Point Road and water’s edge
- 10 Mends Street, between Mill Point Road and water’s edge
- 11 Queen Street, between Mill Point Road and water’s edge

● STRATEGIC LANDMARKS

Visual and physical access to strategic landmarks is to be recognised and protected (e.g. built form, natural landforms etc.).

----- STRATEGIC OUTLOOKS

Outlooks from public places to strategic landmarks across the river are protected and enhanced. This provides opportunities to enhance the visitor experience by provision of scenic routes.

The expansive views across Perth Water *Buneenboro* create opportunities to appreciate the setting of the capital city and its relationship with Derbarl Yerrigan. The changing views from day to night and across the seasons provide outlooks that are important for Perth’s sense of place and are appreciated by visitors to, and residents of Western Australia.

↔ VIEW CORRIDORS

To strengthen visual and physical connections to Perth Water *Buneenboro*, view corridors are to be preserved and enhanced.

2. Natural values and resilience

Perth Water *Buneenboro* sits within the globally unique Swan Coastal Plain, and within an international biodiversity hotspot.

For thousands of years, it existed as a freshwater estuary system until European settlers dramatically altered the natural environment by removing rock and sandbars to facilitate ship movements, transforming the Swan River *Derbal Yerigan* into a salt and freshwater system.

As the city has expanded, the river has been subject to further changes including dredging, reclamation and infill, constriction by river walls, clearing of vegetation and the impacts of storm and wastewater discharge. This has altered its natural processes of foreshore flooding, erosion, deposition and nutrient cycling.

River walls border a large proportion of the locality's foreshore, facilitating access up to, and along, the river edge. The walls have historically been constructed to protect key infrastructure and buildings, reduce scour from drains, and hold the position of the reclaimed foreshore.

The locality is susceptible to flooding and sea level rise, and with the risk of increased inundation over the longer term, the impact of climate change needs to be planned for and managed appropriately.

There is a need to return a balance that allows long-term resilience of the river while enabling sustainable user experience and interaction. To achieve this, it is necessary to reconnect the river with its foreshore, allow direct interaction with and connection to the water, improve the amenity of existing walling, recover the natural estuarine processes through restoration of wetlands and living streams where possible, require water-sensitive urban design (WSUD), allow biodiversity to flourish, and enable adaptation to changing climate.

Rebalancing the river creates the opportunity to restore the interconnected cultural narratives and practices of the Whadjuk-Noongar people, facilitate community enjoyment and wellbeing, and through education and interpretation, enable greater understanding of the river system, bringing about behaviour change.

Allowing points where the river can flood, places where biodiversity connections are returned and maintained, and incorporating both traditional and western ecological knowledge in planning and management is key.

OBJECTIVES

- 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.
- 2.5 Mitigate the impacts of flooding and climate change by minimising the extent of fill within the foreshore, ensuring no net loss in flood capacity and designing buildings and infrastructure to accommodate/adapt to periodic inundation and sea level rise.
- 2.6 Minimise the use of hard structures – e.g. for asset protection, flood management and drainage scour.
- 2.7 Contamination to be managed and remediated where possible to mitigate adverse environmental outcomes with a specific focus on improvement in water quality entering the river.
- 2.8 Minimise adverse environmental impacts including to adjacent areas.
- 2.9 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.

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(b) Due to the important role of the river and foreshore in accommodating flooding, filling of the river or foreshore is generally not permitted. Filling within the urban nodes will only be permissible if offset by the provision of additional flood capacity.
- 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 foreshore between activity nodes.

Environmental impacts

- 2(e) Development addresses site specific considerations such as geotechnical and groundwater conditions and is designed to mitigate adverse environmental impacts.
- 2(f) Potential adverse environmental and amenity impacts are mitigated. Examples that require focused consideration include noise pollution, clearing of vegetation, waste management, acid sulfate soils, soil and/or water contamination, light pollution, potential impacts to aquatic fauna and flora, hydrodynamic processes and erosion/deposition processes.

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(h) Stormwater runoff from rainfall events at new developments is managed at source in accordance with the Stormwater Management Manual for Western Australia and related guidance documents.
- 2(i) Existing public drainage infrastructure is retrofitted to improve stormwater quality that discharges to the river. Drainage infrastructure within private development is upgraded at the time of redevelopment. Consider stormwater storage for irrigation purposes.

- 2(j) Existing roads, carpark and roofs are retrofitted to improve stormwater quality.
- 2(k) Minimise the use of water for irrigation.
- 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.
- 2(m) Nutrient and irrigation management plans provided throughout the policy area establish methodologies for minimal nutrient input into the river system.

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; and
 - Enhances connection to Kings Park *Mooro Karta*.
 - 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 and chemical fertilisers wherever possible.
- 2(t) Landscape design supports the principles of Crime Prevention through Environmental Design objectives.

River interface

- 2(u) Any proposal to modify the interface with the river maximises access to and amenity of the river by:
 - Achieving the 'Desired outcomes for the foreshore' as outlined in Figure 6. Where possible riverwalls and revetments are replaced with bioengineering, regraded foreshores and beaches;
 - Minimising the use of hard structures such as revetments and riverwalls – while it is important in some instances to provide structural protection for the foreshore, this is avoided if possible due to reduced opportunities for the public to access the river and the adverse impact on environmental outcomes for the river;
 - Mitigating impacts, such as erosion and deposition processes, on adjacent foreshore;
 - Optimising opportunities for the community to access the river. For example, this should include provision of beach access, provision of a soft, natural interface and minimisation of the length and height of hard structures that interface with the river. The addition of boardwalks, decks, jetties and fishing platforms should be limited to identified nodes; and
 - Using materials that are naturally present within the locality, for example riverwalls and revetments, should be constructed of limestone or biscuit rock – granite is generally unacceptable.

Figure 6 – Desired outcomes for natural values and resilience



Figure 6 – Desired outcomes for natural values and resilience



Climate resilience

Perth Water *Buneenboro* will be designed and managed for resilience to a changing climate.

Sea level rise is forecast to increase substantially over the next century. Based on the current climate change scenario modelling, this trend is expected to continue well beyond 2100.

In addition to sea level rise, other variables associated with climate change such as extreme weather events like high rainfalls within a short timeframe and storm surges (particularly when combined with naturally occurring high astronomical tides) are likely to affect the river foreshore and the associated infrastructure.

This map illustrates modelling of current* and future annual exceedance probability (AEP) levels. The future level for 2110 includes a predicted Mean Sea Level (MSL) rise of 0.9 metres.

Given these changes, it is important to adapt current foreshore use, infrastructure and management to allow for the river's natural 'flood retreat cycle' to occur. Unless located within urban nodes, such as Elizabeth Quay and Waterbank, which have been designed to minimise risk of inundation, development around the foreshore should generally be designed to accommodate inundation.

*based on 2014 Department of Water and Environmental Regulation (DWER) dataset (under review in 2019). Predicted flood projections originally presented as 100-year Annual Recurrence Interval (ARI) flood levels.

Figure 7 – Existing and future flooding projections



3. Foreshore activation

Perth Water *Buneenboro* is one of the city's pre-eminent attractions, valued for its picturesque setting, new waterside destinations such as Elizabeth Quay, its significant parklands such as Sir James Mitchell Park and Langley Park, as well as smaller, reflective spaces. The intact band of publicly accessible foreshore is unique for a capital city context.

Long identified for its tourism value, particularly striking views of strategic landmarks such as the Perth City skyline and Kings Park *Mooro Kaarta*, and a rich variety of nature-based experiences both on and off water, there is an opportunity to improve amenity and diversify activities and attractions in key locations around the locality.

Opportunities will continue to be explored to provide a variety of riverside places for people to socialise, dine, exercise, relax or participate in organised activities, while ensuring that the riverine environment is reinstated and enhanced.

Historic use of the river and its foreshore has shaped present day destinations and activity nodes in Perth Water *Buneenboro*. Over time these nodes have consolidated into a variety of uses, from commercial and residential nodes (e.g. Elizabeth Quay and Barrack Square) through to lower intensity or informal community activity spaces. The nodes offer a range of passive and active recreation opportunities and function as community focal points and meeting places.

A network of activity nodes has been established within this Locality Plan to provide a clear expectation of how these spaces will continue to develop consistent with Figure 8. In summary the nodes are described as follows:

- **Urban nodes** – These nodes support large scale development including areas intensively used for residential, commercial activity (e.g. office, hotel, retail, food and beverage), active and passive recreational, cultural, transport and marine activities. These nodes are generally developed to be resilient to inundation and to accommodate the impacts of climate change. Filling may be permitted to support land use and development within these nodes.
- **Special use nodes** – Within a natural landscaped setting, these nodes support adjacent large-scale infrastructure as well as small scale activities such as equipment hire, dining and cafés, passive recreational areas, environmental uses, cultural uses, water transport and marine activities. Permanent, lightweight, adaptable and low impact development with a footprint limited to the building area generally occurs within these nodes. These buildings are to be designed to accommodate the effects of flood and climate change while minimising filling (for example by utilising post construction in new structures).
- **Local nodes** – Activities and infrastructure at these nodes generally includes small scale facilities such as low intensity commercial activities (e.g. mobile van, café or kiosk, pop-up infrastructure), hire facilities, picnic facilities, grassed areas, playgrounds, access to walking trails, environmental and cultural information (e.g. interpretive signs and Aboriginal heritage and cultural information relevant to the historic use and cultural importance of the site). Local nodes are well suited to temporary and seasonal activities. Buildings and infrastructure are to be designed to accommodate periodic inundation or allow for rapid and practical relocation.

OBJECTIVES

- 3.1 A network of connected activity nodes strengthens existing places, enables a diversity of uses and experiences and encourages active transport.
- 3.2 Management and use of the foreshore between activity nodes prioritises passive recreation and nature-based activities.
- 3.3 Development responds and adapts to environmental drivers, minimises foreshore impact and is undertaken in a coordinated manner.
- 3.4 Development across the locality uses high quality design and detailing and durable materials.
- 3.5 Development within nodes is intrinsically related to the waterside setting and role of the node.
- 3.6 The cumulative impact of development within nodes is managed and may limit future intensification.
- 3.7 The locality provides a built and natural environment that discourages crime and facilitates a sense of safety for all users.

DEVELOPMENT OUTCOMES

- 3(a) The nature and scale of development is appropriate to the network of activity nodes identified in Figure 8.
- 3(b) Permanent structures and buildings are limited to urban and special use activity nodes and passive recreation and nature-based uses are preferred along sections of the river foreshore between activity nodes.
- 3(c) Development provides direct public access to, around and along the foreshore and enhances community enjoyment of the foreshore and river.
- 3(d) Proposals are designed in accordance with Designing Out Crime Planning Guidelines (WAPC, 2006).
- 3(e) With the exception of continued improvement of jetties and construction of infrastructure to support expansion of public transport services, there is an ongoing presumption against new permanent structures within the River Reserve (as defined in the *Swan and Canning Rivers Management Act 2006*).
- 3(f) Development is of a high-quality design compatible with its setting, in terms of height, bulk, scale, setback, orientation, material selection and appearance. Note: Significant development proposals may be subject to the State Design Review Panel or other design review process of the statutory decision maker for the proposal.
- 3(g) Permanent structures :
 - are designed and detailed to a high standard; and
 - are constructed of durable materials appropriate to the location and in keeping with the character of the locality.
- 3(h) Development provides community infrastructure and facilities, including:
 - end of trip facilities and secure storage for bicycles;
 - storage/hire facilities for watercraft and bicycles;
 - public toilets and change rooms; and
 - upgraded infrastructure adjacent to the development (e.g. pedestrian/cycle paths, seating, shade structures, water stations).

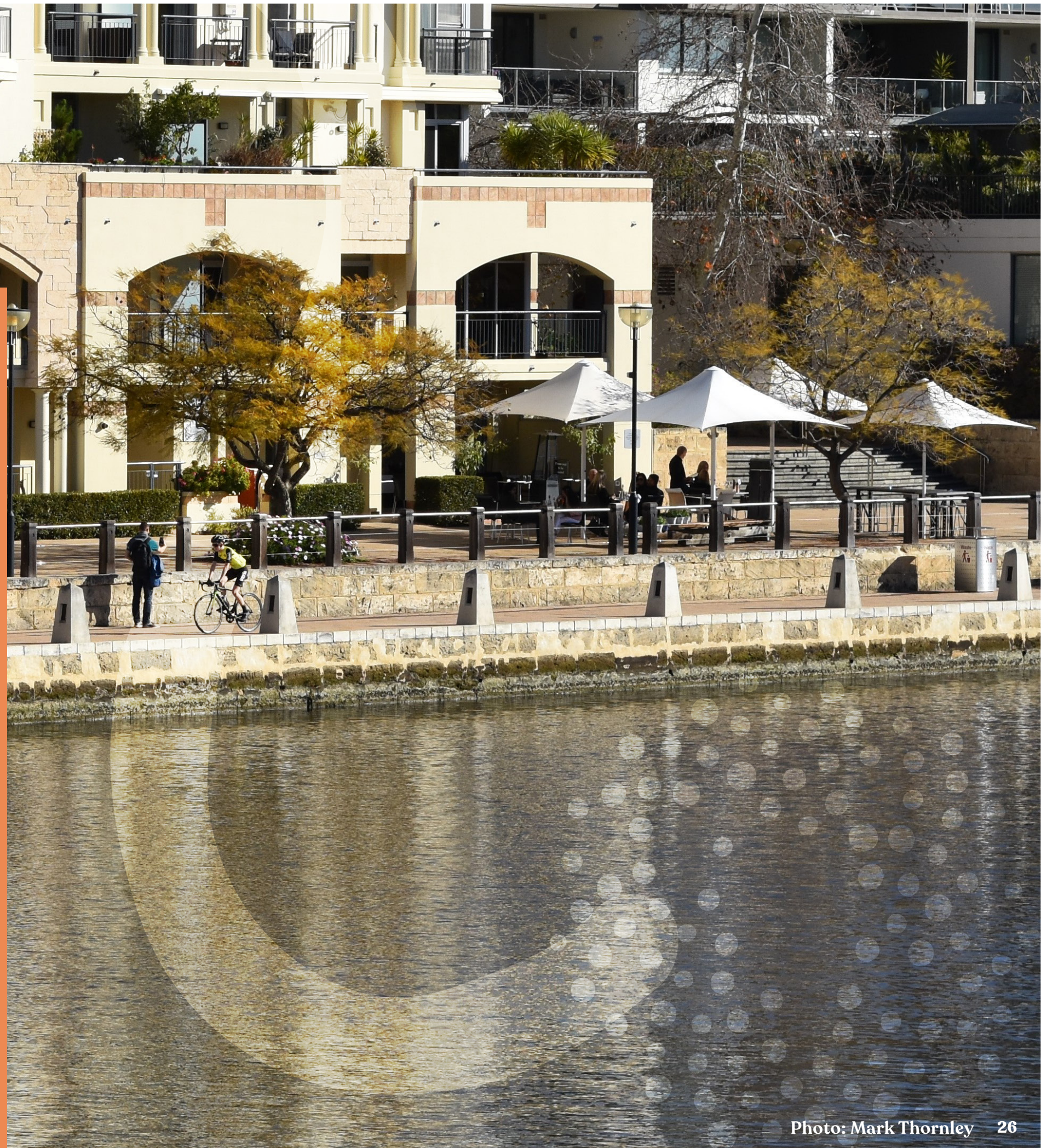


Figure 8 – Desired outcomes for activity nodes



Figure 8 – Desired Outcomes for activity nodes legend

URBAN NODES

- 1 ELIZABETH QUAY**
Continued role as Perth's premier riverfront destination. Future redevelopment of Perth Convention and Exhibition Centre represents opportunity to reconnect Perth Water *Buneenboro* and the city's west end.
- 2 BARRACK SQUARE**
The primary port access to the CBD, Barrack Square will be redeveloped as a transport and civic hub, including provision of a range of facilities and services (e.g. ticketing points, vessel hire, pick-up and drop-off point, community markets).
- 3 CONCERT HALL**
Opportunities are explored to redevelop the Terrace Road carpark to strengthen connection between the foreshore, Perth Concert Hall and Government House. Expand cultural and entertainment opportunities that respect viewsheds and maintain public access and public tenure.
- 4 WATERBANK**
Foreshore interface with prime, mixed use destination with residential, commercial and public uses including a community facility. Foreshore public access and engagement via an urban beach and promenades.
- 5 CLAISEBROOK COVE**
Continued role as established inlet framed by residential, commercial (e.g. food and beverage), significant public realm and amenity including foreshore access. Strengthened Perth Stadium connection via Matagarup and Windan Bridges provides opportunities for improved economic and social activity.

SPECIAL USE NODES

- 6 POINT FRASER**
Continued uses of recreation, food and beverage. Additional buildings are not encouraged, however uses within the existing buildings may change in line with market drivers. Temporary and semi-permanent hire facilities that are directly associated with use, appreciation and enjoyment of the river are encouraged. Opportunities should be explored to improve access to and use of this node.
- 7 PERTH STADIUM SPORT AND RECREATION PRECINCT**
Continued use and provision of sporting, recreation, entertainment and tourism related uses within an open natural setting. Matagarup Bridge, tourism uses such as a bridge climb and zipline, cafés, other light meal and dining options.
- 8 MINDEERUP - MENDS STREET PIAZZA AND JETTY**
The major arrival point by water to South Perth via Mends Street Jetty (Mindeerup), linking the ferry terminal to Perth Zoo and beyond. A public piazza from the foreshore will provide a link to the Mends Street commercial strip. Additional commercial development on land is not anticipated within this node.

LOCAL NODES

- 9 NELSON AVENUE**
Responding to longer term redevelopment of Gloucester Park, explore opportunities to provided low intensity temporary uses for eventgoers and recreation users (e.g. food trucks, stalls) at the base of Matagarup Bridge.

10 LANGLEY PARK

Framed within a high quality landscaped environment Langley Park is established to provide a diverse range of recreational and entertainment opportunities, including formalised sport and recreation grounds, event spaces, playgrounds, picnic areas and enhanced vegetated connections to the CBD and Ozone Reserve.

A low intensity development node (e.g. café, community meeting space) acts as a central hub within Langley Park.

11 MILLERS POOL

Passive recreation uses complemented with small-scale permanent commercial uses associated with enjoyment of the river (e.g. café).

12 COODE STREET

An arrival point to South Perth via Coode Street jetty. Recreation uses on and off water, supplemented with small scale café or pop-up food and beverage, and equipment hire.

13 HURLINGHAM ROAD

Recreation node supporting on and off water activities, supplemented with small-scale café or pop-up food and beverage and equipment hire.

14 M^cCALLUM PARK

Upgraded recreation space focused on public access to the foreshore via an urban beach with opportunities for café or pop-up food and beverage and equipment hire.

15 BURSWOOD PARK

Passive recreation uses (e.g. playgrounds, beaches) complemented with small-scale permanent and temporary opportunities.

4. On-water activities

Perth Water *Buneenboro* is the city's focal point for on-water recreation. Boating, kayaking, fishing, sailing and stand-up paddle boarding, as well as competitive water sports, are popular and cherished activities.

As the city continues to grow and the Perth Water *Buneenboro* locality's tourism potential matures, demand for prospective private commercial opportunities will continue to expand and diversify, including activities and infrastructure such as floating barges, seaplanes and helipads.

The variety and scale of current and prospective on-water uses within the locality requires a coordinated management approach to ensure public safety and achieve a well considered interface between diverse groups and activities. Growth in on-water uses adds pressure to land-based nodes with space required for such elements including loading, drop-off and pick-up areas, parking, waste management, storage and utilities. This is especially true for Barrack Square which will face constraints as tourism activity and residential development increases.

In light of this, on-water uses and activities need to be managed to minimise risks and impacts to the community.

The principle of access to Perth Water *Buneenboro* for the whole Perth community to enjoy and appreciate is a primary driver. Activities on Perth Water *Buneenboro* should be appropriately managed to ensure that the high amenity value as a natural, yet active space is protected. Important considerations include noise, pollution, lighting impact, overshadowing and protection of the environment and its wildlife.

Some long-standing use and access arrangements exist that require revision to facilitate and improve public access in key areas. Priority management considerations are:

- Improvement and upgrade of Barrack Street, Mends Street and Coode Street jetties to meet current and future demand;
- Avoidance of long-term privatisation of the river by on-water commercial activities;
- Broader community access to courtesy moorings (and potentially rental moorings), particularly during peak periods; and
- Improved utilisation and management of the Western Australian Powered Water Sports Area (WAPSWA).

Figure 9 identifies the strategic approach to on-water activities and provides high level guidance to decision making in this regard.

OBJECTIVES

- 4.1 The river is universally accessible for all users.
- 4.2 To protect and enhance the amenity of the river and the ability of the community to use, enjoy and safely access the river.
- 4.3 Privatisation of the river is avoided.
- 4.4 On-water activities preserve the environmental and cultural value of the river.
- 4.5 Provision is made for a diverse range of activities (e.g. sea plane landing areas, helipad facilities, powered water sports activities, informal activities relying on equipment hire and entertainment activities).
- 4.6 Existing jetty launch sites and other land-based infrastructure are expanded and upgraded to support diverse on-water activities.
- 4.7 The cumulative impact of on-water activities is considered.
- 4.8 Synergies between on and off water uses are created.

DEVELOPMENT OUTCOMES

4(a) The river is maintained as an asset available to the whole community. As such:

- Long-term privatisation of the river is not supported;
- Leasing of parts of the river for commercial activities on water is limited to short-term periods (e.g. five years); and
- Riverbed leases include environmental management system requirements.

4(b) Development applications proposing on-water activities are to be accompanied by a Transport and Infrastructure Access and Impact Statement detailing:

- Bathymetry of the surrounding river channel;
- Expected usage/patronage levels;
- Operational details;
- Public availability;
- Access and servicing arrangements;
- Strategies to mitigate impacts (environment, amenity, infrastructure);
- Hours of operation; and
- Event management plans (where applicable).

4(c) Sea plane and helicopter operations demonstrate that:

- Impacts on the amenity of the locality are minimised in terms of noise, frequency of flights and proximity to sensitive uses;
- Risk to the natural environment, including fauna and flora, and environmental contamination is mitigated. This includes ensuring that no refueling of aircraft will occur on Perth Water *Buneenboro*;

- Operation of aircraft will not adversely affect the ability of the Perth community to safely use Perth Water *Buneenboro*; and
- Risk of collision both in air and on water is adequately mitigated.

4(d) All on-water development:

- Demonstrates safe and sustainable servicing (e.g. goods delivery, fuel supply, parking, access to electricity, reticulated water and waste management);
- On water development should demonstrate a need to be water-based rather than on land. Development should be prioritised on land, with new buildings or permanent structures within the river discouraged.
- Provides appropriate sewage management (in that regard, direct connection to reticulated sewerage is preferred in an effort to minimise environmental risk);
- Mitigates any adverse environmental impacts for example noise, light spill and pollution; and
- Demonstrates that the activity can be undertaken safely.


4(e) Where necessary, development is serviced by land-based infrastructure such as car parking, jetties and boat ramps to support on-water uses and activities. This may require upgrade of services and infrastructure at the cost of the proponent. Where the upgrade or delivery of infrastructure within the public realm is required, that infrastructure remains available for use and access by the community.




Figure 9 – Desired outcomes for on-water activity





Figure 9 – Desired outcomes for on-water activity


 **ELIZABETH QUAY**
Continued role as priority location for public ferry services, courtesy moorings and commercial river craft including water taxis.


 **COMMERCIAL WATERSPORTS AREA**
High-speed designated area for approved operators (e.g. wakeboarding, jet boats).

 **WA POWERED WATERSPORTS AREA**
Activities within this area are managed by the issue of a licence for powered watersports activities pursuant to the *Swan and Canning Rivers Management Act 2006* and on a day to day operational level by the Burswood Management Aquatic Group. The area is available for a broad range of community events.


 Current approval for on-water helipad. Operations subject to strict environmental controls including that on-water refueling is not permitted. Note: a suitable land-based location will be explored if current on-water location is deemed inappropriate.

 Long-term operation of seaplanes will be permitted subject to compliance with operational guidelines that manage their environmental and social impacts.

 Expanded jetty infrastructure and facilities at key nodes based on approved Department of Transport (DoT) criteria (vessel size, use, times etc.).

 Expanded mooring buoy capacity by reconfiguring existing and introducing new courtesy mooring buoys adjacent key activity nodes.

 Expanded jetty mooring capacity.

 Gaps in passive vessel infrastructure and facilities are addressed. Investigate new storage (e.g. racks to facilitate securing items while visiting land destinations). Co-locate with self-service active transport hire stations.

5. Circulation and movement

Facilitating strong connections to, around and across Perth Water *Buneenboro* brings opportunities and benefits for the community, environment and economy.

Unifying foreshore destinations and improving key pedestrian and active transport facilities and connections will encourage people to make healthier transport choices. It will also establish a suite of green linkages that connect surrounding communities, improving both physical and mental health.

Providing for future expansion of the public transport system – ferry, bus and potentially light rail – and facilitating the introduction of a future commercial water taxi service will increase travel choice for all. Maintaining strategic view corridors to Mt Eliza, the city skyline, Perth Stadium and Heirisson Island is a key requirement when considering new or upgraded transport infrastructure.

OBJECTIVES

- 5.1 Efficient, convenient and accessible public transport networks and services connect activity nodes.
- 5.2 Connections to and around Perth Water *Buneenboro* strengthen its relationship with surrounding local communities.
- 5.3 A consistent approach to wayfinding is used throughout the locality.
- 5.4 Safe and accessible active transport networks to and throughout the river foreshore.
- 5.5 Scenic loops for the enjoyment of tourists and locals with views to Perth Water *Buneenboro* are prioritised.

DEVELOPMENT OUTCOMES

- 5(a) Development provides:
 - Infrastructure that supports and encourages active transport between activity nodes;
 - Separated pedestrian and active transport path networks;
 - Access to public amenities such as public toilets, parents' rooms and universal access facilities;
 - Key infrastructure including cycle and active transport facilities;
 - A visually permeable and easy to navigate environment;
 - Appropriate interpretive signage;
 - Access to drinking water;
 - Pet facilities (e.g. water bowls, tethering points, waste bags);
 - Consistency in the look, feel and treatment of access and infrastructure elements tailored to the locality's setting; and
 - Connections to the surrounding area.
- 5(b) Development in locations identified in the Swan Canning Riverpark Trail Masterplan and the Marli Riverpark Interpretation Plan includes construction of trails and interpretation infrastructure as it relates to the proposed development.
- 5(c) Universal access is provided in accordance with the requirements of the *Disability Discrimination Act 1992* and relevant Australian Standards.



Figure 10 – Desired outcomes for circulation and movement



Figure 10 – Desired outcomes for circulation and movement

- 1

RIVERSIDE DRIVE
Explore relocation of Riverside Drive away from the foreshore to mitigate increased inundation, improve river access, connections and viewsheds and improve visitor amenity.
- 2

CAUSEWAY BRIDGE
Improved pedestrian and cycle connections between the Victoria Park foreshore and the City of Perth foreshore.

In the event of key infrastructure delivery requiring modification or replacement of the Causeway Bridge (e.g. light rail), bridge height should be increased to facilitate passage of larger vessels.
- 3


Upgrade pathways under the Causeway Bridge to mitigate inundation and improve lighting and associated amenity.
- 4


HEIRISSON ISLAND
Movement and circulation infrastructure supports the vision of establishing Heirisson Island as an ecological and cultural sanctuary.

- 

Expanded public ferry route
- 

Potential ferry and water taxi stops
- 

Potential water taxi only
- 

Potential active transport hire (e.g. bikes, scooters)
- 

Potential on-water recreational craft hire (e.g. kayaks, stand-up paddleboards)
- 

Improve pedestrian/cycle connectivity and safety across Riverside Drive in line with existing road network
- 

New pedestrian and cycle only bridge in line with demand to relieve pressure on the Causeway Bridge path (indicative location only)
- 

Upgrade the existing movement network for active transport including shared cycle and pedestrian paths
- 

A complete movement network for active transport around the river that provides separated paths for cyclists, pedestrians and related users

Definitions

The following definitions apply to the terms used within this document:

“acid sulfate soils” is the common name given to naturally occurring soil and sediment containing iron sulfides. When disturbed and exposed to air they oxidise and produce sulfuric acid, iron precipitates, and concentrations of dissolved heavy metals such as aluminium, iron and arsenic.

“active transport” means to use a physical activity such as walking, cycling, running, or other active means to travel from one destination to the next.

“activity node” refers to a location within the Perth Water *Buneenboro* locality recognised as supporting a range of active uses within a network of activity nodes along the Swan River.

“adaptation” is as defined in State Planning Policy 2.6 – State Coastal Planning Policy and means an adjustment in natural or human systems in response to actual or expected stimuli or their effects, which moderates harm or exploits beneficial opportunities. Adaptation is the means for maximising the gains and minimising the losses associated with coastal hazards over the planning timeframe.

“development” has the same meaning as in the *Planning and Development Act 2005*.

“foreshore” or **“foreshore reserve”** means an area of land abutting a watercourse or body of water, and is to be vested in the Crown and shown on the survey documents either as a reserve for recreation or a reserve for foreshore management, depending on the use to be made of the land.

“inundation” means the flow of water onto previously dry land and/or development. It may either be permanent, for example due to sea level rise, or temporary occurrence during a storm event.

“responsible authority” means the authority responsible for determining or making a recommendation for determination of a development application.

Abbreviations

AEP	annual exceedence probability
ARI	Annual Recurrence Interval
CBD	central business district
DBCA	Department of Biodiversity, Conservation and Attractions
DoT	Department of Transport
DWER	Department of Water and Environmental Regulation
MSL	mean sea level
PWVG	Perth Water Vision Group
TEC	threatened ecological community
WSUD	water sensitive urban design

Related documents

This document should be read in conjunction with the following documents and other related documents, where relevant as this list is not exhaustive:

City of Perth Draft City Planning Strategy, 2019

City of Perth Local Planning Scheme No. 2

City of Perth Precinct Plan No. 8 – Foreshore

City of Perth Precinct Plan No. 12 – Langley

City of South Perth Local Planning Scheme No. 6 City of South Perth
Connect South, City of South Perth

City of South Perth Foreshore Strategy and Management Plan

Department of Biodiversity, Conservation and Attractions:

- Marli Riverpark – An Interpretation Plan for the Riverpark (April 2014)
- Best management practices for foreshore stabilisation (December 2009)
- Corporate Policy 42 – Planning for land use development and permitting (June 2016)
- Corporate Policy 43 – Planning for marinas and yacht clubs (June 2016)
- Corporate Policy 44 – Planning for jetties (June 2016)
- Corporate Policy 45 – Planning for miscellaneous structures and facilities (June 2016)
- Corporate Policy 46 – Planning for commercial operations (August 2016)

- Corporate Policy 47 – Planning for dredging (June 2016)
- Corporate Policy 48 – Planning for development setback requirements (June 2016)
- Corporate Policy 49 – Planning for stormwater management (June 2016)
- Corporate Policy 50 – Planning for dewatering (March 2017)
- Corporate Policy 51 – Planning for wastewater management (March 2017) Metropolitan Redevelopment Authority Central Perth Redevelopment Scheme

Metropolitan Redevelopment Authority Central Perth Development Policies

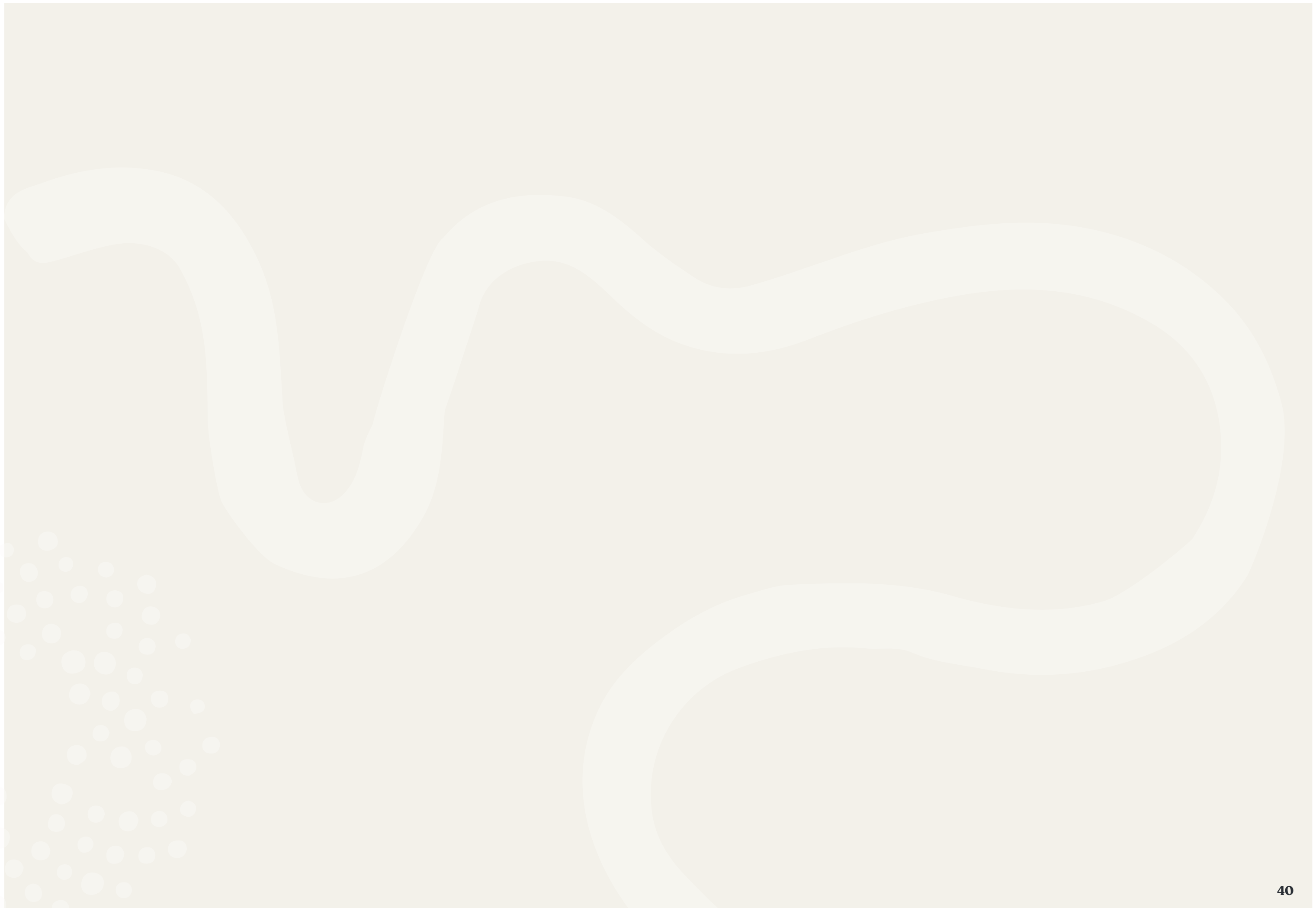
Metropolitan Redevelopment Authority Elizabeth Quay Design Guidelines

Metropolitan Redevelopment Authority Waterbank Design Guidelines

State Planning Policy 2.10 – Swan–Canning River System, Western Australian Planning Commission, 2006

Town of Victoria Park Local Planning Scheme No. 1

Town of Victoria Park Foreshore Strategy and Management Plan
Stormwater Management Manual for Western Australia





Department of Biodiversity,
Conservation and Attractions

Project Team:

Lead consultant: **element** – place strategy, engagement, heritage, urban planning

Consultant team: Syrinx – environmental planning, landscape design

Arup – transport planning and engineering

Dr Richard Walley and David Collard – Aboriginal engagement and advisory

Prepared by:

element.
the art and science of place

Department of Biodiversity, Conservation and Attractions
17 Dick Perry Avenue, Kensington WA 6151

Phone: (08) 9278 0900 Web: www.dbca.wa.gov.au email: rivers.planning@dbca.wa.gov.au

Address for Correspondence

Department of Biodiversity, Conservation and Attractions
Locked Bag 104, Bentley Delivery Centre, Western Australia 6983