



Department of Biodiversity,
Conservation and Attractions

DRAFT

Perth Water
Buneenboro
Precinct Plan

September 2019

Ngala kaaditj Whadjuk moort keyen kaadak nidja boodja

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

Prepared for: Department of Biodiversity, Conservation and Attractions,
on behalf of the Perth Water Vision Group

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Front page image: element



*“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

Introduction

Document purpose and structure

The Perth Water *Buneenboro* Precinct Plan (Precinct Plan) is an important framework which brings together "on" and "off" water considerations, responds to key findings from a dedicated stakeholder and community engagement process and functions as a strategic document that provides guidance for recreation, development, restoration and rehabilitation within the Precinct Plan area.

The Precinct Plan establishes a vision for Perth Water *Buneenboro* and provides development policy, direction and actions to achieve the vision. The Precinct Plan comprises two parts:

- **Part 1: Development Policy and Requirements** – key policy positions to direct and inform all types of development (including use of the land and water) within the Precinct, supported by a series of development requirements that are to be addressed and satisfied as part of any development proposal; and
- **Part 2: Action Plan** – a rolling five-year action plan which identifies a list of actions members of the Perth Water Vision Group (PWVG) aim to implement the Precinct Plan vision. The Action Plan will be updated as new actions arise.

This Precinct Plan is an initiative of the PWVG which comprise eight government agencies, each with a strong interface and active role in Perth Water's management. The PWVG has been established to improve cross-agency collaboration and guide the Precinct Plan's development and implementation.

Led by the Department of Biodiversity, Conservation and Attractions (DBCA), this Precinct Plan has been prepared in support of relevant State Planning Policy established under the *Planning and Development Act 2005* and as a policy to assist in implementing the *Swan Canning River Protection Strategy* established under the *Swan and Canning Rivers Management Act 2006*.

This Precinct Plan will be applied by all statutory decision makers in determining development proposals within the policy area. The Action Plan will be implemented and updated to inform the strategic planning initiatives and works programs of all PWVG members.

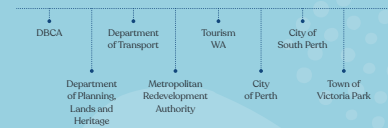


Figure 1 – Perth Water Vision Group

Precinct Plan policy area

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



Figure 2 – Perth Water Buneenboro Precinct Plan Area

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 kaardijin, people and knowledge, to strengthen Buneenboro's weirn, spirit, for years to come.





INTRODUCTION

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 and Canning Rivers 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.

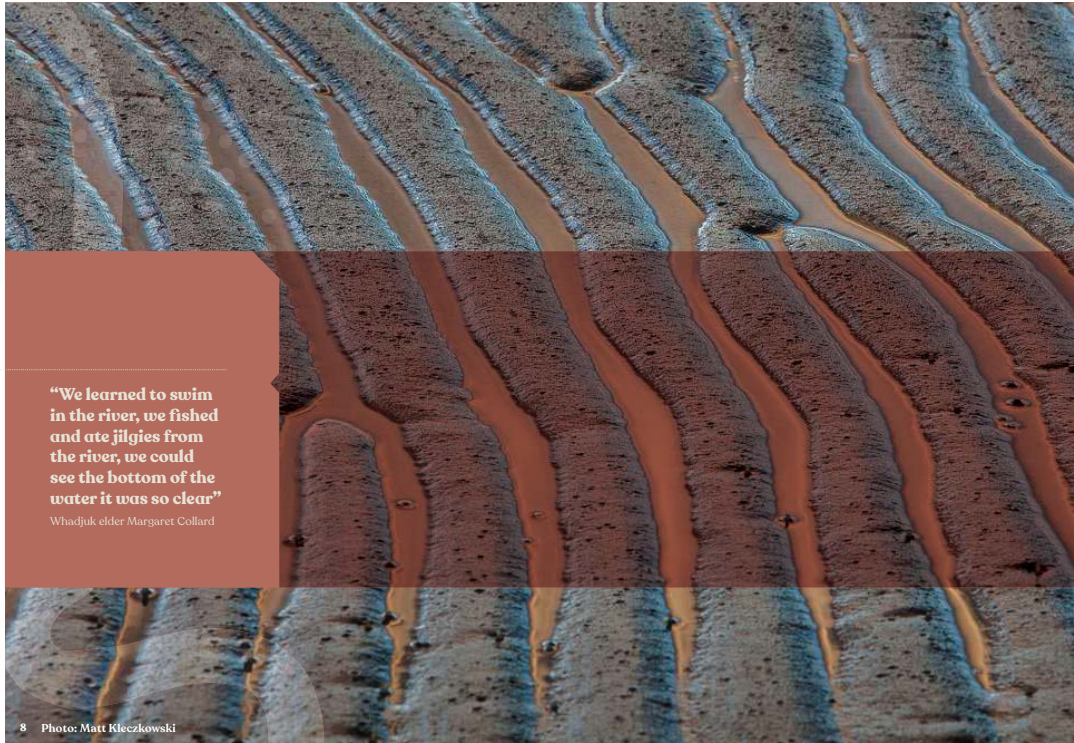
Perth Water *Buneenboro* is a diverse and interconnected living system. Situated between the Narrows Bridge in the west and Windan Bridge in the east, the area includes the adjacent foreshores of the City of Perth, City of South Perth and Town of Victoria Park.

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, Optus 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.

Striking the 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, is the focus for this Precinct Plan.



“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

INTRODUCTION

Derbarl Yerrigan

The Noongar 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 *Buneenboro* – Perth Water¹. 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 Beeljar led by Midjegooro and Yagan, the Beeloo by Munday and, to the north-east, the Wururup led by Weep. The rivers created natural boundaries of these groups but they were not part of the land estate and instead 'owned' by 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/diaryofjennyjearse00moorish/page/88>
 3. <https://archive.org/details/diaryofjennyjearse00moorish/page/82>
 4. Hughes-Hall, D. (2008) Indigenous history of the Swan and Canning rivers, Western Australia

WHADJUK NOONGAR BOODJAR



CONTEXT

Capital city context

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 Precinct Plan aims to develop and maintain strong physical 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 Precinct Plan seeks to enhance the core recreational and environmental values of Perth Water *Buneenboro* while also enabling environmentally sensitive and responsible growth and diversification of different uses.



Photo: Josh Spires, Unsplash



Part A – Development policy and requirements

12 Photo: Mark Thornley



Precinct objectives

This draft Precinct Plan has been developed to improve co-ordination between government agencies responsible for the Precinct's ongoing management.

The Precinct Plan's vision, objectives and requirements align with the outcomes of an extensive stakeholder and community engagement program, implemented from April to December 2018. 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 below.

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, tranquillity 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, rock revetments, beaches etc should be used instead of river walls, 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 primary activity nodes, while new investment in secondary activity 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 and new development by leasehold.
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, Optus 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 Precinct should be accessible to all Western Australians, including people with disabilities, their families and carers.



Key themes from stakeholder consultation guided development of five Precinct objectives:

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 requirements have been developed to guide decision making in relation to the five Precinct objectives and 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 this in the Precinct's public realm, and this can continue to be improved to realise opportunities for cultural recognition and education, reconciliation and self-determination, catchment co-management, environmental restoration and repair and, where possible, economic and employment pathways.

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 Precinct 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 Swan River more broadly). 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 Mount Eliza / Kings Park.

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 strategic viewsheds, are conserved and celebrated.
- 1.3 The local and tourist visitor experience reflects the Precinct'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.

DEVELOPMENT REQUIREMENTS

- (a) The Whadjuk Noongar community is actively engaged on significant development proposals at planning inception.
- (b) Historical Whadjuk-Noongar place names are to be actively recognised in all development and land management initiatives, identified in Figure 3.
- (c) The activity nodes described in section 3 are to be the primary focus for new and upgraded community and recreation facilities and amenities.
- (d) New development is to promote and incorporate cultural interpretation elements and public art (as appropriate) to celebrate and communicate the relevant history of a site.
- (e) Development should not prejudice the:
 - cultural or heritage value of Perth Water *Buneenboro*;
 - larger Swan and Canning rivers;
 - ability of the community to access and enjoy the Precinct; and
 - availability of sufficient open space for large community events, sport and recreation activities.
- (f) Development is to minimise visual intrusion having regard for the significance of views and the visual and natural resource amenity of the setting - limit visual clutter through minimising non-essential elements, locating and designing elements to be unobtrusive.
- (g) New development on public land should complement and enhance the river environment and contribute to the capital city experience.
- (h) Development will achieve community and cultural features, and aspirations for key destinations within the Precinct are identified in Figure 4.
- (i) Development is to be sensitive to viewsheds to, from and between Strategic Landmarks identified in Figure 5 and the river. It must be demonstrated that the proposed development will not have a negative impact on the amenity of views from the Swan River and parklands to Strategic Landmarks and from Strategic Landmarks to the Swan River.



Figure 3 – Whadjuk Noongar place names

Whadjuk Noongar spirituality is intricately related to and underpins every community and cultural space within *Buneenboro*. The Precinct is part of a greater cultural landscape extending beyond the Swan and Canning rivers across the Noongar nation.

The historical landscape of *Buneenboro* has been extensively modified since colonisation and establishment of Perth as the capital of Western Australia.

Whadjuk Noongar place names are to be actively recognised in all development and land management initiatives following proper consultation with and endorsement by Whadjuk Noongar representatives.



Figure 4 – Community, cultural and recreation places

Figure 4 – Community, cultural and recreation places legend

- 1 **ELIZABETH QUAY**
Continued evolution into 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, tourism and civic experiences.
- 3 **CONCERT HALL SOUTH**
Expanded cultural destination with a mix of complementary entertainment, dining and community spaces.
- 4 **LANGLEY PARK**
Continued role as primary space for civic celebrations, large-scale recreation, cultural and sporting events. Infrastructure and facilities to be enhanced to encourage visitation and engagement by residents, workers and visitors.
- 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**
An emerging civic hub at the city's eastern end featuring riverside community spaces, 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 **OPTUS STADIUM PARKLANDS**
Unique tourism, sporting and cultural experiences to be offered within a landscaped setting showcasing Western Australian culture, Swan River and Whadjuk Noongar significance.
- 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 **PASSIVE RECREATION AND SPORTING 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, events and civic celebrations, with expanded opportunities to directly interact with and appreciate the river.
- 14 **SOUTH PERTH PRIMARY EVENT AND CELEBRATION AREA**
Ongoing focal point for civic and cultural events and celebrations with aesthetic, historic, social and cultural significance to city development.
- 15 **MENDS STREET AND JETTY**
South Perth's river gateway to undergo significant 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 – View corridors and strategic landmarks

Figure 5 – View corridors and strategic landmarks legend

VIEW CORRIDORS
To strengthen visual and physical connections to Perth Water, view corridors are to be preserved and enhanced:

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

EAST PERTH

- 4 Hay Street to river foreshore
- 5 Claisebrook Cove to/from Optus Stadium

SOUTH PERTH, VICTORIA PARK, BURSWOOD

- 6 Taylor Street, between Canning Highway and water's edge
- 7 Douglas Avenue, between Mill Point Road and water's edge
- 8 Coope Street, between Mill Point Road and water's edge
- 9 Mends Street, between Mill Point Road and water's edge
- 10 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.

2. Natural values and resilience

Perth Water *Buneenboro* sits within the globally unique Swan Coastal Plain and 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 into a salt and freshwater system.

As the city has expanded, the river has been subject to further changes including dredging, reclamation and infill, contained 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 Precinct's foreshore, allowing for recreation and promenading 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 Precinct is susceptible to flooding and sea level rise, and with the risk of increased inundation over the longer term, the impact of climate change and other environmental conditions needs to be considered. Please refer to Appendix 1 for more details.

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, allow biodiversity to flourish, and enable adaptation to a 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 by minimising the extent of hard infrastructure (such as revetments and river walls) 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 Precinct and creates a natural interface with the river.
- 2.3. Conserve, enhance and protect remnant and other high value vegetation and environmentally valuable localities.
- 2.4. 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.
- 2.5. Minimise the use of hard structures – e.g. for asset protection, flood management and drainage scour.
- 2.6. Minimise the disturbance of potential and actual acid sulfate soils and prioritise on-site remediation strategies of contaminated sites where possible.
- 2.7. Minimise adverse environmental impacts including to adjacent areas.
- 2.8. Informed by research excellence, the principles of climate resilience are applied to planning and management of the river and foreshore.

DEVELOPMENT REQUIREMENTS

Maintain nature and function of the river

- 2(a) Development is to be responsive and implement 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 primary activity nodes will only be permissible if offset by the provision of additional flood capacity.
- 2(c) Development within the activity nodes identified in Figure 8 should be consistent with the function and purpose of the nodes as described in section 3 Foreshore Activation.
- 2(d) Development within secondary and minor activity nodes and outside identified activity nodes should be designed to accommodate some inundation during flood or storm events.
- 2(e) 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(f) Development is to address site specific considerations such as geotechnical and groundwater conditions and be designed accordingly to mitigate adverse environmental impacts.
- 2(g) Potential environmental impacts from any development must be assessed and is to include noise pollution, vegetation clearing (if any), waste management, potential and actual acid sulfate soils, soil and/or water contamination, light pollution, potential impacts to aquatic fauna and flora, hydrodynamic processes and erosion/deposition processes and any others as identified.
- 2(h) Where possible, seek to avoid disturbance of actual or potential acid sulfate soils and/or contamination. Where these are to be intercepted, on-site management and in-situ remediation are preferred in accordance with best management practices.
- 2(i) Any identified impacts of a proposal on the environment, safety and amenity of the river must be avoided, minimised and mitigated in accordance with the relevant legislation and standard risk management hierarchy. Appropriate

management plans are to be produced, approved by the relevant authorities and implemented accordingly.

Water management

- 2(j) Prioritise the use of natural systems (e.g. bio-filtration and living streams) to manage stormwater to deliver multiple benefits (including water quality improvement and flood management).
- 2(k) Stormwater runoff from rainfall events at new developments is to be managed at source and be in accordance with the Stormwater Management Manual for Western Australia and related guidance documents.
- 2(l) Manage water in a sustainable manner including minimising use of irrigated water
- 2(m) Retrofit existing drainage infrastructure to improve stormwater quality that discharges to the river. Consider stormwater storage for irrigation purposes.
- 2(n) Existing roads, carparks and roofs to be retrofitted to improve stormwater quality where opportunities allow.
- 2(o) Opportunities should be explored to replace turf with native plants and non-irrigated recreational facilities in selected areas to reduce use of water, fertilisers and pesticides and to increase biodiversity and amenity within the locality.

Landscape and vegetation

- 2(p) Landscaping to be in accordance with landscaping and planting guidelines developed by DBCA and relevant local authorities – in consultation with the Whadjuk Noongar community – and as amended from time to time. Where landscaping and planting guidelines have not been prepared, advice is to be sought from DBCA and relevant local authority with respect to appropriate species and planting regime.
- 2(q) Landscaping is to showcase Western Australia's unique flora preferring local native vegetation types and species.
- 2(r) Throughout the foreshore the landscape is to be developed to:
 - Improve biodiversity;
 - Rehabilitate existing degraded areas of remnant vegetation;
 - Establish vegetated connections between activity nodes
 - Increase canopy cover throughout the Precinct; and
 - Enhance connection to Kings Park.

- 2(s) Landscaping associated with development is to provide a soft interface to the river's edge.
- 2(t) Habitat creation and reinstatement is encouraged as part of all projects.
- 2(u) Strong green corridors of native vegetation are to be established connecting the foreshore to the surrounding landscape.
- 2(v) Due to the effects of deciduous trees on waterways, such species are not to be used on the foreshore or near stormwater infrastructure that discharges to the river.
- 2(w) Species selection shall be chosen to eliminate the need to use organic and chemical fertilisers wherever possible.

River interface

- 2(x) Any proposal to modify the interface with the river, should:
 - Maximise access to and amenity of the river;
 - Achieve the 'Desired outcomes for the river edge' as outlined in Figure 6. Where possible this should include replacement of riverwalls and revetments with bioengineering, regrading of foreshores and where feasible the creation of beaches;
 - Minimise 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 should be avoided if possible due to reduced opportunities for the public to access the river and the adverse impact on environmental outcomes for the river;
 - Ensure that any riverwalls or revetments installed along the river interface consider adjacent impacts to erosion and deposition processes and ensure these impacts are mitigated or acceptable to stakeholders;
 - Optimise opportunities for the community to access the river. For example, this should include provision of beach access, provide for a soft, natural interface and minimise the length and height of hard structures that interface with the river – such as boardwalks, decks, jetties and fishing platforms; and
 - Use materials that are naturally present within the locality, for example riverwalls and revetments should be constructed of limestone or biscuit rock – granite is unacceptable.

Figure 6 – Desired outcomes for the river's edge



Figure 6 – Desired outcomes for the river's edge legend

- | | | |
|---|--|---|
| <p>1 RIVERSIDE DRIVE
The City of Perth Riverfront Framework should consider opportunities for:</p> <ul style="list-style-type: none"> narrowing and realignment of Riverside Drive away from the foreshore; a variety of treatments to the foreshore including reduction of the extent of the riverwall and incorporation of bioengineering solutions and planting to the river's edge; Increased diversity of landscape planting within Langley Park and Ozone Reserve with provision of water-sensitive urban design; and a vegetated interface with the river to allow for improved public access to the river <p>2 LANGLEY PARK
Enhance with landscaped environment providing diversity of experiences including pause points, community meeting spaces and shade trees.</p> <p>3 POINT FRASER
Increase re-vegetation with bioengineering stabilisation at eastern end of site to improve foreshore stability and ecological function.</p> <p>4 HEIRISSON ISLAND
Promote as ecological and cultural sanctuary including a focus on protection and enhancement of Threatened Ecological Communities (TECs). Opportunity to integrate hard and bioengineered structures to stabilise reclaimed foreshore.</p> <p>5 WATERBANK TO MATAGARUP BRIDGE
Improve ecological and aesthetic function of foreshore. Integrate full strata planting to promote biodiversity connection and increase amenity/shade.</p> <p>6 VICTORIA GARDENS
Revegetate to promote biodiversity connection and increase amenity/shade. Potential for bioengineering to improve foreshore stabilisation.</p> | <p>7 MARDALUP PARK
Maintain existing structures and improve vegetation coverage. Monitor groundwater for residual contamination and develop long-term approach for foreshore management.</p> <p>8 OPTUS STADIUM PARKLANDS
Consider modification of dual use pathway to manage frequent inundation – e.g. raised board-walk style path with bioengineered foreshore.</p> <p>9 BURSWOOD PARK
Progress ongoing enhancements through minimal revetments and ongoing revegetation with local endemic species.</p> <p>10 SIR JAMES MITCHELL PARK
Enhance wetlands and increase diversity of passive recreation and educational opportunities. Partial regrade of foreshore with bioengineering to integrate with existing wetlands and future provisions for water-sensitive urban design.</p> <p>11 COODE STREET
Increase shade and vegetation diversity close to foreshore and increase opportunities for passive and active recreation and educational opportunities.</p> <p>12 SOUTH PERTH FORESHORE
Increase diversity/amenity of landscape planting within adjacent public open space, including provision of water-sensitive urban design. Threatened Ecological Communities will be conserved and enhanced.</p> <p>13 MENDS STREET TO MILLERS POOL
Introduce planting beds – low height vegetation – and strategically placed native tree planting to improve amenity and maintain views to river and city skyline.</p> | <ul style="list-style-type: none"> Existing remnant vegetation and revegetated areas are to be enhanced and protected. Native vegetated corridors are to lead from urban areas into the foreshore. Biodiversity linkages are to be promoted along the foreshore. Lower vegetation preferred between vegetated corridors to protect strategic views from public realm. Strategically important capital city riverfront. Structural/hard built stabilisation will be required. However, opportunities should be explored to provide the foreshore edge with a natural interface to the water, to minimise the extent of riverwall and to provide locations where the public can access the water. Due to the capital city location revetments are not acceptable. Existing riverwall and/or revetment to be replaced with predominantly soft infrastructure allowing for a combination of bioengineering and revegetation. Use of revetments should be minimised. Hard interface to foreshore to be retained. Explore opportunities to soften existing interface with vegetation and minimal hard infrastructure. Natural or high quality interface with the river to be retained and improved and continue to provide community access and environmental benefit. Interface with the river to be improved using a combination of bioengineering and revegetation along with minimal hard infrastructure to stabilise the foreshore and provide a high-quality environmental outcome. Hard structural control required. |
|---|--|---|

3. Foreshore activation

Perth Water *Buneenboro* is one of the city's pre-eminent attractions, valued for its picturesque setting, new water side 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, and a rich variety of nature-based experiences both on and off water, there is a significant opportunity to improve amenity and diversify activities and attractions in key locations around the Precinct.

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

Destination and activity nodes were established by the Whadjuk people and following European settlement. Over time these nodes and others have consolidated into a hierarchy, from commercial and residential nodes (e.g. Elizabeth Quay and Barrack Square) down 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.

An activity node hierarchy is established within this Precinct Plan to provide a clear expectation of how these spaces will continue to develop consistent with Figure 7. In summary the nodes are described as follows:

- **Primary Activity Nodes** - These nodes support large scale development including areas intensively used for residential and commercial activity (e.g. office, hotel, retail, food and beverage), extensive active and passive recreational areas, recreational, environmental and cultural uses and 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.
- **Secondary Activity Nodes** - These nodes support significant large-scale infrastructure within a natural landscaped setting as well as small scale activities such as equipment hire, dining and cafes, passive recreational areas, environmental and cultural uses and 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 whilst minimising filling (for example by utilising post construction in new structures).
- **Minor Activity 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). These are well suited to temporary and seasonal uses and activity to support the role and function of primary and secondary nodes. Buildings and infrastructure are to be designed to accommodate periodic inundation or allow for rapid and practical relocation.

OBJECTIVES

- 3.1. A destination hierarchy 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 Precinct 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. Development is limited in extent to protect the quantum and quality of public open space.
- 3.7. The cumulative impact of development within nodes is managed and may limit future intensification.

DEVELOPMENT REQUIREMENTS

- 3(a) The nature and scale of development is to be appropriate to the hierarchy of activity nodes as set out in the guidance provided in Figure 7.
- 3(b) 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.
- 3(c) All development is to ensure direct public access to, around and along the foreshore and should enhance community enjoyment of the foreshore and river.
- 3(d) Development is to be of a high-quality design compatible with its setting, with respect to height, bulk, scale, orientation, material selection and appearance.
- 3(e) With the exception of continued improvement of jetties, there is a presumption against new structures within the River Reserve.
- 3(f) Developments proposing substantial permanent structures are to be designed and detailed to a high standard, constructed of durable materials appropriate to the location and in keeping with the character of the locality. Significant development proposals should be subject to the State Design Review Panel or other design review process of the relevant local government or responsible authority.
- 3(g) Development should consider the provision of infrastructure and facilities for the benefit of the community, including but not limited to, the following:
 - End of trip facilities and secure storage for bicycles;
 - Storage / hire facilities for water craft and bicycles;
 - Public toilets and change rooms; and
 - Upgrade infrastructure adjacent to the development i.e. pedestrian / cycle paths, seating, shade structures, water stations.



Photo: Mark Thornley 27



Figure 7 - Activity nodes hierarchy

Figure 7 - Activity nodes hierarchy legend

PRIMARY ACTIVITY 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 and the city's west end.
- 2 **BARRACK SQUARE**
The primary port access to CBD, Barrack Square will be redeveloped as a low-rise transport and civic hub, including provision of a range of additional facilities and services (e.g. vessel hire, pick-up and drop-off point, community markets).
- 3 **CONCERT HALL**
Explore opportunities to redevelop the Terrace Road car park to strengthen connection between the foreshore, Perth Concert Hall and Government House and expand cultural and entertainment opportunities that respect viewsheds and maintain public access and public tenure.
- 4 **WATERBANK**
Prime, mixed use riverside 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, food and beverage use; significant public realm and amenity including foreshore access. Strengthened Optus Stadium connection via Matagarup and Windan Bridges provides opportunities for improved economic and social activity.

SECONDARY ACTIVITY 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.
- 7 **OPTUS STADIUM SPORT AND RECREATION PRECINCT**
Continued use and provision of sporting, recreation, entertainment and commercial uses within an open natural setting. Including Matagarup Bridge, tourism uses such as bridge climb and zipline, cafés and other light meal and dining options, commercial and recreation offerings such as ticket sales for recreational activities and equipment hire are encouraged.
- 8 **MENDS STREET**
The major arrival point by water to South Perth via Mends Street Jetty, linking the ferry terminal to Perth Zoo and beyond. Foreshore access via public piazza to the Mends Street commercial strip.

MINOR ACTIVITY NODES

- 9 **NELSON AVENUE**
Responding to longer term redevelopment of Gloucester Park, explore opportunity to provide low intensity activity node for eventgoers and recreation users (e.g. café, bike hire) at base of Matagarup Bridge
- 10 **LANGLEY PARK**
Provide a variety of spaces within Langley Park, including formalised sport and recreation grounds, event spaces, playgrounds, picnic areas and enhanced ecological connections to CBD and Ozone Reserve. Introduce low intensity development node (e.g. café, community meeting space) as central hub for activity facilitating passive foreshore activation, enhanced gathering spaces, playgrounds and picnic areas.
- 11 **MILLERS POOL**
Passive recreation uses complemented with small-scale permanent commercial use (e.g. café).
- 12 **COODE STREET**
Sport and recreation uses on and off water, supplemented with small scale permanent and temporary commercial uses.
- 13 **HURLINGHAM ROAD**
Sport and recreation uses on and off water, supplemented with small-scale permanent and temporary commercial uses.
- 14 **TAYLOR STREET**
Upgraded recreation space to include small-scale permanent and temporary commercial uses. Foreshore public access and engagement via an urban beach and paths.
- 15 **BURSWOOD PARK**
Passive recreation uses (e.g. playgrounds, beaches) complemented with small-scale permanent and temporary commercial uses.

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 Precinct's tourism potential matures, demand for prospective private commercial opportunities will continue to expand and diversify, including activities and infrastructure such as floating barges, sea planes and helipads.

The variety and scale of current and prospective uses 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 quiet, 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:

- Barrack Street, Mends Street and Coode Street jetties require improvement and upgrade to meet current and future demand;
- Lease periods for on-water commercial activities should be short-term (e.g. five years);
- 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.

Figure 8 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. On-water activities preserve the amenity of the river and the ability of the community to use, enjoy and safely access the river.
- 4.3. On-water activities preserve the environmental and cultural value of the river.
- 4.4. Development and activities do not result in privatisation of the river or have a detrimental impact on the amenity and public enjoyment of the area.
- 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.

DEVELOPMENT REQUIREMENTS

- 4(a) Development applications proposing on-water activities are to be accompanied by a Transport and Infrastructure Access and Impact Statement detailing:
 - Bathymetry details of the surrounding river channel;
 - Expected usage / patronage levels;
 - Access and servicing arrangements;
 - Strategies to mitigate impacts (environment, amenity, infrastructure);
 - Hours of operation; and
 - Event management plans (where applicable).
- 4(b) The river is to be retained as an asset available to the whole community. As such:
 - Long-term privatisation of the river will not be supported;
 - Leasing of parts of the river for commercial activities on water will be arranged through short term leasing periods (e.g. five years); and
 - Riverbed leases will have environmental management system requirements.
- 4(c) Proponents are to demonstrate that high risk on-water activities (e.g. management of waste and operations that generate emissions) can be effectively and safely managed so that they represent a low risk to the environment.
- 4(d) Operation of sea planes and helicopters on Perth Water *Buneenboro* are to demonstrate that:
 - Impacts on the amenity of the locality are minimised in terms of noise, frequency of flights and proximity to sensitive uses;
 - Risk of environmental contamination is mitigated. This includes ensuring that no refuelling 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(e) Operations within Commercial Water Sports area not to take place during major events.
- 4(f) All on-water development and activity is to be appropriately serviced and shall consider as a minimum carparking provision and accessibility, essential services such as electricity, reticulated water supply and sewerage.
- 4(g) A development may require the use of land-based infrastructure, such as 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. In addition, the upgrade or provision of infrastructure will remain available for use and access by the community.



Photo: Luke Baker 31

5. Circulation and movement

Facilitating strong connections to, around and across Perth Water *Buneenboro* brings significant 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 travel choices, while establishing a suite of green linkages that connect surrounding communities will improve physical and mental health.

Providing for the public transport system's future expansion – 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, Optus Stadium and Parliament House 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. Prioritise safe and easy access for all users.
- 5.3. Safe and supporting infrastructure, facilities, network management and policies prioritise active transport choices.
- 5.4. New transport infrastructure projects maintain strategic view corridors.
- 5.5. Connections to and around Perth Water *Buneenboro* strengthen its relationship with surrounding local communities.
- 5.6. Consistent approach to design of public infrastructure – signage, wayfinding etc.
- 5.7. Provide safe and accessible active transport networks to and throughout the river foreshore.

DEVELOPMENT REQUIREMENTS

- 5(a) Development should consider:
- Provision of infrastructure that supports and encourages active transport between activity nodes;
 - Provision of separated pedestrian and cycle path networks;
 - Provision of access to public amenities such as public toilets, parents' rooms and universal access facilities;
 - Provision of key infrastructure including cycle and active transport facilities;
 - Wayfinding strategies and design elements;
 - 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 Precinct's setting; and
 - Enhancing key connections to the surrounding area.
- 5(b) Development in locations identified in the *Swan Canning Riverpark Trail Masterplan* and the *Marril Riverpark Interpretation Plan* should include construction of trails and interpretation infrastructure as it relates to the proposed development.
- 5(b) Universal access is provided in accordance with the requirements of the *Disability Discrimination Act 1992* and relevant Australian Standards.





Figure 9 – Circulation and movement networks legend

- 1 RIVERSIDE DRIVE**
 Perth Foreshore Masterplan to investigate reconfiguration of Riverside Drive between Barrack Square and Point Fraser to mitigate increased inundation, improve river access, connections and viewsheds and improve visitor amenity.
 - 2 CAUSEWAY BRIDGE**
 Improve pedestrian and cycle connections. 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 HEIRISSON ISLAND**
 Provide movement and circulation infrastructure that supports the vision of establishing Heirisson Island as an ecological and cultural sanctuary.
 - 4**
 Upgrade pathways under Causeway Bridge to mitigate inundation, and improve lighting and associated amenity.
- Potential expanded public ferry route
 - Potential ferry and water taxi stops
 - Potential water taxi only
 - Potential cycle hire activities
 - Kayak hire
 - Improve pedestrian / cycle connectivity and safety across Riverside Drive in line with existing road network.
 - Build new pedestrian / cycle only bridge in line with demand to relieve pressure on Causeway path. Alignment is indicative only.
 - Complete the network of separated paths for cyclists (and related users) and 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 Precinct recognised as supporting a range of active uses within a hierarchy 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.

"heritage impact statement" a heritage impact statement (HIS) describes and evaluates the likely impact of a proposal on a heritage asset. A HIS is a clear and concise account of the proposed work that addresses three basic questions:

- How will the proposed works affect the significance of the place or area?
- What measures (if any) are proposed to ameliorate any adverse impacts?
- Will the proposal result in any heritage conservation benefits that might offset any adverse impacts?

"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

AHD:	Australia Height Datum	LGA:	Local Government Authority
CAT:	Central Area Transit	MRA:	Metropolitan Redevelopment Authority
CBD:	Central Business District	MRWA:	Main Roads Western Australia
CoP:	City of Perth	PCECP:	Perth Convention and Entertainment Centre Precinct
CoSP:	City of South Perth	POS:	Public Open Space
DBCA:	Department of Biodiversity, Conservation and Attractions	PTA:	Public Transport Authority
DCA:	Development Control Area	PWVG:	Perth Water Vision Group
DoEE:	Department of Environment and Energy	SWALSC:	South West Aboriginal Land & Sea Council
DoT:	Department of Transport	ToVP:	Town of Victoria Park
DPLH:	Department of Planning Lands and Heritage	TEC:	Threatened Ecological Community
DWER:	Department of Water & Environment Regulation		
HIS:	Heritage Impact Statement		

RELATED DOCUMENTS

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:

Department of Biodiversity, Conservation and Attractions:

- Marri Riverpark – An Interpretation Plan for the Riverpark (April 2014)
- Best management practices for foreshore stabilisation (December 2009)
- Policy 42 – planning for land use development and permitting (June 2016)
- Policy 43 – planning for marinas and yacht clubs (June 2016)
- Policy 44 – planning for jetties (June 2016)
- Policy 45 – planning for miscellaneous structures and facilities (June 2016)
- Policy 46 – planning for commercial operations (August 2016)
- Policy 47 – planning for dredging (June 2016)
- Policy 48 – planning for development setback requirements (June 2016)
- Policy 49 – planning for stormwater management (June 2016)
- Policy 50 – planning for dewatering (March 2017)
- Policy 51 – planning for wastewater management (March 2017)

City of Perth Draft City Planning Strategy

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 Mends Street Masterplan

City of South Perth Foreshore Strategy and Management Plan

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



Action Plan

Action	Timing (years) 0-2, 2-5, 5+	Lead agencies	Estimated value / budget (excluding agency internal governance / administration costs)	Key considerations and potential interdependencies
1 – Culture, tourism and recreation				
1.1 Valuing Whadjuk Noongar culture				
<ul style="list-style-type: none"> Review and update Whadjuk Noongar place names across Precinct (including those shown in Figure 3), as required. In collaboration with the Whadjuk people determine and deliver the appropriate narratives, history, culture and connection specific to the Precinct: <ul style="list-style-type: none"> Ensure interpretation is consistent with the requirements of Whadjuk people, the Burra Charter and Government legislation; Make experiences, themes and stories available to visitors to Perth Water Buneenboro associated with pre-contact, contact and post-contact between Whadjuk and non-Aboriginal cultures; and Free and paid interpretation experiences to be made available to visitors to Perth Water Buneenboro. 	0-2 2-5	DBCA, SWALSC*	***	Future Precinct Plans, heritage studies
1.2 Whadjuk Noongar / Noongar Cultural Centre				
<ul style="list-style-type: none"> Work with Whadjuk Noongar representatives to facilitate investigation of potential sites for the location of a Whadjuk Noongar / Noongar Cultural Centre within proximity to Perth Water Buneenboro. Explore opportunity as part of Bicentennial celebration, including liaison with the Perth Public Art Foundation. Align opportunity with the (draft) WA Cultural Infrastructure Strategy. The Cultural Centre should reinforce connections to Kings Park, Government House, Perth Concert Hall, Heirisson Island, South Perth and Victoria Park foreshore. 	2-5	DPLH, CoP, SWALSC*	***	Adoption of Whadjuk People Indigenous Land Use Agreement Finalisation of WA Cultural Infrastructure Strategy
1.3 Cultural Landscape Management Plan				
<ul style="list-style-type: none"> Develop and implement a Cultural Landscape Management Plan to: <ul style="list-style-type: none"> Establish an understanding of the Aboriginal and Non-Aboriginal cultural heritage significance of the area and prepare a statement of significance that encapsulates those values; Conserve places of heritage value for the community to enjoy now and in the future; Identify new opportunities for interpretation of tangible and non-tangible heritage using tools such as public art, signage, wayfinding systems, access infrastructure, digital platforms; and Enable the stories of the area to be celebrated by all facets of the community. 	0-2	DBCA, DPLH, SWALSC	**	Significant contribution of existing work e.g. Marli Riverpark Interpretation Plan. Finalisation of WA Cultural Infrastructure Strategy. City of Perth Cultural Mapping Project

Action	Timing (years) 0-2, 2-5, 5+	Lead agencies	Estimated value / budget (excluding agency internal governance / administration costs)	Key considerations and potential interdependencies
1 – Culture, tourism and recreation				
1.4 Tourism				
<ul style="list-style-type: none"> In context of the State government's tourism product development focus, work with key stakeholders to identify visitor experiences unique to Western Australia, for example: <ul style="list-style-type: none"> Environment and nature-based experiences; Education, interpretation and cultural experiences; Activities that promote health and wellbeing, social inclusion and social connection; and Water based activity and attractions aligned with local identity and lifestyle. 	0-2	Tourism WA	**	WA Tourism Strategy
1.5 Indigenous tourism				
<ul style="list-style-type: none"> Facilitate establishment of additional Aboriginal tourism businesses around Perth Water Buneenboro. The program may include: <ul style="list-style-type: none"> Development of measures to attract and engage members of the Whadjuk Noongar community as business operators (e.g. call for expression of interest, delivery of training and mentorship); and Engagement of the broader tourism operators to improve awareness of increasing tourism services. 	0-2	Tourism WA, DBCA, SWALSC*, WA Indigenous Tourism Operators Council	***	WA Tourism Strategy Aboriginal Tourism Action Plan 2020-2024
1.6 Planning for Matagarup (Heirisson Island)				
<ul style="list-style-type: none"> In collaboration with the Whadjuk Noongar community and PWVG establish a vision and plan for the future of Matagarup (Heirisson Island) with a focus on recognising Aboriginal cultural value and enhancing the natural qualities (including biodiversity values) and features of the Island. Review the 2014 Heirisson Island Master Plan. 	2-5	CoP, DBCA	***	

* SWALSC responsibilities to transfer to Whadjuk Body Corporate pending finalisation of South West Native Title Settlement and associated Whadjuk People Indigenous Land Use Agreement

Action	Timing (years) 0, 2, 2-3, 5+	Lead agencies	Estimated value / budget (excluding agency internal governance / administration costs)	Key considerations and potential interdependencies
2 – Natural values and resilience				
2.1 Maintain nature and function of the river				
<ul style="list-style-type: none"> Conduct an asset audit of the foreshore structures, drains and drainage networks including confirmation of levels relative to Australian Height Datum (AHD), in order to inform sea level rise assessment on flooding. 	0-2	LGAs/Water Corp, DoT	...	Water Services Act 2012, LGAs drainage infrastructure maintenance plans
<ul style="list-style-type: none"> Develop and implement an infrastructure upgrade and maintenance plan that responds to the impacts of climate change and long-term sea (river) level rise. This should consider relocation of drainage infrastructure, appropriate design responses based on acceptable levels of inundation of recreational and transport assets, as well as erosion impacts. 	5+	LGAs, DoT, Water Corp, MRA	...	Best Management Practices for Foreshore Stabilisation, DBCA Policies for development in the Swan Canning Development Control Area
<ul style="list-style-type: none"> Prepare a medium to long term strategy for foreshore management with consideration of the impact of sea level rise and other climate change considerations. 	5+	LGAs, DBCA	...	
2.2 Environment impacts				
<ul style="list-style-type: none"> Develop a Best Practice Landscape Maintenance Manual for the Precinct that limits the use of chemical fertilisers and pesticides, minimises water use, protects native vegetation etc. 	0-2	LGAs	•	LGA Landscape Maintenance Manuals and Procedures
2.3 Landscape and vegetation				
<ul style="list-style-type: none"> Develop targets for increasing native vegetation cover and biodiversity within the Precinct. 	0-2	DBCA, LGAs	..	
<ul style="list-style-type: none"> Explore opportunities to expand WA Wildflowers Way initiative throughout the Precinct. 	0-2	DPLH, Tourism WA, LGAs, DBCA	•	LGAs current policies and strategies for greening and landscape management
<ul style="list-style-type: none"> Develop landscape and planting guidelines for the Precinct incorporating flora that is indigenous to the Precinct with the aim of strengthening the ecological linkages between the Precinct and the adjacent River reserves and POS / green infrastructure assets. 	0-3+		..	WA Wildflowers Way initiative
<ul style="list-style-type: none"> Develop and implement a green infrastructure linkage plan, incorporating native plants between the Precinct and the surrounding public open spaces and along the key pedestrian and cycling networks. 	5+	LGAs	..	
<ul style="list-style-type: none"> Develop breeding habitats for iconic fauna (e.g. Black Swans, Long Necked Turtles etc.) in the suitable areas of foreshore (e.g. Clydesdale Reserve). 	5+	LGAs	..	
2.4 Water management				
<ul style="list-style-type: none"> Conduct opportunities and constraints analysis of stormwater assets and develop green infrastructure plan solutions to minimise pollutant and sediment inputs to the river and contribute to waterwise city objectives (e.g. daylighting of stormwater pipe network to create living streams, wetlands/biofilters, aquifer recharge, storage and reuse etc). 	0-3+	DBCA, DWER, LGAs	...	Stormwater Best Practice Management Manual

Action	Timing (years) 0, 2, 2-3, 5+	Lead agencies	Estimated value / budget (excluding agency internal governance / administration costs)	Key considerations and potential interdependencies
3 – Foreshore activation				
3.1 City of Perth Riverfront Framework				
<ul style="list-style-type: none"> Develop a Riverfront Framework and Masterplan for the Perth Water Buncarbore section within City of Perth (CoP), located east of Elizabeth Quay to Matagarup Bridge: <ul style="list-style-type: none"> Explore opportunities for Riverside Drive, such as relocation or narrowing; Explore opportunities to redevelop Terrace Road car park to strengthen connection between the foreshore, Perth Concert Hall and Government House, to expand cultural attractions and provide supporting uses that respect viewsheds and maintain public access and public tenure; Investigate opportunities to improve/provide for a more natural interface with the river, noting that CoP foreshore infrastructure, such as the riverwall, is nearing end of life; Incorporate 'designed-flooding-events', and soft-engineering to ensure usability of foreshore area; and Through the Masterplanning process, investigate a secondary activity node at an appropriate location along Langley Park, diversify infrastructure and amenity to facilitate a broader range of activities, and provide for improved non-vehicle connectivity throughout the foreshore areas (e.g. between Langley Park and Ozone Reserve). Implement Masterplan. 	0-2	CoP	...	CoP City Planning Strategy MRA Planning Framework.
3.2 David Carr Memorial Park (Narrows Interchange)				
<ul style="list-style-type: none"> At David Carr Memorial Park, plan for: <ul style="list-style-type: none"> Improved environmental outcomes; Improved public access and opportunities for enjoyment; and Opportunities for connectivity with the Perth Convention and Exhibition Centre (PCEC). 	5+	CoP	...	CoP City Planning Strategy CoP Riverfront Framework Future plans for PCEC MRA Planning Framework
3.3 Foreshore activation and servicing				
<ul style="list-style-type: none"> Identify opportunities to locate pop up food and beverage vans within identified activity nodes and where possible, co-locate with expanded bike hire stations and paddle craft facilities: <ul style="list-style-type: none"> Mill Point; Langley Park (e.g. the Langley Park Pump Station); Coode Street; McCallum Park; and Nelson Ave / Matagarup Bridge. Explore opportunities for construction of essential infrastructure (for example sewerage connection) for pop-up businesses at minor activity nodes. Investigate commercial viability for permanent café / restaurant offerings at the following locations: <ul style="list-style-type: none"> Concert Hall foreshore car park (Langley Park); Miller's Pool / Old Mill; Coode St; and Taylor St. 	0-2			
	5+			

Action	Timing (years) 0, 2, 2-5, 5+	Lead agencies	Estimated value / budget (excluding agency internal governance / administration costs)	Key considerations and potential interdependencies
3 – Foreshore activation				
<ul style="list-style-type: none"> Install/upgrade public toilets at the following locations: <ul style="list-style-type: none"> Langley Park (e.g. the Langley Park Pump Station); Waterbank; Mends Street; Coode Street; Mill Point; Hurlingham Road; and Ellam Street. Upgrade toilets located next to children's playgrounds to include parents' rooms (including baby change facilities) and universal access change rooms. Note: Burswood Park facilities already upgraded. Install universally accessible toilets at Mends Street to supplement Elizabeth Quay and Waterbank locations. 	2-5			CoP Riverfront Framework CoSP Foreshore Masterplan, ToVP Foreshore Access and Management Plan
<ul style="list-style-type: none"> Upgrade toilets located next to children's playgrounds to include parents' rooms (including baby change facilities) and universal access change rooms. Note: Burswood Park facilities already upgraded. Install universally accessible toilets at Mends Street to supplement Elizabeth Quay and Waterbank locations. 	2-5			
3.4 Barrack Square Masterplan				
<ul style="list-style-type: none"> Plan for the upgrade and redevelopment of Barrack Square, noting key infrastructure is nearing end of life (for example Jetty 1), consider: <ul style="list-style-type: none"> Its commercial viability as the primary water-based transport hub for, and entrance to, Perth CBD; Capacity to accommodate servicing requirements (access / egress, patron safety, waste management, storage, re-fuelling etc); Relocation of berths (e.g. drop-off and pick-up, hire equipment); and Allowing for expanded retail, tourism and food and beverage uses, and facilities associated with recreational use of the river and foreshore. Explore interim uses of existing underutilised infrastructure, for example Jetty 1 (currently underutilised and not publicly accessible) may be adaptable for equipment hire and patron pick up / drop off for commercial operators. 	2-5	DBCA, DoT, MRA	***	MRA Normalisation Structural limitations of associated aging infrastructure
<ul style="list-style-type: none"> Investigate options for land-based helipads. 	0-2	DoT, DBCA	.	
3.5 Helipads				
<ul style="list-style-type: none"> Investigate options for land-based helipads. 	0-2	DBCA, CoP	.	Contingent on commercial viability of on-water helipad

Action	Timing (years) 0, 2, 2-5, 5+	Lead agencies	Estimated value / budget (excluding agency internal governance / administration costs)	Key considerations and potential interdependencies
4 – On-water activities				
4.1 Proactive management of commercial and tourism opportunities				
<ul style="list-style-type: none"> Formalise Expression of Interest, approvals and management processes for on-water commercial uses (new and expanded), to balance economic, social and environmental benefits and impacts on environment, amenity and infrastructure. Develop approvals conditions for operations within commercial water sports area – including restriction on operations during major events (e.g. Skyshow). 	0-2	DBCA, DoT, Tourism WA	••	
4.2 Assessing development impacts of on-water activities				
<ul style="list-style-type: none"> Develop policy requiring proponents of new and / or expanded commercial river uses to provide a transport and infrastructure access and impact statement detailing key operational and environmental considerations including: <ul style="list-style-type: none"> Expected usage/patronage levels; Access arrangements; Waste management; Servicing arrangement; Strategies to mitigate impacts (environment, amenity, infrastructure); and Event management plans (where applicable). 	0-2	DoT, DBCA	.	
4.3 Courtesy moorings				
<ul style="list-style-type: none"> Expand capacity of courtesy mooring system by: <ul style="list-style-type: none"> Reconfiguring moorings between Narrows Bridge and Elizabeth Quay (to also accommodate the already-approved entertainment barge); and Examining capacity to increase number of courtesy moorings. Consideration should be given to the following locations: Mends Street, Coode Street, Claisebrook Cove and Optus Stadium. 	0-2	DoT, DBCA	••	
4.4 Facilitate opportunities for ongoing operation of sea planes				
<ul style="list-style-type: none"> Complete and finalise sea plane trials. 	0-2	DBCA, Tourism WA	.	
<ul style="list-style-type: none"> Establish sea plane operational guidelines to address: <ul style="list-style-type: none"> Aircraft movements (total number of take-off and landings); Hours of operation; Flight path; Noise management; Prevention of refuelling activities within the Precinct; and Strategies for wildlife protection and strike management. Formalise a proactive process to manage commercial proposals and expressions of interest, including selection criteria and process, implementation and management and commercial terms for ongoing operation. 	0-2	DBCA, Tourism WA	.	

Action	Timing (years) 0, 2, 2-3, 5+	Lead agencies	Estimated value / budget (excluding agency internal governance / administration costs)	Key considerations and potential interdependencies
4 – On-water activities				
4.5 Hire of recreational craft / vessels				
<ul style="list-style-type: none"> Investigate options for future hire facilities at key activity nodes. Engage MRA regarding future opportunities for hire of recreation craft / vessels at Elizabeth Quay. 	0-2	DBCA MRA DoT	•	
4.6 WA Powered Water Sports Area				
<ul style="list-style-type: none"> Review current arrangement with view to improve utilisation and management of the Western Australian Powered Water Sports Area. <ul style="list-style-type: none"> Engage with the Burswood Management Aquatic Group regarding proposed changes; Develop management framework and communications plan; Implement a trial period to test proposed management framework; and Increase public awareness of use of area. 	0-2	DoT, DBCA	•	
4.7 Aquatic Use Review				
<ul style="list-style-type: none"> Implement outcomes of the Aquatic Use Review to identify permissible on-water activities, clearly articulating regulations of use (see Appendix 2). 	0-2	DoT, DBCA	•	

Action	Timing (years) 0, 2, 2-3, 5+	Lead agencies	Estimated value / budget (excluding agency internal governance / administration costs)	Key considerations and potential interdependencies
5 – Circulation and movement				
5.1 Active transport				
<ul style="list-style-type: none"> Improve active transport connections to deliver equitable choices for all user groups, ages and abilities (e.g. pedestrian, cycling, electric scooters, segways): <ul style="list-style-type: none"> Address gaps in pedestrian and active transport facilities (e.g. bicycle parking, seating, shade, water stations) at activity nodes; Progressively install separated paths where they are currently shared; Prioritise north-south connection from Langley Park, across Riverside Drive, to the foreshore; Across the Causeway, resurface existing shared footpath / cycle path and investigate alternative safety railings to widen the shared path, or re-allocate road space; Investigate the feasibility of Heirisson Island pedestrian and cycle only bridge; Investigate the opportunity to unify bike hire/bike share across the Precinct: <ul style="list-style-type: none"> Consider locations for cycle stands; Consider integration with passive on-water craft hire, for example kayaks and paddle boards; and Subject to above, and in addition to Point Fraser and South Perth Esplanade, locate potential self-service cycle hire stations and supporting infrastructure at: <ul style="list-style-type: none"> Coode Street; McCallum Park; Waterbank; Langley Park; Mends Street; Burswood Park; and Nelson Ave. Identify an appropriate location for improved bicycle parking facilities on Heirisson Island. 	0-5 0-2 0-2 2-5 5+ 2-5	LGAs, DoT LGAs CoP, DBCA, DoT DoT, Main Roads WA (MRWA) DoT, CoP, ToVP, DBCA LGAs, DoT, MRA, Tourism WA CoP	•••• •••• •••• •••• depending on options •••• depending on options ••	
5.2 Wayfinding and trails				
<ul style="list-style-type: none"> As a component of the Perth Water Buneenboro Cultural Landscape Management Plan (L3), develop and implement a consistent, Precinct-wide wayfinding masterplan and supporting signage guidelines (including dual Noongar-English naming of sites) that unify Precinct information and connect visitors with surrounding local destinations. Develop active travel maps (walking and cycling) that promote the Precinct - cultural, heritage, native flora and fauna, wildlife, public art, sculpture etc. Explore options for digital access and display. Establish electronic circuit/permanent distance markings on paths around Perth Water Buneenboro to designate running/cycling circuits. 	2-5 0-2 0-2	LGAs LGAs, Tourism WA LGAs	•• • •	

Action	Timing (years) 0, 2, 2-5, 5+	Lead agencies	Estimated value / budget (excluding agency internal governance / administration costs)	Key considerations and potential interdependencies
5 – Circulation and movement				
5.3 Facilitate informal water activities				
<ul style="list-style-type: none"> Investigate demand and opportunities to construct temporary storage of non-motorised watercraft (e.g. kayaks, stand up paddleboards) to enable recreational users to access a wider range of land destinations (e.g. coffee/lunch break, social engagement, explore). 	0-2	CoSP, CoP, DBCA, Commercial scheme operators	• +ongoing maintenance	
5.4 Expand bus and ferry services				
<ul style="list-style-type: none"> Undertake a feasibility assessment for introducing expanded capacity, routes and frequency of bus transport services (e.g. Central Area Transit (CAT)). 	2-5	DoT, PTA, Tourism WA	•	Perth Greater CBD Transport Plan
<ul style="list-style-type: none"> Undertake a feasibility assessment for introducing 'Hop on Hop off' tourism shuttle provider to the South Perth Foreshore. 	5+	DoT, Tourism WA	•	Implementation and timeframe dependant on public / private service
<ul style="list-style-type: none"> Subject to demand, review previous studies such as Perth's Ferry Services - Current Status and Future Use report and investigate the viability of potential for new ferry routes and vessels, to increase cross river connections. 	2-5	DoT	••	
5.5 Improve jetty and ferry infrastructure				
<ul style="list-style-type: none"> Review existing jetties and plan for required upgrades (including consideration of sea level rise) and future provision for potential expanded and additional water-based transport, such as increased ferry services (public and private) and water taxis: <ul style="list-style-type: none"> Elizabeth Quay – capacity review of existing jetty; Mends Street – capacity review of existing jetty; Mends Street – upgrade jetty, and relocate cafe facility to improve access; Coode Street – upgrade jetty; Point Fraser, Claisebrook Cove and Optus Stadium – capacity review; and Claisebrook Cove and Optus Stadium. 	5+	PTA, DoT	••	Connect South Masterplan
	2-5	CoSP, DoT	••	
	5+	CoSP	••••	CoSP Foreshore Management Plan
	5+	CoSP	••••	
	2-5	LGA, Burswood Park Board	••	
	5+	LGA, Burswood Park Board	••	

Action	Timing (years) 0, 2, 2-5, 5+	Lead agencies	Supporting Agencies
6 – Governance			
6.1 Formalise and expand Perth Water Vision Group			
<ul style="list-style-type: none"> Implement following actions: <ul style="list-style-type: none"> Confirm existing Agency involvement and representation (DBCA); Invite additional agencies (DBCA); Nominate Traditional Owner representatives (Whadjuk community); Consider and ratify (expanded Vision Group); Develop draft Terms of Reference (DBCA); and Consider and adopt (expanded Vision Group). 	0-2	DBCA	Vision Group agencies, Traditional Owners
6.2 Form Perth Buneenboro Traditional Owners Advisory Group			
<ul style="list-style-type: none"> Implement following actions: <ul style="list-style-type: none"> Develop draft Terms of Reference (DBCA); Consider and adopt (expanded Vision Group); Nominate Traditional Owner representatives (Whadjuk Noongar community); Consider and ratify (expanded Vision Group); and Establish and administer, including agendas, minutes and sitting fees (DBCA). 	0-2	DBCA	Vision Group agencies, Traditional Owners
6.3 Commercial leasing and tenure			
<ul style="list-style-type: none"> Develop standard riverbed lease agreements for short- and long-term commercial developments. Key lease requirements will include: <ul style="list-style-type: none"> Preference for short term leases (e.g. 5 years); and Alignment with related land-based leases. 	0-2	DBCA	
6.4 Whadjuk culture to inform planning and management for Perth Water Buneenboro			
<ul style="list-style-type: none"> Develop a co-management framework with Whadjuk- Noongar representatives, to focus on areas such as: application of traditional ecological knowledge, extension of the DBCA ranger program, environmental management and protection, engagement in development planning and approvals etc. 	0-2	DBCA, SWALSC*	
<ul style="list-style-type: none"> Establish transparent and consistent engagement, approvals and decision-making processes between local and State government agencies and Whadjuk Noongar community. 	0-2	DBCA, SWALSC*	
<ul style="list-style-type: none"> Include a community-endorsed representative of the Whadjuk Noongar community in the Perth Water Vision Group. See Action 6.2. 			
<ul style="list-style-type: none"> Establish a Perth Water Buneenboro Traditional Owners Advisory Group, to consult, engage and inform decision making related to public and private sector development and improvement projects within the Precinct boundary. 			
6.5 Management of unsolicited proposals			
<ul style="list-style-type: none"> Develop and implement guidelines to manage unsolicited proposals in the Swan Canning Development Control Area (DCA) and/or the River reserve. The guidelines will assist DBCA in determining: <ul style="list-style-type: none"> Appropriateness of the proposal and process to support or decline; and/or Process to request / require changes to specific aspects of the proposal; and/or Whether to proceed to a competitive process through expressions of interest; and/or Whether to enter direct exclusive negotiations. Through the guidelines, set out a step-by-step pre-lodgement evaluation process to provide DBCA with a high-level summary of critical information, before signing landowner consent as the first step of assessing a proposal under the <i>Swan and Canning Rivers Management Act 2006</i> and <i>Swan Canning Rivers Management Regulations 2007</i>. 	0-2	DBCA	

Appendix 1

Sea Level Rise Forecast

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 100-year Annual Recurrence Interval (ARI) flood levels. The future level (for 2100) includes a predicted Mean Sea Level (MSL) rise of 0.9m.

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.

*based on 2014 Department of Water and Environmental Regulation (DWER) dataset (under review in 2019)

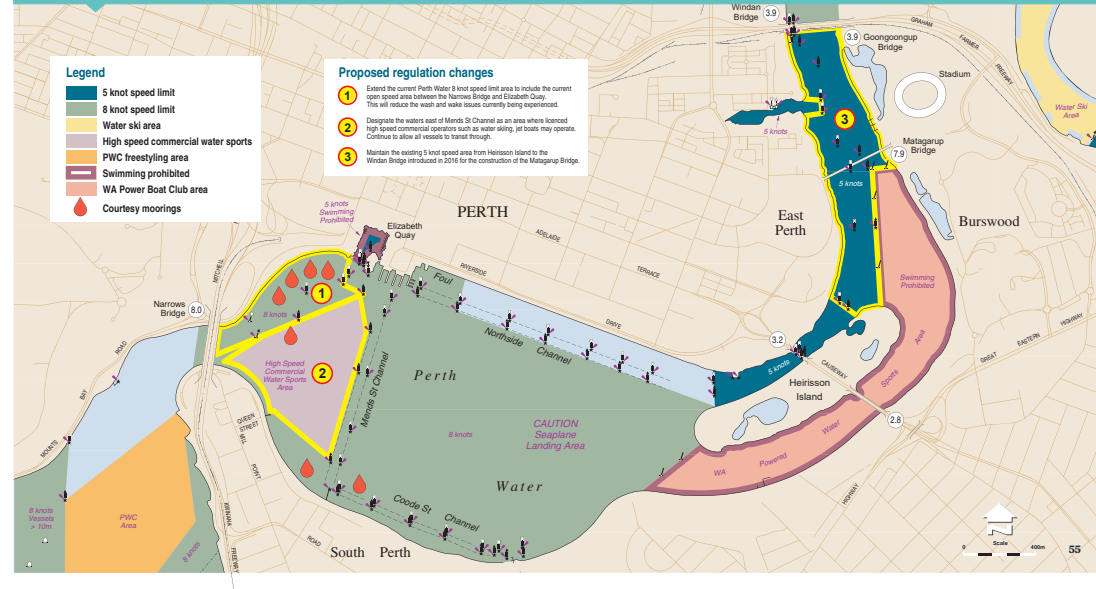
Legend

- Current 100 year ARI flooding level
- 100 year ARI flooding including predicted sea level rise (year 2100)



Appendix 2

Department of Transport – Perth Aquatic Use Review – proposed regulation changes



Prepared by:

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