DYARIGARRO WHADJUK BOODJAR

CLONTARF - WATERFORD - SALTER POINT FORESHORE MASTERPLAN

DRAFT JULY 2018

City of South Perth

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CONTENTS

GLOSSARY

CWSPF	*Clontarf, Waterford, Salter Point Foreshore*
ACM	*Asbestos Containing Materials*
Active Recreation	*Outdoor recreational activities, such as organized sports, playground activities, and the use of motorized vehicles, that require extensive facilities*
AEP	*Annual Exceedance Probability*
AHD	*Australian Height Datum*
ASS	*Acid sulfate soils*
BOM	*Bureau of Meteorology*
CAC	*Clontarf Aboriginal College*
CALM	*Conservation and Land Management (now Department of Planning, Lands and Heritage)*
CBD	*Central Business District*
CCW	*Conservation Category Wetland (refer www.dpaw.wa.gov.au)*
Commercial Development	*Development or enterprises primarily concerned with buying and selling of goods and/or services*
COSP	*City of South Perth*
CUBC	*Curtin University Boat Club*
DAIP	*Disability Access Inclusion Plan*
DBCA	*Department of Biodiversity, Conservation and Attractions*
DCA	*Development Control Area*
DFES	*Department of Fire and Emergency Services*
DPLH	*Department of Planning, Lands and Heritage*
DUP	*Dual Use Path*
DWER	*Department of Water and Environmental Regulation*
EMRC	*Eastern Metropolitan Regional Council*
EMS	*Ecosystem Management Services*
Formal Recreation Facilities	*Facilities provided for the primary purpose of supporting recreation activities. Examples include; club rooms, fitness equipment, playgrounds, boat ramps*
GPT	*Gross Pollutant Trap*
ILC	*Indigenous Land Council*
JDA	*JDA Consultant Hydrologists*
m	*Metres*
mbgl	*Metres below ground level*
MOU	*Memorandum of Understanding*
NSA	*Nicole Siemon and Associates*
NTWA	*National Trust of Western Australia*
Passive Recreation	*Outdoor recreational activities, such as nature observation, hiking, and canoeing or kayaking, that require a minimum of facilities or development.*
POS	*Public Open Space*
PTA	*Public Transport Authority*
Recreation	*Activity done for enjoyment when one is not working.*
REW	*Resource Enhancement Wetland (refer www.dpaw.wa.gov.au)*
SERCUL	*South East Regional Centre for Urban Landcare*
SRT	*Swan River Trust*
SWALSC	*South West Aboriginal Land and Sea Council*
Swan River Trust	*The Swan River Trust is an advisory body created by the Swan and Canning Rivers Management Act 2006. The Swan River Trust provides independent, high level strategic advice to the Minister for Environment and the Director General of the Department of Biodiversity, Conservation and Attractions (DBCA) on matters affecting the rivers. Under the Act, the Swan River Trust is vested with the care, control, and management of the River Reserve with various responsibilities including developing policies, and preparing and reporting on strategic documents relating to the Riverpark.*
URS	*URS Australia Pty Ltd*
UXO	*Unexploded ordnance*
WAPC	*Western Australian Planning Commission*
WOF	*Whole of Foreshore*
WSUD	*Water Sensitive Urban Design*

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THE DYARIGARRO WHADJUK BOODJAR IS ONE OF THREE SIGNIFICANT WATERFRONTS IN SOUTH PERTH AND A PLACE OF EXTRAORDINARY NATURAL BEAUTY AND SIGNIFICANCE.

THE FORESHORE WILL BE PROTECTED AND ENHANCED AS A PLACE WHERE THE NATURAL ENVIRONMENT, CULTURAL HERITAGE AND LOCAL COMMUNITY WILL GUIDE THE FUTURE OF THIS PRECIOUS LANDSCAPE.

1.0 EXECUTIVE SUMMARY

1.1 FORESHORE MASTERPLAN PURPOSE

The City of South Perth (the City) in 2017 commenced a master planning process to guide future activities and management along the Clontarf, Waterford and Salter Point foreshores' (CWSPF) in response to an identified need for a consolidated management strategy.

The foreshore areas from Clontarf through to Waterford and Salter Point are known as the Canning River wetlands. These estuarine wetlands are the most extensive wetlands in the lower reaches of the Swan and Canning Rivers and are considered to be environmentally significant. In recognition of this environmental value, the City has historically produced and implemented a number of separate management plans for different portions or elements of the CWSPF; however until now, there has been no consolidated, over-arching vision and management plan for the area.

Consequently, the primary aim in establishing this CWSP Foreshore Masterplan is to consolidate the disparate collection of existing management plans, ideas and initiatives planned for the CWSP foreshores' into a cohesive, singular policy document. The intention is that this document can be reliably used as a reference for the future management and development planning of the foreshore environs.

In reviewing the range of existing management plans that cover the site area, and through extensive stakeholder and community feedback, this Masterplan purposefully provides:

- a new adaptive landscape approach to balancing the demands for use, development and management of this precious and environmentally significant regional reserve;
- balances the above with the need to conserve and enhance a functional healthy river foreshore environment that accommodates anticipated climatic changes, and
- a framework against which all future decisions for the site are validated.

1.2 OBJECTIVES

Informed by community and stakeholder consultation, this document addresses the following objectives:

Address current and future management issues to strengthen the natural and cultural aspects of the CWSPF.

Allow for unique and site-specific landscape response that embraces the changing environment and allows positive experiences for all users.

Enhance native, physical and biological environmental values and ecosystem processes along the CWSPF.

Establish key areas for passive and active recreation and nature spaces.

Focus on connectivity, accessibility and amenity provision along the entire CWSPF.

Celebrate the unique culture and heritage of the foreshore and surrounds.

1.3 VARIED PERSPECTIVES

To inform this Masterplan, the City embarked on a significant campaign of community and stakeholder consultation. This consultation, detailed in Section 3 of this document, was essential in developing a Masterplan that is comprehensive, robust and considerate of broad range of ideas and community views.

Throughout the consultation and Masterplan development process, respondents overwhelmingly reinforced the following core principles to be incorporated into the final Masterplan document:

1. Preservation of the natural environment;
2. Protecting and enhancing the physical and visual connections to the river, and,
3. Maintaining and enriching character of 'the place'.

However, whilst there was overall strong agreement on the core principles to guide future development and management of the CWSPF, there was significant variance of opinion on how best to achieve these objectives. In response to this, this Masterplan targets a balanced middle ground, embracing best practice, embedded flexibility, and, wherever possible, light but decisive interventions.

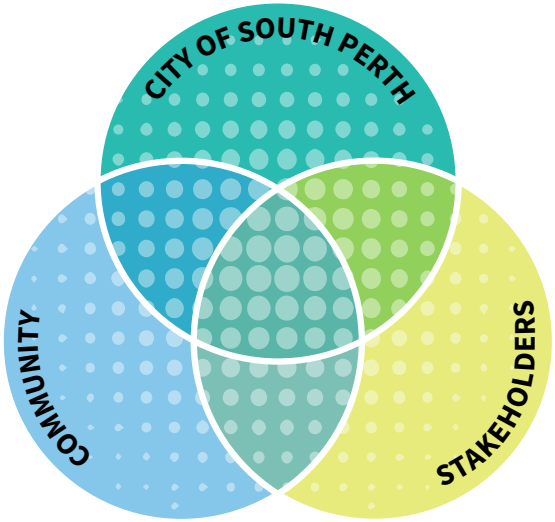


Figure 1 Varied Perspectives

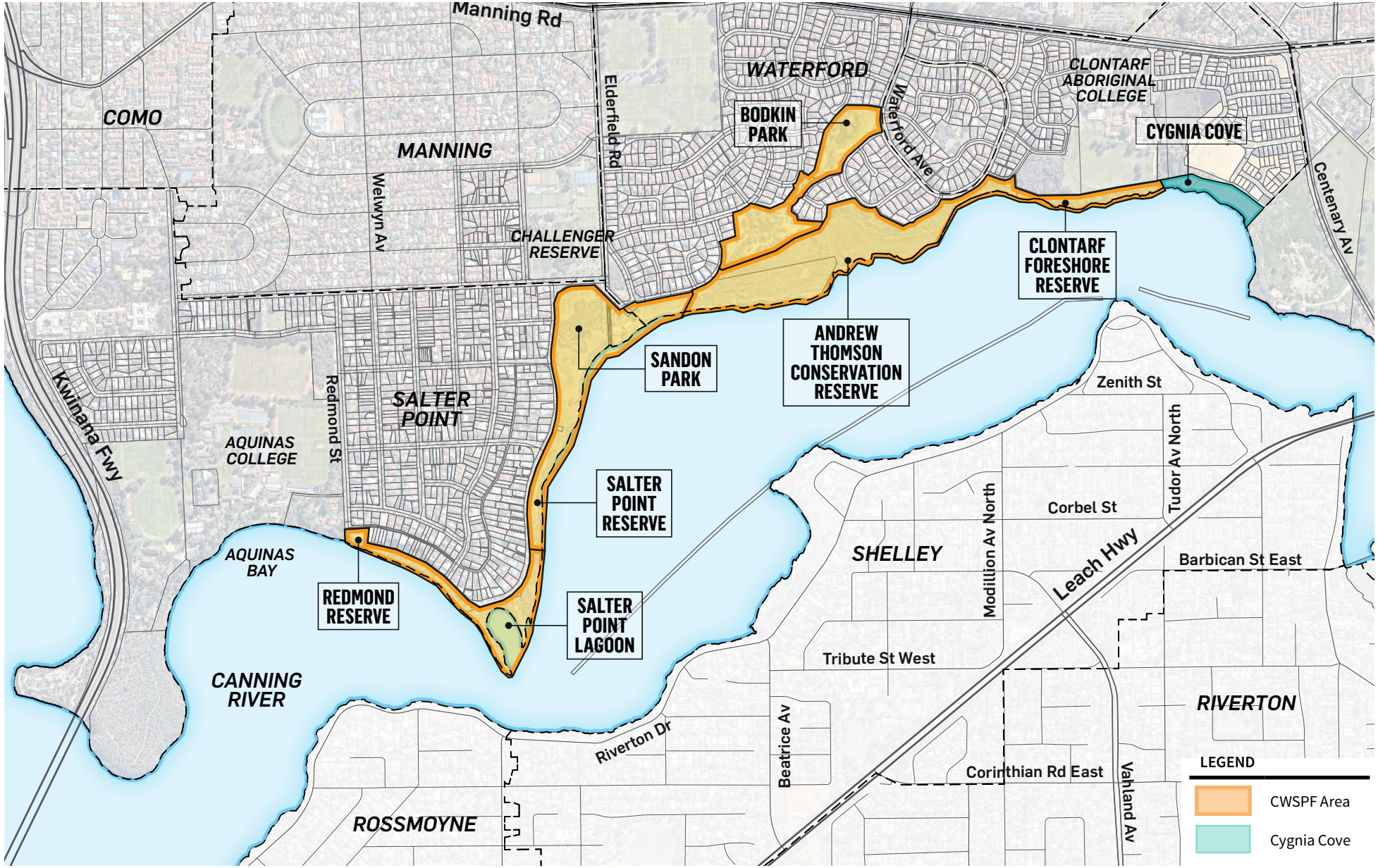


Figure 2 Study Area

1.4 STUDY AREA

The CWSPF study area includes extensive natural reserves, estuarine conservation wetlands, Bush Forever sites and public open space that occupy approximately 34 hectares of Canning River foreshore land. It stretches from Redmond Street in Salter Point to the western boundary of the Cygnia Cove residential estate in Clontarf.

Due to the recent completion of Cygnia Cove Natural Areas Management Plan, it was decided not to include this area in the Masterplan consultation process. However, the relevant components of the approved Cygnia Cove Natural Areas Management Plan have been considered and incorporated in this report for consistency.

1.5 FORESHORE MASTERPLAN PROCESS

The study builds upon previous research, planning and consultation efforts undertaken to date, with a focus on establishing a broad and shared understanding of the whole area, community values and concerns and providing guidance relating to the ongoing management and development of the precinct.

The process included a review of background information, a detailed site analysis and a comprehensive community and stakeholder engagement program.

Collectively, this research has informed a concept Masterplan, together with a series of goals, strategies and actions to achieve the vision.

Figure 3 Project Process Photos

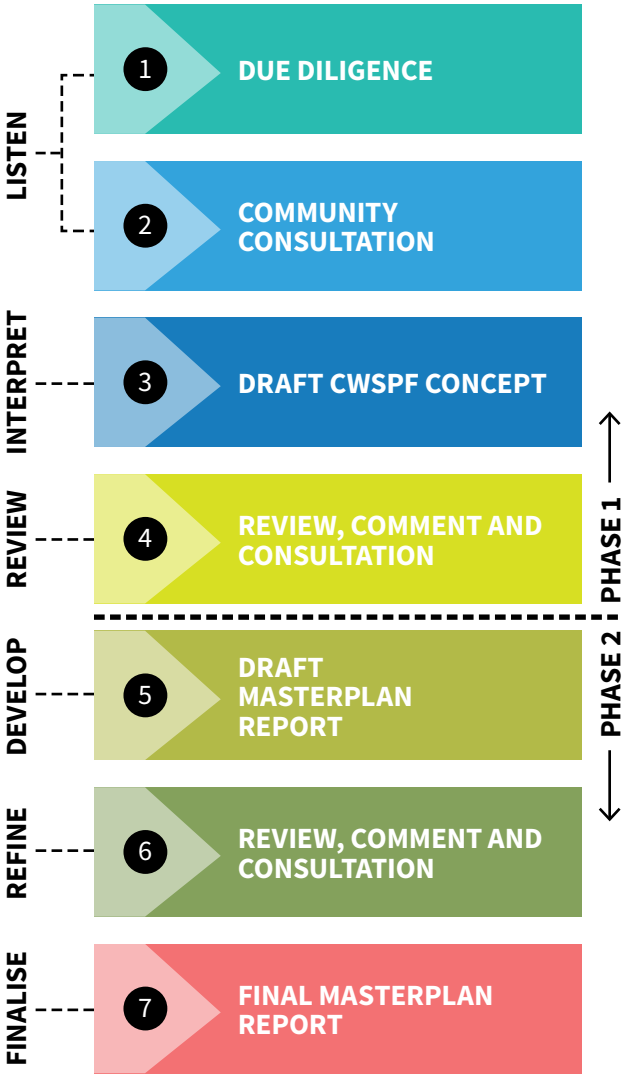


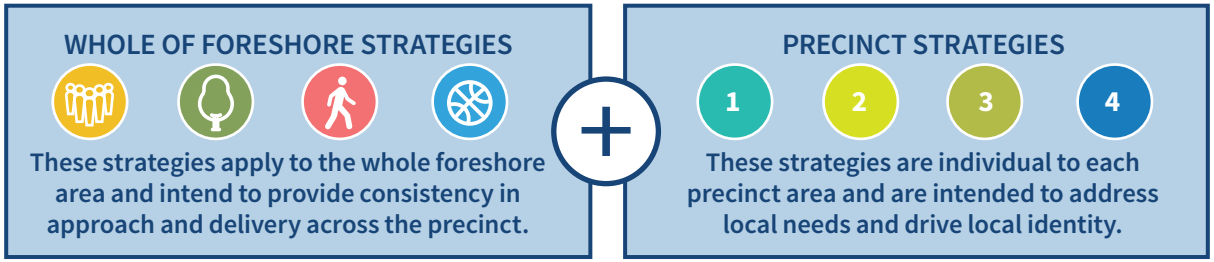
Figure 4 Masterplan Process Diagram

1.6 THE MASTERPLAN

Since the adoption of the various management plans across the foreshore, the City has incrementally constructed and implemented numerous projects throughout the CWSPF. However, the City has recognised that in order to improve the foreshore in a holistic, sustainable and cost-effective way, undertaking stand-alone projects is not a logical or effective way forward.

In response to this need, this masterplan will drive effective coordination of investment and implementation of foreshore improvements, by synthesizing all current work, community and stakeholder aspirations into a single document. This document will therefore provide an integrated approach to project delivery across the foreshore into the future. It identifies the most appropriate combination of uses for the CWSPF, while maintaining and preserving the environmental and heritage values of the area and its surrounds. It complements the regional planning approach of the Department of Biodiversity and Attractions (DBCA) as well as providing for local residents, regional users, and community, event, and tourism enterprises.

The Masterplan objectives are supported by a series of strategies that due to the size of the foreshore have been broken down into two inter-related approaches based on strategic 'themes' and geographical areas:



This dual approach allows for a seamless foreshore experience delivered through the Whole of Foreshore Strategies, while allowing for fine grain local considerations, activities and improvements to be realised through the Precinct Strategies. This will enable the development of foreshore spaces that are:

- Well-appointed with appropriate amenity;
- Comfortable, convenient and accessible;
- Inclusive and well-connected;
- Responsive and respectful of local character and identity; and,
- Sustainable and environmentally responsible

The result will be a holistically-considered foreshore that provides a range of recreational and social activities and conserves the natural and cultural environment.

THEMATIC CONSIDERATIONS AND STRATEGIES

The Whole of Foreshore strategies incorporate key considerations, sub-strategies and actions to enable the holistic planning, management and funding of identified projects. The key themes are:

Culture and Heritage

Recognise and celebrate culture and heritage as a strong element of the foreshore's identity and a reference point for the future of the foreshore

Environment

Develop an environment that responds to the requirements of climate change, provides biodiversity and supports the physical and emotional wellbeing of the community. Recognise and support the conservation values within CWSPF area

Access and Movement

Create a highly accessible and connected public open space, with improved access, connectivity and legibility for all users to the foreshore environment.

Recreation

Support current and projected community needs for recreation in a sustainable, cost effective and holistic manner.

In addition, Precinct Strategies incorporating key considerations, component sub strategies and actions have been defined for each distinct landscape character area along the foreshore. The strategies for each precinct reflect smaller interventions that respond to local community needs, recreation and environmental management.

1 Precinct 1: Clontarf And Andrew Thomson Conservation Reserve

This precinct is identified as a key destination for experiencing and sharing knowledge about the natural environment and our cultural heritage.

2 Precinct 2: Bodkin Park

Bodkin Park is recommended to be upgraded to provide a key local community gathering place with a focus on the natural environment and informal family recreation.

3 Precinct 3: Sandon Park

Sandon Park is identified as a key hub for the local and broader community with a focus on active recreation, community activities and events.

4 Precinct 4: Salter Point Reserve to Redmond Reserve

This is proposed to be a diverse range of natural experiences that accommodates access for passive recreation, interpretation and information relating to the natural environment and cultural heritage.

PROJECT DELIVERY STRATEGY

The time and investment attributed to the entire list of proposed foreshore improvements outlined in this masterplan is beyond the capacity of the City of South Perth's current funding and resourcing levels to complete in any one financial year. To implement the full range of recommendations, funding and implementation will need to be staged over time, which will require the City to prepare a Feasibility Framework and Implementation Plan to feasibly manage the proposed improvement works.

The Feasibility Framework and Implementation Plan will be prepared following adoption of the Dyarigarro Whadjuk Boodjar (CWSPF) Masterplan. This will be based on the strategies identified herein, with ongoing consultation with key project stakeholders, and continuous assessment of project feasibility and the funding arrangements to support the proposed works.

"WALKING, IDEALLY, IS A STATE IN WHICH THE MIND, THE BODY, AND THE WORLD ARE ALIGNED, AS THOUGH THEY WERE THREE CHARACTERS FINALLY IN CONVERSATION TOGETHER, THREE NOTES SUDDENLY MAKING A CHORD."

- Rebecca Solnit

2.0 UNDERSTANDING THE FORESHORE

2.1 SITE LOCATION AND DESCRIPTION

The CWSPF is an extensive area of natural reserves, estuarine wetlands and public open space encompassing approximately 34 hectares of Djarlgarro Beelier (Canning River) foreshore land. It stretches from the western boundary of the Cygnia Cove residential estate to Redmond Street in Salter Point.

Based on site investigations, the area can be divided into four distinct character precincts:

PRECINCT 1: CLONTARF AND ANDREW THOMSON CONSERVATION RESERVE

Precinct 1 has a conservation focus and extends from the edge of Cygnia Cove residential estate along the Clontarf College foreshore and incorporates Andrew Thomson Conservation Reserve. The precinct is dominated by high value fringing riverine vegetation with a dual use path for access.

Other features of this precinct include a jetty, picnic tables and seating, shelters (in Clontarf), and a viewing platform and a boardwalk (in Waterford).

PRECINCT 2: BODKIN PARK

Precinct 2 encompasses Bodkin Park, a local park with a small playground located at its southern end. The park includes two bodies of water connected via an open drain channel and partially revegetated stretch of 'living stream' that provides a stormwater management function. Bodkin Park is bounded partially by Andrew Thomson Conservation Reserve, road reserve and private property.

Other features of this precinct include boardwalks, seating and lighting, an information bay, a drainage network, and combination of gravel and dual use pedestrian paths.

PRECINCT 3: SANDON PARK

Precinct 3 has a broad community focus with car parking, a playground, fitness equipment, public toilet, Scout hall and Curtin University Boat Club, all in close proximity to each other. This precinct is dominated by large open areas of grass with a vegetated wetland area adjacent to the community facilities and riverine fringing foreshore vegetation with open river views.

Other features include a boardwalk, drinking fountain, picnic tables, seating and lighting, signage, open drainage channel and drainage network, foreshore access areas, boat ramps and dual use pedestrian paths.

PRECINCT 4: SALTER POINT RESERVE TO REDMOND RESERVE

Precinct 4 extends from Sandon Park to the western edge of Redmond Reserve. This precinct has three distinct character areas: a narrow low-lying foreshore edge with fringing riverine vegetation; Salter Point Lagoon; and the Aquinas Bay embankment and foreshore walkway. Aquinas Bay includes the Sulman Stairs and Redmond Reserve Stairs.

Other features include boardwalks, drinking fountain, rest/viewing platform, seating, signage, drainage network, foreshore access areas and a small section of dual use pedestrian and unsurfaced paths through Salter Point upper foreshore and spit.

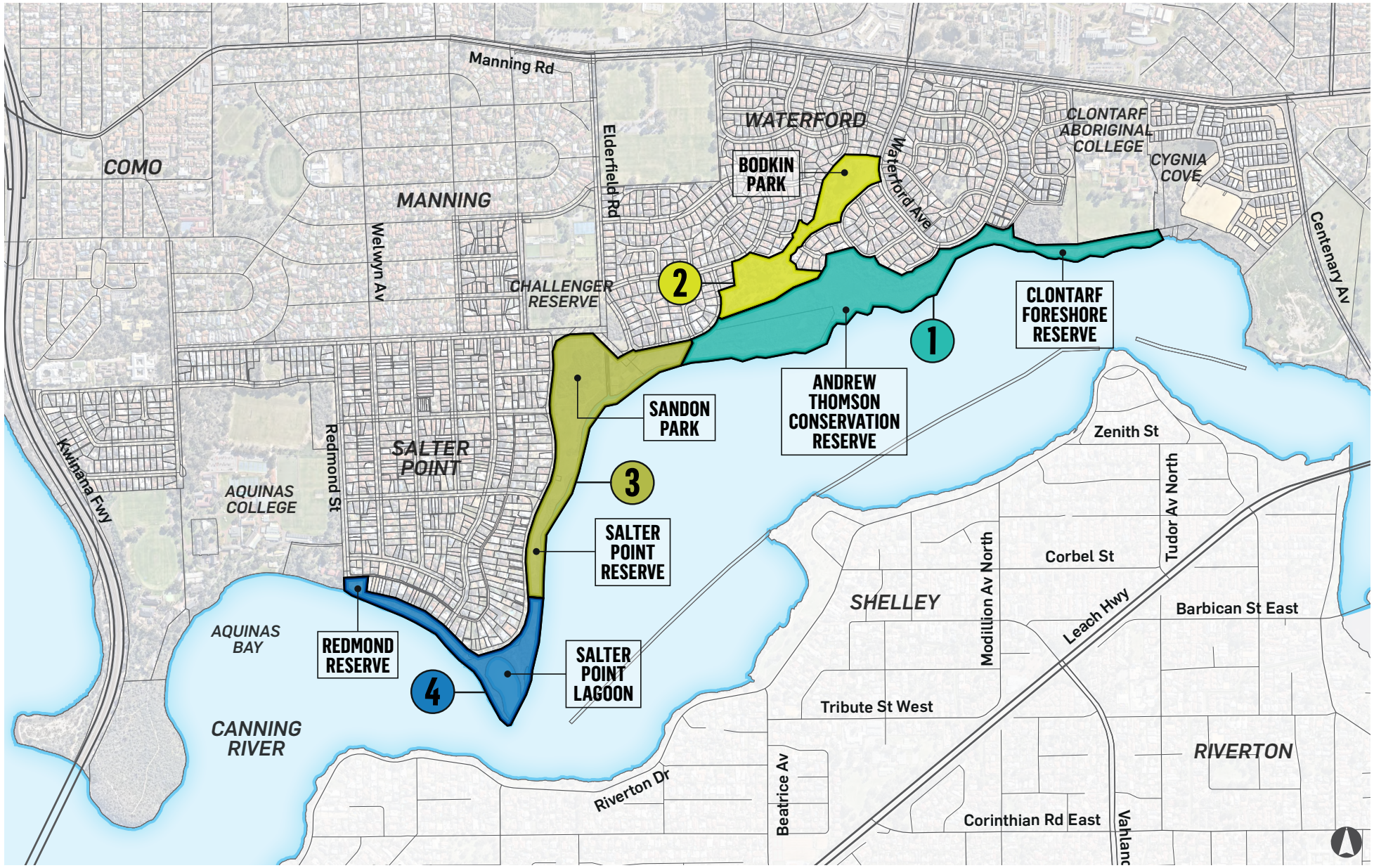


Figure 5 Study Area Precincts

2.2 SITE CONTEXT

2.2.1 REGIONAL CONTEXT

The CWSPF is designated as Public Open Space (POS) attracting users throughout Perth while also providing local amenity and use for residents. Valued for its environmental significance, this foreshore is coming under pressure due to increased patronage, climate change and management constraints.

The majority of the project study area is located within the Swan Canning Development Control Area under Swan and Canning Rivers Management Act 2006. Management of the CWSPF resides with the City of South Perth.

The foreshore has aesthetic, heritage, social, cultural, and Aboriginal significance, and links as a historical site to the early rural days of Perth.

The Waterford Foreshore Reserve has National Heritage Listing and contains vegetation that is no longer found elsewhere on the foreshores of the Swan and Canning Rivers, representing significant ecological value. The wetlands occurring within the Waterford and Salter Point Reserves are recognised in the Register of National Estate because of their considerable conservation and natural heritage value. They are also included in the Directory for Important Wetlands in Australia (Swan-Canning Estuary). The presence of trans-migratory bird species in these areas makes this area nationally and internationally significant.

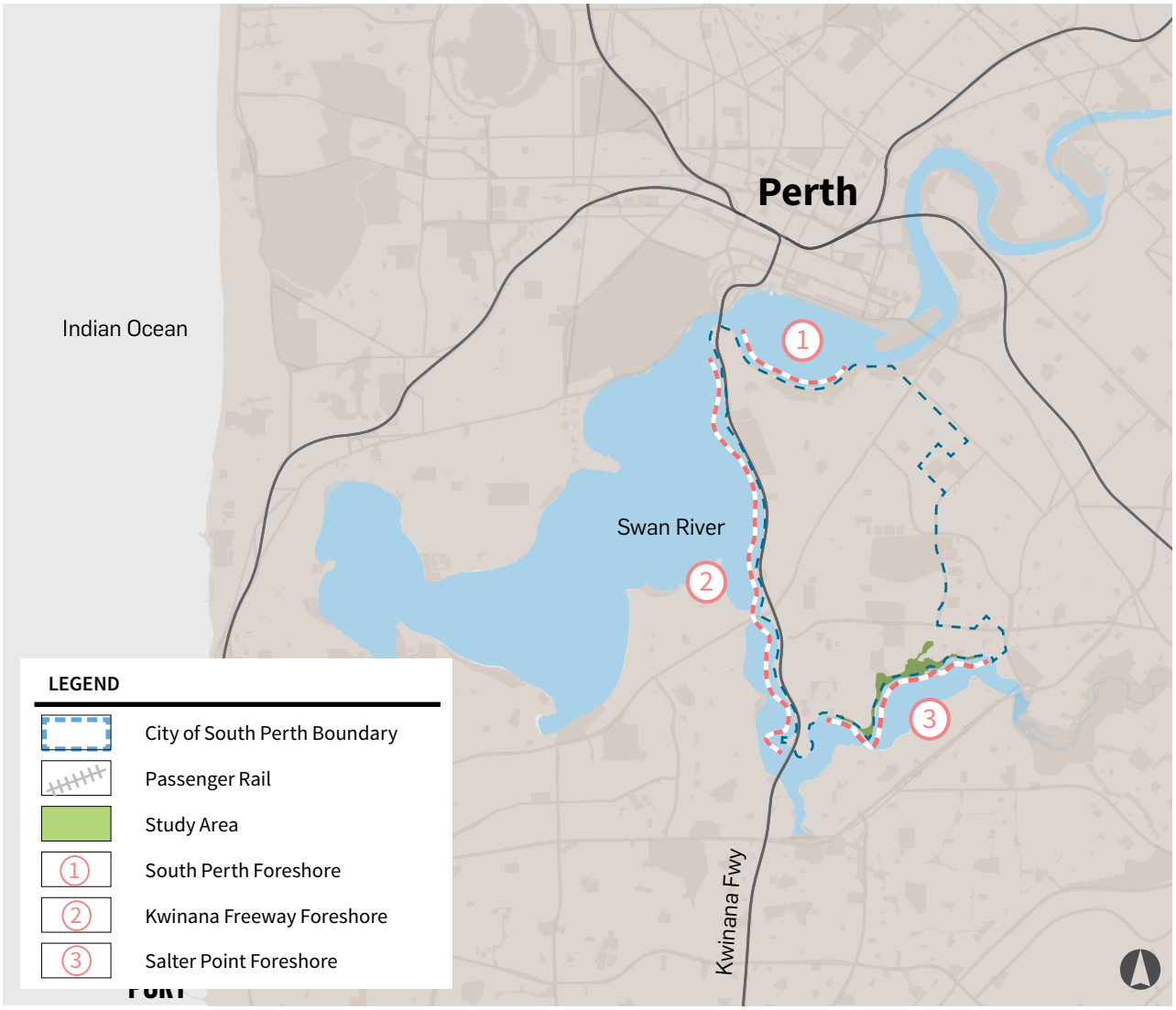


Figure 6 Regional Context Plan

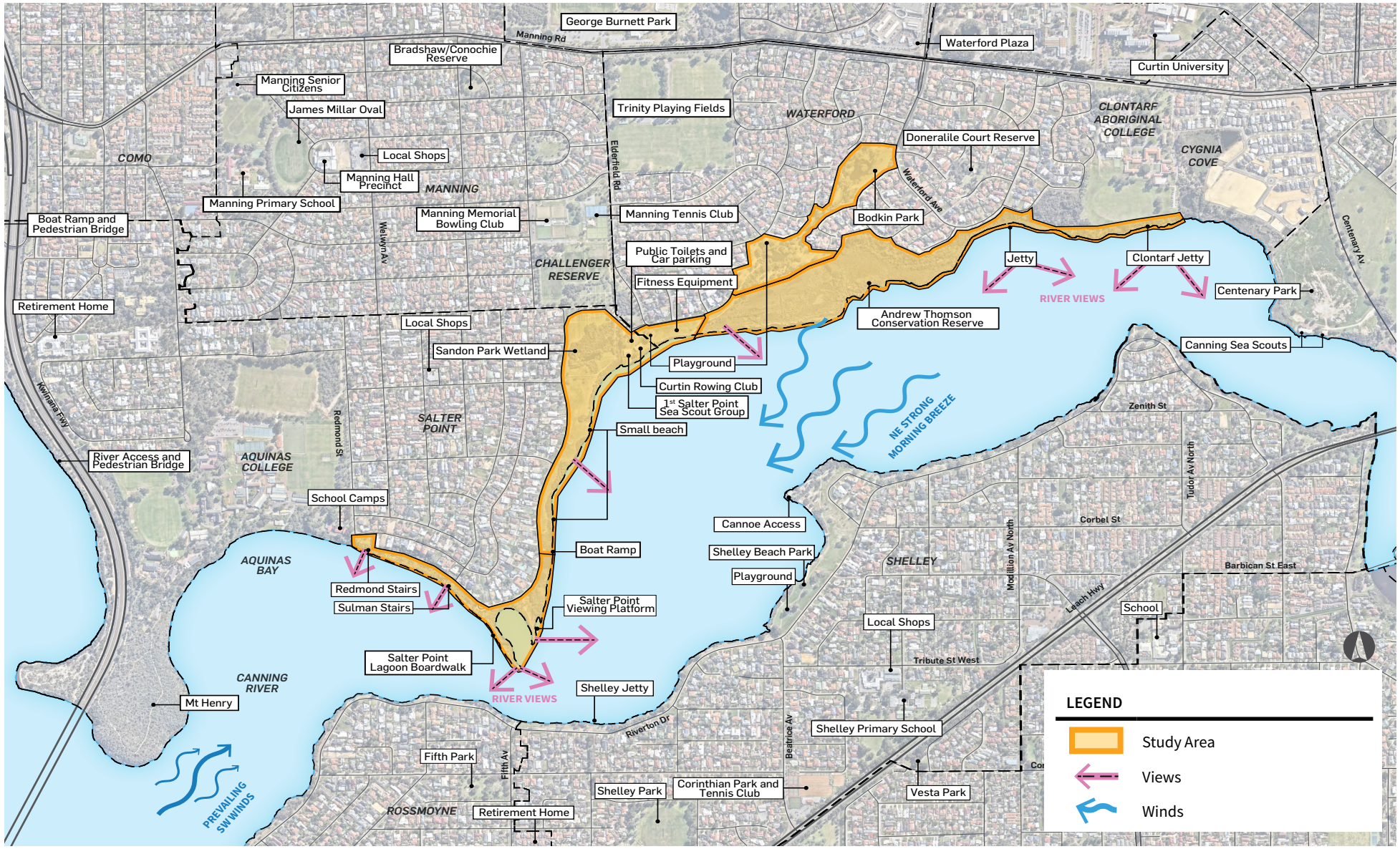


Figure 7 Local Context Plan

2.2.2 LOCAL CONTEXT

The CWSPF forms the southern bookend to the City of South Perth administration areas and provides an extremely valuable counterpoint to the South Perth Foreshore experience. The area is approximately 9 km from the Perth CBD and Manning Road is the nearest arterial road, located an average of one kilometre north of the site (Refer Figure 6).

The foreshore is relatively inaccessible due to the surrounding urban form. The primary user groups are located in the surrounding suburbs of Salter Point, Waterford and Manning.

Surrounding destinations include Curtin University, Challenger Reserve, Aquinas College, Clontarf College and Waterford Plaza.

2.2.3 PLANNING CONTEXT

The study area falls under State Planning policy 2.10. This policy contains the following vision statement for the future of the Swan-Canning river system:

"Our vision for the river and its setting is that it displays its true worth as a sustaining resource to Aboriginal society over many millennia and as the foundation of European settlement in Western Australia." *Source: State Planning Policy 2.10 Swan-Canning River System*

It also sets out policies based on the guiding principles for future land use and development in the precincts along the river system and performance criteria and objectives for specific precincts. The CWSPF forms part of the Lower Canning area and is governed by the following objectives:

- protect views from public places, particularly from Canning and Mount Henry bridges, Deep Water Point and Salter Point;
- ensure that development and river uses do not degrade the visual amenity and conservation value of the natural landscape, particularly within significant areas such as the Canning River Regional Park;
- protect places of cultural significance, in particular places on the Register of Heritage Places and the Department of Aboriginal Affairs register of significant places;
- ensure that commercial development on the foreshore reserve is confined to existing recreation nodes and in accordance with an adopted Swan-Canning precinct plan for the area;
- enhance recreational opportunities where access is limited, and,
- ensure that the scale and density of new residential development blends harmoniously with the leafy, suburban character and predominantly natural features of the landscape.
  Source: State Planning Policy 2.10 Swan-Canning River System

The study area for the CWSPF Masterplan consists of land reserved as 'Parks and Recreation' under the Metropolitan Region Scheme (foreshore reserve), as well as land reserved as 'Parks and Recreation' under the City of South Perth Local Planning Scheme 6. This provides the planning context in relation to the local and regional amenity and recreational functions of the site, and on this basis the balancing of the local and regional interests and impacts. The study area also abuts Challenger Reserve, which is a regional reserve nominated under the Metropolitan Region Scheme. This reserve has been developed for both active (soccer) and passive recreation (playground, BBQs).

The land-side interface is primarily single residential (Residential R20), ranging from historical grid patterns in Salter Point, and curvilinear suburban development of Waterford to the border with the Clontarf Aboriginal College. Although the study area benefits from having much of the land-side edges having road frontage, the suburban context does make broader access to the foreshore less obvious or intuitive from a regional perspective. In light of this, it is important that identified activity foci be sensitive to access arrangements and traffic impacts.

From a regional perspective, the area is likely to see increased pressure for redevelopment and increased urban density over time, given its high amenity (on the river), close proximity to the City and development of key infrastructure such as Curtin University.

Refer to *Appendix B* for context maps.

2.2.4 LAND DETAILS AND MANAGEMENT

The majority of the foreshore falls within the Swan Canning Development Control Area (DCA). The Department of Biodiversity, Conservation and Attractions (DBCA) provides advice and makes recommendations on development and land use applications that affect the DCA in accordance with the relevant policies and guidelines for the DCA. Any activities proposed for the foreshore area including revegetation or weed control must be approved by the DBCA.

Bodkin Park is the only reserve in the study area that sits outside the DCA. All areas within the study area are managed and maintained by the City of South Perth.

2.2.5 CLIMATE

Perth has a Mediterranean climate with mild wet winters and hot dry summers. The locality of the CWSPF has a predominately south facing aspect that is exposed to the prevailing south-westerly winds. Climatically, these conditions lend themselves to a relatively comfortable outdoor environment for the majority of the year, although strong and often cool south-westerly winds can impact the amenity of recreational areas and use of parts of the foreshore (Refer Figure 7).

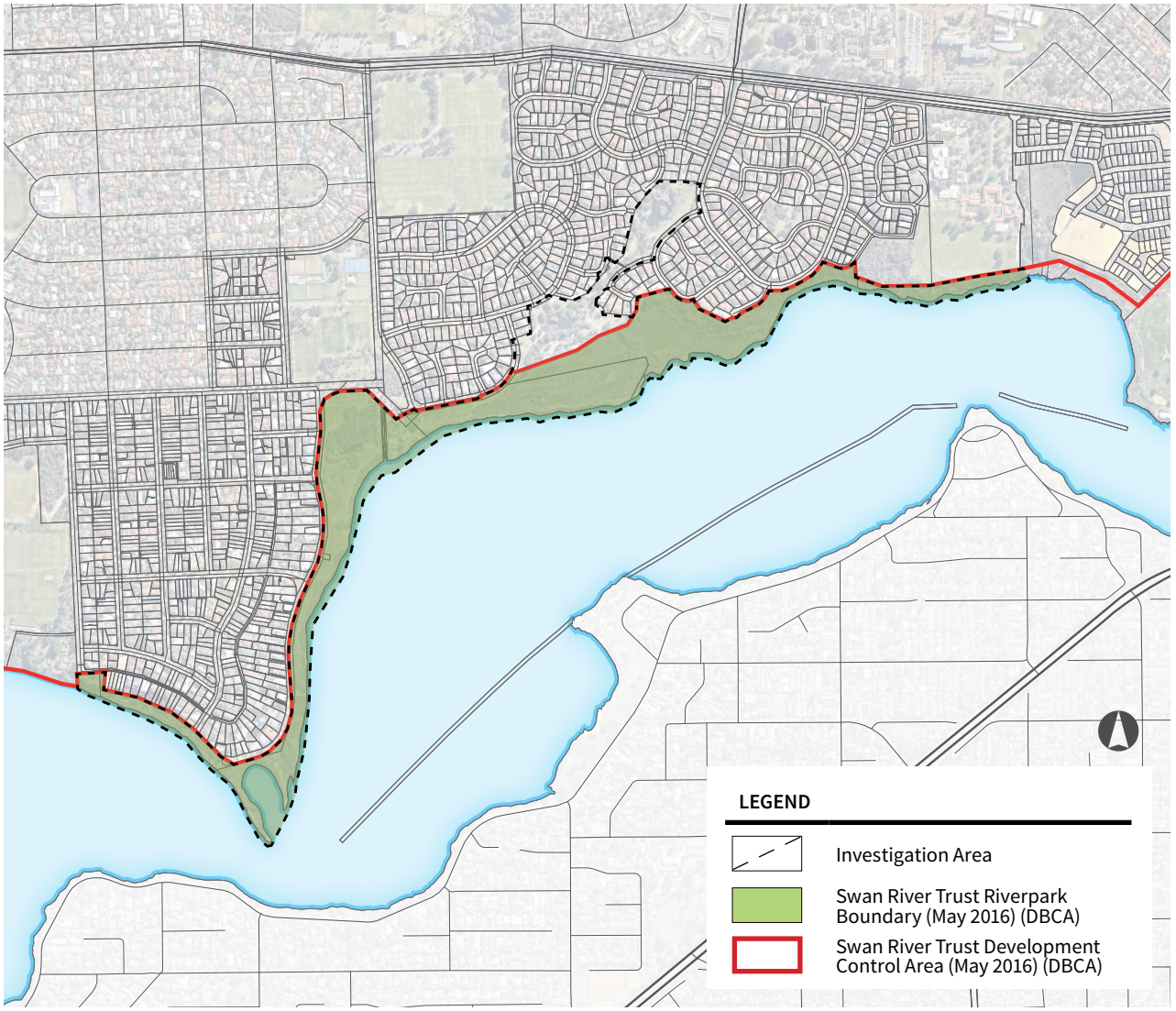


Figure 8 Development Control Area and Riverpark Plan

2.3 EXISTING SITE CONDITIONS AND MANAGEMENT ISSUES

2.3.1 EXISTING MANAGEMENT STRATEGIES, PLANS AND POLICIES

A number of existing strategic reports, policies and previous and existing management strategies and plans have been reviewed in relation to the development of the CWSPF Masterplan. A full list of these documents can be found in Appendix A. These reports, strategies and plans were comprehensively reviewed as part of the Masterplan development process, and where appropriate, relevant provisions were considered and adapted into the CWSPF Masterplan.

This Masterplan also supports the City's Climate Change Adaptation Strategy, Green Plan, Corporate Business Plan 2015 – 2019 and the Strategic Community Plan 2017.

2.3.2 EXTENT OF IMPLEMENTATION OF CURRENT MANAGEMENT PLANS TO DATE

The City of South Perth has a number of management plans that cover the CWSPF. Some apply to discrete areas, while others overlap or are more general in nature. Please refer Appendix A for a list of the current actions within these reports and the current status regarding implementation.

2.3.3 APPROPRIATENESS OF CURRENT MANAGEMENT PRACTICES AND STRATEGIES, AND OUTCOMES OF IMPLEMENTED STRATEGIES

The areas of concern in relation to environmental management which have been raised during the stakeholder and community consultation of the CWSPF Masterplan have included:

- Density and growth of Casuarina trees near the boundary of the Andrew Thomson Conservation Reserve;
- Wetland revegetation within the Andrew Thomson Conservation Reserve;
- Mosquito presence in the area;
- Fire management access through Andrew Thomson Conservation Reserve;
- Condition of the living stream within Bodkin Park;
- Drainage in some turf areas (i.e. become boggy in winter), and,
- Planted vegetation surrounding the lagoon.

The overall foreshore management plan for the majority of the site is currently 18 years old and contains over eleven pages of management action items. A current evaluation of the implementation and outcomes of this Management Plan is recommended. This may require environmental investigations to be undertaken across the extent of the foreshore area, including:

- Flora and vegetation survey;
- Fauna and habitat survey;
- Review of the stormwater treatment systems, and,
- Conducting an assessment of impacts to the fringing wetland and Canning River.

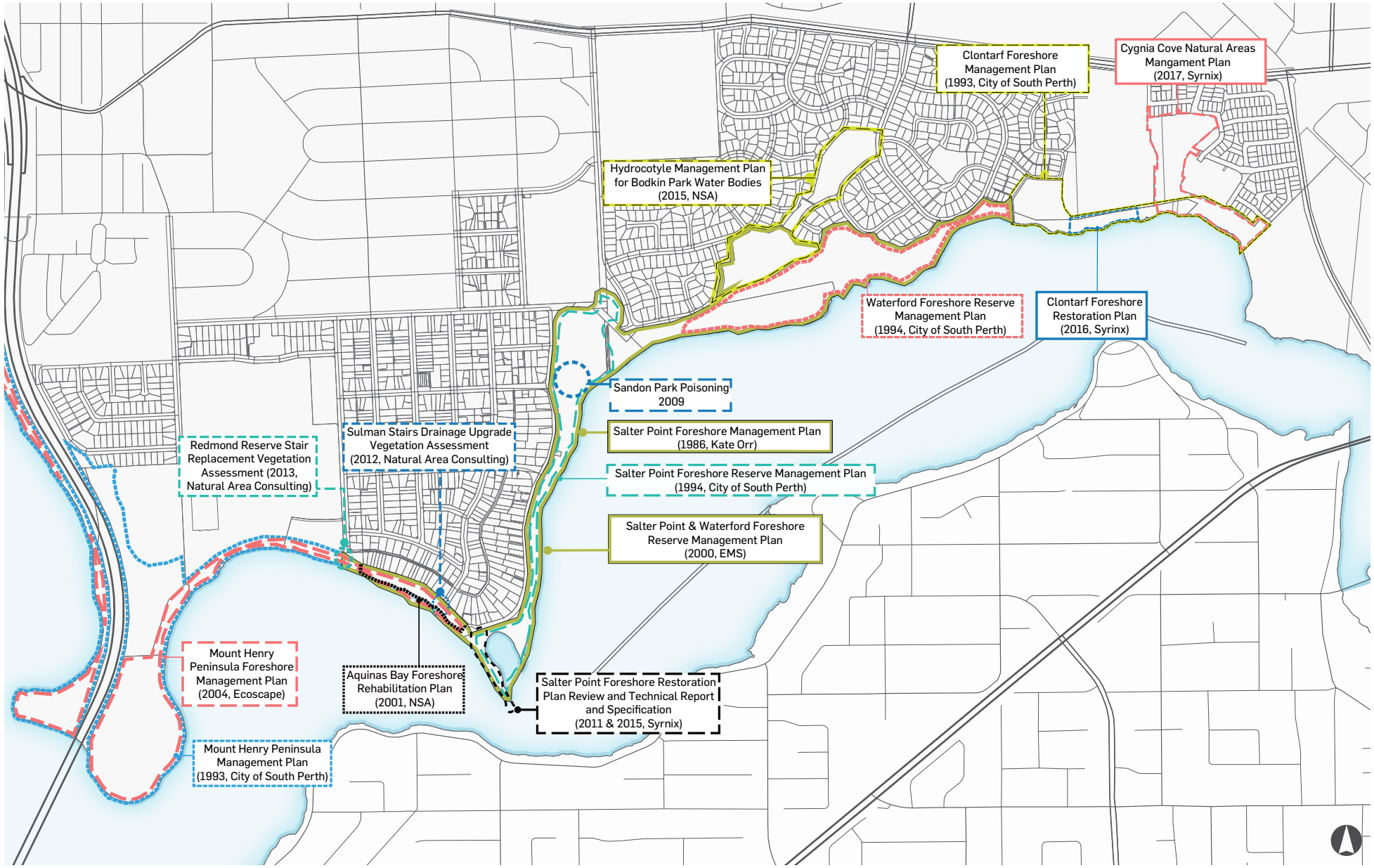


Figure 9 Management Plans and Reports

2.3.4 GEOLOGY AND SOILS

The Salter Point, Waterford and Clontarf foreshore area is characterised by geological formations associated with the Bassendean dune system, which largely form through aeolian (wind-driven) processes. However, alluvial deposition has also influenced the area as a result of the low-lying nature of the foreshore (described largely as 'river terrace, low level').

The soils within the area consist of pale grey, medium-grained alluvial sands and limestone deposits (Jordan, 1986). Adjacent to Salter Point lagoon, along the elevated ridge, the geology is more typical of the Bassendean aeolian soils. This steep limestone cliff is the eastern-most extent of the Tamala Limestone ridge that forms Mount Henry (EMS, 2000). These soil types accumulated during the Pleistocene and Holocene eras, with the alluvial deposits forming more recently.

2.3.5 CONTAMINATED SITES AND ACID SULPHATE SOILS

Uncontrolled fill has been recorded at a number of locations throughout the foreshore area, likely to be associated with historical landfilling or uncontrolled dumping. Evidence of such material has been detected throughout the suburb of Waterford (previously a wetland, landfilled), at Clontarf and Cygnia Cove (COSP, 1993; Syrinx, 2017).

Further investigations have identified large deposits of fill material (largely building rubble) along the Clontarf and Cygnia Cove foreshores, used to create the ovals associated with Clontarf College and to suppress sedge growth. The infill activities commenced in 1954, and are estimated to extend to a depth of 0.1 to 0.5 metres below ground level (mbgl). Whilst much of the infill material is likely to be inert, such as bricks, cement slabs and wood, there are also some confirmed Asbestos Containing Material (ACM) fragments in the area. The Clontarf foreshore area has since been remediated, with ACM from known hotspots and most of the building rubble removed from the foreshore area (Syrinx, 2016).

The Salter Point and Waterford foreshore area is identified as having a high risk of acid sulfate soils (ASS) occurring within three metres of the soil surface, as a result of the proximity of these soils to the Swan River and associated fringing wetlands (DWER, 2017a). When disturbed, atmospheric oxygen reacts with iron sulfides in the soil, resulting in the production of sulfuric acid, therefore adequate management is necessary to ensure no adverse impacts to environmental or human health.

There is no mapped risk of unexploded ordnance (UXO) occurring within the foreshore area (Department of Defence, 2017).

2.3.6 TOPOGRAPHY

The topography of the foreshore area is relatively flat and low-lying, for the most extent ranging from approximately 0 m AHD at the Canning River water's edge to 3 or 4 m AHD further inland. The exception is on the western side of Salter Point, where the limestone cliffs (up to 20 m AHD within the foreshore area) rise high above the low-lying alluvial flats.

These cliffs form part of the Bassendean dune system, and are the eastern-most expression of the Tamala Limestone ridge that forms Mt Henry.

2.3.7 BIODIVERSITY AND ECOSYSTEMS

Flora

The foreshore area is largely vegetated, interspersed with areas of managed parkland to enable passive and active recreation. The vegetated areas fall into the following overarching vegetation complexes (EMS, 2000; Syrinx, 2016):

- Jarrah / banksia woodland complex;
- Flooded gum (*Eucalyptus rudis*) woodland complex;
- Melaleuca / *Juncus kraussii* closed woodland complex;
- *Casuarina obesa* (Saltwater Sheoak) / *Juncus kraussii* (Shore Rush) open woodland complex;
- *Juncus / Shoenus* sedgeland complex, and,
- *Sarcocornia* (Samphire) / *Bolboschoenus caldwellii* (Marsh Club Rush) complex.

These complexes are associated with terrestrial and/or wetland habitats (with examples of salt tolerant and freshwater complexes). Riverine fringing vegetation such as that within the foreshore area provides a filtration mechanism for pollutant-laden inflows to the Canning River, either from piped drainage or overland flow, stabilises the river bank, slows flood water movement and provides valuable habitat for fauna. The vegetation itself and the peaty soils within which it grows act to bind nutrients and pollutants such as heavy metals and hydrocarbons, preventing them from entering the riverine environment.

It has been noted that the influence of increased stormwater runoff and therefore reduction in salinity of wetland areas (particularly within the Andrew Thomson Conservation Reserve wetland, which

receives fresh water from the constructed Bodkin Park wetland system) has resulted in changes to vegetation complexes in these areas. The extent of freshwater vegetation complexes is increasing as a result of this influence (EMS, 2000). In some areas, such as the Clontarf foreshore vegetation, this occurrence has also been noted, likely as a result of groundwater seepage (Syrinx, 2016).

Fauna

Limited fauna surveys have been undertaken across the foreshore area in previous years. Fauna species recorded utilising the area include waterbirds / waders, bushland birds, long-necked turtles, frogs, lizards, snakes and numerous invertebrate species. Historically, quenda and mastiff bats were recorded (in 1986/1987) but have not been recorded in more recent fauna surveys, likely due to high numbers of feral mammals (EMS, 2000).

Mudflats available at low tide provide valuable foraging habitat for a number of resident and migratory waterbirds / waders, particularly at the Andrew Thomson Conservation Reserve wetland and Salter Point Lagoon.

2.3.8 LANDSCAPE QUALITY

Landscape management and planning is an integral part of maintaining the quality of life that Western Australians enjoy. The need to manage and maintain landscape character has increased in importance in Western Australia.

In 1989 the Department of Conservation and Land Management formulated a Landscape Management Policy to promote a standard process for undertaking visual landscape management within the State. The State Planning Strategy commits the Western Australian Planning Commission to protect important landscapes, to ensure that development proposals incorporate measures to retain landscape elements, and to reduce the impacts development may have on tourism and recreation values in Western Australia.

A number of factors contribute to landscape character. These factors can include the landform, vegetation, water bodies and human land-use. These factors play a dominant role in how the landscape and its visual or scenic quality is valued and experienced by the community.

The CWSPF has four distinct landscape character precincts. While each character precinct has a high number of most preferred character indicators (Ref: Visual Landscape Planning in Western Australia WAPC 2007) these indicators are particular to each character precinct.

Precinct 1 - Clontarf and Andrew Thomson Conservation Reserve

Of all areas along the CWSPF, the stretch of reserve between Clontarf and the Andrew Thomson Conservation Reserve has the highest perceived natural character.

Defined by an extensive series of wetlands, intact vegetation communities and minimal access this area has an intimate and enclosed feel from publicly accessible areas, punctuated by glimpses of the Canning River and Wetlands.

Highly valued and desirable views are available at three locations along the stretch of foreshore, two being associated with over-water viewing platforms and one due to a break in the vegetation.

Precinct 2 – Bodkin Park

The Bodkin Park landscape is defined by a built suburban character and has a number of highly preferred indicators present, including presence of greenery and trees, waterbodies and unique, local character.

The park itself is highly enclosed, through both the tree cover and a significant percentage of direct frontage residential properties that creates a feeling of ‘privatisation’.

A lack of coherence in recent planning for the park has led to a devolved structure with very few open areas remaining and dense vegetation, particularly in the southern portion of the park. This dense vegetation has obscured views of the waterbodies in some areas.

Precinct 3 – Sandon Park

The Sandon Park landscape character is defined by open and expansive vistas with small areas of treed enclosure. Large expanses of turf with river fringe of grasses and small clumps of melaleucas provide open and expansive views across the water.

The grassland textures are visually attractive and the expansive turf areas facilitate recreation, which is highly valued by the local community.

Precinct 4 - Salter Point Reserve to Redmond Reserve

Second only to Precinct 1 in 'perceived' naturalness'', the Salter Point Reserve to Redmond Reserve landscape character is dominated by vegetated steep cliff slopes with a narrow fringe of vegetation between the water and the cliff face.

This precinct offers expansive views across Aquinas Bay from Redmond Reserve and the Sulmon stairs, and filtered views at lower levels across the river from the pedestrian path at the base of the cliffs.

The experience of this precinct is impinged by existing residential development that visually disrupts the cliff edge, and ongoing weed management issues.

Fringing vegetation between Sandon Park and Salter Point Lagoon is of high visual quality and the lagoon offers a unique landscape experience unavailable anywhere else within the Swan Canning River complex.


P1 - Clontarf Jetty


P1 - Andrew Thompson Conservation Reserve Footpath


P2 - Bodkin Park - south


P2 - Bodkin Park - north


P3 - CUBC shed


P3 - Sandon Park


P4 - Salter Point lagoon


P4 - Redmond Reserve

Figure 10 Landscape Character

2.3.9 BUSHFIRE

The Department of Fire and Emergency Services has developed Bushfire Prone Area mapping for Western Australia. Bushfire prone areas are defined as areas subject to, or likely to be subject to, bush fire attack. The identification of bushfire prone areas is based on local conditions, including vegetation classification, patch size and proximity. The mapping indicates that the entire foreshore area and most of the adjacent lots are located within a bushfire prone area, and as such are susceptible to fire risk and likely to be required to undertake actions to reduce fire risk where any modifications to the land are proposed (DFES, 2017).

There are concerns associated with the lighting of illegal fires along the foreshore for the cooking of prawns and other related activities (EMS, 2000).

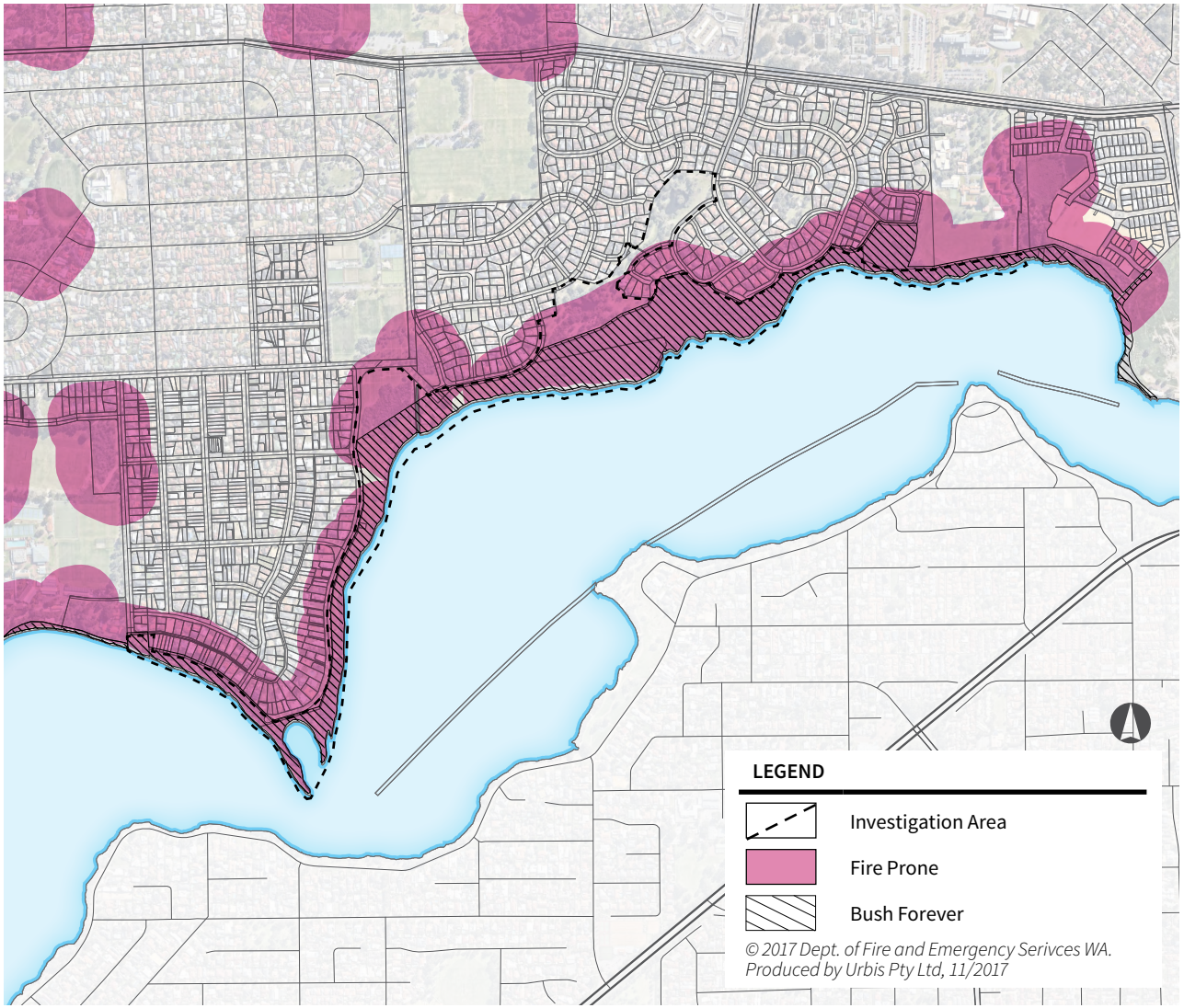


Figure 11 Bushfire Plan

2.3.10 WEEDS

Invasive flora species are widespread throughout the foreshore area, and are dominated by grasses such as couch *(Cynodon dactylon)*, buffalo grass *(Stenotaphrum secundatum)*, kikuyu *(Pennisetum clandestinum)* and other annual herbs. Some of these weed species have colonised naturally, or have been introduced over time as a result of historic landfilling and illegal dumping.

Bullrush *(Typha orientalis and T. domigiensis)* have established at Melaleuca Swamp in Sandon Park and the adjacent foreshore, as well as in Bodkin Park, however are not considered to be a significant problem (COSP, 1994a, COSP, 1994b). Woody weeds and bulb species have also been identified within this foreshore, requiring control.

Hydrocotyle ranunculoides (Floating Pennywort) is a prolific, highly invasive aquatic weed that has colonised the Bodkin park wetlands, potentially blocking the drainage channels and outcompeting native vegetation (NSA, 2015). This is currently under control and subject to ongoing monitoring.

A combination of manual, mechanical and chemical control techniques are currently applied by the City of South Perth to manage weeds throughout the foreshore area.

Introduced Fauna

Feral fauna species recorded within the foreshore area include the red fox, domestic and feral cat, black rat, house mouse and domestic dog.

2.3.11 HYDROLOGICAL PROCESSES

Groundwater

The groundwater underlying the foreshore area originates from the Cloverdale Mound, which lies between the Swan and Canning Rivers. Perth Groundwater Map (DWER, 2017b) indicates that the groundwater levels across the foreshore area are generally at the surface within the fringing wetland areas, these being groundwater-dependent ecosystems. Groundwater flows generally towards the river.

Surface Water, Wetlands and Waterways

The foreshore area bounds the Swan-Canning estuarine river system, a significant waterbody listed in the Directory of Important Wetlands in Australia. There are extensive freshwater and saline wetlands that fringe the river system, performing an important buffering function. The river estuary is classified as a Conservation category wetland (estuary – water body) by the Department of Biodiversity, Conservation and Attractions (DBCA) Geomorphic Wetlands Database.

Salter Point Lagoon has a portion classified as Conservation category (CCW), with the central extent classified as Resource Enhancement category (REW) (lake, estuary-peripheral). This is the only remaining lagoon of the Swan-Canning System, and an important landscape and environmental feature of the foreshore area. The water level within the lagoon is influenced by tidal movement, with a sand deposit near the entrance that is seasonally impacted.

Melaleuca Swamp in Sandon Park is a freshwater wetland maintained by fresh groundwater interaction and stormwater runoff, classified as a Conservation category wetland (lake).

The Clontarf River Flats is an estuary-peripheral wetland classified as Conservation category that extends across the Bodkin Park wetlands, Andrew Thomson Conservation Reserve wetland and Clontarf foreshore. The Bodkin Park wetlands were artificially created on the site of a naturally occurring spring, which now act to convey stormwater runoff from the Collier Pines Main Drain to the river. The wetland within the Andrew Thomson Conservation Reserve is saline and tidally influenced, however freshwater inflows from stormwater runoff is impacting the dominance of salt tolerant vegetation communities (EMS, 2000) (Refer Figure 12).

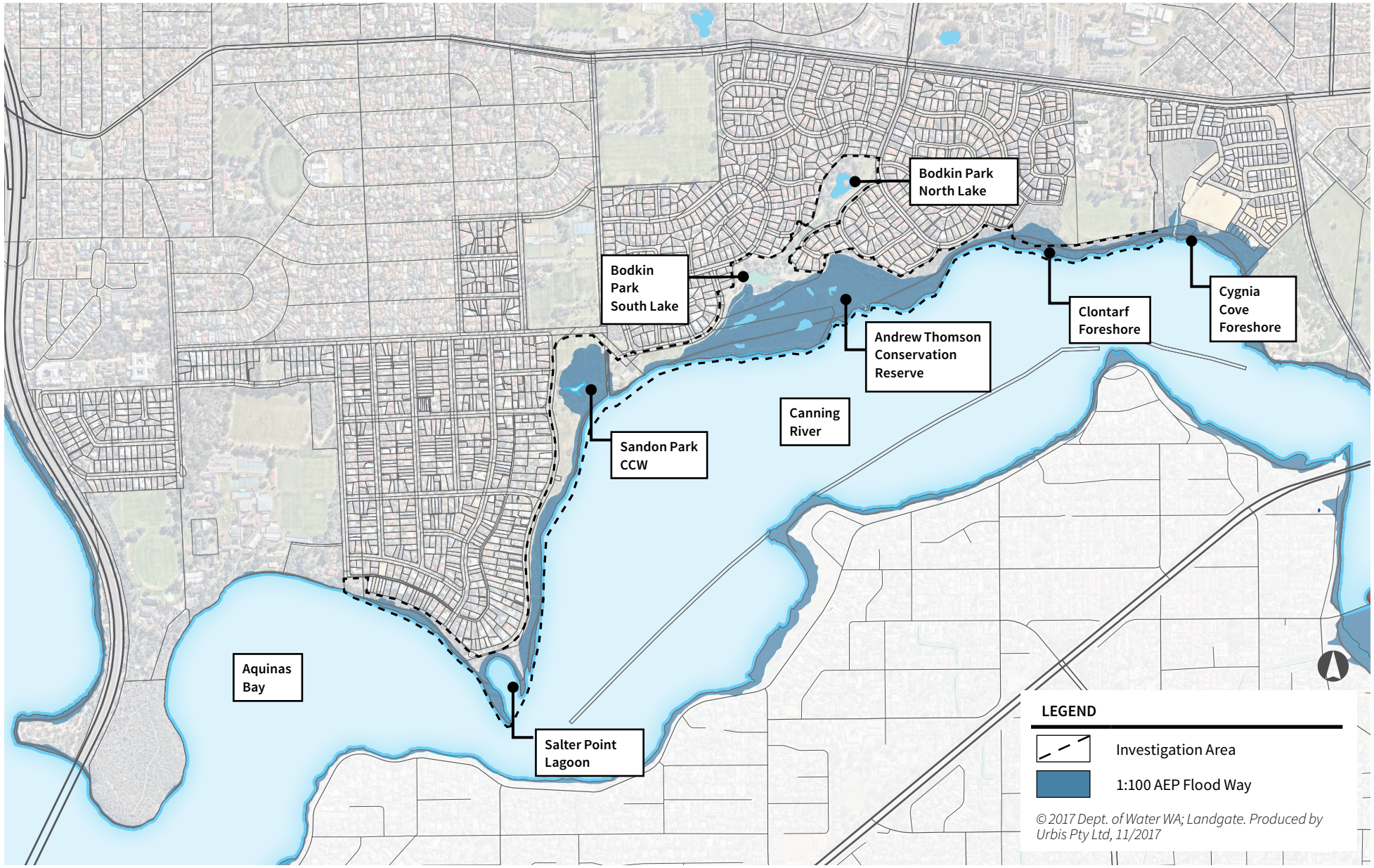


Figure 12 Waterbodies & Floodzone Plan

Stormwater Management

A number of local and state drainage systems discharge into the Canning River via the foreshore. Of these, the major drains include the Elderfield Road Drain, which drains through Sandon Park adjacent to Melaleuca Swamp, and the Collier Pines Main Drain which discharges into the Bodkin Park wetlands / drainage system through the Andrew Thomson Conservation Reserve wetland and into the river estuary.

Bathymetry

The Canning River adjacent to the foreshore area is relatively shallow, with depths ranging from approximately 0.1 m at fringing locations to 2 m in localised areas. West of the Salter Point Lagoon is a slightly deeper section that reaches 4 m in depth (Navionics, 2017). Historically, a channel was maintained for the transport of logs downstream and for boating (COSP, 1993).

The daily tidal range recorded at Barrack Street Jetty, which is upstream of the foreshore area, ranges from approximately 0.1 to 0.7 m (BOM, 2017).

Flooding and Sea Level Rise

The DWER has mapped flood plain and flood fringe areas based on the 1% Annual Exceedance Probability (AEP) (similar to the previously described 1 in 100-year ARI event). The flood way and flood fringe encroach on the majority of the foreshore area, as well as some of the residential lots adjacent to the foreshore area (Refer Figure 13).

Severe flooding has been experienced historically, due to the shallow nature of the riverbed in this area and the low-lying foreshore areas (COSP, 1993).

The City completed a climate change impacts risk assessment in 2010. This assessment identified flood inundation due to sea level rise as a high priority risk for the City of South Perth foreshore areas. In 2014 the City developed Kwinana Freeway Foreshore Management Plan that assessed anticipated sea level rise impacts on the City's western foreshore and offered practical recommendations to address flood inundation issues. The City's southern and northern foreshores require similar flood risk assessment to be undertaken to inform the decision making process on appropriate protective measures for the City's foreshore areas.

Since 2016 -2017 the City has partnered with EMRC to complete flood risk assessment of the City's northern foreshore, as part of a collaborative approach to undertake stages 2 and 3 of EMRC's regional flood risk vulnerability study project. As part of this work the City has been collaborating with EMRC, Department of Water, Cities of Swan, Belmont and Bayswater and Towns of Bassendean and Victoria Park.

The result of this collaborative work, updated modelling and mapping of the northern foreshore has been completed with consideration of the effects of climate change to inform and develop mitigation strategies and decision-making on proposed land use and development of flood prone land.

There is currently no timeframe for assessment of the southern foreshore.

Erosion and Accretion

Erosion and accretion processes in riverine environments are influenced by a number of factors including bathymetry, tidal influences, seasonal fluctuations in water flows and levels, sea level rise, the shape and vegetation cover of the receiving shoreline, prevailing wind direction and strength, and natural and modified wave behaviour / wash. Reviewing historical aerial imagery of the foreshore shoreline of the area between 1953 and 2017 has indicated that erosion has generally been a dominant process, particularly around Salter Point. Evidence of accretion is present around the Andrew Thomson Conservation Reserve wetland (Landgate, 2017).

These processes have been particularly documented around Salter Point and the lagoon, where the sand bar at the entrance of the lagoon seasonally fluctuates based on erosion and accretion processes. Erosion has been documented on the eastern and western foreshores of Salter Point, with some accretion to the north of the point on the western foreshore (Syrinx, 2015). Concerns around the flushing of the lagoon as a result of the accretion of silt and sand at the entrance has been raised historically by local residents.

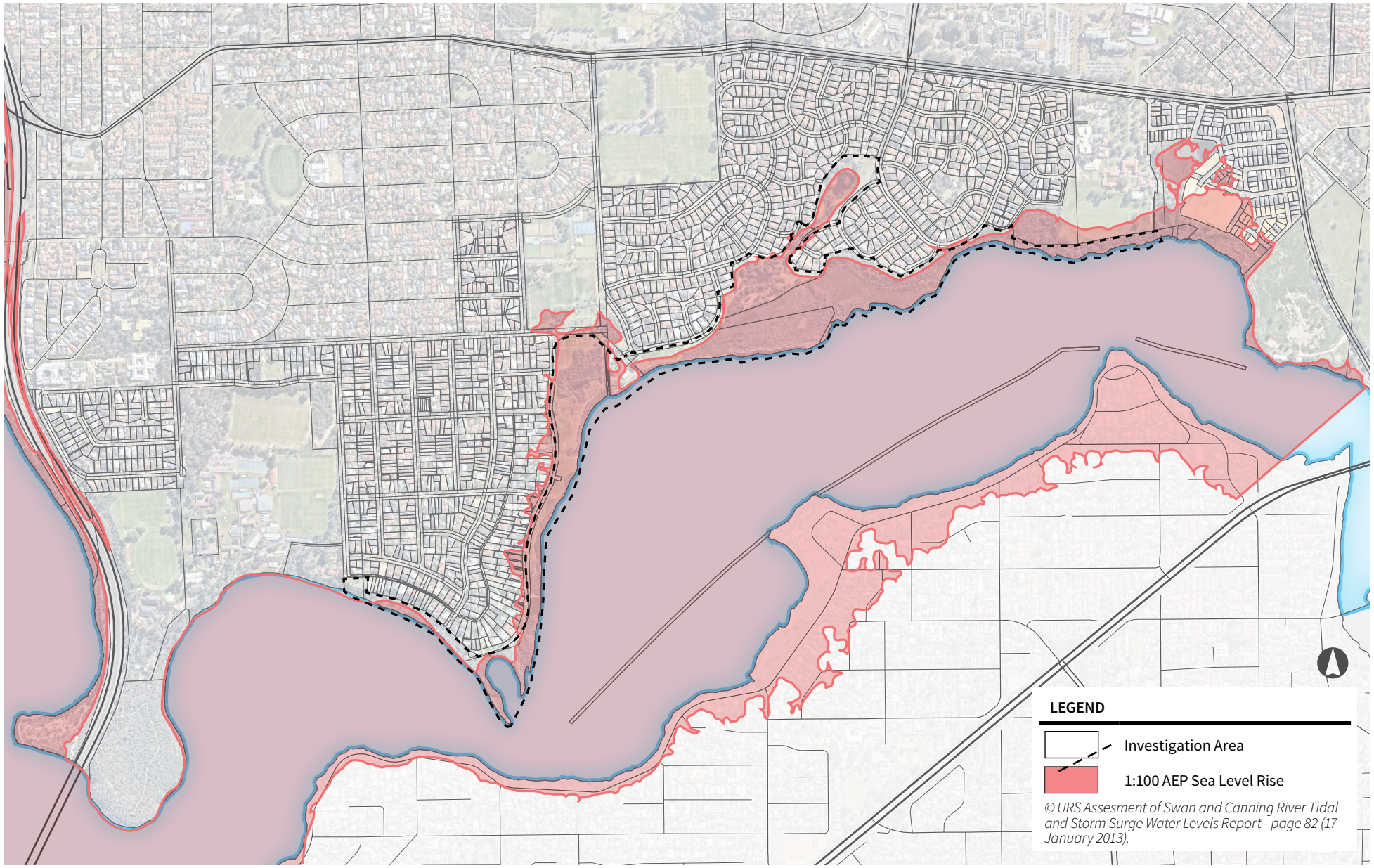


Figure 13 Sea Level Rise Plan

Infrastructure and Services

The City allocates an annual maintenance budget for the ongoing management of the CWSPF. However there is insufficient funding available for infrastructure upgrades and replacement of assets on the CWSPF.

Current issues include required upgrades such as the stairs at Redmond Reserve, Clontarf foreshore jetty, old boardwalks, outdoor furniture and picnic facilities.

Future issues include the impacts of anticipated sea level rise on the current drainage network capacity (which will likely require upgrades to support the changes to water levels), the impacts of bushfire management requirements, and escalation of future operational budgets.

Additionally, there is currently limited provision for features that are associated with high-quality foreshore environments. Examples include the lack of interpretive and information signage along the foreshore and absence of formal trails established to showcase aboriginal cultural heritage. There are also few formal viewing platforms and no bird hides which will allow for improved interactions with the area.

There are a number of pedestrian and cycle paths that traverse the CWSPF, and all are well utilised. The surface treatments of paths vary greatly, with a mixture of pavement, compacted earth, boardwalk and sand. There are a number of locations where paths do not connect (where they ideally would do so) such as in front of the Salter Point Sea Scouts and Curtin University Boat Club. Some paths currently suffer from inundation issues, particularly in the area to the west of the Sea Scouts. Generally, path conditions to support universal access are poor.

For visitors, accessing the foreshore is difficult as the primary mode of transport is by car with limited other alternatives. The Cycling Network Plan: Transport @ 3.5million (Department of Transport 2016) indicates a potential commuter cycle network that connects from the Salter Point Lagoon south across the river and north along Salter Point Parade, linking through Bodkin Park and north to Curtin University. This is currently unfunded and there are no detailed plans.

The river adjacent the CWSPF area is used primarily for non-powered boating activities, with informal launching at a number of locations along the foreshore. Small power craft such as dinghies are launched at an informal launch site along Salter Point Parade. The Salter Point Sea Scouts and the Curtin University Boat Club have boat launching facilities and regularly use the river for boating activities.

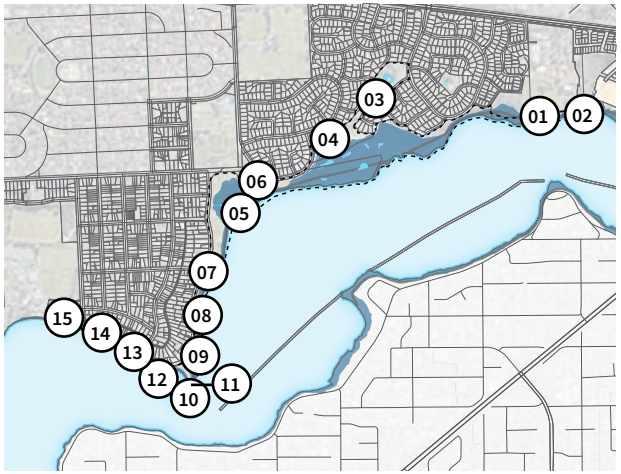


Figure 14 Existing Infrastructure and Landscape Treatments

2.4 CULTURAL AND SOCIAL VALUE AND USE

2.4.1 ABORIGINAL HERITAGE AND CULTURAL USE

The Aboriginal term for the land in which CWSPF is situated is 'Whadjuk Nyoongar Boodjar'. 'Nyoongar' (and derivatives thereof) is the general name for Aboriginal people descending from the south-west of Western Australia. Of the fourteen Nyoongar language groups, the people who live in the Perth region are known as the Whadjuk people. The Whadjuk land south of the Swan River and west of the Canning River to the coast is known as Bilya (Beeliar). The land across the Canning River to the Helena River is Beeloo land. The Canning River is the border between these two Whadjuk clans.

The study area forms part of the Djarlgarro Beelier (Canning River) and the Canning River flats (wetlands) and are significant to Nyoongar people. Two registered Aboriginal Heritage Sites are recorded as overlapping the project area; **Canning River (Site ID 3538)** and **Wadjup (Site ID 24319)**. These sites are significant as they are the spiritual, hunting, collecting, fishing and ceremonial grounds for Beeloo people. (Source: Cygnia Cove Management Plan)

Wadjup (Site ID 24319) is the aboriginal name referring to the wetlands of Canning Flats which once stretched from Salter Point to Riverton Bridge. According to Aboriginal consultant Richard Wilkes, "Wadjup" refers to land associated with or connected to fresh water (Harris, 1913). Wadjup is a men's site reserved for ceremonial purposes and was the southern and eastern extent of the Beeloo people territory (Hill, 2013). The area once had an abundance of wildfowl, especially Moornyi Koolyak (black swans) and ducks – traditional Nyoongar food. It was an important camping ground where Whadjuk people foraged, fished and hunted. It was here that they gathered to camp.

The Canning River (Site ID 3538) is a widely recognised heritage site which includes the entire length of Canning River and associated creeks, tributaries and springs. This site is of high cultural and spiritual significance to all Nyoongar people, being the path created in the Dreaming by a great serpent spirit called Waakal (alternative spelling Waugal, Wagul, Wagyl, Waagal) or Rainbow Serpent. This path (or river bed, associated springs, wetlands and lakes) should not be disturbed and wherever possible the areas adjacent to the riverbed should be kept in their natural formation with vegetation composed of local aboriginal species.

Nyoongar cultural ideologies, language and social mores have been based on the same tenets since kura kura - a long time ago - and are transmitted and maintained via stories. While the content of these stories may change in accordance with the narrator, location and audience, the Waakal is commonly depicted as the Creator. Many Nyoongar consider the Swan - Canning riverscape sacred due to stories associated with the Waakal and the belief in its continued presence in the area. (Source: Marli Riverpark Interpretation Plan)

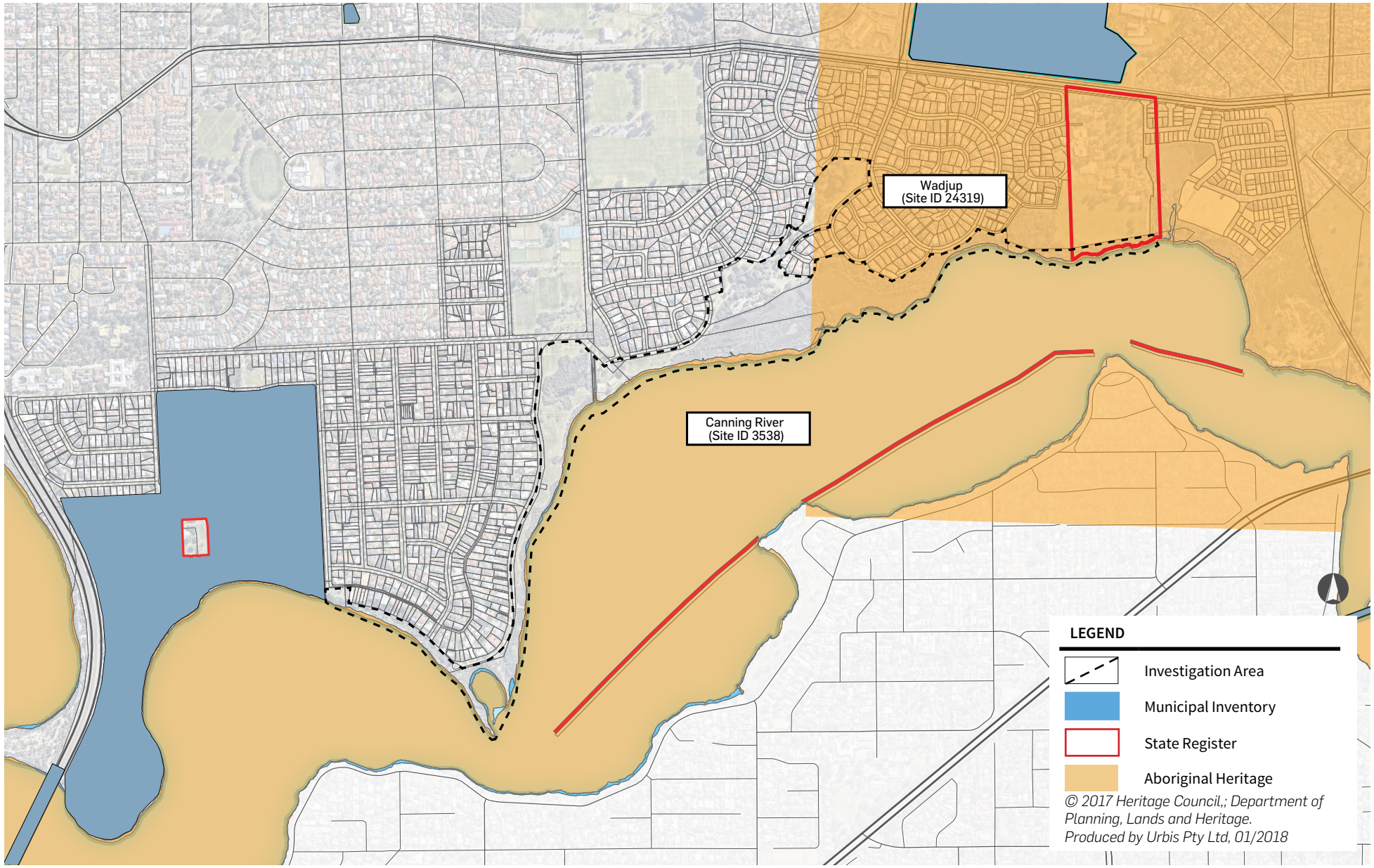


Figure 15 Heritage Plan

2.4.2 POST EUROPEAN SETTLEMENT HERITAGE

After their arrival in 1829, colonists quickly took over the Whadjuk Nyoongar Boodjar and used it for farming. The Whadjuk people fought a losing battle against appropriation of their land. In this early conflict, the Whadjuk people were led by Midgegooroo and his famous son Yagan. This is a story of dispossession which finally left the Whadjuk people without the land on which they depended – spiritually as well as materially.

The Djarlgarro Beelier (Canning River) was the site of some of the earliest conflicts between colonial settlers and Aboriginal people with both Midgegooroo and Munday (a Beloo leader) proclaimed outlaws in 1833; the former being summarily executed in 1833. Following the killing of Yagan (Midgegooroo's son) in 1833, the Governor revoked the outlaw status of Munday, and in 1840 it is reported that he appointed him and others, including Mundigo and Mando from the Canning, as Aboriginal Police Aides. (Source: City of Canning Heritage Study 2015)

The history of the CWSPF are not well documented for this period. The area was settled in 1848 by pioneering families. It was when State Housing started being constructed in 1949 that the area really began to develop and by 1952, 173 homes had been constructed.

Place naming is currently the only real recognition of the post European settlement history. This includes names such as:

Salter Point

Named for Samuel August SALTER (August 1849 - 1930), sawyer and timber contractor, who had a landing stage on the point known as "Salter's Landing", later known as "Salter's Point". Logs were floated down the Canning River from Kelmscott and Jarrahdale to Salter's Landing for transportation to a mill by barge. Salter operated here around 1879 - 1881. This is the first known European activity in the area prior to the establishment of Clontarf Boys' Home in 1901. Samuel Salter was the son of Samuel Salter (a farmer) and Sarah Ellen Buckingham (married 22.9.1875) who arrived in WA as British migrants on the 'Diadem' in April 1842. At that time, Salter Point was virgin bushland. There was no access to the area by road, and could only be accessed from the river.

The area now comprising Manning, Mount Henry, Salter Point and Waterford was annexed to the South Perth Road Board from the Canning Road Board on 10.6.1955. A map dated 1909 shows this area as being part of the Queen's Park Municipality.

'Salter' is one of several names commemorating early settlers, land owners or local families who influenced the development of the City, including, Cassey, Charles, Clifton, Conlon, Courthope, Darley, Darlot, Douglas, Dyson, Gardner, Garvey, Gillon, Heppingstone, Jelf, Judd, Lamb, Manning (Manning family), Manning (South Perth family), Morris Mundy, Neil McDougall, Sandon, Saunders, Sprunt, Stiles, Strickland, Tondut (see entries for these names).

(Sources: City records; Notes prepared by Cecil Florey 1988; 'Western Mail'.)

Sandon Park

The name honours the pioneer settler family, SANDON. Harold Sandon was born in 1909 in Kempsie, New South Wales. His brother, Bob, was born five years later after their father moved in 1911 to Western Australia. Neither attended school because it was too far away and there was no transport. The Sandon family were the first to move into the area now known as Salter Point.

In 1947, Harold Sandon participated in a ballot for newly created half-acre (2,000 sq. metre) lots which ran down to the river, all offered at a pegged price of £50 per lot. The Sandons were the first family to draw a lot, moving onto the land immediately in 1947, living in a tent until they could build. Their land, formerly Lot 276, is now occupied by three houses.

They lived on this property until 1980s, when they decided to subdivide part of the property and build a new house on one portion of the original lot. The formerly named "Salter Point Reserve" was renamed in 1992 in honour of this pioneering family, two members of which at that time still lived in the area, aged 77 and 82. Bob Sandon had been employed with the South Perth Road Board as a groundsman on the Richardson Park cricket pitches for 23 years, while Harold had worked with the Melville Road Board as a gardener. Harold Sandon died in September 2005 aged 96.

Waterford

A subdivision of land formerly comprising the Clontarf Boys' Home owned by the Christian Brothers.

The land area involved was so large that the area became a suburb in its own right. The name 'Waterford' is after an Irish town, commemorating the birth place of Edmund Rice, the founder of the Christian Brothers where the first Christian Brothers' schools were founded. The Christian Brothers were the owners and subdividers of the land south of Manning Road, east of Elderfield Road. This land originally formed part of the Clontarf Boys' Home, school and farm, set on about 200 hectares along the Canning River, run by the Brothers from 1901 for orphaned or disadvantaged boys.

(Sources: City records; 'Western Mail'; www.waterfordtourism.org/waterford-city.htm)

Clontarf Bay

A bay in the Canning River which was named after the former nearby CLONTARF Boys' Home and farm. Clontarf was named by Brother Treacy after a place of the same name in Ireland, reflecting the Irish heritage of the Christian Brothers. The Christian Brothers owned and operated the former Clontarf Boys' Home and farm on about 200 hectares between Manning Road and the Canning River, east of Elderfield Road. From 1981, large portions of the land were subdivided and became what is now the residential suburb of 'Waterford'.

(Sources: City records; www.clontarfonline.com/about/history.php)

Lyndon

Lyndon Lewis was the 2013 City of South Perth and Premier's Day Australia Day Citizenship Award winner after working with the council to create community stairs to the foreshore from Sulman Avenue, now known as Lyndon's Ladder.

Bodkin Park

Named after Reverend Brother D F BODKIN (1884 - 1929), who served as Superior of the Clontarf Boys' Home 1907 - 1917. Irish born, Brother Bodkin was among the four original Brothers who came to Victoria in 1868 to establish the Christian Brothers in Australia.

The first main building was designed by Br Bodkin and Marie Jackson of Cavanagh and Cavanagh Architects, and was recognised as one of the most modern public buildings in the State. The limestone was brought by barge from Cottesloe, or from quarries in the vicinity of Clontarf Road, South Fremantle. Brother Bodkin died at Clontarf on 20.2.1929 aged 85.

Andrew Thomson

ANDREW THOMSON Dip Env Sc, BA(Soe Sc), M Fd, B Ed, Dip Ed Admin, MDA, MDD (March 1930 - 8.8.2004) was a strong and passionate advocate for the natural environment and actively promoted environmental awareness and biodiversity management within the City of South Perth and beyond.

The Waterford Foreshore Conservation Reserve was his favourite place in the City and is considered a very important conservation reserve in a regional context. Waterford Foreshore Conservation Reserve is vested with the State Government Planning department and managed by the City.

(Source: City records.)

Redmond

Named for Brother Michael Francis (commonly known as Frank or Reddy) REDMOND, CFC, MBE (6.5.1889 - 30.9.1979), an extremely well-known and revered staff member of Aquinas College from 1939 to 1979. Although he had taught in every mainland state of Australia, the last 40 years of his life were devoted to Aquinas College. In 1928 he was transferred to Brisbane, then to Clontarf in Perth where he was appointed to the position of Superior, taking over from Brother Keaney.

In January 1939 he was transferred to Aquinas College. The college had been officially opened at its present site on 27.2.1938 by Sir James Mitchell, Lieutenant Governor of WA.

Redmond Street borders the eastern side of the Aquinas College site. It is derived from one of several names commemorating Christian Brothers in the locality, including Bodkin, Keaney, Pope and Redmond.

The Convict Built Timber Jetty

The stumps of wood that form a line through the Canning River are an unusual relic of Perth's earliest industrial heritage and convict labour.

The old convict fence, a series of uneven wooden poles in a line above the water between Salter Point and the Shelley Bridge, was part of a dredging effort to get barges down this section of the river.

The fence still forms a clear line along that part of the river, and is on the state heritage register which describes it as a "prominent uncommon structure of landscape" with a great deal of heritage value.

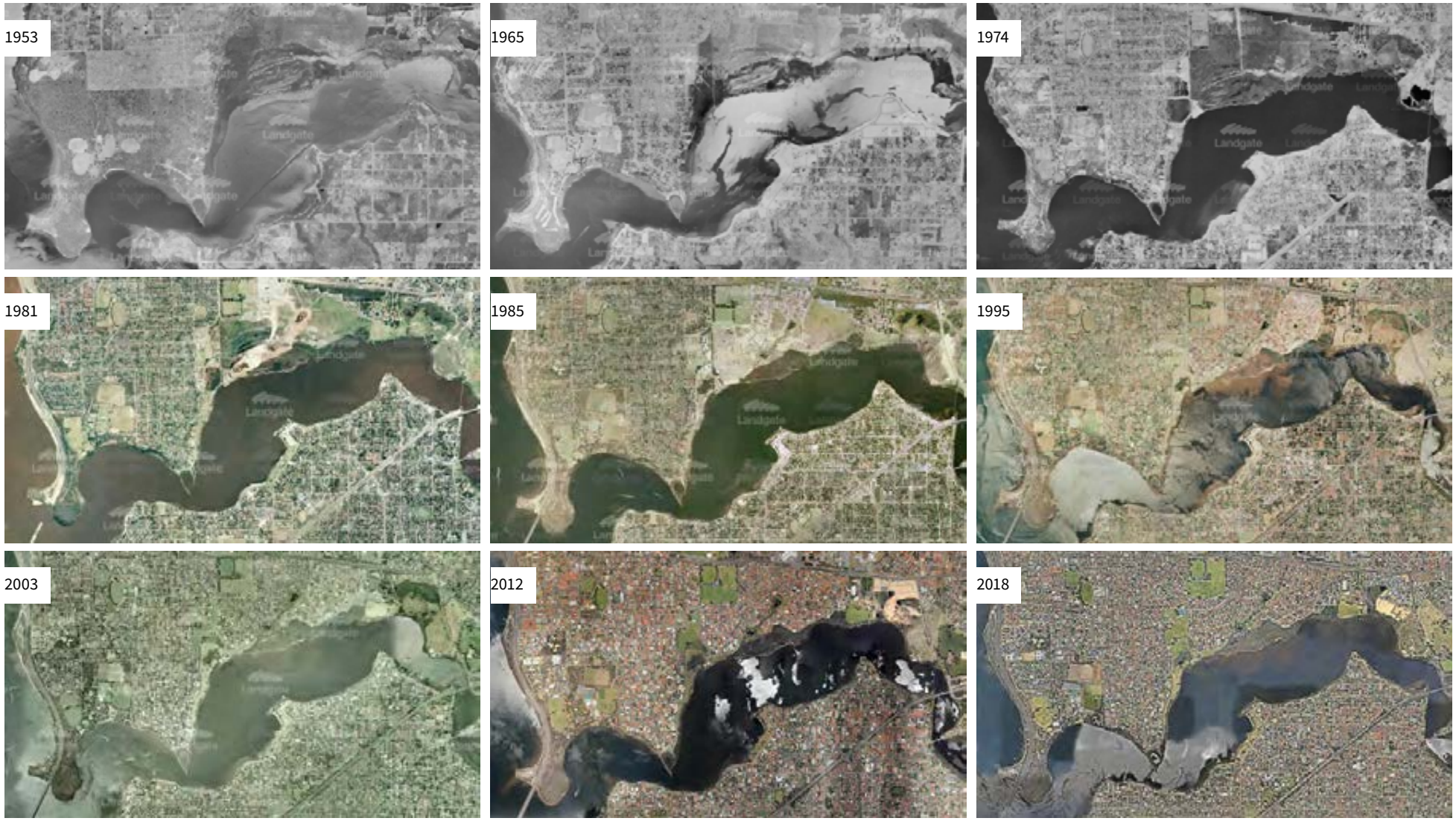


Figure 16 Historical Site Aerial Photography *(Source: Landgate)*

2.4.3 CURRENT SITE USAGE

Events

The CWSPF area is predominantly used for passive recreation and is currently not an area for regular events. Any events are small in nature and associated with the Curtin University Boat Club and Salter Point Sea Scouts.

Recreation – Land Based

The majority of the foreshore area is used for passive recreation. Walking, cycling and dog walking and exercise are the major activities.

Activities such as bird watching are popular and at times, bird watching walks have been organised along the foreshore.

Community based activities generally occur in two locations – either Bodkin Park or the open grassed area adjacent the Curtin University Boat Club. There are few formal recreation facilities within the CWSPF, comprising of the children's playground in Sandon Park, adjacent the Curtin University Boat Club (recently upgraded by the City). There are also two exercise nodes that were recently installed in Sandon Park, and there is a swing set located in Bodkin Park.

Recreation – Water based

The river adjacent the CWSPF area is used primarily for non-powered boating activities, with informal launching at a number of locations along the foreshore.

Small power craft such as dinghies are launched at an informal launch site along Salter Point Parade.

Fishing also occurs along the foreshore; however, access is limited and the water is generally shallow.

The Salter Point Sea Scouts and the Curtin University Boat Club have boat launching facilities and regularly use the river for boating activities.

Commercial Enterprises and Recreation Activities

There are currently no private commercial enterprises, however the Salter Point Sea Scouts and the Curtin University Boat Club have formal lease arrangements with The City. The Salter Point Sea Scouts facility is also used for community based activities such as martial arts classes.

Public Facilities

Public facilities are limited along the foreshore. There is intermittent bench seating, some of which is difficult to access for those with accessibility issues. There are a few picnic settings, one of which is relatively new, located in front of Clontarf and set back from the river and accessed only via a walking path. The only public toilet along the foreshore is the automatic universal toilet adjacent to the carpark at the Curtin University Boat Club. The only formal carpark is adjacent the Curtin University Boat Club, although there is informal street parking elsewhere.

Pedestrians and Cyclists

Walking and cycling are the two most common uses along the CWSPF. There are a number of pedestrian and cycle paths and all are well utilised for either connecting beyond the site or as part of daily recreation along the river.

There is no clear hierarchy of paths and there are numerous reported conflicts between pedestrians and cyclists, based on speed, sight lines, and volume of traffic.

There are a number of areas along the foreshore that prohibit universal access due to slope and/or lack of supporting infrastructure.

Transport and Access

The majority of the CWSPF can only be accessed via private vehicles within the existing local residential street network. There is limited carparking opportunities for visitors, with the exception of a small carpark co-located with the Curtin University Boat Club and Salter Point Sea Scouts hall, and some informal on-street parking.

There is a bus route that runs through the residential areas north of the site, but no public transport connects directly to the foreshore area.

Wayfinding to the foreshore is challenging as the street network is generally curvilinear or broken with limited signage, making it difficult to navigate effectively to the foreshore.

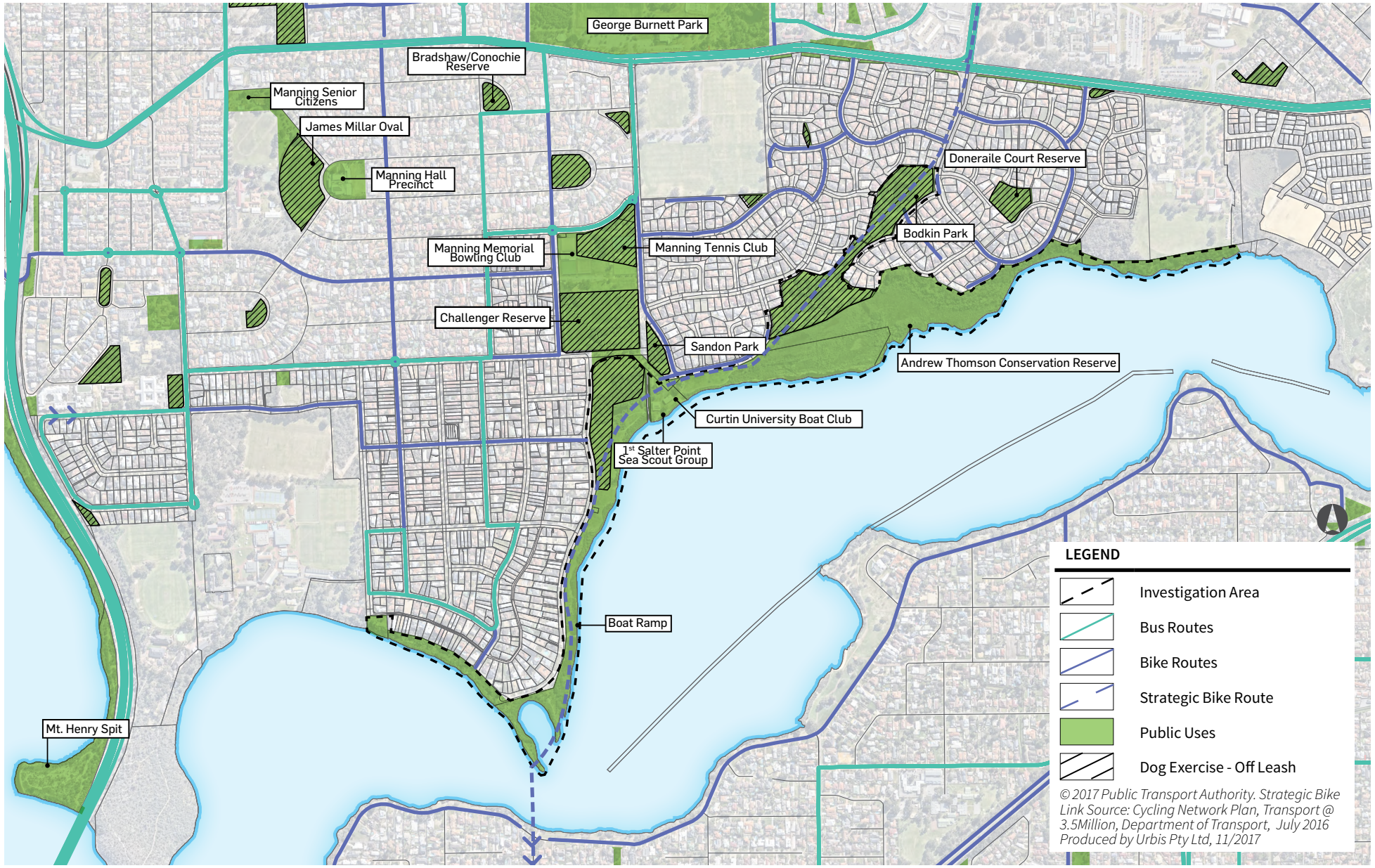


Figure 17 Public Services Plan

2.4.4 PREDICTED FUTURE SITE CONDITIONS AND MANAGEMENT ISSUES

Changes in the Physical Biological Environment since 1986, 1994 and 2000

The Salter Point and Waterford Management Plans have been in place since the mid-1980s, when the original Salter Point Foreshore Management Plan (Orr, 1986) and Waterford Foreshore Reserve Management Plan (Orr, 1987) were prepared. In February 1994 the plans were both reviewed and updated (Brooker et al, 1994a; Brooker et al, 1994b), and this was again undertaken in 1999 / 2000, to amalgamate the two plans into the one Salter Point and Waterford Foreshore Management Plan (EMS, 2000). Much of the changes between the reports has been in the planning context and State and Local Government policy frameworks in play at the time.

However, the main objective of the Foreshore Management Plan review was to investigate and document the success of the implementation of management recommendations made in the superseded versions.

With the exception of some anecdotal evidence and possible informal reconnaissance survey, (EMS, 2000) is fairly limited in the provision of scientific assessment and review, and relies largely on desktop sources such as historic data, other relevant reports / data and aerial photography from which to draw conclusions. Changes documented in this manner have included:

- Loss of wetlands through land reclamation processes required to create the suburbs of Salter Point, Manning and Waterford;
- The increased extent of freshwater vegetation associations, as a result of increased freshwater runoff / subsurface flows towards the river;
- Overall reduction in the size of the saline wetlands;
- A noted increase in the stagnancy of Salter Point Lagoon possibly as a result of sand deposition at the channel opening to the river, despite the indication that it remains operating as a healthy wetland system;
- An increase in the growth of filamentous and other algae in the Bodkin Park wetlands, potentially resulting in reduced water quality;
- Increased prevalence of macroalgae in the shallows between Salter Point and Waterford, impacting seagrass populations;
- Alterations to vegetation communities as a result of landfill and other anthropogenic impacts – fire, trampling, stormwater runoff, dumping of garden refuse and other wastes, and,
- A noted increase in feral and domestic faunal impacts and impacts relating to loss of habitat to historic fauna populations.

The lack of a current, comprehensive management instrument over the Salter Point and Waterford foreshores is apparent, and as such it is noted that a current evaluation of the implementation of Salter Point and Waterford Foreshore Management Plan (EMS, 2000) is required. This evaluation would require environmental investigations to be undertaken across the extent of the foreshore area, including flora and vegetation survey, fauna and habitat survey and review of the stormwater treatment systems and related impacts to the fringing wetlands and Canning River (at a minimum).

Impacts of Population Growth. Recreation and Other Land Use

Additional population growth within the area is likely to lead to more people accessing the foreshore environment. Activities likely to be undertaken by the community include:

- Walking, cycling, and active and passive recreation along the foreshore and nearby open space areas;
- Dog walking along the foreshore and nearby open space areas;
- Humans and dogs entering the river or traversing areas within conservation value; and,
- Fishing, prawning and worm collecting.

If unmanaged these activities could lead to impacts including:

- Damage to the existing native vegetation within the foreshore and adjacent open space areas;
- Disturbance to native fauna;
- Disturbance to bank and river sediments, potentially leading to bank erosion;
- Increased littering which can attract and support feral fauna in the area (e.g. rats, feral cats), and,
- Increased weed spread within native vegetation areas, through disturbance leading to weed colonisation and weeds being brought into/spread throughout the area on footwear, tyres etc.

Protection from Anticipated Sea Level Rise

The following actions will assist in adapting to potential future sea level rise impacts:

- Selecting tree species for planting along the foreshore zone that have a wide tolerance for soil moisture conditions and temperature changes (associated with climate change);
- Locating any future permanent structures on higher elevated land where possible or fill/elevate via building design to create an increased pad height;
- Implementing regular vegetation and shoreline monitoring to allow early detection of any detrimental impacts potentially associated with sea level rise to allow for early action to be undertaken;
- Incorporating potential sea level rises into the design, maintenance or replacement of roads along the foreshore, access paths, jetties etc, and,
- Installing erosion control infrastructure along the foreshore edge.

Potential Changes in Land Vesting Use and Policies

The City has been working on a number of strategies to guide the City into the future. The strategies are being developed based on community aspirations and in response to the City's expected growth under the State Government's strategic planning document Perth and Peel @ 3.5 Million.

In the recently released Perth and Peel @ 3.5 Million - Central Sub-regional Planning Framework, South Perth is expected to have a total population of 61,870 people; an increase of approximately 29 percent to the year 2050.

Within this Framework, CWSPF forms part of the 'green network' which is designated to accommodate Bush Forever sites, national and regional parks, district and local parks, golf courses, foreshores, sports fields, cycle paths, trails and the like. Increased pressure to contain development and minimise urban sprawl requires careful consideration of the City's green network to protect our metropolitan region's environmental assets.

At a local level, the City of South Perth is currently undergoing the preparation of a new Local Planning Strategy which will form the basis for the preparation of a review of the City's Town Planning Scheme No. 6. The overriding objective of the Town Planning Scheme is to require and encourage performance-based development in a manner which retains and enhances the attributes of the City and recognises individual precinct objectives.

Subsequent to the preparation of the City Local Planning Strategy and Local Planning Scheme review, it is anticipated that the existing local planning policy suite would be reviewed to align with the new planning framework.

Changes in landownership and vesting may also occur subject to the Local Planning Strategy and Local Planning Scheme review.

Gaps and Future Opportunities

To address information gaps and improve knowledge of the foreshore area to provide a sound basis for future management decisions, the following additional tasks will be beneficial:

- In relation to vegetation assessment, the main survey data is from 2000 or earlier. For consistency it would be beneficial to have an updated reconnaissance flora and vegetation survey undertaken over all precincts, particularly noting vegetation type, condition and weed presence;
- Undertake an assessment of fauna and habitat within the precincts, including presence of feral fauna populations, and,
- Climate change vulnerability assessment to identify areas of greatest vulnerability where future management and planning should be prioritised.

The implementation of certain recommendations in this report will require the following additional studies:

- Acid Sulfate Soil (ASS) investigation;
- Contaminated site investigation;
- Drain/stream biophysical assessment, and,
- Bushfire Attack Level assessment and Bushfire Management Plan.

“OUR HERITAGE AND IDEALS, OUR CODE AND STANDARDS – THE THINGS WE LIVE BY AND TEACH OUR CHILDREN – ARE PRESERVED OR DIMINISHED BY HOW FREELY WE EXCHANGE IDEAS AND FEELINGS.”

- Walt Disney

3.0 CONSULTATION AND ENGAGEMENT

3.1 CONSULTATION AND ENGAGEMENT

3.1.1 CONSULTATION PROCESS

Preparing to consult

The City considered it essential that the CWSPF Masterplan reflected community aspirations. Consultation with key stakeholders and the broader community led to creative ideas and set the priorities for the Masterplan.

Prior to consulting with stakeholders and the community, Urbis undertook an extensive review of previous studies, relevant literature and records of previous stakeholder engagement to form an overview of the likely issues and opportunities within the Masterplan area. Subsequently, a workshop was held with City of South Perth personnel to build upon the initial review by providing additional depth and perspective. More than 30 staff from a broad range of managerial and operational roles contributed their collective knowledge and experience to this initial review.

Based upon the initial review, a consultation program was designed around the four precincts within the Masterplan area, and three key categories.

The four precincts were:

- **Precinct 1:** Clontarf and Andrew Thomson Conservation Reserve;
- **Precinct 2:** Bodkin Park;
- **Precinct 3:** Sandon Park, and,
- **Precinct 4:** Salter Point Reserve to Redmond Reserve.

The three key categories were:

- **Natural environment**;
- **Recreation and activities**, and
- **Facilities and services**.

Online consultation

The City of South Perth publicly launched the CWSPF Masterplan project online in October 2017. Information about the project was posted to the City's website, and a consultation hub was established via the City's 'Your Say South Perth' platform. The Your Say South Perth site presented project news, maps and technical reports. It provided links to fly-through videos of the CWSPF Masterplan area, and a detailed public survey.

Public survey

An online public survey was conducted over five weeks to December 4, 2017. Respondents were asked to rate and add to a range of factors under the three key themes in terms of importance and priority for future planning. Other information including areas most visited and demographic data was collected. Comments were invited so that respondents could share hopes and ideas for the Masterplan area in their own words.

The survey was completed by 172 people, of which 148 visit the foreshore at least weekly. Fifty-three respondents were in the 'parents and homebuilders' (as defined by the Australian Bureau of Statistics) age bracket of 35-49 years, forming the biggest group by age, followed by 'empty nesters and retirees' aged 60-69 years with 44 responses.

Most respondents lived in Waterford (59), Salter Point (48) and Manning (28). Sixteen respondents identified as living outside areas adjacent to the foreshore.

The most popular areas visited were Precinct 3: Sandon Park followed by Precinct 4: Salter Point Reserve to Redmond Reserve.

Community Open Day

More than 80 people attended a community open day that was held at the Manning Community Hall on November 25, 2017. The open day was highly interactive, enabling attendees to hold extended discussions about their ideas, hopes and priorities with the City's personnel and planning consultants.

Inputs were noted directly onto maps of the Masterplan area. Verbal and written feedback collected on the day suggested that attendees found the open day to be a positive consultation experience.

Community Information Session and Survey No.2

A community information session was held at the Manning Community Hall on February 10 2018, and a second online survey conducted during February, following publication of the Draft Masterplan Summary. About 50 people attended the information session, and the City received 65 survey submissions – 50 from people living in Salter Point and Waterford. Overall, the draft Masterplan was supported by the majority of respondents, although numerous concerns were raised. In many cases, comments in favour or opposition to the draft Masterplan had common drivers – overwhelmingly respondents reinforced the core principles of preserving the environment, maintaining and enhancing people's connection (including visual) to the river, and protecting the character of the foreshore. Opinions varied as to whether the draft Masterplan achieved these principles, however the broad themes arising from community feedback are generally unified and clear.

Stakeholder interviews and meetings

In addition to consultation with the general public, interviews and meetings with key institutional and community stakeholders were conducted to collect inputs from groups with special interests in the CWSPF Masterplan. These included government agencies with statutory roles in managing the area, and community members representing groups with recreational, environmental or cultural interests.

Stakeholder interviews and meetings were held with:

- City of South Perth Aboriginal Reference Group;
- City of South Perth Access and Inclusion Group;
- City of Canning;
- Salter Point Community Group;
- Millennium Kids;
- Indigenous Land Council;
- Curtin University Boat Club;
- 1st Salter Point Sea Scouts;
- Department of Biodiversity Conservation and Attractions;
- Department of Water and Environmental Regulation;
- Department of Fire and Emergency Services;
- Water Corporation;
- Curtin University;
- Local Aboriginal Representatives, and,
- Clontarf College.

3.2 KEY THEMES

The following themes were highly favoured in the consultation feedback responses under the three identified categories:

NATURAL ENVIRONMENT

See the Water

The community has a strong emotional connection with the natural environment, especially with respect to the Canning River. People described 'loving' the river and feeling a 'soul connection' to it. Visual access to the river from residential and public areas was highly valued.

Protect and Conserve

Protection of native fauna, pest and weed management, and the health of other water bodies (wetlands, lake, lagoon, living streams) also rated highly for importance. People favour an approach to planting and maintaining native vegetation that is balanced with social uses of the foreshore.

Educate (subtly)

'Educational interpretation' is also important, but should be kept unobtrusive so as not to detract from the enjoyment of natural areas.

Effective Management

There is strong support for improved mosquito management. The condition of the living stream, the density of vegetation in parts of Bodkin Park, weed management and the condition of lakes are identified as enhancement opportunities.

RECREATION AND ACTIVITIES

Again, the river is the most valued and important feature in the 'recreation and activities' theme. Most people are content to be near the river, rather than in it per se.

Walking, Cycling and Pets

Walking, cycling and social gatherings and other land-based activities rate most highly, whereas fishing, swimming and boating were among activities considered least important. Pet exercise areas are important to some, but should be balanced with other social uses.

Walkers expressed support for speed restrictions for cyclists on shared paths, to maintain a safe and relaxed environment for all users. Modest upgrades to play and exercise equipment are favoured enhancements.

Local Destination

People said somewhere to buy coffee or other refreshments while out walking would be welcome, but facilities should be a modest presence rather than a tourist destination.

FACILITIES AND SERVICES

My Place

People described enjoying a sense of 'secret' and 'private' places in the foreshore area, and hoped this would be retained.

A Safe Place

'Safety and security' is rated as the most important consideration, including in relation to cars being broken into around existing public amenities and feelings of safety in public areas at night.

Improved Facilities

'Bins and rubbish removal' and 'access for all' are identified as points for possible enhancement through future planning. 'Public BBQs' and 'public toilets' are also important. People favoured preserving the character of the area over major infrastructure developments.

There is support for re-establishing access around Aquinas Bay, and interest in the location of planned walkways around the lagoon, and in realigning some paths to protect and restore riparian zones.

3.2.1 GENERAL FEEDBACK

In addition to the feedback that contributes to the key themes arising from the consultation, there are some highly generalised, but recurrent points that are pertinent to the Masterplan.

A common point raised in feedback related to the need for greater continuity and cohesion in strategic planning and management across all three key themes. Community groups and members reported having a long-standing continuous presence and relationship with the CWSPF area. For these people and groups, a majority felt that a sense of history, continuity and cohesion was not reflected in some of the past planning decisions and operational management of the area, and they expressed hope and the expectation that the CWSPF Masterplan would be a positive step in this direction.

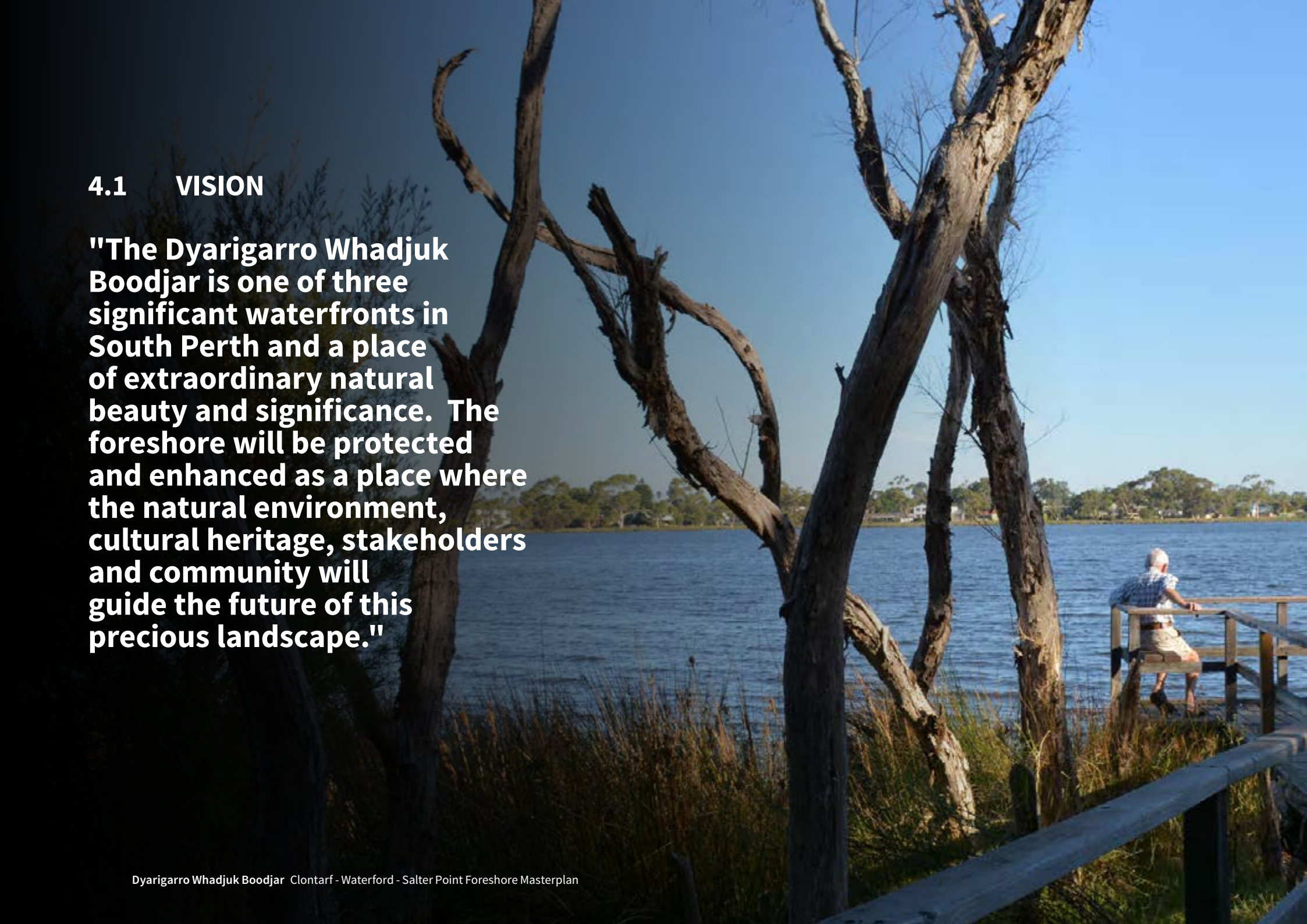
Similarly, recurrent feedback pointed towards the link between personal emotional connections with the river and surrounds, and perceptions of planning decisions and ongoing management of the area. People saw the Masterplan as an opportunity to continue to foster personal connections, and hoped that the concept of personal connection would be central to the strategic direction of the Masterplan.

Central to this, is the strong support for finding ways to capture the area's environmental, social and cultural history. This includes suggestions for appropriate interpretive signage, and the use of community events and new technology to creatively communicate the CWSPF's heritage.

"PLANNING IS BRINGING THE FUTURE INTO THE PRESENT SO YOU CAN DO SOMETHING ABOUT IT NOW"

- Alan Lakein

4.0 MASTERPLAN



4.1 VISION

"The Dyarigarro Whadjuk Boodjar is one of three significant waterfronts in South Perth and a place of extraordinary natural beauty and significance. The foreshore will be protected and enhanced as a place where the natural environment, cultural heritage, stakeholders and community will guide the future of this precious landscape."

4.2 KEY MESSAGES

WATER IS THE HEART AND SOUL OF THE ACTIVITIES ASSOCIATED WITH THE CWSPF

THE NATURAL ENVIRONMENT IS TREASURED

CWSPF SHOULD HAVE A STAKEHOLDER AND COMMUNITY FOCUS

4.3 OBJECTIVES

The following project objectives, informed by community and stakeholder consultation, have formed the guiding framework for the development of this Masterplan. This document should be used as a gauge against which all future decisions for the area are validated.

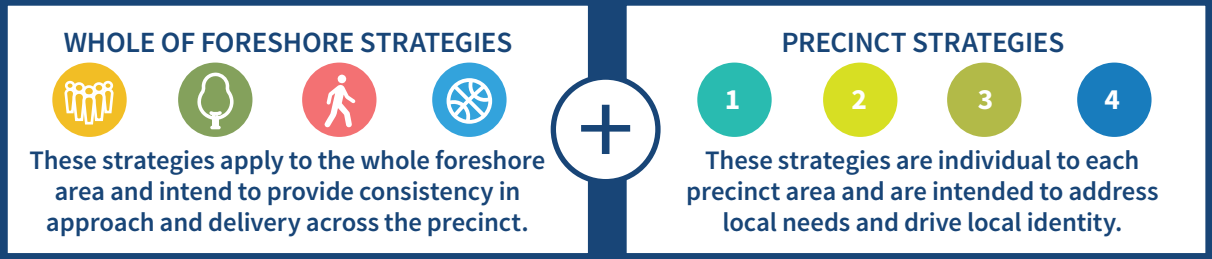
- Address current and future management issues to strengthen the natural and cultural aspects of the CWSPF.
- Allow for unique landscaping response that embraces the changing environment and allows positive experiences for all users.
- Enhance native, physical and biological environmental values and ecosystem processes along the CWSPF area.
- Establish key areas for sport activities, passive recreation and nature spaces.
- Focus on connectivity and accessibility along the entire CWSPF area.
- Celebrate the unique culture and heritage of the foreshore and surrounds.

4.4 MASTERPLAN

Since the adoption of the various management plans across the foreshore, the City has incrementally constructed and implemented numerous projects and objectives throughout the CWSPF. These projects were the result of work undertaken as part of the earlier plans (refer Existing Management Strategies/Plans and Policies).

From this, the City recognised that in order to improve the foreshore in a holistic, sustainable and cost effective way, undertaking stand-alone projects such as these was not a logical or effective way forward. This Masterplan synthesises all current work and future aspirations into a single document and provides an integrated approach to managing the foreshore into the future.

The size of the foreshore necessitates two concurrent approaches to the strategies:



These concurrent approaches to the foreshore will enable the development of foreshore spaces that are comfortable, convenient and accessible; inclusive and well-connected; while being diverse and identifiable. This will ensure a sustainable future in which the foreshore provides a range of recreational and social activities and conserves the natural and cultural environment.

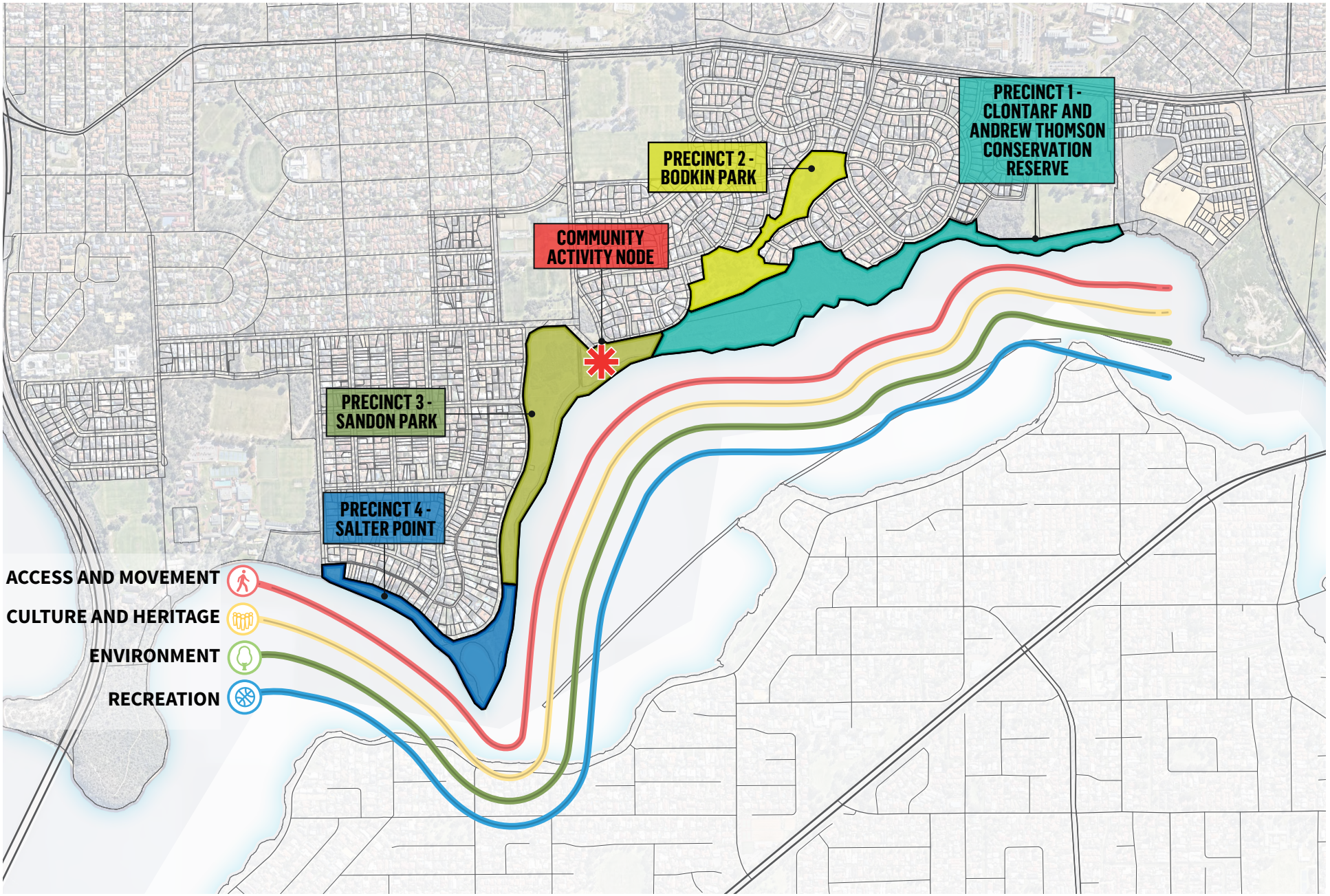


Figure 18 Masterplan Area

4.5 WHOLE OF FORESHORE

There are a number of initiatives that have been identified as relevant to the whole of the CWSPF.

The ordering of these categories and the numbering of the strategies is arbitrary, and it is likely that one or more of these strategies and/or sub strategies may be actioned together.

WHOLE OF FORESHORE STRATEGIES

- **CULTURE AND HERITAGE**
- **ENVIRONMENT**
- **ACCESS AND MOVEMENT**
- **RECREATION**

LEGEND

- Connect pedestrian paths beyond the precinct to enable extended walking circuits around the river and to key local destinations/activity areas
- Adjust cycle paths and manage vegetation to remove tight curves and obstructed view lines for safety
- Introduce defined parking areas through appropriate signage and treatments
- Formalise and co-locate launching facilities
- Improve way finding signage for all modes of transport (walking, cycling, public transport and private motor vehicle)
- Introduce interpretation walking trails incorporating artwork, text and illustrative signage
- Create a series of 'story circles' along the length of the foreshore - intimate discrete spaces allowing education, storytelling, reflection, traditional ceremonies and gathering
- Install additional seating and respite areas associated with the movement network
- Define dog off-leash areas and provide appropriate supporting infrastructure
- Existing Bus Route 31 Redmond Street to Perth Busport
- Community Activity Node as central recreation and amenity focus

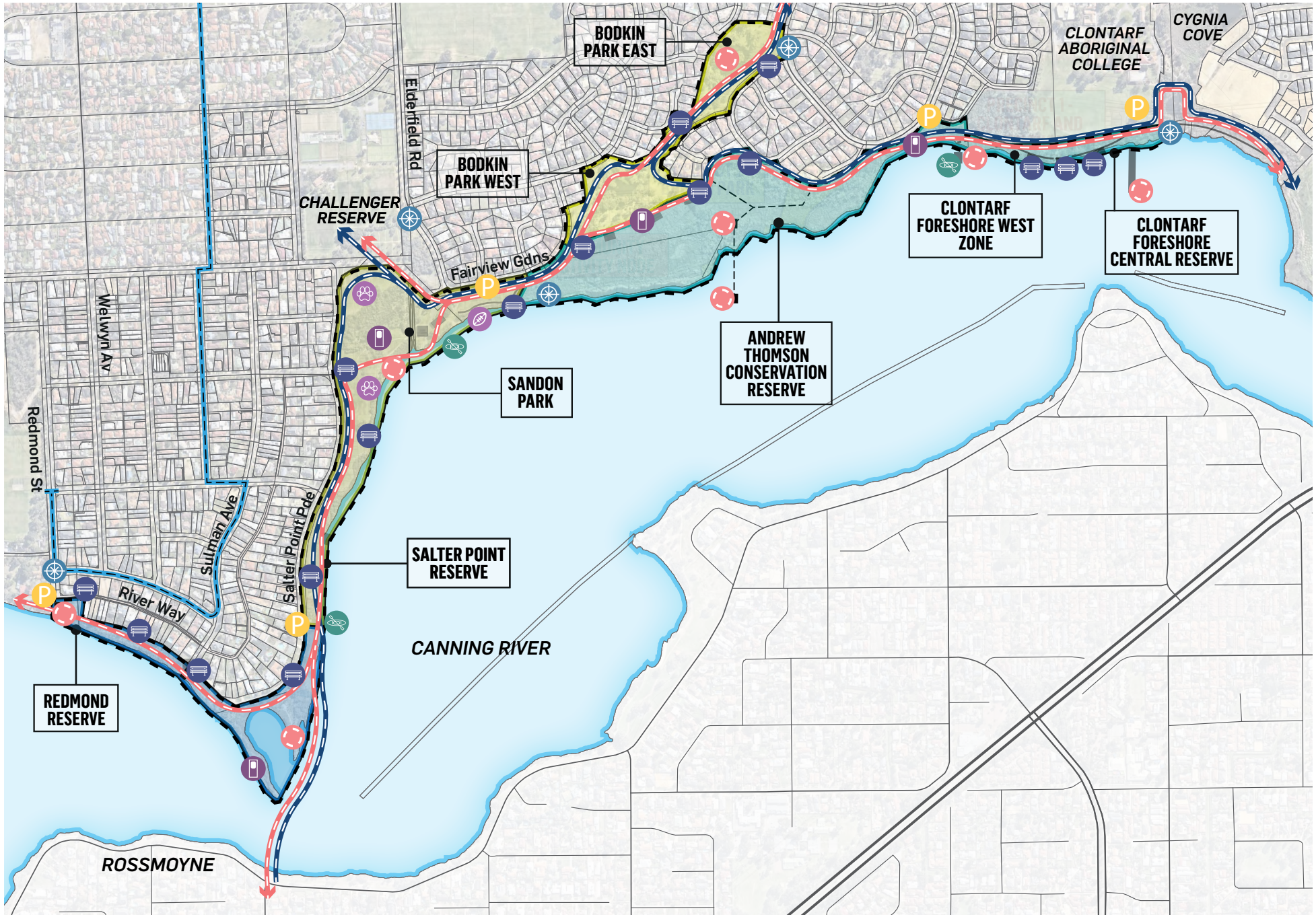


Figure 19 Whole of Foreshore Strategies

CULTURE AND HERITAGE

RECOGNISE AND CELEBRATE CULTURE AND HERITAGE AS A STRONG ELEMENT OF THE FORESHORE'S IDENTITY AND A REFERENCE POINT FOR THE FUTURE OF THE FORESHORE

Currently

The CWSPF is predominantly used for passive recreation and is currently not used for regular events. Any events are small and associated with the Curtin University Boat Club and Salter Point Sea Scouts.

The foreshore has a very strong cultural history and heritage, both European and Aboriginal, which is currently unrealised. Recognition of aboriginal heritage and cultural use of the foreshore area is limited to some signage in the Clontarf area and a panel on the information boards in Bodkin Park. Place naming is currently the only real recognition of the post European settlement history.

Future Opportunities and Considerations

Information

1. Develop a bilingual naming strategy across the foreshore to encompass walk loops, trails etc.

Interpretation

2. Investigate culture and heritage in order to prepare a Culture and Heritage Interpretation Plan to provide a framework for interpretation across the foreshore, to enable key messages and themes to be represented utilising various media, while allowing site-specific stories to be told. Ensure all signs are designed to be non-intrusive in scale and character.
3. Introduce interpretation walking trails incorporating artwork, text and illustrative signage.
4. Consider interactive augmented reality opportunities at key locations to enhance education experience.
5. Develop and maintain an oral history of the area and make available as part of a broader digital strategy.

Engagement

6. Facilitate walking tours for locals and visitors to learn and appreciate the foreshore heritage and culture.
7. Encourage and promote local events and performances.
8. Establish ongoing relationships/partnerships with local aboriginal groups, including youth, to assist with ongoing management of areas of the foreshore.

Interpretation node

Gathering place

Information signage

Story circle

Interpretive signage

***IMAGES ARE INDICATIVE ONLY**

DEVELOP AN ENVIRONMENT THAT RESPONDS TO THE REQUIREMENTS OF CLIMATE CHANGE, PROVIDES BIODIVERSITY AND SUPPORTS THE PHYSICAL AND EMOTIONAL WELLBEING OF THE COMMUNITY. RECOGNISE AND SUPPORT THE CONSERVATION VALUES WITHIN CWSPF AREA

Currently

The CWSPF environment doesn't demonstrate best practise principles from a climatic, water management and operations perspective.

The CWSPF is experiencing erosion, native vegetation fragmentation, summer drought, destructive storm events, weed inundation, seasonal prolonged flooding and increased water salinity that result in significant loss of fringing vegetation and natural habitat.

It is also anticipated that these reserves will come under additional pressure as population density increases over time.

The high conservation values of this area are framed by open parkland with irrigated turf and passive recreation opportunities. Over time, the open parkland has become increasingly naturalised, leading to increased community anxiety over loss of amenity and views to conservation areas, the river and to permanent waterbodies.

Future Opportunities and Considerations

Climate Change

9. Prepare a climate change response and adaptation plan for the river foreshore.
10. Consider Water Sensitive Urban Design (WSUD) best practice in all future works and projects.
11. Ensure irrigation ecozoning and hydrozoning are in place and minimise the use of irrigation wherever possible. Focus areas of high irrigation and maintenance in areas of highest use.
12. Promote increased biodiversity through seed collection and propagation of endemic species and planting (where appropriate) vegetation structures that support vulnerable and at-risk fauna.

Management

13. Clearly define parkland and conservation areas to ensure appropriate and agreed management regimes are implemented.
14. In parkland areas, maintain the existing character of open parkland with scattered tree planting and local play and recreation opportunities. Select and manage tree and shrub planting to ensure clear views are maintained across parklands to achieve safety and surveillance requirements and to facilitate long range views and wayfinding.
15. In parkland areas, tree planting should be selected based on shade provision. All trees, as they develop, will have their crown lifted to 2.4m above ground.
16. In conservation areas, manage and restrict access to defined paths and river access points.
17. Develop a palette of materials, products and plant species across the foreshore to ensure consistency of approach to projects and management.
18. Ensure adequate weed and pest control programs are implemented and maintained.
19. Remove bollards where possible and install barrier kerbs.
20. Undertake an evaluation of the implementation and effectiveness of current management plans.
21. Undertake periodic (10yrs) environmental investigations across the extent of the foreshore area, including:
    - flora and vegetation survey;
    - fauna and habitat survey, and
    - review of the stormwater treatment systems, as well as,
    - conducting an assessment of impacts to the fringing wetland and Canning River.

Following this review an updated management plan over the Clontarf, Waterford, Salter Point foreshore should be prepared, taking into account the objectives, community concerns and outcomes of this Masterplan process.

Community Participation

22. Encourage community involvement and stewardship through support of 'friends' groups, youth education etc.

Information and Education

23. Develop online and physical information signage to improve awareness and education of the CWSPF natural assets and processes.

24. Facilitate and promote walking tours for locals and visitors to learn and appreciate the natural environment.

25. Provide information to residents about changes in the local environment and impacts/pressure that are occurring to promote understanding, care and stewardship.

26. Install additional nesting boxes with accompanying information regarding purpose.

27. Continue to engage with local schools in developing ongoing landcare and monitoring programs.

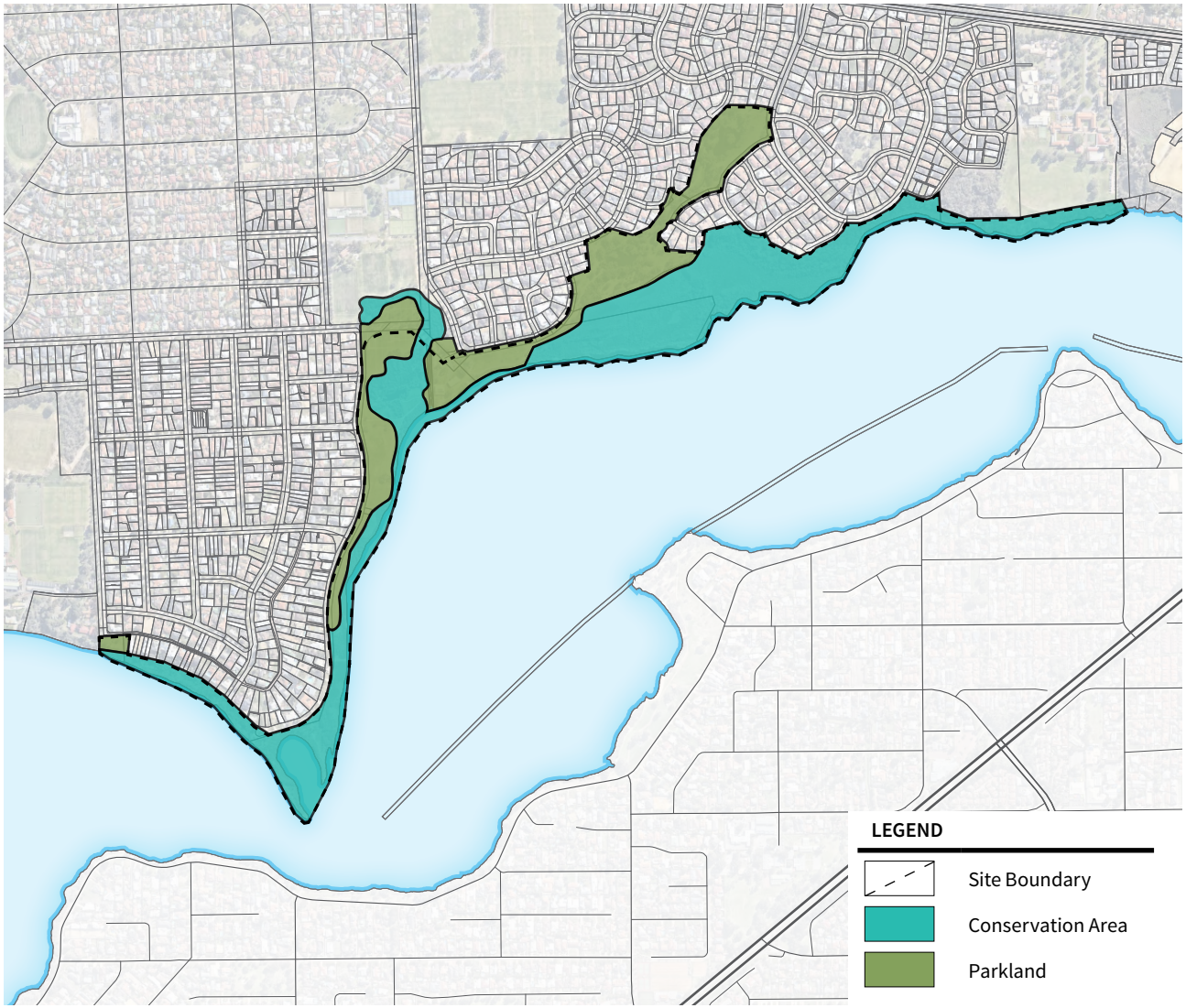


Figure 20 Parkland and Conservation Management Areas

ACCESS AND MOVEMENT

CREATE A HIGHLY ACCESSIBLE AND CONNECTED PUBLIC OPEN SPACE, WITH IMPROVED ACCESS, CONNECTIVITY AND LEGIBILITY FOR ALL USERS TO THE FORESHORE ENVIRONMENT.

Currently

There are a number of pedestrian and cycle paths throughout the study area and all are well utilised. The surface treatments of paths vary greatly, with a mix of pavement, compacted earth, boardwalk and sand.

There are also locations where paths do not connect, such as in front of the Salter Point Sea Scouts and Curtin University Boat Club. Some paths currently suffer from inundation issues, particularly to the west of the Salter Point Sea Scouts. Generally, path conditions for all abilities use is poor. Access at the western end of the foreshore, at Redmond Reserve is via stairs that are in poor condition and the City has detailed plans for the replacement of these stairs. Access for bikes and reduced abilities, even after the stair replacement plan, will still be restricted.

For visitors, accessing the foreshore is difficult as the primary mode of transport is by car with limited other alternatives. The Cycling Network Plan: Transport @ 3.5 million (Department of Transport 2016) indicates a potential commuter cycle network that connects from the Salter Point Lagoon south across the river and north along Salter Point Parade, linking through Bodkin Park and north to Curtin University. This is currently unfunded and there are no detailed plans.

Future Opportunities and Considerations

Pedestrians

28. Introduce defined hierarchy between the pedestrian path network versus cycle paths across the foreshore. Where paths are dual function ensure adequate width, signage and speed limiting.
29. Connect pedestrian paths beyond the precinct to enable extended walking circuits around the river and to key local destinations and activity areas.
30. Ensure all footpaths connect and where paths may be seasonally inaccessible, ensure alternative routes are provided.
31. Develop a palette of materials and standard details for paths and boardwalks.

Cycle

32. Set priorities and program based on recommendations from the City of South Perth and Town of Victoria Park Joint Bike Plan;
33. Adjust cycle paths and manage vegetation to remove tight curves and obstructed view lines for safety.
34. Provide cycle parking associated with the Curtin University Boat Club redevelopment.

Vehicle

35. Introduce defined parking areas through appropriate signage and treatments.
36. Ensure adequate lighting of formal parking areas to ensure safety and surveillance.

Public Transport

37. Liaise with Public Transport Authority (PTA) and Curtin University to extend bus routes to Sandon Park and Curtin University Boat Club.

Watercraft

38. Formalise and co-locate launching facilities.
39. Provide facilities for locking trolleys at launch sites.
40. Consider whole of river issues and liaise across local government areas to establish water recreation and launching facilities.

Access for All

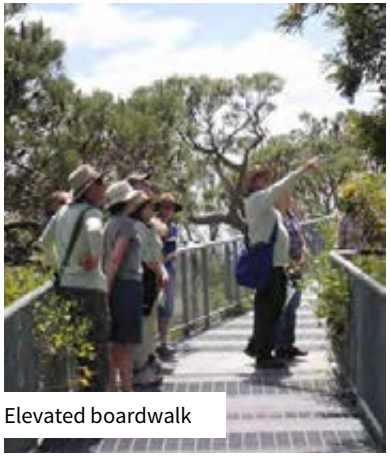
41. Connect the path network and systematically upgrade existing paths to a consistent standard to provide for universal access.

Wayfinding

42. Improve wayfinding signage for all modes of transport (walking, cycling, public transport and private motor vehicle). Include:
    - Key entry markers at the entry to Sandon Park, from Elderfield Rd and at Redmond Reserve;
    - Walk circuit signage, noting distance, and
    - Boat launch signage.

Lighting

43. Establish priority access paths and park areas. Undertake a lighting audit and ensure lighting is at appropriate levels in these areas.
44. Develop a palette of light fittings and fixtures.



Elevated boardwalk

Small watercraft access

Dual use path

Walking and cycling

Informal path

Launching facilities

Vehicle parking

RECREATION

SUPPORT CURRENT AND PROJECTED COMMUNITY NEEDS FOR RECREATION IN A SUSTAINABLE, COST EFFECTIVE AND HOLISTIC MANNER.

Currently

The river adjacent the CWSPF is used primarily for non-powered boating activities, with informal launching at a number of locations along the foreshore. Small power craft such as dinghies are launched at an informal launch site along Salter Point Parade. Fishing also occurs along the foreshore, however access is limited and the water is generally shallow. The Salter Point Sea Scouts and Curtin University Boat Club have boat launching facilities and regularly use the river for boating activities. Rowing and canoeing are the most popular recreational activities, along with playground access.

Other recreation activities are generally passive, with the majority of users walking (for personal or pet exercise), running, cycling or picnicking. A small playground and 2 fitness stations have been recently installed in Sandon Park.

The Sandon Park precinct is adjacent to Challenger Reserve, which encompasses formal sporting grounds and facilities.

Future Opportunities and Considerations

Active

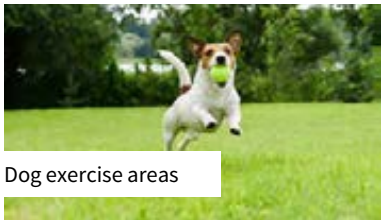
45. Establish a fitness circuit with exercise equipment, associated with Sandon Park. Consider linking to Challenger Reserve.
46. Ensure that the Curtin University Boat Club redevelopment includes a space for community activity groups such as martial arts, yoga, dance etc.
47. Promote the Curtin University Boat Club as a facility that encourages community membership.
48. Ensure grassed areas within Sandon Park and Bodkin Park, where noted in the Precinct Strategies, are kept unimpeded to allow for kick-about and other recreation activities.

Community activites

Cycling and walking loops

Kick-about area

Water recreation



Dog exercise areas

Passive

49. Install additional seating and respite areas associated with the movement network.

50. Develop digital mapping to define walking and cycling loops and correlate this with physical signage.

51. Clearly define dog off-leash areas and provide appropriate supporting infrastructure, including dog exercise equipment.

52. Ensure that the Curtin University Boat Club redevelopment has facilities, such as toilets and catering to support community events and activities in Sandon Park.

53. Establish a series of 'story circles' with seating for small groups – places for story-telling, education, arts and recreation groups to meet .

54. Improve park facilities including signage, toilets, and furniture such as bins, seats, picnic tables etc.

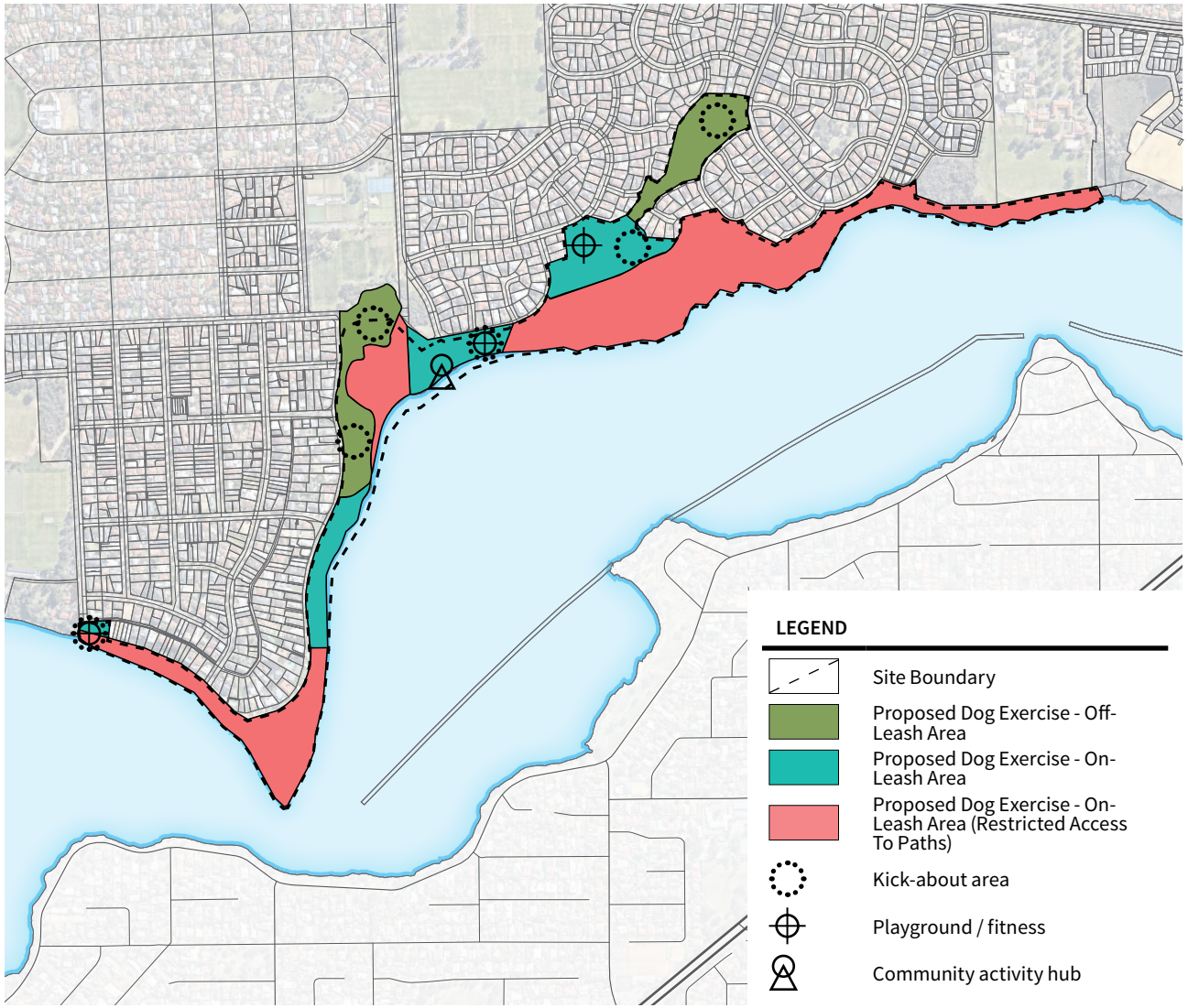


Figure 21 Dog Exercise Zones

4.6 PRECINCT 1 - CLONTARF AND ANDREW THOMSON CONSERVATION RESERVE

4.6.1 DESCRIPTION

Precinct 1 is a predominantly natural environment. It is broken up into two areas, Andrew Thomson Conservation Reserve and the Clontarf foreshore. It is generally an area of passive recreation focused on the natural environment. Road frontage is very limited in Precinct 1 making vehicle access restricted. The area is of great cultural significance to both aboriginal and non-aboriginal people.

Andrew Thomson Conservation Reserve is an area of high value conservation. Access is limited to the northern periphery, where a walking path extends the length of the reserve. Activities are limited to passive recreation, such as walking, cycling, bird watching and quiet appreciation of the natural environment. Areas of the Reserve, particularly the Melaleucas are showing signs of degradation, likely the result of the impacts of climate change, according to DBCA.

The eastern end of Precinct 1, the Clontarf foreshore, is a narrow band of foreshore vegetation accessed by an east/west pathway. It is used by the general public and by staff and students of Clontarf College. There have been considerable revegetation restoration works undertaken through this area. There are some new picnic settings and bench seats on the north of the path. This area includes/abuts two places of historic significance: Cats Island (the historic Clontarf garden) and the Clontarf Jetty. Both are currently in a state of disrepair and provide opportunities for future redevelopment. The historic jetty is currently unsafe and the City has installed a barrier fence restricting access. It is heavily used by many birds, including pelicans.

4.6.2 ISSUES/CONSIDERATIONS

- Views into Andrew Thomson Conservation Reserve are restricted by dense perimeter planting on the northern boundary. Some of this planting is not endemic to the area.
- Site lines along the pedestrian path are restricted in places by path alignment, boundary fencing and vegetation, impacting on safety and surveillance.
- There is little information about or acknowledgement of cultural heritage or environmental issues.
- Access to the river is limited to one small viewing deck along this foreshore length.
- Access for vehicles is very limited.

4.6.3 CURRENT RELEVANT MANAGEMENT POLICIES/PLANS

- Cygnia Cove Natural Areas Environmental Management Plan (2017, Syrinx)
- Salter Point and Waterford Foreshore Management Plan (EMS 2000)
- Climate Change Risk Assessment Adaptation Report Part A and Part B (2010, Echelon)
- Swan and Caning River Protection Strategy (2015, Swan River Trust)
- Draft City of South Perth Joint Bike Plan (2018, Aurecon)

4.6.4 STAKEHOLDERS

- Department of Biodiversity, Conservation and Attractions
- Department of Fire and Emergency Services
- Department of Planning, Lands and Heritage
- City of Canning
- Indigenous Land Council
- Clontarf Aboriginal College
- South West Aboriginal Land and Sea Council
- Local community
- City of South Perth relevant staff

WHAT WE HEARD

Key messages from the community

- Improvements, but not at the expense of the conservation values.
- Bird life and aquatic animals are highly valued.
- Some areas are unsafe at particular times of day.

Key messages from stakeholders

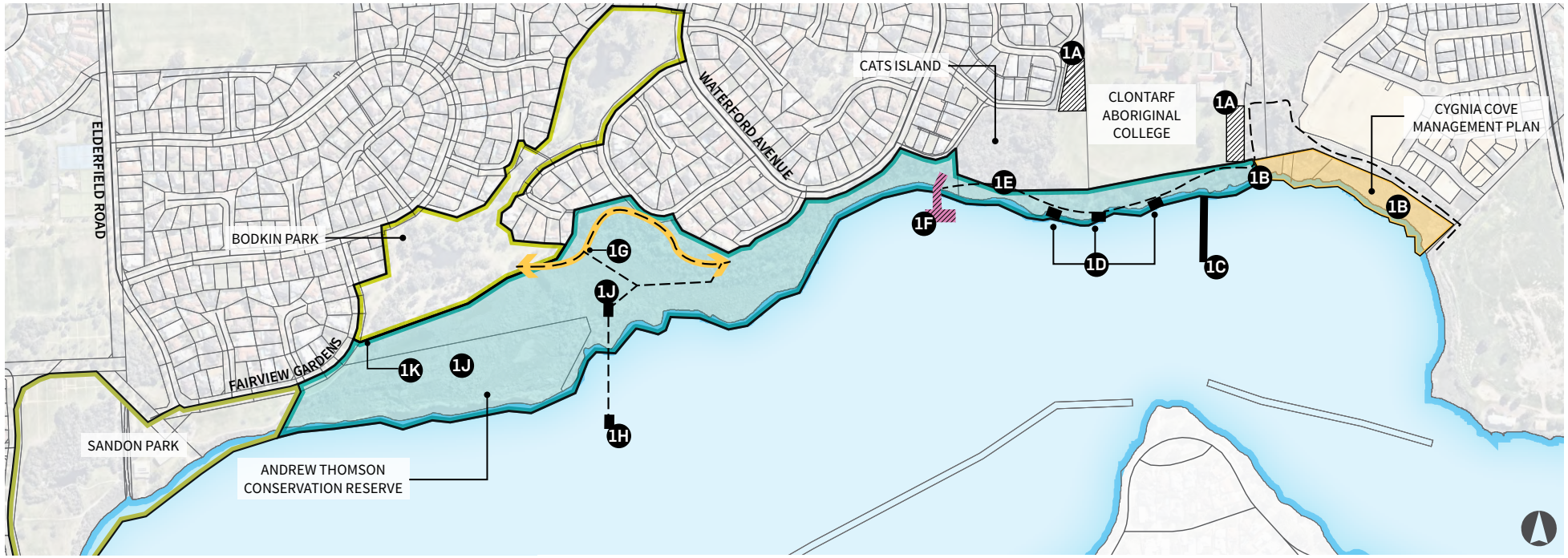
- DBCA - Clearing of vegetation will not be supported in the Reserve.
- DFES - access for fire suppression is not adequate and consequently some dwellings may be vulnerable.

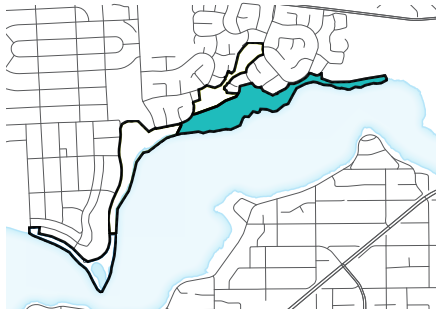
WHAT COULD BE:

This precinct could become a key destination for experiencing and sharing knowledge about the natural environment and our cultural heritage.

4.6.5 GENERAL RECOMMENDATIONS/ OPPORTUNITIES

- Improve safety and surveillance particularly along the walking path through path re-alignment and selective vegetation clearing.
- Increase opportunities to access the river.
- Celebrate the cultural heritage of the site through interpretation, engagement with local aboriginal groups and activities such as information walks and story telling.
- Provide opportunities to learn about conservation and the natural environment through improved access - visual and physical, interpretation and signage and activities such as information walks.
- Improve views into Andrew Thomson Conservation Reserve through selective clearing of vegetation and construction of new viewing decks and walkways.
- Establish ongoing partnerships with stakeholders for delivery of projects, ongoing management and information sharing.
- Create places for gathering and storytelling for small groups.





KEY PLAN

KEY INITIATIVES

- (1A) Consider access for public parking in conjunction with Clontarf Aboriginal College.
- (1B) Consider path realignment to remove tight corner and connect foreshore DUP through Cygnia Cove to Centenary Park, Canning Foreshore
- (1C) Restore and re-establish jetty for fishing and story telling.
- (1D) Investigate opportunities for riverfront seating and picnicking (locations to be determined)
- (1E) Provide interpretive information about the old Clontarf garden (Cats Island).
- (1F) Formalise canoe launch and provide seating area co-located with existing viewing deck.
- (1G) Relocate path away from property boundaries for safety.
- (1H) Investigate opportunities for creation of an elevated walkways and viewing platform.
- (1J) Explore suitable locations for instalation of Osprey poles in association with viewing platforms
- (1K) Raise path level to interface with road and improve visibility.

Figure 22 Precinct 1

4.6.6 STRATEGIES

1A

- Liaise with representatives from the Indigenous Land Council and Clontarf Aboriginal College to consider options for shared after-hours public parking on the college site. Consider proximity to the river and ease of access for canoe launch.
- Provide path access from carpark to river with new canoe launch and trolley locking facility.

Next Steps

- Engage with ILC regarding most appropriate location for shared parking and access path.

1B

- Consider path realignment to reduce tight corner for cyclists, improve visibility and indicate continuation of path link through Cygnia Cove. Establish path link to Clontarf carpark for all abilities access.
- Provide information signage relating to Cygnia Cove conservation area.
- Foreshore DUP to connect to centenary park, Canning Foreshore.

Next Steps

- Prepare interpretation / signage plan for the full foreshore. Engage consultants as required.
- Engage with DBCA and CAC.

1C

Existing

Aspirational

- Restoration and partial re-establishment of the heritage jetty. Maintain the southern portion of the current jetty structure for bird roosting.
- Provide space and seating on the jetty for small groups to support education and story telling.
- Include cultural/historical interpretive information in the redevelopment.

Next Steps

- Engage a heritage consultant to prepare concepts, with inputs from appropriate coastal engineering consultants, in consultation with stakeholders.
- Utilise concepts to seek project funding.
- Commence seeking necessary approvals.
- Prepare interpretation / signage plan for the full foreshore. Engage consultants as required.
- Engage with DBCA, State Heritage and CAC.

1D

Existing

Aspirational

Investigate opportunities for riverfront seating and picnic settings between existing path and river edge, subject to stability of the river environment.

Next Steps

- Site visit to determine appropriate location/s.
- COSP to assess against current policies/ management plans .
- Engage with DBCA and CAC.
- Engage coastal engineering consultants .

1E

Existing

Aspirational

- Provide interpretive information about the history of Cats Island (the historical Clontarf Garden).
- Work with Clontarf Aboriginal College representatives to create pedestrian links through Cats Island to the river path.

Next Steps

- Engage consultants as required.
- Engage with ILC/CAC.

1F

Existing

Aspirational

- Widen the existing jetty structure for better accessibility and surveillance.
- Extend the jetty and make a more expansive platform with seating on the water end to allow for education and story-telling.
- Include a canoe launch structure within the upgraded jetty.
- Install interpretive/ information signage.
- Construct a feature wall with integrated seating and interpretive signage/art at the street end of the structure.
- Create facility for locking boat trolleys.

Next Steps

- Prepare a concept plan.
- Prepare interpretation / signage plan for the full foreshore. Engage consultants as required.
- Seek appropriate approvals as required.
- Engage with DBCA.

1G

Existing

Relocate path away from property boundaries to open views along path. This will help to reduce cyclist/pedestrian conflict and to improve safety and passive surveillance. The path may need to be partially boardwalk structure depending on detailed assessment.

- If path relocation not supported by DBCA, the following management actions need to be undertaken to address safety issues:
  - Under-prune vegetation adjacent the path to open views;
  - Restrict new planting of large shrubs (1-3m) within 5 metres of the path, and
  - Consider conservation fencing where path abuts fragile ecological areas.

Next Steps

- Prepare a feasibility study to assess viability of path relocation.
- Engage with DBCA and impacted adjacent residents.

1H

Aspirational

Aspirational

- Investigate opportunities for elevated walkway through Andrew Thomson Conservation Reserve to a viewing platform over the river.
- Provide interpretive signage about the conservation values of the Reserve and the cultural significance of the flora and fauna.

Next Steps

- Undertake a feasibility study to determine the community benefit, appropriateness and potential location for the walkway and platform.
- Engage with DBCA.

1J

Aspirational

- Explore locations for installation of Osprey nesting poles within Andrew Thomson Conservation Reserve to provide options for existing nesting Osprey, as existing habitat trees are suffering and dying as a likely result of climate change.
- Consideration in site location to be given to ongoing monitoring and viewing by birdlife enthusiasts.
- Consider installation of bird hides.

Next Steps

- Engage with DBCA to ascertain the best location and construction strategy.

1K

Existing

Aspirational

- Construct a roadside path for cyclists to provide pedestrian/cyclist separation through the active node in Sandon Park and connect to realigned path network in Bodkin Park.
- On the existing path, establish a buffer between sedges and path users.

Next Steps

- Map proposed alignment.
- Engage with DBCA.

4.7 PRECINCT 2 - BODKIN PARK

4.7.1 DESCRIPTION

Bodkin Park is a local community park with a predominantly parkland character – i.e. trees and grass. It has a storm water management system (Collier Pines Main Drain) running the full length of the park, discharging into the river. The water system is an asset of the Water Corporation and is managed by that department. The park is cherished by the local community for its passive recreation opportunities and its natural focus.

The park edges are defined by a mix of property boundaries and road edge. Fencing style, quality and heights to property boundaries is inconsistent.

Planting through the park is predominantly trees, with shrub and sedge planting focused on the edge of the storm water management system. There is a mix of tree species and planting is unstructured.

The 'drain' that connects these lakes is structured in part, with timber board edging, with the balance along the southern end having been established as a living stream. The living stream area has dense mid-storey vegetation and sightlines to the stream are significantly impacted. This is causing concern to residents. There are turtles inhabiting the lakes and local resident's gardens are often used by the turtles for nesting.

Facilities in the park are minimal and include a swing set, scattered seating and information signage. Most facilities are not well located for optimum benefit. There is a north/south path link that provides a partial connection to Curtin University.

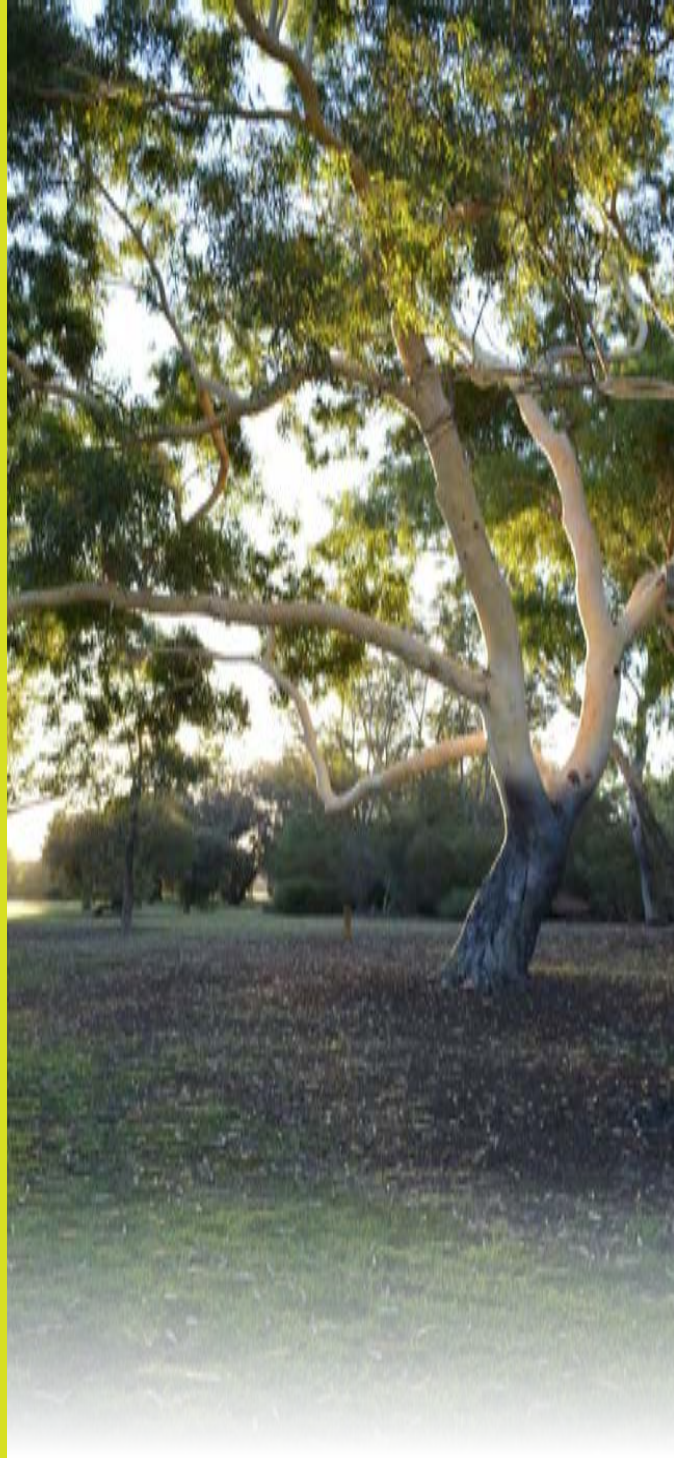
Views to Andrew Thomson Conservation Reserve and the river from Bodkin Park have been largely lost due to a recently planted stand of Casuarina trees that straddle the boundary of the park and Andrew Thomson Conservation Reserve.

4.7.2 ISSUES/CONSIDERATIONS

- Water quality and weed management in the lakes is poor.
- Views across the park and to the river have been impacted by vegetation growth.
- Community facilities are minimal.

4.7.3 CURRENT RELEVANT MANAGEMENT POLICIES/PLANS

- Salter Point and Waterford Foreshore Management Plan (EMS 2000)
- Climate Change Risk Assessment Adaptation Report Part A and Part B (2010, Echelon)
- Swan and Caning River Protection Strategy (2015, Swan River Trust)
- City of South Perth Integrated Catchment Management Plan Volume 1 and Volume 2 (2004, JDA and Ecoscape)
- Hydrocotyle Management Plan for Bodkin Park Waterbodies (2015, NSA)
- Draft City of South Perth and Town of Victoria Park Joint Bike Plan (2018, Aurecon)



4.7.4 STAKEHOLDERS

- Department of Biodiversity, Conservation and Attractions
- SERCUL
- Water Corporation
- South West Aboriginal Land and Sea Council
- Local community
- City of South Perth relevant staff

WHAT WE HEARD

Key messages from the community

- The park has a local community focus.
- Views have been impeded or lost through growth of vegetation.
- Water quality in the lakes has become poor over recent years.
- Mosquito management is an ongoing concern.
- Bird life and aquatic animals are highly valued.

Key messages from stakeholders

- DBCA - Preserve and protect the riparian zone from erosion and as natural habitat for wildlife.

WHAT COULD BE:

Bodkin Park could be upgraded to provide a key local community gathering place (destination) with a focus on the natural environment and informal family recreation.

4.7.5 GENERAL RECOMMENDATIONS/ OPPORTUNITIES

- Establish a management arrangement with Water Corporation that ensures that the water quality in the lakes is improved.
- Improve the quality of the water through the development of a living stream, designed to retain site-lines and maintain physical access to the stream.
- Selectively clear mid-story shrubs and under-prune trees to open site-lines through the park and to the water.
- Provide more and improved community facilities, focused on a natural character and outcome.
- Ensure that some grassed areas are maintained open and unimpeded from planting and canopies to allow for active recreation.
- Re-establish views over Andrew Thomson Conservation Reserve, through selective modification/clearing of vegetation, new platforms and walkways .
- Consider development of a detailed concept plan for Bodkin Park to guide improvements in a consolidated and integrated fashion.

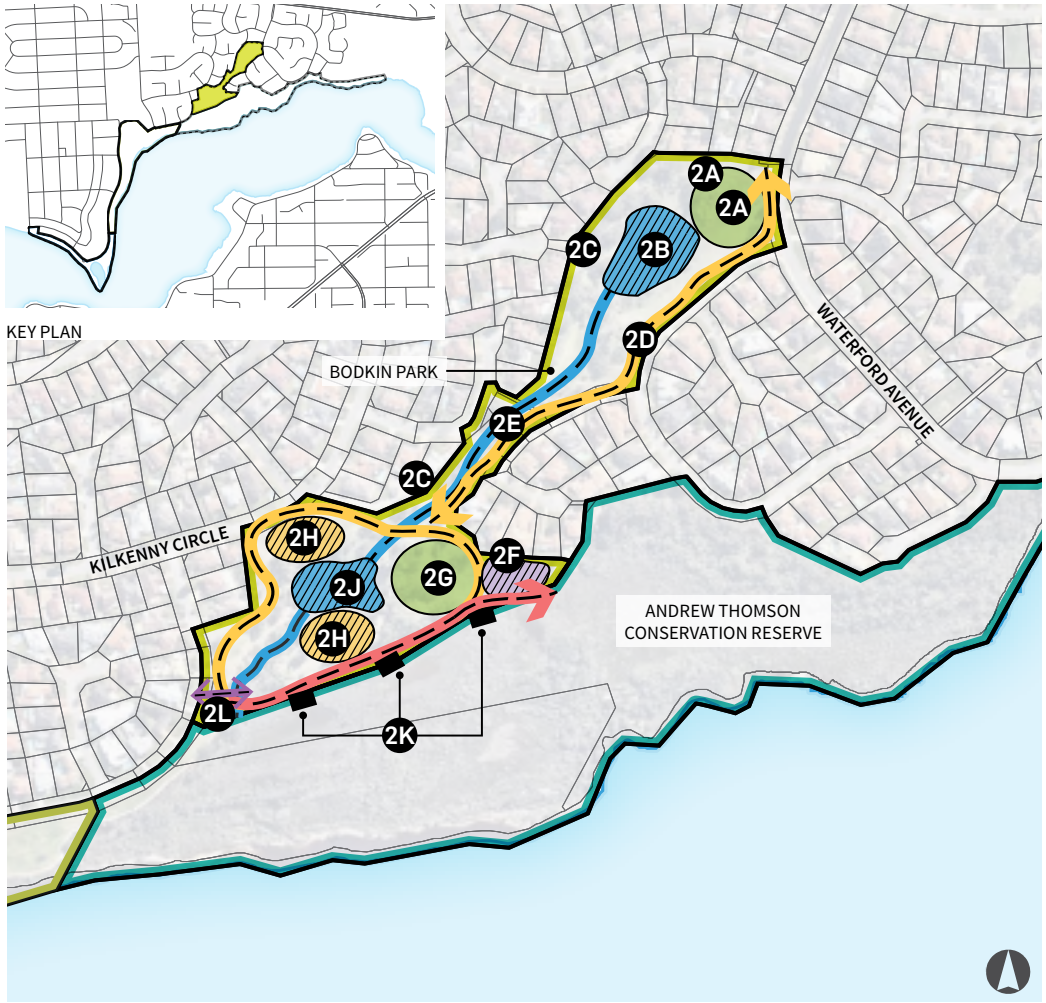


Figure 23 Precinct 2

KEY INITIATIVES

- (2A) Consider community facilities such as shelter, picnic tables, BBQ.
- (2B) Establish two edge conditions for north lake - reeds or hard edge (no grass) ensuring turtle access is maintained. Construct turtle hide with interpretive signage.
- (2C) Frame park edges with attractive low planting to soften and define public-private interface.
- (2D) Add eastern path to create walking and cycling loop.
- (2E) Create living stream between north and south lakes with trees and low planting ensuring safety and surveillance principles are incorporated.
- (2F) Extend low sedge land planting to soften interface with Andrew Thomson Conservation Reserve and mark transition between parkland and conservation area. Potential information and wayfinding zone with seating.
- (2G) Maintain open area for kick-about.
- (2H) Establish a recreation node including shelter, picnic tables, BBQ, possible half court – location to be investigated.
- (2J) Selective clearing and ongoing management of living stream, south lake and Andrew Thomson Reserve interface to improve visual amenity, safety and surveillance and manage water quality and habitat.
- (2K) Elevated viewing platforms to provide views across Andrew Thomson Conservation Reserve including information signage. Co-located with new footpath.

  Realign existing cycle/pedestrian path and investigate opportunities to create alternative pedestrian path adjacent to reserve.
- (2L) Create a new pedestrian bridge across the living stream at Fairview Gardens, south of existing bridge to improve wayfinding, access and sightlines.

4.7.6 STRATEGIES

2A


Existing


Aspirational

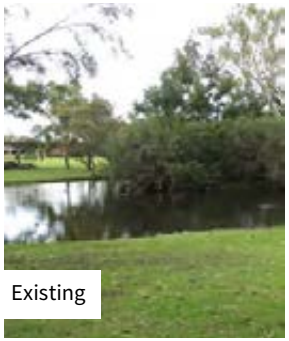

Aspirational

- Install community facilities, including picnic tables and shelter. Installation of additional community facilities such as BBQs for consideration.

Next Steps

- Prepare concept plan.
- Engage with the local community and relevant community groups.

2B


Existing


Aspirational

- Establish two edge conditions for the northern lake, to support the water quality of the lake and the habitat for turtles, ensuring access for turtles is considered. Edge conditions to be sedge planting or hard edge.
- Construct a turtle hide with interpretive and educational information.
- Establish a new management regime with Water Corporation to ensure ongoing water quality in the lake system.
- Undertake bi-annual water testing to monitor water quality.

Next Steps

- Prepare a concept plan for the lake and consult with Water Corporation.
- Revise current turtle hide plan to alter location of hide, in line with community feedback.
- Establish an MOU with Water Corporation.
- Establish an ongoing water testing regime and reporting.

2C


Existing


Aspirational

- Frame some park edges with areas of low, colourful shrub beds, particularly where property boundaries abut the park. This will soften the park edges visually and define public/ private interfaces.

Next Steps

- Develop a planting plan concept and approved plant species list.
- Engage with adjacent residents.

2D

Existing

Aspirational

- Construct path link along the eastern edge of Bodkin Park creating a walking and cycling loop within the park and a better connection to Curtin University. Ensure that alignment is such that the path connects to road links and maintains the open kick-about area as noted in 2A. Path design to allow for dual use.

Next Steps

- Prepare a concept plan and map proposed alignment.

2E

Existing

Aspirational

- Remove timber edge drain structure and construct a Living Stream between north and south lakes. Design and planting selection to ensure open views are retained for safety and surveillance.
- Create natural scenarios such as rock crossings for access to water at appropriate locations.
- Include natural structures for incidental play.
- Install Gross Pollutant Traps (GPTs).
- Establish a maintenance regime to ensure a clear mid-storey is maintained.

Next Steps

- Engage environmental and landscape consultants to develop living stream concept options.
- Prepare a management plan.
- Engage with Water Corporation/South East Regional Centre for Urban Landcare (SERCUL) and the local community.

Aspirational

2F

Existing

- Soften and define the eastern end of Bodkin Park, by extending sedgeland planting from Andrew Thomson Conservation Reserve to a newly aligned path and establishing a low, buffer planting edge to adjacent properties.
- Establish a seating and information node with interpretive/ educational signage relating to Andrew Thomson Conservation Reserve.

Next Steps

- Prepare a concept plan and peg path alignment.
- Prepare interpretation / signage plan for the full foreshore. Engage consultants as required.
- Engage with DBCA and adjacent residents.

2G

Existing

Aspirational

- Establish and maintain an open, grassed kick-about space in the southern end of Bodkin Park.

Next Steps

- Prepare a concept plan that establishes the extent of the open area.
- Rationalise any newly planted trees within the allocated area.

2H

Aspirational

Aspirational

- Establish a local recreation hub with seating, shade and recreation activities such as table tennis, nature focused play, half court. Facilities to cater to all ages to encourage family participation. Possible inclusion of BBQ facilities subject to feasibility.
- Design, materials and colours to reflect nature.

Next Steps

- Prepare a concept plan.
- Engage with local residents, relevant stakeholders and community groups.

2J

Existing

Aspirational

- Selective clearing and ongoing management of existing living stream, and southern lake, to improve visual amenity, improve safety and surveillance, and manage water quality and habitat.
- Selectively clear or under prune Casuarinas on COSP property to establish view corridors to Andrew Thomson Conservation Reserve.
- Establish an ongoing clearance regime to retain view corridors.

Next Steps

- Prepare a management plan or update existing.
- Engage with Water Corporation/South East Regional Centre for Urban Landcare (SERCUL).

2K

Existing

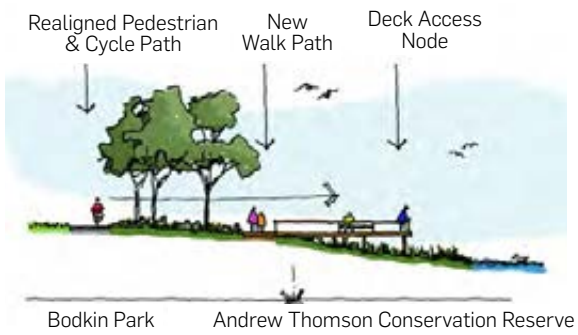
- Investigate a secondary access path to provide a pedestrian board walk option to boundary of Bodkin/Andrew Thomson Conservation Reserve. Include open platform terraces with seating for contemplation, education and story-telling. Consider an elevated platform for bird watching.
- Provide cultural and conservation interpretive signage/information.
- Realign and widen the existing path for safer cyclist use.

Next Steps

- Prepare a concept plan.
- Engage with local residents, relevant stakeholders and community groups.

2L

Aspirational



Next Steps

- Commence selective clearing/underpruning of Casuarinas on COSP property. Establish a maintenance regime for removing new self-propagated Casuarinas.
- Prepare a concept plan to establish new boardwalk/path alignment and location of viewing terraces.
- Engage with DBCA and seek approval as required.
- Prepare interpretation / signage plan for the full foreshore. Engage consultants.

2M

Existing

Aspirational

Create a new pedestrian bridge across the living stream at Fairview Gardens, south of existing bridge to improve wayfinding, access and sightlines.

- Reconfigure existing path network to suit.
- Upgrade or remove existing bridge.

Next Steps

- Prepare a concept plan.
- Engage with DBCA, subject to final alignment.

4.8 PRECINCT 3 – SANDON PARK

4.8.1 DESCRIPTION

Precinct 3 is the activity hub within the foreshore project area, incorporating the only carparking area, ablution facilities and formal recreation facilities along the length of the CWSF. It is the area most directly accessible from Manning Road.

Precinct 3 includes the parkland abutting Challenger Reserve, Sandon Park fronting Salter Point Parade and the area fronting Fairview Gardens, including the recreation buildings, carpark, playground and grassed park fronting the river.

The area abutting Challenger Reserve is a grassed parkland with scattered trees and areas of remnant wetland. It has an east/west access path connecting Hope Ave to the recreation hub on the foreshore. There is an open drain through the park that discharges into the river. There is a boardwalk through the wetland that is not well connected to other walkways.

The Salter Point Parade foreshore is a linear park, used primarily for walking. There is a grass strip adjacent to the road and sedge planting to the foreshore. There are some dense groups of small trees. There are two small beaches with associated seating. Residential lots front this section of the foreshore.

The recreation hub area consists of two buildings, both nearing end of life, one houses Curtin University Boat Club, the other the Salter Point Sea Scouts and other community uses. There is a carparking area and a single public toilet. A new playground and BBQ area has been installed. This is well utilised, however the location compromises the functioning of the Curtin University Boat Club. The adjacent park has had some fitness equipment installed. The equipment is not connected to a fitness trail or circuit. The only shade is associated with the playground. Access to the river is restricted to the boat ramp at the Curtin University Boat Club.

4.8.2 ISSUES/CONSIDERATIONS

- The Curtin University Boat Club and Salter Point Sea Scout buildings are nearing end of life and require upgrade.
- The Curtin University Boat Club and Salter Point Sea Scout facilities are not easily accessible to the public.
- Lighting levels in the carpark have been noted by stakeholders as inadequate.
- The single public toilet is inadequate.
- There is community confusion around dog access areas.
- There is little shade in the grassed park in front of Fairview Gardens.
- There are some grassed areas that are currently inundated during winter.
- Paths are inconsistent in material and standard and some do not provide for universal access.
- There is no path connection across the river front of the boat club buildings.
- The vegetated drain is in poor condition.
- Seating and community infrastructure is limited outside of the playground area.
- The waterfront club facilities, parking and community facilities are not easily visible or well signed when arriving from Elderfield Rd.
- There is an opportunity to provide a fitness circuit extending into Challenger Reserve and linking the recreation facilities to the river.

4.8.3 CURRENT RELEVANT MANAGEMENT POLICIES/PLANS

- Draft City of South Perth and Town of Victoria Park Joint Bike Plan (2018, Aurecon).
- Salter Point and Waterford Foreshore Management Plan (2000, EMS).
- Climate Change Risk Assessment Adaptation Report Part A and Part B (2010, Echelon).
- Swan and Caning River Protection Strategy (2015, Swan River Trust).
- City of South Perth Integrated Catchment Management Plan Volume 1 and Volume 2 (2004, JDA and Ecoscape).

4.8.4 STAKEHOLDERS

- Local community
- Curtin University
- Curtin University Boat Club
- Salter Point Sea Scouts
- Department of Biodiversity, Conservation and Attractions
- South West Aboriginal Land and Sea Council
- Millennium Kids
- Salter Point Community Group Inc.
- City of South Perth relevant staff

P3

WHAT WE HEARD

Key messages from the community

- Retention of views is important.
- Enforcement of dog regulations is inadequate.
- Retention of small beaches are supported.
- Any redevelopment to be low key and in character with the natural setting.
- Toilet facilities are inadequate.
- Retain grassed areas adjacent Salter Point Parade where possible.

Key messages from stakeholders

- Curtin University
  - Clubhouse facilities are inadequate for the boat club's needs.
  - Curtin is prepared to consider an integrated redevelopment, with Salter Point Sea Scouts and public facilities.
- Salter Point Sea Scouts
  - Reservations about an integrated facility.
  - More garage and storage space is required.
- DBCA
  - Reduce turf where possible.

WHAT COULD BE:

Sandon Park could become a key hub for the local and broader community with a focus on active recreation, community activities and events.

4.8.5 GENERAL RECOMMENDATIONS/ OPPORTUNITIES

- Redevelop the Curtin University Boat Club and Salter Point Sea Scouts into an integrated facility that incorporates public facilities (refer to 3A for more detail).
- Provide better access to the river for informal family recreation.
- Simplify delineation of the areas for dog on and off-leash. Provide for dog exercise/agility.
- Establish a continuous foreshore path that is universally accessible.
- Provide shade trees strategically located to minimise impacts on views.
- Integrate foreshore planning with planning for Challenger Reserve.
- Link remnant stands of wetland and extend to include areas that suffer significant winter inundation.
- Improve wayfinding entry signage .
- Celebrate the cultural heritage of the site through interpretation, engagement with local aboriginal groups and activities such as information walks and story telling.

Figure 24 Precinct 3

KEY INITIATIVES

- (3A) Extend roadside DUP to connect redevelopment area to path network.
- (3B) Provide scattered shade tree planting associated with seating areas. Maintain open areas to facilitate community events and recreation.
- (3C) Investigate selective removal of fringe vegetation to create family beach.
- (3D) Investigate visual cue artwork and signage for wayfinding (beyond study area).
- (3E) Connect and restore remnant wetland areas to create continuous link from south Challenger Reserve to Canning River including information signage and boardwalks (extends beyond study area).
- (3F) Establish off leash dog exercise area incorporating kick-about, picnic facilities, family recreation. Tree planting constrained to perimeter.
- (3G) Future redevelopment of Salter Point Sea Scouts, Curtin University Boat Club and carparking incorporating potential community use facilities, café and public toilets.
- (3H) Reconfigure and divert existing drain to improve water quality management.
- (3J) Provide scattered shade tree planting adjacent to footpath for walkers and park users. Arrange groupings of trees planted in association with new seating where necessary for shade provision.
- (3K) Extend wetland and formalise existing footpath connection between Sandon Park and Curtin University Boat Club.
- (3L) Maintain grass between edge of floodplain and roadway.
- (3M) Retain and enhance two existing small beaches for canoe launch, dog access, paddling recreation. Incorporate seating, universal access and conservation fencing.
- (3N) Extend sedgeland planting to existing mapped flood plain area. No additional tree planting in sedgelands.

P3

4.8.6 STRATEGIES

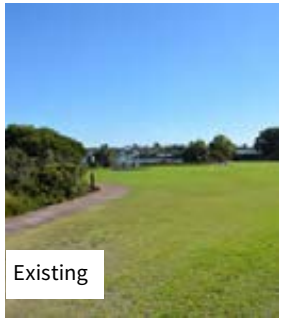
3A

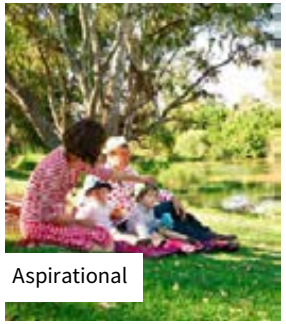
- Extend roadside DUP to connect 3A redevelopment area to proposed path (1K).

Next Steps

- Prepare a concept plan with consideration to existing informal roadside parking.

3B


Existing


Aspirational

- Provide scattered planting of shade trees, underpruned to 2.5m.
- Provide additional seating associated with shade trees.
- Maintain central open grassed area to optimise flexibility for community events and recreation activities.

Next Steps

- Prepare a concept plan including tree locations and species.
- Engage with relevant stakeholders adjacent residents.

3C


Existing


Aspirational

- Selectively remove a section of river fringing vegetation to create a community beach and associated infrastructure, subject to input from coastal engineers.

Next Steps

- Engage coastal engineers to prepare feasibility and options.
- Subject to feasibility, prepare concept.
- Consider beach size and location in conjunction with redevelopment of Curtin University Boat Club precinct.
- Engage with DBCA.

3D


Aspirational

- Commission and install statement artwork/ signage for wayfinding.

Next Steps

- Prepare interpretation / signage plan for the full foreshore. Engage consultants as required.

3E

Existing

- Connect and restore remnant wetlands to create a continuous link from south Challenger Reserve to Canning River.
- Extend wetland areas to include grassed areas that currently get heavily inundated and revegetate.
- Maintain wide, open view corridors in conjunction with path links through for safety and surveillance.
- Provide cultural and conservation interpretive signage/information.
- Consider installation of conservation fencing to wetland edge to aid in revegetation and management.

Next Steps

- Prepare a concept plan showing extent of wetland, areas of expansion, path links and boardwalks.
- Engage with local residents, DBCA and Water Corporation.

3F

- Create off-leash dog exercise area for family recreation.
- Maintain central grassed open area for kick-about north of existing east-west path.
- Provide picnic facilities under trees to perimeter.
- Restrict additional tree planting to perimeter.
- Remove/relocate any trees recently planted in the central grassed area.
- Install dog agility equipment.
- Install low fence to western road edge.
- Plant scattered shade trees through grassed area south of existing east west path.
- Consider installation of conservation fencing to wetland areas.

Next Steps

- Assess ground stability and ensure adequate drainage infrastructure is in place.
- Develop concept plan in consideration of future planning for Challenger Reserve.
- Invite participation from local dog owners to develop plan.

Aspirational

Aspirational

Aspirational

3G

Existing

Existing

Aspirational

- Redevelop the Curtin University Boat Club and Salter Point Sea Scout facilities into a new, consolidated development. To potentially include but not limited to:
  - Curtin University Boat Club facilities, including boat storage, meeting area, change rooms, kitchen/catering;
  - Salter Point Sea Scout facilities, including additional storage;
  - Public ablution facilities;
  - Community use space for local community groups;
  - Small café/kiosk;
  - Reconfigured carpark;
  - Improved lighting;
  - Path linkage between facility and the river, and,
  - Boat launch for non-motorised craft.
- NOTE – Final list of inclusions subject to development of brief by stakeholder group
- New development to be designed to respond to the natural setting, with sympathetic choice of materials and detailing.
- New development to be a maximum of two levels.
- Views to the river to be retained from access road.
- Public access to be retained between new development and the river edge.
- Public access to the boat ramp to be retained for hand launching.
- Landscaping including planting and paving selection to be in sympathy with the natural setting.
- Building facilities and surrounds to be universally accessible.

Next Steps

- Option to establish project specific Stakeholder Reference Group.
- Prepare a project brief, in conjunction with stakeholders.
- Prepare concept plans.
- Engage with local community.
- Establish funding model and leasing arrangements.

Stakeholders

- Curtin University Boat Club.
- Salter Point Sea Scouts.
- DBCA.
- Local community user groups (current and potential).
- City of South Perth relevant staff.

Aspirational

Aspirational

3H

Existing

- Re-route existing drain to establish better water quality management prior to river outfall.
- Establish living stream environment with open views.
- Establish new north-south access path with all abilities accessibility.

Next Steps

- Prepare a concept plan.
- Engage with Water Corporation and DBCA.
- Develop management plan for ongoing tree maintenance, particularly under-pruning.

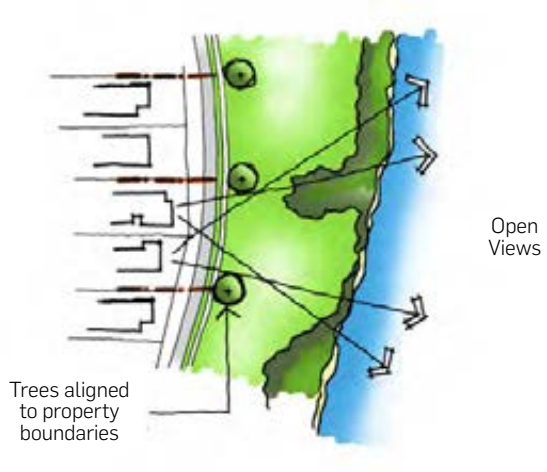
3J

Existing

- Plant scattered shade trees adjacent to the road edge footpath to provide shade to path and park users.
- Tree species to be clear understory and able to be under-pruned to maintain site lines to river.
- Trees to be planted on the alignment of property boundaries and at road terminations.
- Establish an on-going management process to remove Casuarinas that self-sow.
- Scattered small groupings of trees to be planted in grassed areas associated with new and existing seating for provision of shade.

Next Steps

- Provide a detailed tree planting plan with species in accordance with the City's urban forest strategy.
- Advise adjacent residents.



3K

Existing

Aspirational

- Extend wetland sedges to include areas of winter inundation. This area to act as transition zone between wetland environment and riverine edge, with low planting only to maintain views for safety and security.
- Formalise the existing path from Sandon Park to the Curtin University Boat Club, ensuring universal access. Some path sections may require boardwalk construction.

Next Steps

- Prepare a concept plan to confirm extent of new planting.
- Engage with local residents, DBCA and Water Corporation.

3L

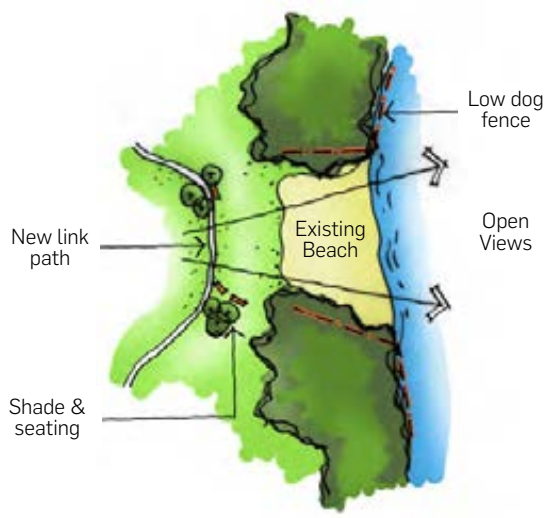
Existing

- Retain existing grassed strip between roadway and the line of mapped flood plain in response to community comments.

Next Steps

- Continue existing management/maintenance regime.
- Consider implementation of irrigation to turf areas.

3M

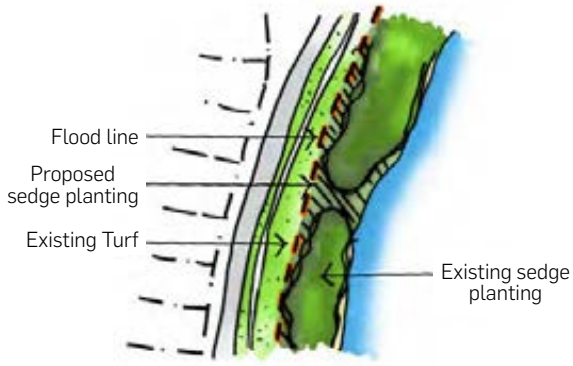


- Retain and enhance two existing small beaches.
- Allow for dog access to the river and install conservation fencing .
- Provide path link for universal access.
- Relocate seats to periphery and provide shade planting.

Next Steps

- Prepare concept plan and confirm path gradients for universal access.
- DBCA and other relevant stakeholders.

3N



- Extend existing sedgeland planting to the alignment of the mapped flood plain area as an ongoing response to climate change impacts. Extent of sedgeland planting subject to DBCA advice.
- No additional wetland trees to be planted in sedgelands. Selective thinning of existing trees to provide filtered views to river.

Next Steps

- Confirm current floodplain mapping.
- Advise local residents.
- DBCA and other relevant stakeholders.

4.9 PRECINCT 4 – SALTER POINT

4.9.1 DESCRIPTION

Precinct 4 comprises an area from the informal boat ramp on Salter Point Parade, west to Redmond Reserve at the boundary of Aquinas College. The eastern end of this precinct is focused around Salter Point Lagoon and the western end is a narrow, vegetated foreshore strip at the base of a steep and unstable embankment. A pedestrian path extends the length of the precinct. The precinct is used predominantly for passive recreation, mostly walking.

The lagoon is a natural feature that has permanent water. It supports a diversity of life, particularly birds. The water level and natural environment, varies seasonally. This area has particular significance to local aboriginal people. Significant revegetation and stabilisation has been undertaken by the City to stabilise the western edge. An informal path extends along both edges, the eastern path ending in a deck structure. The cul-de-sac at the end of Salter Point Parade is elevated from the lagoon and an un-natural embankment has been created as a result. Views to the lagoon from the road-side path are restricted by vegetation.

The western end of the Precinct consists of a steep, vegetated embankment with an access path along the river. There are two access stairs, one newly constructed (Sulman Stairs) and one at Redmond Reserve, that requires upgrading. The area is secluded and there is little indication, from the top of the bank, of the path access below. Redmond Reserve, adjacent to Aquinas College, is a simple grassed park with minimal infrastructure.

4.9.2 ISSUES/CONSIDERATIONS

- There is little information about or acknowledgement of cultural heritage or environmental issues.
- Stabilisation of the river edge is an ongoing management issue.
- Stabilisation of the cliff embankment is an ongoing management issue.
- Vegetation east of the lagoon is being damaged by unrestricted pedestrian access.
- Stair access to the river from Redmond Reserve is currently in poor condition. There is no universal access provision.

4.9.3 CURRENT RELEVANT MANAGEMENT POLICIES/PLANS

- Draft City of South Perth and Town of Victoria Park Joint Bike Plan (2018, Aurecon).
- Salter Point and Waterford Foreshore Management Plan (2000, EMS).
- Climate Change Risk Assessment Adaptation Report Part A and Part B (2010, Echelon).
- Swan and Caning River Protection Strategy (2015, Swan River Trust).
- Salter Point Foreshore Restoration Plan Review Technical Report (2015, Syrinx).
- Salter Point Foreshore Restoration Plan (2011, Syrinx).
- Mount Henry Peninsula Foreshore Management Plan (2004, Ecoscape).
- Redmond Reserve Stair Replacement Vegetation Assessment (2013, Natural Area Consulting).
- Sulman Stair Drainage Upgrade Vegetation Assessment (2013, Natural Area Consulting).
- Marli River Park - An Interpretation Plan (2014, NTWA and SRT).

4.9.4 STAKEHOLDERS

- Local community.
- Department of Biodiversity, Conservation and Attractions.
- South West Aboriginal Land and Sea Council.
- Aquinas College.
- Salter Point Community Group Inc.
- City of South Perth relevant staff.

WHAT WE HEARD

Key messages from the community

- Views have been adversely impacted from tree planting around the lagoon.
- Concerns expressed about algae and smells associated with the lagoon.
- Planting should be local species – query some planting to date.
- Desire for pedestrian access around Aquinas Bay.
- General concern regarding the DoT Bike Plan connection through Salter Point Lagoon.

Key messages from stakeholders

- DBCA
  - Erosion from tidal processes in Aquinas Bay.

WHAT COULD BE:

This precinct could be a diverse range of natural experiences that accommodates access for passive recreation, interpretation and information relating to the natural environment and cultural heritage.

4.9.5 GENERAL RECOMMENDATIONS/ OPPORTUNITIES

- Celebrate the cultural heritage of the site through interpretation, engagement with local aboriginal groups and activities such as information walks and story telling.
- Provide opportunities to learn about conservation and the natural environment through improved access, interpretation and signage and activities such as information walks.
- Provide universal access to the lagoon and consider opportunities for universal access at Redmond stairs.
- Control pedestrian access to protect vegetation.
- Create a hilltop lookout at Redmond Reserve with seating, opened views and improved amenity; consider formalised short-term parking bays.
- Establish a partnership with Aquinas College to manage ongoing opportunities for foreshore access and management.

KEY INITIATIVES

- (4A) Formalise canoe launch access with adjacent street parking.
- (4B) Formalise existing walkways around Salter Point Lagoon to protect existing environment.
- (4C) Add alternative walkway to allow improved pedestrian experience.
- (4D) Consider bridge for loop walk and interpretation across the lagoon mouth.
- (4E) Stabilise and formalise existing beach access (subject to coastal erosion advice).
- (4F) Create sitting lookout at the top of Sulman stairs and define public-private boundaries.
- (4G) Remove all temporary fencing and install permanent fencing where required to base of bank.
- (4H) Upgrade Redmond Reserve to include seating, lookout and recreation facilities.
- (4J) Visual cue artwork and signage for wayfinding.
- (4K) Explore options for universal access at Redmond stairs. Possible inclinator.
- (4L) Explore long-term managed access with Aquinas College.

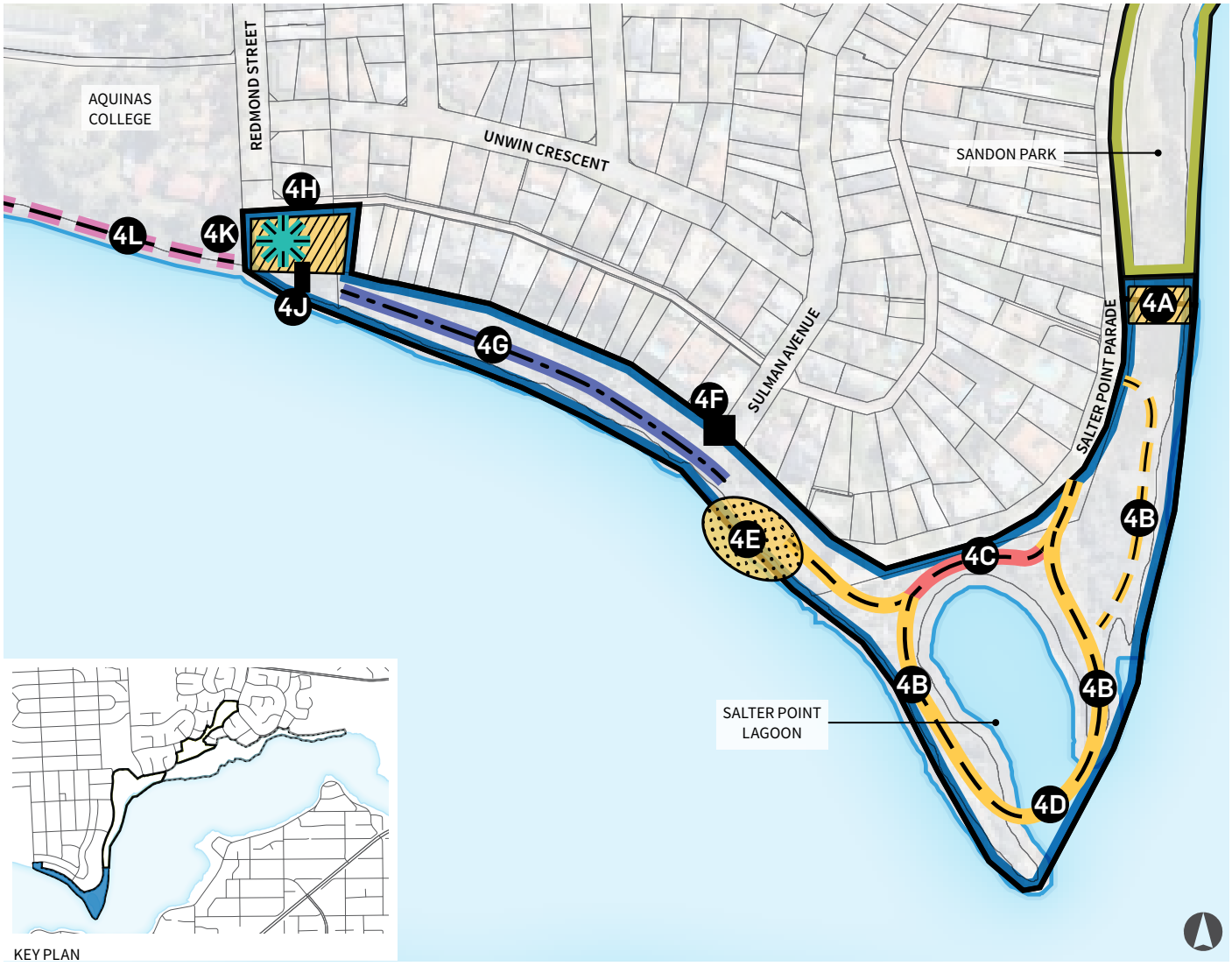


Figure 25 Precinct 4

4.9.6 STRATEGIES

4A

Existing

Aspirational

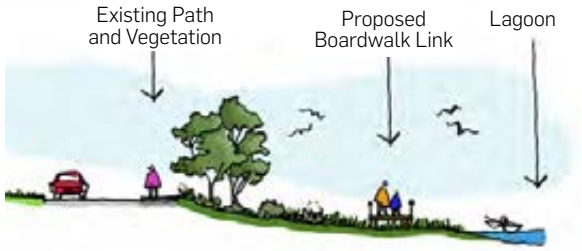
- Formalise allocated street parking.
- Create facility for locking canoe trolleys.
- Low fencing to sedge boundary to restrict access.
- Provide new seating with path access.
- Hand launching area only.

Next Steps

- Close vehicle access to river.
- Prepare a concept plan, including parking provision.
- Engage with DBCA and local user groups.

4B

Existing



- Establish new pedestrian connection to enhance the lagoon experience for recreational walkers and allow full circuit connection around the lagoon for education and interpretation.
- Design and construction to take account of the fragile ecosystem edge and minimise impacts.

Next Steps

- Undertake feasibility study to determine community benefit and impacts.
- Subject to feasibility study outcomes, prepare concept plan.
- Engage with DBCA.

4C

Existing

Aspirational

- Formalise existing walkways around Salter Point Lagoon to protect the environment and clearly define access areas.
- Provide for universal access.
- Establish cultural and educational interpretive signage.
- Systematically remove non-endemic plant species.
- Continue to stabilise the western edge of the lagoon.

Next Steps

- Prepare a feasibility study and if deemed appropriate, a concept plan.
- Prepare interpretation / signage plan for the full foreshore. Engage consultants as required.
- Engage with DBCA.
- Engage with Department of Transport to determine status of commuter cyclist link through Salter Point Reserve.

4D

Aspirational

- Provide a bridge link for a loop walk around the lagoon.
- Enhance access to existing seat platform for all abilities and provide additional seating to create opportunity for education and story-telling groups.

Next Steps

- Undertake feasibility study to determine community benefit and impacts of bridge link.
- Subject to feasibility study outcomes, prepare concept plan.
- Prepare concept for deck upgrade.
- Engage with DBCA.

4E

Existing

- Investigate formalising existing river edge access. This will be subject to advice in relation to coastal erosion.

Next Steps

- Undertake tidal process investigations to determine ongoing management and risk.
- Engage with DBCA if modifications are needed.

4F

Existing

- Improve seating area at the top of Sulman Stairs.
- Instigate selective pruning to provide outlook from new seating.
- Establish a clear delineation between public and private property.
- Provide additional information signage.

Next Steps

- Survey property boundary.
- Prepare a concept plan.

4G

Existing

- Remove all temporary fencing and replace with permanent fencing where long term fencing is deemed to be required.

Next Steps

- Undertake needs analysis to determine extent of permanent fencing required.

4H

Existing


Aspirational


Existing


Aspirational

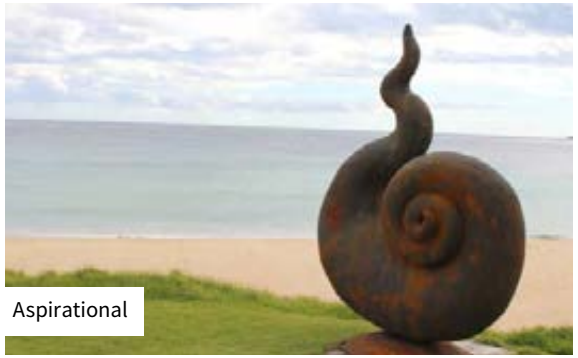
- Upgrade Redmond Reserve to include improved fencing, seating, shade and recreation facilities.
- Establish carparking spaces.
- Install interpretive signage.
- Selectively prune embankment planting to provide open views.

Next Steps

- Prepare a concept plan.
- Prepare interpretation / signage plan for the full foreshore. Engage consultants as required.
- Engage with adjacent landowners.

4J


Aspirational


Aspirational

- Commission and install statement artwork/ signage for wayfinding and interpretation.

Next Steps

- Prepare interpretation / signage plan for the full foreshore. Engage consultants as required.

4K

Existing

Aspirational

- Explore options for universal access at Redmond Stairs, including potential upgrade and widening of deck walkway along the river at the base of Redmond Stairs.

Next Steps

- Feasibility study, including review of national/ international examples .
- Engage with DBCA.

4L

Existing

- Explore long term managed access options along the Aquinas foreshore.
- Consider partnership options for the management of the embankment adjacent Redmond Reserve / Aquinas College.

Next Steps

- Engage with Aquinas College.

THINGS WHICH MATTER MOST MUST NEVER BE AT THE MERCY OF THINGS WHICH MATTER LEAST.

- Johann Wolfgang von Goethe

5.0 NEXT STEPS

5.1 EXISTING MANAGEMENT PLANS AND RELEVANCE

There have been a number of environmental management plans prepared for the area. The following table summarizes the key plans which are relevant to the development of this Masterplan, and outlines the actions within the plan which may be relevant to the implementation of the masterplan objectives.

A current evaluation of the implementation of these Management Plans is recommended, requiring environmental investigations to be undertaken across the extent of the foreshore area, including a:

- flora and vegetation survey;
- fauna and habitat survey;
- review of the stormwater treatment systems; and,
- assessment of impacts to the fringing wetland and Canning River.

Following this review an updated comprehensive management plan over the CWSP foreshore should be prepared, taking into account the objectives and outcomes of the Masterplan.

MANAGEMENT PLAN (AUTHOR, DATE)	RECOMMENDED ACTIONS WITHIN THE MANAGEMENT PLAN	CURRENTLY ACTIVE	MASTERPLAN OBJECTIVES RELEVANT TO THE OBJECTIVES					
			 Address Current and Future Management issues to strengthen the natural and cultural aspects to the CWSP Foreshore	 Allow for unique landscaping response that embraces the changing environment and allows positive experiences for all users	 Enhance native, physical and biological environmental values and ecosystem processes along the CWSP Foreshore	 Establish key areas for sport activities, passive recreation and nature spaces	 Focus on connectivity and accessibility along the entire CWSP Foreshore	 Celebrate the unique culture and heritage of the foreshore and surrounds
Salter Point Foreshore Management Plan (Orr, 1986) and then updated by Brooker et al, 1994a	Superceded	Superceded	No	No	No	No	No	No

MANAGEMENT PLAN (AUTHOR, DATE)	RECOMMENDED ACTIONS WITHIN THE MANAGEMENT PLAN	CURRENTLY ACTIVE	MASTERPLAN OBJECTIVES RELEVANT TO THE OBJECTIVES					
								
Waterford Foreshore Reserve Management Plan (Orr, 1987) and later updated by Brooker et al, 1994b	Superceded	Superceded	No	No	No	No	No	No
Salter Point and Waterford Foreshore Management Plan (EMS, 2000)	Vesting and leasing of land – reservation of Brothers Keaney's Garden	Current	Yes	No	No	Yes	No	Yes
	Management of the Physical Environment – stabilisation works, revegetation, water quality monitoring, community education, construction of islands, disaster contingency plan, sewerage issues	Current	Yes	Yes	Yes	Yes	Yes	Yes
	Pesticide use by council and residents	Current	Yes	Yes	Yes	No	No	No
	Organic Nutrient Contamination – education and traps	Current	Yes	Yes	Yes	No	No	No
	Management of the Biological Environment – monitoring, weed control, access management, planting management, propagation, maintenance management , fire management and education, wildlife habitat	Current	Yes	Yes	Yes	Yes	Yes	No

MANAGEMENT PLAN (AUTHOR, DATE)	RECOMMENDED ACTIONS WITHIN THE MANAGEMENT PLAN	CURRENTLY ACTIVE	MASTERPLAN OBJECTIVES RELEVANT TO THE OBJECTIVES					
								
	Pest Management and Pet Control – mosquitos, midge, rats, mice, fox, argentine ants, control, nutrient and irrigation management, dog and cat management.	Current	Yes	Yes	Yes	Yes	Yes	No
	Managing recreation and infrastructure – signage, path networks, lighting, bird hides, seating, picnic facilities, drinking fountains, café, toilet facilities, boat launching facility, worm harvesting and prawning management	Current	Yes	Yes	Yes	Yes	Yes	Yes
	Reserve Access – pathways and access control	Current	Yes	Yes	Yes	Yes	Yes	No
	Public Awareness, Education and Training – friends groups, field staff, community and school group involvement, environmental education	Current	Yes	Yes	Yes	No	No	Yes
	Views – protection of vegetation on the foreshore	Current	Yes	Yes	Yes	No	No	No
	Maintenance – infrastructure, seating, weed management schedule, mowing and brushcutting schedule, rubbish bins, sharps disposal, watering schedules	Current	Yes	Yes	Yes	Yes	Yes	No
	Management and Implementation	Current	Yes	Yes	Yes	Yes	Yes	Yes
	Traffic Issues/Vehicle Management – kerbing, bollards, traffic calming	Current	Yes	Yes	No	No	Yes	No

5.2 PRIORITIES AND TIMING

Strategies are listed for both the Whole of Foreshore (WOF Strategies) and Precinct Strategies (P1 to P4). Each Strategy has a list of component strategies – 54 for the Whole of Foreshore - and 45 for the 4 precincts - have been listed in the preceding pages.

The Strategies, component strategies and 'Next Steps' for each Whole of Foreshore (WOF) Strategy and Precinct Strategy, forecasts 10-20 years' of actions forward for the planning of the CWSPF. The ordering of the WOF and Precinct Strategies do not signify which is most important but are merely identifiers. Project delivery of the WOF Strategies and their 54 component strategies may be run concurrently with the delivery of one or more of the 45 specific Precinct Strategies.

5.2.1 FUNDING, FEASIBILITY FRAMEWORK AND IMPLEMENTATION PLAN

The time and cost that could be attributed to the entire list of strategies is above the capacity of the City of South Perth's current funding and staffing, which will necessitate a Feasibility Framework being devised to tackle this project.

Following adoption of the Dyarigarro Whadjuk Boodjar (CWSPF) Masterplan, a Feasibility Framework and Implementation Plan will be prepared. This will be based on the priorities identified during formulation of the CWSPF Masterplan, ongoing consultation and assessment of project feasibility and the funding arrangements available and anticipated.

Opportunities for low cost interim activation strategies and projects which could be used to test ideas without expending large amounts of money will also be developed.

The Implementation Plan will be developed with due consideration of the City's ability to fund projects through the Long Term Financial Plan and annual budgets and will also identify which projects could potentially receive external funding.

The Implementation Plan will be the basis for the City to progress more detailed planning based on specific Whole of Foreshore (WOF) and Precinct Strategies (P1-P4).

5.3 FUTURE ENGAGEMENT

Future community engagement will be undertaken to ensure that implementation of the Masterplan is true to the principles and themes established through consultation.

The City has a number of community and stakeholder groups, which it will engage to provide guidance on various elements of the Masterplan. In some cases, initiatives will be implemented in small increments or on a trial basis, to create opportunities to make adjustments in response to the lived experience.

City officers will liaise directly with residents in areas directly affected by changes arising from the Masterplan.

6.0 APPENDICES

6.1 CLONTARF WATERFORD SALTER POINT REFERENCE DOCUMENTS

CLONTARF WATERFORD SALTER POINT REFERENCE DOCUMENTS

Salter Point and Waterford Foreshore Management Plan (2000, Ecosystems Management Services)

Salter Point Foreshore Restoration Plan Review Technical Report (2015, Syrinx)

Salter Point Foreshore Restoration Plan (2011, Syrinx)

Salter Point Foreshore Restoration Plan Technical Specification (2011, Syrinx)

Mount Henry Peninsula Foreshore Management Plan (2004, Ecoscape)

Mount Henry Peninsula Management Plan (1993, City of South Perth)

Clontarf Foreshore Management Plan (1993, City of South Perth)

East Clontarf Management Plan (1998, Curtin University of Technology)

Cygnia Cove Natural Areas Environmental Management Plan (2017, Syrinx)

Aquinas Bay Foreshore Rehabilitation Plan (2001, NSA)

Waterford Foreshore Reserve Management Plan (1987, Kate Orr)

Waterford Foreshore Reserve Management Plan (1994, City of South Perth)

Salter Point Foreshore Management Plan (1986, Kate Orr)

Redmond Reserve Stair Replacement Vegetation Assessment (2013, Natural Area Consulting)

Sulman Stair Drainage Upgrade Vegetation Assessment (2013, Natural Area Consulting)

Climate Change Risk Assessment Adaptation Report Part A and Part B (2010, Echelon)

City of South Perth Integrated Catchment Management Plan Volume 1 and Volume 2 (2004, JDA and Ecoscape)

South Perth Foreshore Management Masterplan - Section 18 Notice (2006, City of South Perth)

Swan and Caning River Protection Strategy (2015, Swan River Trust)

Final Report Swan and Canning Rivers Iconic Trails Project (2009, SWALSC)

City of South Perth Town Planning Scheme 6 (2003, City of South Perth)

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DRAFT Salter Point Management Masterplan layout (2007)

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6.2 SALTER POINT WATERFORD MANAGEMENT PLAN

MANAGEMENT PLAN	REC NO.	RECOMMENDATION	STATUS	COMPLETED
Salter Point Waterford	A1	Repair Redmond Street and Sulman Avenue stairways to meet equivalent building standards.	Have obtained a design for Redmond Reserve stairs and installed new stairs at Sulman Avenue with financial contribution from a local resident.	In progress
Salter Point Waterford	A2	Construct boardwalk from end of Redmond Street to the limestone path.	Completed 2000	Yes
Salter Point Waterford	A3	Implement an intensive weed control as a HIGH PRIORITY focussing on annual grasses, herbaceous and tree weeds on limestone cliff; and perennial and annual grasses and bulbs in the riparian zone.	Ongoing	In progress
Salter Point Waterford	A4	Continue intensive revegetation program – limestone cliff and riparian zone including all strata of vegetation.	Ongoing	In progress
Salter Point Waterford	A5	Advise residents that Council has surveyed and pegged the precise location of the boundary between the residential lots and the road reserve and will be commencing rehabilitation works in this area.	Completed 2001	Yes
Salter Point Waterford	A6	Initiate process to change vesting and zoning of the road reserve for conservation.	No record found	No
Salter Point Waterford	A7	Develop foreshore agreements between City of South Perth and adjoining property owners to minimise fire risks by planting indigenous species and controlling weeds (Technical Services).	Rehabilitation plan developed in 2001 and forwarded to all residents to encourage agreements	Yes
Salter Point Waterford	A8	Direct mail a copy of the Swan River Trust pamphlet “Advice for river residents” to all residents on the riverside of River Way and the end of Sulman Avenue (Customer Services).	No record found	No
Salter Point Waterford	A9	Replace limestone trail with a raised open wooden boardwalk on western side of the Lagoon to reduce problems arising from sand movement.	Boardwalk extended north 2007 by Apace. Area in front of boardwalk has erosion control works.	Yes
Salter Point Waterford	A10	Construct boardwalk with a bird viewing platform adjoining a limestone path on eastern side of the Lagoon to form a circuit. This requires development of a detailed plan.	Bird viewing platform constructed 2005	No
Salter Point Waterford	A11	Implement intensive weed control program – focussing on perennial and annual grasses, African daisies and assorted bulbs in the riparian zone and Banksia woodland component.	Ongoing	In progress

MANAGEMENT PLAN	REC NO.	RECOMMENDATION	STATUS	COMPLETED
Salter Point Waterford	A12	Implement an intensive revegetation program focusing on eroding riparian zones including all strata of vegetation. Note, planting may require watering support (Technical Services / Works – ongoing).	Ongoing	In progress
Salter Point Waterford	A13	Install a dual use path immediately adjacent to Salter Point Parade which joins onto the limestone walk trail such that the DUP provides an interface between grass and foreshore vegetation (Technical Services / Works – 2000-2001).	Requires further investigation. Trails plan proposed.	No
Salter Point Waterford	A14	Install a group of benches in a circle beneath shade to enable groups of people to meet (Works – 2000-2001).	Not complete	No
Salter Point Waterford	A15	Review water quality in lagoon with officers from the Swan River Trust and Water and Rivers Commission, and assess the need for opening of the channel	Anecdotal information suggests that channel regularly flushed. In February 2018 the City commenced Salter Point lagoon study that include surface and groundwater monitoring and analysis.	In progress
Salter Point Waterford	A16	Install displays into CALM style information shelter which will be rotated on a three-monthly cycle.	CALM style shelter installed at Sandon Park	Yes
Salter Point Waterford	A17	Install a steel bicycle rack at the turnabout.	Bicycle rack have been installed at the Salter Point lagoon entrance point.	Yes
Salter Point Waterford	A18	Install a dual use path immediately adjacent to Salter Point Parade which connects with the limestone walk trail.	Requires further investigation. Trails plan proposed.	No
Salter Point Waterford	A19	Stabilise the entry into the small boat launching ramp and move the southern bollards to increase parking area.	Complete 2001	Yes
Salter Point Waterford	A20	Install bollards between the boat ramp and the remnant vegetation.	Bollards installed 2007	Yes
Salter Point Waterford	A21	Install sections of graded kerbing to improve parking accessibility and cater for fauna movement.	No record found	No
Salter Point Waterford	A22	Implement an intensive weed control and revegetation program focusing on eroding riparian zones including all strata of vegetation. Note, planting may require watering support.	Ongoing	In progress

MANAGEMENT PLAN	REC NO.	RECOMMENDATION	STATUS	COMPLETED
Salter Point Waterford	A23	Move the bollards landward to increase extent of revegetation works to improve sustainability of fringing vegetation. This would be undertaken in consultation with nearby landholders.	Complete 2001	Yes
Salter Point Waterford	A24	Revegetate local government drain feeding in opposite Howard Parade.	No record found	No
Salter Point Waterford	A25	Create informal limestone trail close to water from Melaleuca swamp to Salter Point, which has three links with the dual use path along the roadside.	Requires further investigation. Trails plan proposed.	No
Salter Point Waterford	A26	Augment trees within Sandon Park using large native tree stock; focussing planting in areas where the trees are dying or dead.	Trees planted in 2001	Yes
Salter Point Waterford	A27	Encourage improved scheduling of mowing contractors.	Ongoing	In progress
Salter Point Waterford	A28	Protect the two remaining small beaches by reinforcing the extent of vegetation occurring on either side.	Ongoing	In progress
Salter Point Waterford	A29	Provide Pooch Pouch dispensers and rubbish bins at frequent intervals.	Commenced but requires further work.	In progress
Salter Point Waterford	A30	Provide information to local residents to discourage dumping of garden waste into Sandon Park	Ongoing via Sustainability community education workshops.	In progress
Salter Point Waterford	A31	Extend the limestone walk trail to include a branch leading to the spur adjacent to the drainage outfall and connect across the wetland with a small boardwalk. The limestone trail needs to connect at the other side.	Funding under a future budget	No
Salter Point Waterford	A32	Install bollards around the wetland perimeter 3 m from existing vegetation boundary.	Commenced but requires further work.	No
Salter Point Waterford	A33	Install graded kerbing to improve parking accessibility and cater for fauna movement.	No record found	No
Salter Point Waterford	A34	Implement an intensive weed control and revegetation program focusing on eroding riparian zones including all strata of vegetation. Note, planting may require watering support.	Ongoing	No
Salter Point Waterford	A35	Re-contour Manning Road Main Drain (Elderfield Drain) and revegetate with native rushes and sedges.	Complete 2000/01	Yes
Salter Point Waterford	A36	Continue revegetation program in local government drain entering the Melaleuca swamp.	Ongoing	No

MANAGEMENT PLAN	REC NO.	RECOMMENDATION	STATUS	COMPLETED
Salter Point Waterford	A37	Hold a naming competition for each isolated wetland remaining within Sandon Park.	No record found	No
Salter Point Waterford	A38	Plant large native tree stock between Melaleuca swamp and Manning Road Main Drain, with the ultimate objective to extend the native vegetation.	Trees planted in 2001	Yes
Salter Point Waterford	A39	Install a group of seats beneath large tree stock to enable the area to be used for resting.	No record found	No
Salter Point Waterford	A40	Undertake a feasibility study to determine whether Sandon Park should become a recreational node (City of South Perth). The study should include: Current usage and potential usage (i.e. Fiesta events etc); Demand for and provision of additional facilities such as toilet blocks, barbeques, small jetty; Landscaping around the facilities; Provision of shade trees; Education trail outlining the ecological importance of the wetland and fringing vegetation.	No record found	No
Salter Point Waterford	A41	Replace boat ramp at Curtin University of Boat Club with a stepped structure –some re-contouring of the bank may be necessary.	Recontouring commenced with boat ramp to be addressed in 2002/'03	No
Salter Point Waterford	A42	Investigate the feasibility of creating an environment centre with limited catering facilities (café) to operate between 10am and 4 pm, landward of the existing facilities.	No record found	No
Salter Point Waterford	A43	Reinforce tree line and extend the foreshore vegetation to improve the environmental integrity of the area.	No record found	No
Salter Point Waterford	A44	Protect vegetation with bollards in areas where obvious trampling occurs.	No record found	No

MANAGEMENT PLAN	REC NO.	RECOMMENDATION	STATUS	COMPLETED
Salter Point Waterford	A45	Develop a landscape plan for the area in conjunction with local residents. Investigate the feasibility of: moving the path landward to enable improved extent of riparian vegetation. Providing groups of shade trees consistent with existing vegetation views in Fairview Gardens Reserve. Continue revegetation and weed control program between dual use path and the riverbank. In the event of serious damage occurring to the path, Council should consider moving the path at least 10 m back towards to road to increase the extent of fringing vegetation. This would reduce the maintenance costs associated with this strip. Feasibility of enhancing existing buildings.	No record found	No
Salter Point Waterford	A46	Exercise weed control and eradicate grasses including kikuyu and buffalo grass, and other herbaceous weeds on a regular basis.	Ongoing	No
Salter Point Waterford	A47	Reinforce plantings between dual use path and river.	Ongoing	No
Salter Point Waterford	A48	Install Pooch Pouch dispensers close to path near Salter Point Sea Scout Hall and near Bodkin Drain, attached to rubbish bins bin to enable responsible dog owners to dispose of their pets waste.	Commenced but requires further work.	No
Salter Point Waterford	A49	Stencil “Dogs must be on leads’ and “Pedestrians have right of way” onto dual use path.	Requires further investigation	No
Salter Point Waterford	A50	Assess the level of use of the informal track through the Juncus stands at the boundary of the Waterford Conservation Area, and consider need for formalising a track. Prefer to discourage access.	Requires further investigation	No
Salter Point Waterford	A51	Install grouped covered seating under the trees adjacent to the children’s playground.	Requires further investigation	No
Salter Point Waterford	A52	Ensure regular maintenance of children’s playground and other facilities	Ongoing	No
Salter Point Waterford	A53	Provide groups of native shade trees consistent with existing vegetation in Bodkin Park. Species including Melaleuca preissiana, Eucalyptus rudis and Corymbia calophylla are suggested but need to be part of an overall landscape plan for Bodkin Park.	Superseded by living stream project 2007	No

MANAGEMENT PLAN	REC NO.	RECOMMENDATION	STATUS	COMPLETED
Salter Point Waterford	A54	Maintain information shelter adjacent to dual use path and rotate information panels with other shelters in City of South Perth.	Signs being redesigned for Andrew Thomson Reserve and content updated 2008	No
Salter Point Waterford	A55	Continue Penrhos College students involvement in seed collection, weed control and replanting activities.	Complete	Yes
Salter Point Waterford	A56	Direct community access to the water by designing and installing two fenced boardwalks through disturbed areas adjacent to the extensive healthy stands of paperbarks and sedge understorey. Locations to be determined with the assistance of the local community and Swan River Trust but it is suggested that one is constructed over the Bodkin Drain outlet and other in the vicinity of the Eucalyptus rudis woodland near Templemore Avenue.	Requires further investigation	No
Salter Point Waterford	A57	Continue revegetation program to manage weed infestation and replacement with locally indigenous flora.	Ongoing	In progress
Salter Point Waterford	A58	Provide rubbish bins close to the dual use path in Bodkin Park with Pooch Pouch dispensers.	Commenced but requires further work.	No
Salter Point Waterford	A59	Stencil ‘Dogs prohibited beyond this point’ onto the dual use path.	No record found	No
Salter Point Waterford	A60	Minimise direct mosquito control in area, and if implementing runneling ensure that sediment removed does not impede natural water flows.	Enviro Health are using Abate in area	No
Salter Point Waterford	A61	Continue revegetation program focussing on control of perennial and annual grasses to reduce the fire risk.	Ongoing	In progress
Salter Point Waterford	A62	Maintain boardwalk at Waterford Avenue.	Ongoing	In progress
Salter Point Waterford	A63	Install dual use path between Nenagh Grove to the reserve boundary.	Completed 2001	Yes
Salter Point Waterford	A64	Install a CALM style information shelter near Waterford Avenue using panels.	see A54	No
Salter Point Waterford	A65	Remove suspended debris between 1 and 2 m above the ground and mulch on-site and ensure control of annual grasses.	Ongoing. Pruning carried out summer ‘01/’02	In progress
Salter Point Waterford	A66	Initiate processes to gain Brother Keaney’s Gardens.		No

MANAGEMENT PLAN	REC NO.	RECOMMENDATION	STATUS	COMPLETED
Salter Point Waterford	A67	Ensure that a minimum foreshore reserve width of 30 m is maintained as a buffer between Waterford subdivision Stage 13 and the river.	Cygnia Cove foreshore management plan being developed 2008 and Cygnia Cove Natural Areas Environmental Management Plan was produced in 2017	Yes
Salter Point Waterford	03/01/00	VESTING AND LEASING OF LAND		
Salter Point Waterford	G1	Reserve Brother Keaney's Garden for Conservation under the Metropolitan Region Scheme (City of South Perth; Christian Brothers; Ministry for Planning).	The City of South Perth works in partnership with the Clontarf College on weed control an restoration of "Cats Island" that is formerly known as Brother Keaney's Garden	In progress
Salter Point Waterford	G2	Once reserved under the MRS, amend the City of South Perth Town Planning Scheme to be consistent with the MRS and declare Brother Keaney's Garden a reserve and vest it in the City of South Perth (City of South Perth; Department of Land Administration).	see G1	No
Salter Point Waterford	G3	Approach Ministry for Planning regarding purchase of Brother Keaney's Garden from Christian Brothers by the Crown (Christian Brothers; Ministry for Planning).	see G1	No
Salter Point Waterford	G4	If recommendations G1-G3 are achieved within five years, include this area in the 2004 review of this plan (CSP Technical Services).	see G1	No
Salter Point Waterford	G5	State purpose of all foreshore reserves to be "conservation of flora and fauna and passive recreation" and City of South Perth to gain vesting of all land not currently vested to the City.	No record found	No
Salter Point Waterford	**03/01/00**	**MANAGEMENT OF THE PHYSICAL ENVIRONMENT**		
Salter Point Waterford	G6	Stabilise the slopes adjacent to the steps at Redmond Street and Sulman Avenue with hemp matting, limestone spoil and vegetation as required (CSP Technical Services / Works).	Ongoing. Investigating options to use limestone boulders to stabilise foot of slopes at Redmond St	In progress
Salter Point Waterford	G7	Ensure any plantings in these areas include species from each strata of vegetation so that the banks are properly stabilised (CSP Technical Services / Works).	Ongoing.	In progress

MANAGEMENT PLAN	REC NO.	RECOMMENDATION	STATUS	COMPLETED
Salter Point Waterford	G8	Increase revegetation between moderate to high water mark where only narrow remnants persist to improve resilience of the environment (CSP Technical Services / Works).	Ongoing.	In progress
Salter Point Waterford	G9	Undertake regular water quality sampling and analysis to ensure nutrient levels within water entering the wetlands and river is acceptable including peak flows and seasonal programs (School / community groups / Ribbons Of Blue / City of South Perth).	Ongoing.	In progress
Salter Point Waterford	G10	Stencil drains to ensure residents are aware that the drains feed directly to the river or wetland systems (Community groups/ Schools / Swan River Trust / CSP Councillors and officers).	Complete	Yes
Salter Point Waterford	G11	Provide educational material to landowners encouraging the proper use of fertilisers and chemicals (CSP Technical Services / Works).	Ongoing via Sustainability community education workshops.	In progress
Salter Point Waterford	G12	Prepare a feasibility study for the installation of islands and plantings within the Bodkin Lakes (Water Corporation / City of South Perth Environmental Officer).	Lake margins partially planted as drain rehab (Bodkin Park Living Stream). Islands will be considered in next stage.	No
Salter Point Waterford	G13	Monitor existing plantings in the Bodkin Drain and infill as required (CSP Technical Services / Works).	Superseded by living stream project 2007	No
Salter Point Waterford	G14	Initiate a streamlining program for the open section of the Elderfield (Manning Road) Main Drain. Plant with species endemic to the area (CSP Technical Services / Works).	Completed 2000	Yes
Salter Point Waterford	G15	Develop disaster contingency plan / drainage strategy to manage accidental spillages in accordance with Recommendation 2.4.5 of the Environmental Strategy (City of South Perth).	No record found	No
Salter Point Waterford	G16	Liaise with the Water Corporation to ensure sewerage issues are adequately addressed and monitored (CSP Technical Services / Works).	No record found	No

MANAGEMENT PLAN	REC NO.	RECOMMENDATION	STATUS	COMPLETED
Salter Point Waterford	**03/01/00**	**PESTICIDE USE BY COUNCIL**		
Salter Point Waterford	G17	Provide educational material to residents detailing the chemicals used for mosquito control and the impacts on the environment (CSP Env. Strat 1.3.2 – Technical Services)	Ongoing via Sustainability community education workshops. Enviro Health are using Abate in area. Communication their responsibility	In progress
Salter Point Waterford	G18	Provide educational material to residents detailing chemicals that are prohibited for use around wetland environments, and suitable chemicals (CSP Technical Services / Works).	Ongoing via Sustainability community education workshops.	In progress
Salter Point Waterford	**03/01/00**	**ORGANIC NUTRIENT CONTAMINATION**		
Salter Point Waterford	G19	Provide educational material to mowing contractors, Council staff and landholders detailing that disposal of materials down the stormwater system is illegal, and provide information about the impact of dumping of garden waste and grass trimmings on waterways and the drainage network (CSP Technical Services / Works).	Ongoing - Yellow Fish Road Program. Stopped 2005.	In progress
Salter Point Waterford	G20	Investigate the feasibility of installing sediment, gross pollutant and chemical spill traps to improve water quality (CSP Works / Technical Services).	The City of South Perth installs GPTs on annual basis	In progress
Salter Point Waterford	**03/01/00**	**MANAGEMENT OF THE BIOLOGICAL ENVIRONMENT**		
Salter Point Waterford	G21	Select and mark suitable sites for photographs to enable annual monitoring through photographic record of vegetation condition (CSP Technical Services / Works).	Ongoing. Requires further development of archives.	In progress
Salter Point Waterford	G22	Continue to undertake weed control following the guidelines provided in Appendix 5 (CSP Technical Services / Works).	Ongoing	In progress
Salter Point Waterford	G23	Erect bollards to demarcate mowing limits. (CSP Technical Services / Works).	Complete	Yes
Salter Point Waterford	G24	Undertake regeneration following bush regenerators guidelines (CSP Technical Services / Works).	Ongoing	In progress
Salter Point Waterford	G25	Continue to collect local seed and cuttings, for propagation at the Council nursery (CSP Technical Services / Works).	Ongoing with Sustainable Seed Bank	In progress

MANAGEMENT PLAN	REC NO.	RECOMMENDATION	STATUS	COMPLETED
Salter Point Waterford	G26	Ensure that planting only occurs in sites where proper site preparation and weed control have been achieved (CSP Technical Services / Works).	Ongoing	In progress
Salter Point Waterford	G27	Focus on assisted regeneration in predominantly native vegetation zones. This process requires consistent weed control to enable revegetation through natural processes (CSP Technical Services / Works).	Ongoing	In progress
Salter Point Waterford	G28	Hand weed around existing stands of native vegetation to minimise damage resulting from herbicide application where possible (CSP Technical Services / Works).	Adopted as standard practice	In progress
Salter Point Waterford	G29	Invite Cubs, Guides and Scouts, University students and other groups to assist with revegetation of the Elderfield Drain (CSP Technical Services / Works).	Salter Point Sea Scouts have undertaken planting in the drain	In progress
Salter Point Waterford	G30	Protect regrowth of native vegetation by erecting bollards around existing remnants to protect them from trampling and mowers (CSP Technical Services / Works).	Ongoing	In progress
Salter Point Waterford	G31	Maintain weed control and revegetation program (CSP Technical Services / Works).	Ongoing	In progress
Salter Point Waterford	G32	Establish up to 10 groves of trees to shelter walkers (CSP Technical Services / Works).	Commenced but requires further planting	In progress
Salter Point Waterford	G33	Formalise weed management strategies for specific areas to be implemented over the next five years in accordance with the proposed weed strategy (CSP Env. Strat 1999-2002).	Ongoing	In progress
Salter Point Waterford	G34	Implement periodical maintenance schedules for ongoing weed control (CSP Technical Services / Works).	Ongoing. Maintenance schedules incorporated into ongoing management.	In progress
Salter Point Waterford	G35	Develop weed management guidelines for each of the weed species present in the study area (CSP Works).	Ongoing	In progress
Salter Point Waterford	G36	Use photographs to determine the level of weed control achieved over time (CSP Technical Services).	Ongoing as above	In progress

MANAGEMENT PLAN	REC NO.	RECOMMENDATION	STATUS	COMPLETED
Salter Point Waterford	G37	Develop educational material for local residents to encourage the planting of native species and containment of exotic plant material (CSP Technical Services).	Information shelters installed. Ongoing via delivery of Sustainability community workshops	In progress
Salter Point Waterford	G38	Implement discrete fencing and limestone walk trails to prevent the movement of people and animals into conservation zones to prevent spreading weed seed and plant fragments (CSP Technical Services / Works).	Requires further investigation	No
Salter Point Waterford	G39	Investigate the use of State Government-funded labour programs, such as Green Corps, to minimise the implementation costs (CSP Technical Services / Works).	Ongoing. Work for the Dole teams used extensively in 2000/'01/'02	In progress
Salter Point Waterford	G40	Ensure council mowing teams or street sweepers collect grass clippings that could enter waterways or drains (CSP Works).	Ongoing	In progress
Salter Point Waterford	G41	Make funds available for increased mowing of all turf areas (CSP Works).	Ongoing	In progress
Salter Point Waterford	G42	Encourage local residents to continue to monitor activities on the foreshore and to take prompt action in the event of fire. Provide a list of contact numbers in case of emergencies and forward to residents with their Rates Notices (CSP Technical Services / Works).	Ongoing	In progress
Salter Point Waterford	G43	Encourage City of South Perth Rangers to patrol the foreshore area from the dual use and walk paths from beyond Salter Point to Waterford Avenue on a regular basis (CSP Technical Services / Customer Services / Works).	Ongoing	In progress
Salter Point Waterford	G44	Provide information about the impact of fire on the environment in an information panel for use at Salter Point and Waterford. This information can also be used at Cloisters and Davilak Reserve information shelters (CSP Technical Services / Works).	No record found	No
Salter Point Waterford	G45	Remove rock rings and other structures used for lighting of fires to discourage future use (CSP Works).	Complete. Fire pit behind Sea Scots hall was filled in 2006	Yes
Salter Point Waterford	G46	Control annual grasses and other weeds which increase the flammability of the reserve (CSP Technical Services / Works).	Ongoing	In progress

MANAGEMENT PLAN	REC NO.	RECOMMENDATION	STATUS	COMPLETED
Salter Point Waterford	G47	Promote native fauna (frogs, birds) in reserves through a rehabilitation program that increases nesting sites and habitats (CSP Technical Services / Works).	Ongoing. Turtle nesting beds may be considered for Bodkin Park.	In progress
Salter Point Waterford	G48	Discourage residents (and visitors) from feeding wildlife, using non-intrusive signage or stencilling (CSP Technical Services / Works).	Ongoing via delivery of Sustainability community workshops	In progress
Salter Point Waterford	G49	Continue the Birds Australia monitoring program and ensure City of South Perth maintains a register of birdlife for the area. This information can be used to develop information signs (CSP Technical Services).	Ongoing via annual bid watching tours along the foreshore that are conducted by the City in partnership with Birdlife Australia for the community.	In progress
Salter Point Waterford	G50	Encourage residents to plant appropriate vegetation to attract and protect birdlife (CSP Technical Services).	Ongoing through information signage and the Green Plan	In progress
Salter Point Waterford	**03/01/00**	**PEST MANAGEMENT AND PET CONTROL**		
Salter Point Waterford	G51	Encourage natural enemies of mosquitoes (e.g. birds, frogs and spiders) through implementation of recommendations relating to pet and pest management, recreation access and the rehabilitation of vegetation (Community and City of South Perth).	Ongoing	In progress
Salter Point Waterford	G52	Implement Recommendations 1.3.1 – 1.3.3 of the 1999 Environmental Strategy relating to development of a mosquito and midge control strategy and development and implementation of an education program for local residents. The education program needs to focus on:	Complete	Yes
Salter Point Waterford		making the local community more aware of mosquito ecology;	Complete	Yes
Salter Point Waterford		gaining acceptance that mosquitoes are part of a healthy wetland environment;	Complete	Yes
Salter Point Waterford		advising that mosquito numbers can be removed by improved backyard hygiene and reducing the use of fertilisers; and,	Complete	Yes
Salter Point Waterford		encouraging people to protect themselves by modifying their lifestyles (Technical Services – Environmental Health).	Complete	Yes
Salter Point Waterford	G53	Continue to investigate the formation of a Contiguous Local Authority Group for mosquito control (CSP Env. Strat Recommendation 1.3.1).	Happening through mosquito and midge group	In progress

MANAGEMENT PLAN	REC NO.	RECOMMENDATION	STATUS	COMPLETED
Salter Point Waterford	G54	Promote nutrient and irrigation management on public and private land (CSP Env. Strat Recommendation 2.2.6).	Ongoing for public reserves	In progress
Salter Point Waterford	G55	Continue to provide mosquito control measures within the peak nuisance periods (CSP Environmental Health Services).	Ongoing	In progress
Salter Point Waterford	G56	Provide educational material to residents detailing methods of limiting rat and mouse populations (Agriculture WA; Department of Conservation and Land Management).	Record not found	No
Salter Point Waterford	G57	Plan vermin (e.g. fox) control programs in conjunction with managers of all adjacent bushland and wetland areas including the Canning River Regional Park (CALM) and Aquinas College (CSP Technical Services).	Annual surveys completed and control undertaken if required	In progress
Salter Point Waterford	G58	Provide educational material to residents to enable correct identification of argentine ants and contact details for control officers (Agriculture WA).	Record not found	No
Salter Point Waterford	G59	Develop information signage about the impact pets have on the environment, and responsible pet management. These signs could be placed in the information bays at Waterford, Salter Point and Mount Henry Spit on rotation (CSP Technical Services). These could be supported by information leaflets provided to people when they renew their dog licences, collect impounded dogs and for Council staff to give out.	Record not found	No
Salter Point Waterford	G60	Increase rangers' visits to the area and enforce Local Laws, including prosecution for non-compliance (CSP Rangers).	Ongoing	In progress
Salter Point Waterford	G61	Install more Pooch Pouch dispensers to encourage dog owners to dispose of their pet faeces carefully (CSP Works). Supporting stickers could be installed advertising the locations of dispensers on rubbish bins and other key locations.	As above	In progress
Salter Point Waterford	G62	Stencil "Dogs not allowed along this path unless on leash" or equivalent message at each end of the dual use path at an appropriate distance from the conservation areas (CSP Technical Services / Works).	As above	In progress

MANAGEMENT PLAN	REC NO.	RECOMMENDATION	STATUS	COMPLETED
Salter Point Waterford	G63	Investigate providing equivalent powers given to Rangers, to bushland maintenance officers and Parks and Reserves staff (City of South Perth).	Requires investigation	No
Salter Point Waterford	G64	Implement media campaign through local newspapers about dog management, responsibilities of owning dogs and advising how managing your dog responsibly can help improve the conservation values of these important wetland and bushland areas (CSP Environmental Officer).	Record not found	No
Salter Point Waterford	G65	Investigate the feasibility of trapping domestic pets whose owners fail to ensure compliance, with subsequent transfer to the Council pound or other agency (CSP Technical Services / Works).	Record not found	No
Salter Point Waterford	G66	Promote the available subsidy for cat sterilisation program initiated by the City of South Perth. Consider extending the cat local law to make it compulsory to sterilise cats (CSP Technical Services / Works).	Ongoing	In progress
Salter Point Waterford	G67	Promote public awareness of the benefits of keeping cats indoors as much as possible, and particularly at night (CSP Technical Services / Works).	Ongoing	In progress
Salter Point Waterford	**03/01/00**	**MANAGING RECREATION AND INFRASTRUCTURE**		
Salter Point Waterford	G68	Erect grouped signs to distinguish between dual use paths and walk trails (CSP Technical Services / Works).	Ongoing	In progress
Salter Point Waterford	G69	Improve the walk trail leading from the lagoon to the Redmond Street steps (CSP Technical Services / Works).	Some emergency repair works have been undertaken.	In progress
Salter Point Waterford	G70	Investigate the feasibility of additional walk paths around the base of Mount Henry (CSP Technical Services / Works).	Requires investigation	No
Salter Point Waterford	G71	Construct a platform and boardwalk at the base of the Redmond Street steps to connect the steps with the existing walk trail (CSP Works).	Completed 2000	Yes

MANAGEMENT PLAN	REC NO.	RECOMMENDATION	STATUS	COMPLETED
Salter Point Waterford	G72	Construct a concrete DUP flush with the road to connect the walk trail at the lagoon with the DUP already running alongside Salter Point Parade. Note that the steepness of the bank will require a retaining structure for a distance of approximately 15 metres. Retain the bollards between the DUP and wetland (CSP Technical Services / Works).	Requires investigation	No
Salter Point Waterford	G73	Monitor existing DUPs to ensure that cracks, dips and service pits do not pose a tripping hazard (CSP Works and Field crew).	Ongoing	In progress
Salter Point Waterford	G74	Upgrade the informal trail connecting the Salter Point Scout Hall with the Salter Point Road DUP (CSP Works).	Record not found	No
Salter Point Waterford	G75	Investigate the feasibility of night lighting to paths (CSP Works).	Record not found	No
Salter Point Waterford	G76	Stencil distance markers onto the DUP so that people can gauge the distance of their walk/jog (CSP Works).	Record not found	No
Salter Point Waterford	G77	Investigate the construction of a viewing platform and trail within the Lagoon riparian zone for bird watching (CSP Environmental Officer).	Record not found	No
Salter Point Waterford	G78	Connect the existing boardwalk on Waterford Avenue to the existing path network (CSP Technical Services / Works).	Completed 2001	Yes
Salter Point Waterford	G79	Investigate the feasibility of upgrading the Curtin University Boat Club and Salter Point Scout Hall in the long term (CSP Works).	Record not found	No
Salter Point Waterford	G80	Install two covered picnic benches next to each playground (CSP Works).	Picnic benches uncovered	No
Salter Point Waterford	G81	Increase seating so that there is a seat on average every 300 metres along the main paths (CSP Works).	Record not found	No
Salter Point Waterford	G82	Investigate the feasibility of providing drinking fountains located at the Salter Point Scout Hall (CSP Technical Services / Works).	Drinking fountains next to carpark were installed	Yes
Salter Point Waterford	G83	Undertake feasibility study investigating the potential for establishing a combined café / toilet facility bearing in mind the advantages of the location adjacent to the Scout Hall and Curtin University Boat Club (CSP Works).	Record not found	No
Salter Point Waterford	G84	Retain and upgrade the small boat launching facility on Salter Point Parade (CSP Works).	Completed 2001	Yes

MANAGEMENT PLAN	REC NO.	RECOMMENDATION	STATUS	COMPLETED
Salter Point Waterford	G85	Install bollards to prevent damage to existing rushes and sedges at both existing ramps (CSP Technical Services / Works).	completed 2006	Yes
Salter Point Waterford	G86	Liaise with Swan River Trust to obtain and install worm digging signage and a location map for appropriate digging areas (CSP Environmental Officer).	Worm digging rules have changed to allow digging anywhere around the river that is away from existing vegetation.	N/A
Salter Point Waterford	G87	Install combined signage stating that fires are prohibited on the foreshore and advising prawners that residue from netting runs must be returned to the river. Further, information shelters showing the locations of appropriate access points for riverine activities should be present (CSP Technical Services / Works).	Record not found	No
Salter Point Waterford	G88	Assess success of prawn broilers at Cloisters, support SRT research on prawning and determine if prawn broiler installation is warranted.	Record not found	No
Salter Point Waterford	**03/01/00**	**RESERVE ACCESS**		
Salter Point Waterford	G89	Assess informal paths within the wetlands and the areas adjacent to private property. Close undesirable paths and upgrade others (CSP Technical Services / Works).	Record not found	No
Salter Point Waterford	G90	Encourage residents to use the provided paths and not create their own access ways (City of South Perth) (CSP Technical Services / Works).	Ongoing	In progress
Salter Point Waterford	G91	Assess the level of indiscriminate access and if it continues to result in degradation of the wetlands, construct a fence that is not visible from the roadway along Waterford Avenue to encourage use of the boardwalk and path network (CSP Technical Services / Works).	Record not found	No
Salter Point Waterford	**03/01/00**	**PUBLIC AWARENESS, EDUCATION AND TRAINING**		
Salter Point Waterford	G92	Support the formation or re-vitalisation of local friends groups and provide supervision and support via the Environmental Officer and Works Division – including loan of equipment for, and removal of materials following work days (CSP Technical Services / Works.	Ongoing	In progress

MANAGEMENT PLAN	REC NO.	RECOMMENDATION	STATUS	COMPLETED
Salter Point Waterford	G93	Continue to support two specialist trained field staff to work in bushland regeneration and maintenance on the foreshore (CSP Technical Services / Works).	Natural Areas Maintenance team of two staff is dedicated to management of the conservation reserves and natural areas.	In progress
Salter Point Waterford	G94	Encourage ongoing community and school group involvement in wetland and foreshore management projects (CSP Technical Services / Works).	Ongoing	In progress
Salter Point Waterford	G95	Continue providing bush regeneration courses to interested members of the public who actively commit more than 40 hours per annum to bushland and wetland maintenance (CSP Technical Services).	ongoing. The City provides community dieback training and delivers community sustainability workshops that cover natural areas restoration.	In progress
Salter Point Waterford	G96	Encourage ongoing community environmental education through a variety of means; public environmental forums, stencilling projects, signs, pamphlets, media and holiday recreation programs as recommended in Section 1.4 of the CSP Env. Strat. 1999-2002.	Ongoing via community planting days, weed control sessions, education workshop , trainings and foreshore tours.	In progress
Salter Point Waterford	**03/01/00**	**VIEWS**		
Salter Point Waterford	G97	In conjunction with the Swan River Trust and Department of Conservation and Land Management, prosecute residents and visitors who deliberately destroy native vegetation (CSP).	Ongoing	In progress
Salter Point Waterford	G98	Develop a Local Law for the protection of vegetation on public land (CSP Works Env. Strat. 2.3.3).	Covered by existing local law	Yes
Salter Point Waterford	G99	Evaluate the vegetation on the banks at the end of Redmond Road and revise plantings if required (CSP Technical Services / Works).	Ongoing monitoring and restoration works undertaken	In progress
Salter Point Waterford	G100	Liaise with residents before instigating tree planting projects that may impact on the extent of views (CSP Technical Services / Works).	Previous recommendation suggests that a landscape plan be developed	No
Salter Point Waterford	G101	Canvass residents and develop a list of residents who do not object to tree planting on the foreshore adjacent to their properties (CSP Technical Services / Works).	Can be addressed in the development of landscape plan	No

MANAGEMENT PLAN	REC NO.	RECOMMENDATION	STATUS	COMPLETED
Salter Point Waterford	**03/01/00**	**MAINTENANCE**		
Salter Point Waterford	G102	Ensure council staff report and promptly correct problems with infrastructure (CSP Works / Technical Services / Field crews).	Ongoing	In progress
Salter Point Waterford	G103	Paint seats a natural colour, in sympathy with the natural environment (CSP Works).	Seating part of City's standard furniture policy	In progress
Salter Point Waterford	G104	Design and implement a schedule for weed maintenance within the native vegetation and turfed areas (CSP Technical Services / Works).	Ongoing	In progress
Salter Point Waterford	G105	Synchronise mowing and brush cutting of turf areas to close the gap between the two activities (CSP Works).	Record not found	No
Salter Point Waterford	G106	Design and locate litter bins appropriately and empty them regularly with a greater frequency during the prawning season (CSP Works).	Ongoing	In progress
Salter Point Waterford	G107	Involve the community in litter collection through the Clean Up Australia Day (CSP Technical Services / Field crews).	Ongoing	In progress
Salter Point Waterford	G108	To discourage vandals, repair all damaged facilities immediately after any act of vandalism (CSP Works).	Ongoing	In progress
Salter Point Waterford	G109	Develop a community education program with regard to needle and syringe disposal (CSP Env. Health Services 2000/2001).	Record not found	No
Salter Point Waterford	G110	Investigate providing needle bins at key locations if the improper disposal of used needles continues (CSP Env. Health Services).	Record not found	No
Salter Point Waterford	G111	Investigate the feasibility of rescheduling watering so that the sprinklers do not affect early morning walkers (CSP Works).	Record not found	No
Salter Point Waterford	**03/01/00**	**MANAGEMENT AND IMPLEMENTATION**		
Salter Point Waterford	G112	Ensure that the recommendations contained in this document are carried out in a timely manner (CSP Works / Technical Services / Corporate Services).	Ongoing	In progress
Salter Point Waterford	**03/01/00**	**TRAFFIC ISSUES / VEHICLE MANAGEMENT**		
Salter Point Waterford	G113	Evaluate roadside kerbing and ensure that steep sided kerbs are intermittently replaced with graded sections at least three metres long (CSP Works).	Considered in developing traffic management plans	No

MANAGEMENT PLAN	REC NO.	RECOMMENDATION	STATUS	COMPLETED
Salter Point Waterford	G114	Ensure that bollard and chain remain locked to prevent parking at the pumping station (All Council officers).	Complete	Yes
Salter Point Waterford	G115	Install traffic calming devices to protect fauna crossing Salter Point Parade, Waterford Avenue and Fairview Gardens.	Record not found	No

City of
South Perth