



City of Rockingham

# Public Open Space Community Plan Strategy



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## Alternative Formats

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## Community Engagement

*Admin use only: Please select all special interest groups that may be interested in this strategy. Groups selected will be notified using Rock Port.*

- ☐ Aboriginal and Torres Strait Islanders
- ☐ Arts and Events
- ☐ Coastal and Marine Environment
- ☐ Community Development
- ☐ Community Safety
- ☐ Disability Access and Inclusion
- ☐ Environmental Interests
- ☐ Grants
- ☐ Heritage
- ☐ Libraries and Education
- ☐ New Community Plan Strategies
- ☐ New Infrastructure Projects
- ☐ Planning and Development
- ☐ Roads and Footpaths
- ☐ Safety Bay/Shoalwater Foreshore  
Revitalisation Masterplan
- ☐ Seniors Facilities and Activities
- ☐ Sporting Clubs and Facilities
- ☐ Strategic Community Planning
- ☐ Tenders and Quotations
- ☐ Tourism
- ☐ Volunteering
- ☐ Waste and Recycling
- ☐ Youth

## Disability Access and Inclusion

*Admin use only:* Please consider identify the elements from the City's current Disability and Inclusion Plan (DAIP) and identify those that are relevant to, or will be impacted by this strategy as per the table below. If you would like to discuss the impacts and relevance of the DAIP to your strategy, please contact the Manager Community Capacity Building.

<b>The Seven Outcome Areas of the DAIP</b>	<b>Will the Key Element be impacted by this Strategy? "Y" or "N"</b>	<b>If "Y", please explain how the actions under this element will be impacted by this Strategy</b>
1. <i>Access to City services and events</i>		
2. <i>Access to City buildings and facilities (including outdoor spaces)</i>		
3. <i>Access to information</i>		
4. <i>Access to quality service from City staff</i>		
5. <i>Access to equal complaints procedures</i>		
6. <i>Access to participation in public consultation</i>		
7. <i>Access to City employment opportunities</i>		

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# 1. Executive Summary

This Public Open Space Strategy has been prepared to guide the planning, development and management of Public Open Space (POS) within the City, to ensure it best meets the needs of the community and balances competing demands for space.

The City of Rockingham is responsible for the management of over 460 individual parcels of POS including parks, active playing fields and nature reserves. Additional POS is regularly being added in emerging areas through the land development process.

The planning and management of City's POS assets presents a number of challenges, including:

- the provision of sufficient space for organised sporting activities;
- meeting a diverse range of community needs, and adapting to changing needs over time;
- making the most effective and efficient use of land; and
- integrating natural environmental features into open spaces.

The following Strategic Objectives have been established to guide the planning, development and management of POS:

1. To locate POS to maximise its accessibility to the community;
2. To design and develop POS to meet the conservation (environmental), recreation, social and sporting needs of the community;
3. To ensure POS is cost effective to maintain;
4. To plan to adapt to a changing climate; and
5. To consider competing demands and functions that impact on the useability of POS.

To address these challenges and the Strategic Objectives, the City examined its current practices for the design, planning and management of POS with respect to intent of the planning framework. Through this process, six Key Elements were identified from within the planning framework which address the core considerations for the planning, development and management of POS.

For each element, Key Objectives were established as matters the City must address to achieve the Strategic Objectives of the Strategy. The following table summarises the key elements, key objectives and applicable planning documents:

Key Element Analysis			
Key Element	Purpose	Key Objectives	Applicable Documents
1. Classification of POS	Defining the hierarchy and network of POS reserves to guide the intended function, distribution, infrastructure and design requirements for different types of reserves.	<b>1.1</b> Adopt a classification system to be consistently applied to planning for the development and management of POS.	Directions 2031 and Beyond

2. Size and Distribution	Establishing guidance for the size and distribution of reserves to meet varying recreational requirements.	2.1 Future planning must ensure adequate POS is provided to accommodate organised sport.	Directions 2031 and Beyond
		2.2 Consider POS requirements in established urban areas.	Perth and Peel @ 3.5 Million
		2.3 Ensure new development provides for an appropriate range of POS types to accommodate future recreation.	Development Control Policy 2.3 - Public Open Space in Residential Areas
3. Function	Establishing the purpose of POS reserves to meet the recreational needs of the community.	3.1 Define the preferred function of POS.	South Metropolitan Peel Sub-Regional Planning Framework
		3.2 Ensure competing land uses do not adversely impact on the recreational function of POS.	Liveable Neighbourhoods
		3.3 Future planning must effectively implement Water Sensitive Urban Design (WSUD) principles and best management practices.	South Metropolitan Peel Sub-Regional Planning Framework
4. Environment	The integration natural landform and features into recreation areas and planning to adapt to potential changes to the environment.	4.1 Future planning must consider measures to adapt to a drying climate.	State Planning Strategy 2050
		4.2 Improve the City's tree canopy cover within POS.	South Metropolitan Peel Sub-Regional Planning Framework
		4.3 Utilise the City's natural capital for recreation purposes.	State Planning Strategy 2050
		4.4 Integrate significant environmental attributes into POS in new Structure Plan areas.	Directions 2031 and Beyond
		4.5 Plan for Future coastal hazards that may impact the recreational value of coastal POS reserves.	Development Control Policy 2.6 - State Coastal Planning Policy



5. Design	The components of a POS reserve that must be considered to ensure POS is developed to meet its intended function.	<b>5.1</b> Bushfire planning and management requirements must be considered of POS.	State Planning Policy 3.7 – Planning in Bushfire Prone Areas
		<b>5.2</b> Establish Guidance for an appropriate level of improvement and infrastructure in POS Reserves.	State Planning Policy 7.0 – Design of the Built Environment
		<b>5.3</b> Design POS to provide for the recreational requirements of a variety of users and experiences.	State Planning Policy 7.0 – Design of the Built Environment
		<b>5.4</b> POS should provide for a safe and functional environment.	Liveable Neighbourhoods
		<b>5.5</b> Ensure strategic consideration of the City's open space reserves to have the capacity to accommodate events and tourism opportunities.	State Planning Strategy 2050
6. Management	Ensuring POS is designed with consideration of the City's ability to manage POS.	<b>6.1</b> To efficiently and effectively manage POS for the benefit of the community.	State Planning Strategy 2050

The strategy identifies 18 strategic matters within the five key elements. These matters are proposed to be addressed through the implementation of 6 actions and 11 ongoing actions. These include:

### Actions

1. Apply the classification identified in Table 5 to all City strategies and policies relating to the delivery and management of POS.
2. Update Planning Policy 3.4.1 - Public Open Space to:
  - (i) Introduce design criteria and parameters to guide the allocation of POS within future structure plan and subdivision proposals.
  - (ii) Incorporate guidance on allocation of land for active open space, taking into account the recommendations of the Active Open Space (Playing Fields) in a Growing Perth Peel study.
  - (iii) Clarify the City's assessment requirements for new POS reserves proposed within Structure Plans to ensure new reserves demonstrate its capacity to provide functional recreation space.  
Provide guidance on the intended function and attributes of reserves in accordance with Table 6.
  - (iv) Guide the provision of infrastructure within the POS hierarchy.
  - (v) Clarify the City's assessment requirements for new POS reserves proposed within Structure Plans to ensure new reserves demonstrate its capacity to provide functional recreation space

- (vi) Introduce design criteria within Planning Policy 3.4.1 - Public Open Space to limit the impact of ancillary land uses within POS reserves designated for a recreational purpose.
  - (vii) Improve the balance of competing infrastructure demands and functions located in POS that restrict its usability for recreation.
  - (viii) Introduce provisions to ensure bushfire management and design implications are addressed for the planning and management of POS reserves.
  - (ix) Consider usability of POS for people who may have a disability
  - (x) Consider accessibility for all users.
  - (xi) Introduce additional criteria for Crime Prevention through Environmental Design (CPTED) principles to be applied for the development of POS.
  - (xii) Introduce provisions to guide the design application of water sensitive urban design within POS.
  - (xiii) Introduce design criteria to promote activities, functions and tourism opportunities in accordance with the classification of POS.
  - (xiv) Establish guidance for the provision of POS to support medium and high density residential development, and the utilisation of cash-lieu in infill development areas.
  - (xv) Incorporate relevant principles established within the City's Greening Plan within Planning Policy 3.4.1 – Public Open Space to ensure urban POS areas can contribute to the greening of neighbourhoods.
3. Prepare Public Open Space Design Guidelines to replace Appendix 1 Public Open Space Landscape Plan contained within Planning Policy 3.4.1 - Public Open Space, to outline the City's planning criteria for an acceptable and sustainable provision of park infrastructure, considering the classification of POS.
4. Advocate the State Government to:
- (i) Introduce changes to the planning framework to provide measures for the provision of sufficient POS to accommodate organised sport uses.
  - (ii) Establish agreements at Structure Plan stage for the shared use of ovals for sporting use.
  - (iii) Establish agreements with the Department of Education for the shared use of existing school sites for sporting use
5. Develop a Plan within the Strategic Asset Management Framework to:
- (i) Address gaps in infrastructure provision and ensure POS has:
    - An appropriate level of service;
    - Sets minimum infrastructure requirements; and
    - Establishes qualitative assessment criteria for redeveloping/introducing new infrastructure within a POS reserve.
  - (ii) Ensure the City's existing POS areas provide an appropriate level of service to the community which will consider balancing community needs against cost of development and ongoing maintenance / replacement.
  - (iii) Outline a minimum standard of infrastructure provision, which will consider balancing community needs against cost of development and ongoing maintenance / replacement.
  - (iv) Guide the provision and management of major infrastructure consistent with the level of service envisaged within the classification of POS reserves.
  - (v) Provide a transparent sustainable approach to the provision of public toilets in POS reserves.



- (vi) Establish qualitative assessment criteria for officers to assess the suitability of redeveloping or introducing service infrastructure within an existing POS reserve.
  - (vii) Identify and promote recreation opportunities within conservation and natural areas.
6. Develop the Five-Year Works Program (Parks Improvement Plan) to guide the redevelopment of existing POS reserves based on a strategic needs-based manner.

### **Ongoing Actions**

1. Establish a POS Working Party to ensure the actions specified by the POS Strategy are addressed and to provide a strategic response to the planning, development and management of the City's POS Reserves.
2. Planning and design for recreational spaces within foreshore POS reserves and other vulnerable locations is to consider the recommendations of the City's CHRMAP, and align with the preferred adaptation response.
3. Prepare discrete POS Strategies in locations where increases in residential density are identified in a Local Planning Strategy, or where current provision of POS is below 8%.
4. Investigate the potential for treated wastewater, aquifer replenishment and shared ground water allocations to be used for the irrigation of POS Reserves.
5. Identify locally significant environmental features, vegetation and fauna to be protected through the preparation of Structure Plans.
6. Investigate options for non-irrigated POS reserves.
7. Advocate the State Government to make changes to planning framework to provide measures on the provision of sufficient public open space to accommodate organised sports uses.
8. Advocate Department of Education to establish agreements at Structure Plan stage for the shared use of ovals for sporting use.
9. Identify locally significant environmental features, vegetation and fauna to be protected through the preparation of Structure Plans whilst complimenting the intended recreational function of the space.
10. Prepare Community Infrastructure Plans and District Structure Plans to inform the allocation of space for sporting grounds in new urban areas.
11. Through the POS Working Party, establish a process to encourage community engagement and participation in actions relating to the planning, development and management of POS.

## 2. Strategic Objectives

### 2.1 Strategic Objectives

The following Strategic Objectives have been established to guide the planning, development and management of POS:

1. To locate POS to maximise its accessibility to the community;
2. To design and develop POS to meet the conservation (environmental), recreation, social and sporting needs of the community;
3. To ensure POS is cost effective to maintain;
4. To plan to adapt to a changing climate; and
5. To consider competing demands and functions that impact on the useability of POS.

### 2.2 Strategic Alignment

This POS Strategy addresses the Community's Vision for the future and specifically the following Aspiration and Strategic Objectives contained in the Strategic Community Plan 2019-2029:

**Aspiration 3:** *Plan for Future Generations*

**Strategic Objectives:** Infrastructure Planning: Plan and develop community, sport and recreation facilities which meet the current and future needs of the City's growing population;

Responsive Planning and Control of Land Use: Plan and control the use of land to meet the needs of the growing population, with consideration of future generations;

Climate Change Adaptation: Acknowledge and understand the impacts of climate change, and identify actions to mitigate and adapt to those impacts; and

Preservation and Management of Bushland and Coastal Reserves: Encourage the sustainable management and use of the City's bushland and coastal reserves; and

Liveable Suburbs: Plan for attractive sustainable suburbs that provide housing diversity, quality public open spaces, walkways, amenities and facilities for the community.

The POS Strategy also:

- Links with the City's Strategic Framework of Community Plan Strategies, master plans, management plans, planning policies and guidelines, which currently inform the City's planning and management of POS reserves.
- Provides guidance in the preparation and update of these documents; and



- Provides a framework to guide the City's decision-making processes for the planning, development and ongoing management of POS.

The Strategic Objectives of the POS Strategy are to be addressed through the following:

<b>Table 1: Community Plan Strategies</b>	
<ul style="list-style-type: none"> <li>- Bushfire Hazard Reduction Strategy</li> <li>- Children and Young People Strategy</li> <li>- Community Infrastructure Plan</li> <li>- Coastal Hazard Risk Management Adaptation Plan</li> <li>- Disability Access and Inclusion Strategy</li> <li>- Environmental Planning Strategy (proposed)</li> <li>- Health and Wellbeing Strategy</li> <li>- Infrastructure Asset Management Plan</li> <li>- Karnup District Structure Plan (proposed)</li> </ul>	<ul style="list-style-type: none"> <li>- Local Planning Strategy (proposed)</li> <li>- Natural Area Conservation Strategy</li> <li>- Rockingham Beach Foreshore Master Plan</li> <li>- Rockingham Strategic Metropolitan Centre Activity Centre Plan</li> <li>- Shoalwater and Safety Bay Foreshore Masterplan</li> <li>- Strategic Asset Management Plan</li> <li>- Youth Outdoor Recreation Space Strategy</li> </ul>

<b>Table 2: Implementation Plans</b>		
<b>Asset Management Plans</b>	<b>Environmental Management Plans</b>	<b>Local Planning Policies / Guidelines</b>
<ul style="list-style-type: none"> <li>- Asset Management Policy</li> <li>- Strategic Asset Management Plan (Proposed)</li> <li>- Asset Management Plan</li> <li>- Five Year Works Program (Parks Improvement Plan) (Proposed)</li> </ul>	<ul style="list-style-type: none"> <li>- Baldivis Tramway Master Plan</li> <li>- Bushland Management Plan (Proposed)</li> <li>- City Greening Plan</li> <li>- Dixon Road Conservation Precinct Management Plan</li> <li>- Foreshore Management Plan</li> <li>- Lake Richmond Management Plan (Draft)</li> <li>- Lewington Reserve Management Plan</li> <li>- Reserve Prioritisation Report</li> <li>- Tamworth Hill Swamp Management Plan (Draft)</li> <li>- Wetland Management Plan</li> </ul>	<ul style="list-style-type: none"> <li>- Planning Policy 3.4.1 - <i>Public Open Space</i></li> <li>- Public Open Space Development Guidelines</li> <li>- Planning Policy 3.4.3 – <i>Urban Water Management</i></li> </ul>

### 3. Background

POS performs many social, environmental and economic functions which make it a highly valued component of the urban environment and the foundation of urban liveability. The City of Rockingham is responsible for the management of over 460 individual parcels of POS.

The City currently manages its POS reserves through a range of actions prepared and implemented by different Divisions.

The planning and management of City's POS assets presents a number of challenges, including:

- the provision of sufficient space for organised sporting activities;
- meeting a diverse range of community needs, and adapting to changing needs over time;
- making the most effective and efficient use of land; and
- integrating natural environmental features into open spaces.

This POS Strategy has been based on research and analysis of:

- Relevant literature, including Commonwealth, Western Australian and City of Rockingham planning documents; international and national guidelines; and best planning practice.
- The existing provision of POS across the City (refer Figure 5 on page 28); and
- Consultation with key stakeholders and the community. A summary of the community consultation informing the preparation of the Strategy is addressed in Section 4.3 – *Assessment of Key Issues* of this Strategy.

The planning framework specifies the parameters that need to be considered for the planning development and management of POS. This does not come without its challenges, as the implementation of the planning framework does not address key issues faced with the planning, development and management of POS. Specifically, this relates to:

- Size and distribution of POS
- Functions within POS
- Environmental integration into POS;
- Detailed design considerations; and
- Management responsibilities.

In addition to the planning parameters that influence the provision of POS, the City also recognises the values of the community, which have been identified through previous consultation matters that must be taken into account. The City has conducted the following public consultation processes that have identified matters which should be addressed with respect to POS:

- Active Open Space Survey (Sporting Groups)
- Children's Workshop
- Community and Children's Surveys
- Community Coastal Values Survey
- Community Values Survey
- Local Planning Strategy Community Engagement
- Community Plan Strategy Engagement Process
- Strategy for Children and Young People 2018 – 2023
- Senior's Strategy 2017 – 2021



The outcomes of stakeholder engagement identified the following values associated with the City's POS:

- A strong affinity associated with the City's foreshore reserves for its recreation value, environmental attributes and for the mental wellbeing of the community.
- The provision of reserves that supports and encourages organised sport.
- A strong affiliation with natural amenity and landscape character being protected within reserves.
- POS that contributes to the greening of urban areas.
- A desire for well-located POS within close proximity to where residents live.
- POS being designed to cater for children in an engaging manner.
- POS that encourages physical activity and social engagement.
- POS that contain infrastructure for a range of activities (such as playgrounds, barbeques, skate parks, lighting, shelters, public toilets, footpaths and car parking).

***Note: The POS Strategy is primarily focussed on POS, being areas ceded to the Crown through land subdivision processes for the purpose of public recreation.***

***Whilst not the primary focus of the POS Strategy, the City has a range of conservation and regional reserves which also provide recreational opportunities for the community and compliment the array of POS provided in urban settings. Where relevant, the Strategy considers this complimentary relationship between POS and conservation and regional reserves.***



## 4. Planning and Policy Context

Effective planning, development and management of POS is dependent on the successful integration of a suite of legislation, strategies and policies implemented by the State and Local Government. The following strategies and policies outline broad matters that should be considered in the planning, development and management of open space. Analysis of these documents has identified a range of key objectives that the POS Strategy should address.

### Strategic Framework

#### 4.1.1 State Planning Strategy 2050

The *State Planning Strategy 2050* is the State's leading integrated land use planning document, providing the strategic context and basis for the coordination and integration of land use planning and development across State, regional and local jurisdictions.

The Strategy outlines the following key matters to be considered when planning for POS:

- Seek to design POS areas to cater for festivals, events, tourism and cultural activities.
- Ensure the availability of sufficient suitable water sources to maintain high-quality POS, including school ovals accessible for community use.
- POS needs to contribute to a community's urban fabric and sense of place.
- POS should be designed to promote healthy living together with accessible healthy environments to meet the recreation needs of the community.
- The consideration of maintenance requirements plays an important role in the planning of POS.
- Natural bushland and wetland areas, (including Bush Forever sites) should be incorporated into broader POS network.

#### Key Objectives:

##### Design:

*Ensure strategic consideration of the City's POS reserves to have the capacity to accommodate activities, local functions and tourism opportunities.*

##### Environment:

*Future planning must consider measures to adapt to a drying climate.*

*Utilise the City's 'natural capital' for recreation purposes.*

##### Management:

*There is a need to efficiently and effectively manage POS for the benefit of the community.*

#### 4.1.2 Directions 2031 and Beyond

*Directions 2031 and Beyond: Metropolitan Planning Beyond the Horizon* (Directions 2031) was released by the WAPC in August 2010 as the plan to provide a vision for the future growth of the metropolitan Perth and Peel region.

It highlights the benefits of a more consolidated city that accommodates future population growth while aiming to protect the environment and achieve a more sustainable pattern of urban development and effective transportation networks.

Directions 2031 promotes the following actions for the planning of POS:

- Implement measures to protect, enhance and expand the POS green network to incorporate the natural environment and provide quality passive and active POS;

- Ensure the provision of appropriate public spaces for recreation to cater for community health and wellbeing;
- Strategically guide the development of a system of diverse and well-distributed POS;
- Ongoing maintenance and development of a vibrant POS network will require detailed consideration of water supply issues and increasing levels of water efficiency and design innovation into the future;
- Ensure adequate provision of regional and district active recreation sites;
- Incorporate protection of the natural environment and water management concepts into the development of POS; and
- Encourage walking, cycling and sports as part of the overall community health picture.

#### **Key Objectives:**

##### Classification of POS:

*Provide a consistent classification system to be applied to planning for the development and management of POS.*

##### Environment:

*Integrate significant environmental attributes into POS in new Structure Plan areas.*

##### Size and Distribution:

*Future planning must ensure adequate POS is provided to accommodate organised sport.*

#### **4.1.3 Perth and Peel @ 3.5 Million**

*Perth and Peel @ 3.5 Million* is the overarching report to the *South Metropolitan Peel Sub-Regional Planning Framework* informed by the key principles of Directions 2031.

The report provides a snapshot of the Perth and Peel regions now and in the future, advocating for the sustainable development of a more considered, connected and consolidated urban form.

The document notes that future population growth will inevitably require additional sporting and recreational facilities across the sub-regions. It advocates for these facilities to be co-located with other uses including libraries, education facilities and activity centres.

The document reiterates the State's requirement for a minimum of 10% developable land to be reserved for local POS, in addition to regional reserves. It also notes that the challenges of climate change; efficient, secure and affordable water; and the need to protect environmental attributes, will be increasingly important in the provision of adequate POS across the region as the population increases.

The report acknowledges infill development as a significant contributor to housing diversity, choice and affordability, and requires that green networks supporting infill development are preserved, enhanced and consolidated for the health and wellbeing of the community.

#### **Key Objective:**

##### Size and Distribution:

*Consider POS requirements in established urban areas.*



#### 4.1.4 South Metropolitan Peel Sub-Regional Planning Framework

The *South Metropolitan Peel Sub-Regional Planning Framework* (the Framework) aims to establish a long-term, integrated planning framework for land use and infrastructure to guide future growth across the sub-region. It provides strategic guidance to government agencies and local governments on all aspects of land use and infrastructure provision in the South Metropolitan Peel sub-region. The frameworks will provide guidance for:

- The preparation of amendments to the Perth metropolitan and Peel region schemes, local planning strategies / schemes and district, local and activity centre structure plans; and
- The staging and sequencing of urban development to inform public investment in regional community, social and service infrastructure.

With respect to POS, the Framework sets out proposals to:

- Encourage and guide increased connectivity between areas of POS or conservation through an integrated green network;
- Protect areas with regional conservation, environmental and landscape value;
- Identify sites to meet the growing requirements for regional sport and recreation facilities; and
- Establish the elements and functions of the green network in supporting an active and healthy community.

The Framework outlines the following actions for the planning of POS:

- In view of limited water availability, development and management of POS needs to be reviewed to consider the use of non-potable water supplies for irrigation purposes, and using materials and plants, as well as designing recreational spaces, which have a reduced water requirement;
- Actions to preserve, enhance and consolidate the green network of parks, rivers, recreation areas, facilities for active POS, conservation and biodiversity areas, and areas with a high level of tree canopy coverage, considered important for the health and wellbeing of the community;
- 50ha Regional Sporting POS within Karnup; and
- Future regional POS for passive recreation /nature along the Serpentine River in Keralup.

##### **Key Objectives:**

##### Environment:

*Improve the City's tree canopy cover within POS.*

##### Function:

*Define the preferred function of POS.*

*Future planning must effectively implement Water Sensitive Urban Design (WSUD) principles and best management practices.*

## Statutory Framework

### 4.1.5 Metropolitan Region Scheme

The *Metropolitan Region Scheme* (MRS) is the statutory planning scheme for the Perth metropolitan region and is the principal mechanism for implementing future strategic land use and infrastructure proposals. The MRS provides for land (and water) acquisition for public purposes such as regional POS, public uses and infrastructure as well as protection for critical natural environmental attributes.

Local government planning (including local planning schemes) is required to be consistent with the broad land uses under the MRS.

### 4.1.6 City of Rockingham Town Planning Scheme No.2

Town Planning Scheme No.2 (TPS2) specifies the statutory land use planning controls within the City. The POS Strategy is required to address the following TPS2 objectives:

#### General Objectives

- (a) *To establish the preferred use of land well in advance of development;*
- (b) *To optimise the provision of services and facilities for the community;*
- (c) *To ensure the co-ordinated provision of adequate land for development;*
- (d) *To conserve and enhance features of cultural, historical, environmental and natural significance; and*
- (e) *To reconcile community needs and aspirations with appropriate land use and development.*

#### Specific Objectives

- *To secure the amenity, health and convenience of the Scheme Area and the inhabitants thereof;*
- *To make provisions for the conservation and preservation of places of historic interest and landscape value;*
- *To protect and enhance the environmental values and natural resources of the Scheme Area and to promote ecologically and environmentally sustainable land use and development which minimises resource use and waste;*
- *To create a pedestrian traffic and landscape environment which complements the wide range of activities carried on or proposed within the Scheme Area; and*
- *To set aside land for future public use as reserves.*

## Policy Framework

### 4.1.7 Liveable Neighbourhoods

*Liveable Neighbourhoods* is a Western Australian operational policy prepared by the Western Australian Planning Commission (WAPC). It was prepared to guide the design and assessment of strategic and operational aspects of structure planning and subdivision development within green field and large infill sites, throughout the State. It is a performance based framework, which draws together design principals and policy requirements of lot size, movement systems, activity centres, POS, school sites, urban water management and development adjacent to transit stations.

Specifically, Element 4 – *Public Parkland* provides policy guidance for the minimum standard in which POS is to be developed and a range of requirements and objectives to be followed to provide a balance of POS reserves, ranging from local, neighbourhood and district parks and playing fields.

*Liveable Neighbourhoods* acknowledges the requirement for a balanced approach for the provision of bushland / vegetation retention, water management and useable POS.

*Liveable Neighbourhoods* outlines the following considerations for the planning of POS:

- The requirement for 10% of a subdivision area being set aside for POS.
- The types of open space area, which are Regional Reserves, Foreshore Reserves and POS. In relation to POS, *Liveable Neighbourhoods* categorises this space into district, neighbourhood and local POS areas.
- District Reserves are recommended to be located on the boundary of multiple neighbourhood precincts to provide for organised sport and informal recreation requirements.
- Neighbourhood Reserves are large reserves recommended to be situated away from the core of neighbourhoods but within a 5-minute walk of most residential areas. These reserves attract a higher level of infrastructure than local reserves and can accommodate a range of functions.
- Local Reserves provide for small spaces for recreation and to create a sense of place within close proximity to all residential development. This space includes small parks and squares and can be responsive to site requirements such as tree retention.
- POS is required to be developed to a minimum standard.
- It promotes linking urban water management with landscape design, providing for an integrated approach to water sensitive urban design.
- Seeks to ensure POS is designed to provide a balance between conservation, active and passive recreational uses.
- Provides policy measures to create a balanced provision of POS with a wide range of POS types to meet the needs of all users in the community and enhance local amenity.
- Natural features and cultural features should be incorporated into neighbourhood and district parks.
- Smaller parks are recommended to be located near town and neighbourhood centres, while larger spaces be located on the edge of neighbourhoods.
- POS is to be designed to enhance safety, addressing crime prevention through environmental design (CPTED) principles, require POS to be bounded by perimeter streets and where development does adjoin POS, it is required to be orientated to overlook and provide passive surveillance.



- Seeks to ensure public access to natural water bodies.

**Key Objectives:**

Function:

*Ensure competing land uses do not adversely impact on the recreational function of POS.*

Design:

*POS should provide for a safe and functional environment.*

#### **4.1.8 State Planning Policy 7.0 – Design of the Built Environment**

This Policy sets out the objectives, measures, principles and processes which apply to the design and assessment of built environment proposals through the planning system. Schedule 1 - Design Principle 2 specifies that “*good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.*”

The Policy outlines the following considerations for the planning of POS:

- POS needs to be designed with people in mind, they should be attractive and comfortable, offering opportunities for people to meet and socialise, bringing vitality and identity to a place.
- Good landscape design protects existing environmental features and ecosystems, promotes biodiversity; offers a variety of habitats for flora and fauna, enhances the local environmental context and restores lost or damaged ecosystems where possible.
- Consider environmental factors such as water and soil management, ground and site conditions, solar access, microclimate, tree canopy, urban heat island impacts, habitat creation and preservation of green infrastructure – balancing these against social, cultural and economic conditions.
- POS must provide for amenity, functionality and weather protection while encouraging social inclusion, equitable access and respect for the public and neighbours.
- Good landscape design employs hard and soft landscape and urban design elements to create environments that interact in a considered manner with built form, resulting in well integrated, engaging places that contribute to local identity and streetscape character.
- Well-designed landscape environments facilitate long term management and maintenance.

**Key Objectives:**

Design:

*Design POS to provide for the recreational requirements of a variety of users and experiences.*

*Establish Guidance for an appropriate level of improvement and infrastructure in POS Reserves.*

#### **4.1.9 State Planning Policy 3.7 – Planning in Bushfire Prone Areas**

This Policy sets out policy measures applicable to the consideration of development in bushfire prone areas. SPP3.7 provides a general presumption against the introduction or intensification of land use in areas subject to extreme bushfire hazard (including BAL-40 and BAL-FZ) unless it is minor development or unavoidable development.

The level of information required at each stage of the planning process is clearly articulated, including additional requirements for vulnerable and high-risk land uses.

It is not intended that the requirements are implemented retrospectively on existing development or subdivision. Decision making authorities do, however, have a duty of care to ensure that life, property and infrastructure is adequately protected from the risk of bushfires.

The Policy outlines the following considerations for the planning of POS:

- That the planning and management of POS does not introduce or increase the threat of bushfire to residential development, ensuring reserves are designed and located in appropriate areas in the context of new dwellings.
- That reserves are appropriately managed in accordance with the priorities identified within adopted Bushfire Management Plans.

**Key Objective:**

Design:

*Bushfire planning requirements must be considered in POS.*

#### **4.1.10 Development Control Policy 2.3 - Public Open Space in Residential Areas**

The WAPC's Development Control Policy 2.3 – *Public Open Space in Residential Areas* (DC2.3) provides for the planning requirements relating to provision of POS.

DC 2.3 generally requires suitable provision of POS which can be used by people living and/or working in urban areas.

The policy seeks to ensure that the provision of POS allows for an adequate, well-located distribution of land for active and passive recreation in each locality. This may be secured by providing larger areas for active recreation and smaller areas for passive recreation within residential areas.

The Policy also seeks to ensure POS enhances the amenity of development and provide for the recreational needs of local residents.

The Policy outlines the following considerations for the planning of POS:

- The requirement for 10% POS ceded free of cost to the crown within a new subdivision is based on the recommendations of the Plan for the Metropolitan Region Perth and Fremantle, 1955 Report (the Stephenson-Hepburn Plan).
- The parameters for the provision of cash-in-lieu of land provided for POS.
- The location and distribution of POS should be balanced between incidental passive POS, readily accessible to all residents, and recreational POS in larger units suitable for active leisure pursuits.
- Where a development area is abutting a watercourse (e.g. river or creek) or body of water (e.g. lake or the sea), a Reserve for Recreation or a Reserve for Foreshore Management is generally required.

**Key Objective:**

Size and Distribution:

*Ensure new development provides for an appropriate range of POS types to accommodate future recreation.*

#### 4.1.11 Development Control Policy 2.6 - State Coastal Planning Policy

State Planning Policy 2.6 - *State Coastal Planning Policy* ('SPP2.6') provides guidance for decision-making within the coastal zone and the establishment of foreshore reserves with a view to protecting, conserving and enhancing coastal values.

The policy provides guidance for land use and development decision-making within the coastal zone including managing development and land use change; establishment of coastal foreshore reserves; and to protect, conserve and enhance coastal values.

The objectives of this policy are to:

- Ensure that the location of coastal facilities takes into account coastal processes, landform stability, coastal hazards, climate change and biophysical criteria;
- Ensure the identification of appropriate areas for the sustainable use of the coast for housing, tourism, recreation, ocean access, maritime industry, commercial and other activities;
- Provide for public coastal foreshore reserves and access to them on the coast; and
- Protect, conserve and enhance coastal zone values, particularly in areas of landscape, biodiversity and ecosystem integrity, indigenous and cultural significance.

##### **Key Objective:**

##### Environment:

*Plan for future coastal hazards that may impact the recreational value of coastal reserves.*

#### 4.1.12 Designing Out Crime Planning Guidelines

The planning and design of places, spaces and buildings can assist in reducing crime by the application of improvements to lighting, fencing, landscaping and surveillance of the area from buildings and land use. Peoples' behaviour, particularly in terms of the possibility of offending, as well as an individual's perception about their safety, can be influenced by the design of that environment. Good design can reduce opportunities for offending and improve feelings of safety.

The principal purpose of the Guidelines is to provide local government, government agencies, town centre management, the public and private sector development industry and planning and design practitioners, with a context for understanding the principles of designing out crime and a toolbox of design criteria and approaches to address crime prevention in their local areas.

The Guidelines specify the following design implications be considered as part of the planning of POS:

- Development should front onto POS to promote public surveillance.
- Blank walls and the side of buildings should be minimised wherever possible.
- POS should be well defined and purposeful.
- The safety of POS is directly related to the design of the spaces and its ability to provide surveillance, sightlines, legibility and protection from entrapment.

#### 4.1.13 Better Urban Water Management

The WAPC's *Better Urban Water Management* Guidelines provides a framework to facilitate better management of our urban water resources by ensuring an appropriate level of consideration is given to the total water cycle at each stage of the planning system.

The Guidelines specify the following design implications be considered as part of the planning of POS:

- Consideration of water supply to irrigate POS.
- Encourages strategies to minimise water and nutrient use.
- Encourages the integration of stormwater management into POS.

#### Local Planning Framework

##### 4.1.14 Community Infrastructure Plan

The City's *Community Infrastructure Plan* (CIP) is an annually updated document that guides the development, timing, design and location of community infrastructure delivered for the community over a ten to fifteen-year period.

In the context of POS, it addresses infrastructure associated with sport and recreation facilities required for the community benefit.

The infrastructure proposed to be delivered is justified based on a needs analysis of current and future residents. The needs of the community are based on an ongoing review of the City's demographic profile.

- The CIP guides the identification of land and facilities required to support the sport and recreation functions within new and existing POS.
- It provides the City with a documented framework of community infrastructure planning principles and guidelines.





#### 4.1.15 Local Planning Policy 3.4.1 – Public Open Space

The City adopted Planning Policy 3.4.1 – *Public Open Space* in 2009 to provide guidance regarding the location and design of POS within the City. The objectives of the Policy are:

- To ensure that all residential development is complemented by well-located areas of POS that provide for the recreational and social needs of the community.
- To ensure that POS is designed, developed and maintained to an acceptable standard to enhance local amenity.

Appendix 1 of the Policy outlines the information requirements for Landscape Plans required to be approved by the City through the subdivision process. It also outlines the minimum design standards for local, neighbourhood and district POS.

This policy is the City's implementation mechanism for the appropriate provision and development of POS.

#### 4.1.16 Local Planning Policy 3.4.3 – Urban Water Management

Planning Policy 3.4.3 – *Urban Water Management* provides guidance on total water cycle management to ensure that planning and development proposals are dealt with in a consistent manner and promote alternative water conservation and sustainability practices that reduce reliance on traditional supplies.

The Policy seeks to address urban water management within POS reserves by:

- Ensuring land use planning decisions integrate land and water planning in an appropriate manner.
- Implement Water Sensitive Urban Design (WSUD) principles and best management practices within POS reserves and as part of the comprehensive drainage network.
- Improving water quality within the City and ensure the protection and management of sensitive environments. Where possible, restore and enhance the environmental, economic and social values of the City's waterways and protected wetlands.



## 5. Key Element Analysis

The planning framework outlines the following Key Elements that the City must address into the future.

The City has examined its current practices for the design, planning and management of POS with respect to intent of the planning framework.

To address the wide array of matters associated with the planning, design and management of POS, key elements were established to define the components of POS that required future actions.

For each Key Element, the following Key Objectives have been identified as matters the City must address to achieve the Strategic Objectives of the Strategy. These Key Objectives are examined in further detail within in Section 5.1 - *Assessment of Key Elements and Issues*.

Table 3: Key Element Analysis			
Key Element	Purpose	Key Objectives	Applicable Documents*
1. Classification of POS	Defining the hierarchy and network of POS reserves to guide the intended function, distribution, infrastructure and design requirements for different types of reserves.	<b>1.1</b> Adopt a classification system to be consistently applied to planning for the development and management of POS.	Directions 2031 and Beyond
2. Size and Distribution	Establishing guidance for the size and distribution of reserves to meet varying recreational requirements.	<b>2.1</b> Future planning must ensure adequate POS is provided to accommodate organised sport.	Directions 2031 and Beyond
		<b>2.2</b> Consider POS requirements in established urban areas.	Perth and Peel @ 3.5 Million
		<b>2.3</b> Ensure new development provides for an appropriate range of POS types to accommodate future recreation.	Development Control Policy 2.3 - Public Open Space in Residential Areas
3. Function	Establishing the purpose of POS reserves to meet the recreational needs of the community.	<b>3.1</b> Define the preferred function of POS.	South Metropolitan Peel Sub-Regional Planning Framework
		<b>3.2</b> Ensure competing land uses do not adversely impact on the recreational function of POS.	Liveable Neighbourhoods
		<b>3.3</b> Future planning must effectively implement Water Sensitive Urban Design (WSUD) principles and best management practices.	South Metropolitan Peel Sub-Regional Planning Framework

4. Environment	The integration natural landform and features into recreation areas and planning to adapt to potential changes to the environment.	4.1 Future planning must consider measures to adapt to a drying climate.	State Planning Strategy 2050
		4.2 Improve the City's tree canopy cover within POS.	South Metropolitan Peel Sub-Regional Planning Framework
		4.3 Utilise the City's 'natural capital' for recreation purposes.	State Planning Strategy 2050
		4.4 Integrate significant environmental attributes into POS in new Structure Plan areas.	Directions 2031 and Beyond
		4.5 Plan for Future coastal hazards that may impact the recreational value of coastal POS reserves.	Development Control Policy 2.6 - State Coastal Planning Policy
5. Design	The components of a POS reserve that must be considered to ensure POS is developed to meet its intended function.	5.1 Bushfire planning and management requirements must be considered of POS.	State Planning Policy 3.7 – Planning in Bushfire Prone Areas
		5.2 Establish Guidance for an appropriate level of improvement and infrastructure in POS Reserves.	State Planning Policy 7.0 – Design of the Built Environment
		5.3 Design POS to provide for the recreational requirements of a variety of users and experiences.	State Planning Policy 7.0 – Design of the Built Environment
		5.4 POS should provide for a safe and functional environment.	Liveable Neighbourhoods
		5.5 Ensure strategic consideration of the City's open space reserves to have the capacity to accommodate events and tourism opportunities.	State Planning Strategy 2050
6. Management	Ensuring POS is designed with consideration of the City's ability to manage POS.	6.1 To efficiently and effectively manage POS for the benefit of the community.	State Planning Strategy 2050

*\*Note: Key Objectives may relate to a number of documents contained within the Planning Framework.*

## 5.1 Assessment of Key Elements and Issues

### 5.1.1 Element 1 - Classification of POS

**Key Objective 1.1: Adopt a classification system to be consistently applied to planning for the development and management of POS.**

There are currently varying classifications of POS across planning documents.

Since the introduction of *Liveable Neighbourhoods* in 2007, POS has been classified in accordance with the Table 4 below:

Table 4: Liveable Neighbourhoods Classification Table		
Park Type	Park Size	Park Catchment
Local / Small POS	≥0.3ha	150-300m
Neighbourhood POS	≥0.3ha - <2.5ha	400m
District POS	≥2.5ha - <7ha	1km

More recently, the then Department of Sport and Recreation (DSR) prepared the *Classification Framework for Public Open Space (2014)* in response to the demand for universally accepted cross-industry terminology to describe the fundamental form, function and hierarchy of different types of POS. It is anticipated that this classification framework will be incorporated into *Liveable Neighbourhoods* when it is updated in the future.

The Classification Framework defines POS as:

*“POS refers to urban green spaces: parklands, play areas, playing fields, bushland, greenways and other similar spaces people use for recreation, sport and social interaction”.*

The different types of POS reserves available are categorised by function and size. The classification of POS considers a range of factors, including:

- The size of POS (Pocket, Local, Neighbourhood, District, Regional);
- The distribution of POS within the community (network);
- The catchment the POS or facility is intended to serve; and
- Its intended function.

The Classification Framework provides the following Table 5:

Table 5: DSR Classification of POS		
Park Type	Park Size	Park Catchment
Local POS	≥0.4ha - <1ha	400m
Neighbourhood POS	≥1ha - <5ha	800m
District POS	≥5ha - <20ha	2km
Regional POS	≥20ha	10km



It is recommended that the Council apply a similar approach to the classification of POS, subject to additions necessary to meet the City's needs. In this regard, it is considered that the classification of POS specifies the broad function of the space, as the size of a POS reserve is not the sole indicator of its role. For example, a large POS reserve may include substantial conservation areas which mean that its recreational function is not reflective of its actual size (i.e. a District size POS reserve may only perform a local recreational function).

Table 6 provides general guidance and POS reserves are classified on a 'best fit' basis. There may be circumstances where POS reserves may not meet all of the criteria relevant to its particular classification.

<b>Table 6: Rockingham Classification Table</b>				
<b>Catchment Hierarchy</b>	<b>Size</b>	<b>Accessibility</b>	<b>Catchment (population)</b>	<b>Function</b>
<b>Pocket</b>	<0.4ha	300m	Up to 1500	Passive recreation
<b>Local</b>	0.4-1ha	400m	Up to 4,000	Passive recreation
<b>Neighbourhood</b>	1-5ha	800m	4,000 - 10,000	Active Sport and Passive Recreation
<b>District</b>	5-20ha	2km	10,000 - 50,000	Active Sport and Passive Recreation
<b>Regional</b>	20ha+	N/A	50,000+	Active Sport and Passive Recreation
<p><i>Note:</i></p> <ul style="list-style-type: none"> <li>- Accessibility refers to the desired distribution of POS reserves through a community, ensuring convenient access to POS for the community. For example, it is desirable for all dwellings to be located within 800m of a neighbourhood POS reserve and 2km of a District POS reserve.</li> <li>- Catchments identify the number of dwellings (population) served by each specific POS reserve type. For example, a district sporting complex may accommodate a number of sporting clubs serving a population of 25,000-75,000 people.</li> <li>- Mindful that the function of POS reserves may vary, accessibility to POS does not suggest that all needs will be met within those distances, rather each dwelling is located within reasonable distance of a variety of types of POS.</li> </ul>				

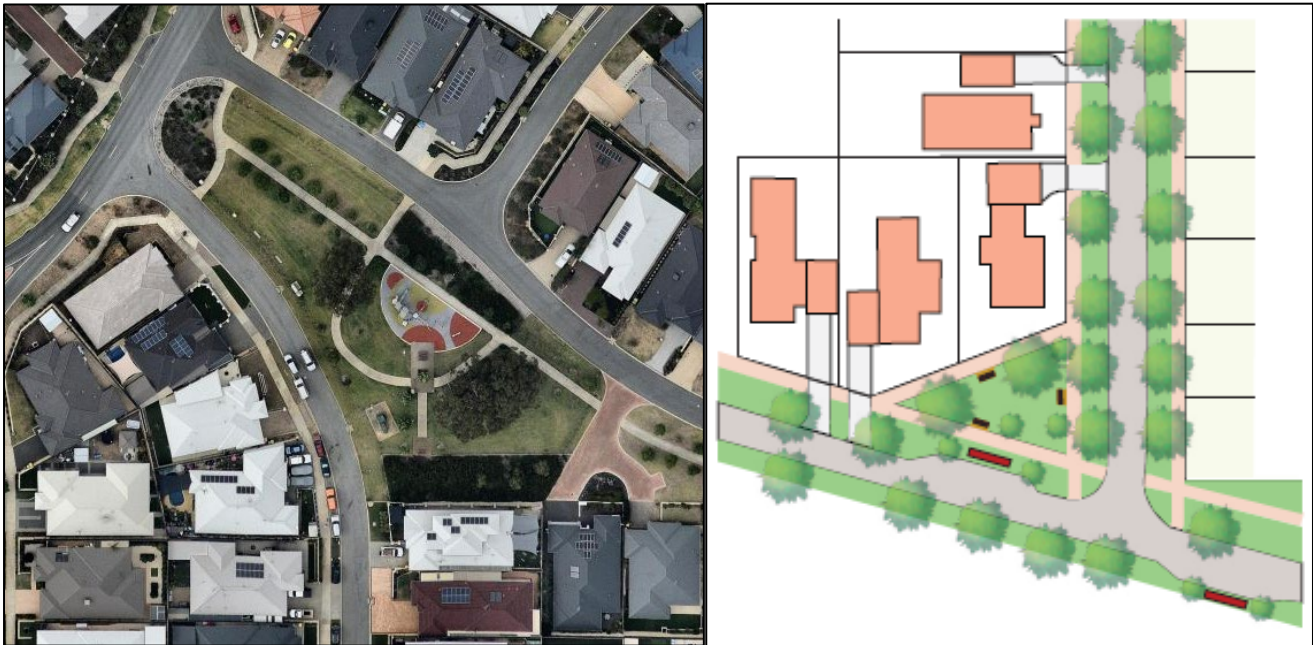
### Pocket POS

Pocket POS can contribute to the landscape character and quality of the neighbourhood and make walking through the area more enjoyable and appealing to residents.

Pocket POS should complement the POS network by providing areas for shade and passive recreation.

These spaces should only be implemented in exceptional circumstances to protect and incorporate prominent local features or to provide public green spaces within a built-up environment such as an activity centre.

Pocket POS is not generally suitable to accommodate a drainage function as it impedes the function of the POS reserve for recreation purposes. The provision of new pocket POS should only be considered by exception where appropriate justification is provided demonstrating the recreation and social value of such POS reserves.



Sunbeam Reserve Baldvis

Sources: WAPC (2015); Nearmap 2020

Figure 1. *Example of a Pocket Park within Baldvis*

### Local POS

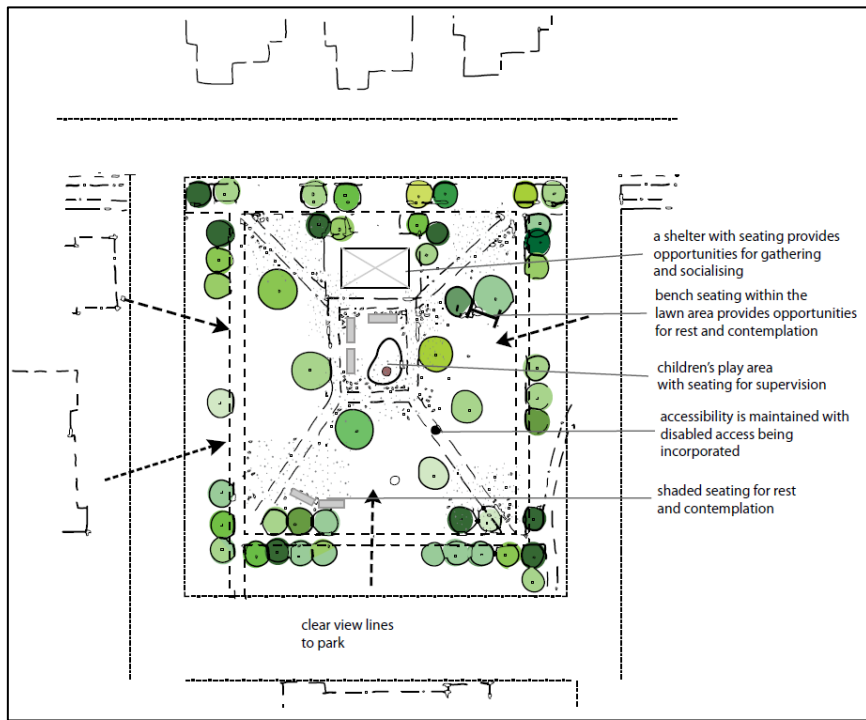
Local POS consists of small local parks that provide for the recreation needs of the immediate residential population.

These spaces provide for passive recreation and are intended to be accessed by bicycle or foot. Local POS include places for play, kickabout space, shade areas, informal recreation and sport, with a low level of infrastructure provision.

Local POS should be sized to accommodate retention of remnant vegetation, encourage nature play, relaxation, interaction with the environment and sense of place. Local POS also provide an opportunity to create a network of linkages between places of interest for the pedestrian network, enhancing the pedestrian environment.

Design considerations:

- Provided within 400 metres or 5-minute walk to residential areas.
- Typical size 0.4ha – 1 ha.
- Accessibility friendly, forming part of an overall pedestrian and cycling network to connect key destination points.
- Passive recreation space.
- Responsive to natural site features.
- Support good passive surveillance.
- Build a sense of place.
- Assist to preserve of local biodiversity.



*Source: Department of Sport and Recreation (2012)*



*Karridale loop Reserve*

*Source: Nearmap 2020*

Figure 2. Example of Local POS



## Neighbourhood POS

Neighbourhood POS serves as the recreational and social focus of a community. These POS reserves are intended to provide a variety of features and facilities that encourage the opportunity to socialise.

These POS reserves are to provide a number of functions in a complementary manner. Neighbourhood POS should seek to provide for a combination of recreation, nature and sporting functions and provide for the opportunity for these spaces to be modified over time to meet any changing needs of the community.

Neighbourhood POS identified for a sport function is required to be of sufficient size to allow other POS functions to be provided such as playgrounds, spectator areas / sheltered space, park furniture, car parking, buffer from surrounding roads and dwellings.

Where Neighbourhood POS is proposed to be co-located with a Primary School site, the POS must be of sufficient size to accommodate a senior playing field and park infrastructure suitable for a Neighbourhood POS reserve. The oval and infrastructure should be located solely on POS and not be fenced to prevent public access.

Playground infrastructure and supporting facilities proposed to be contained within Neighbourhood POS should be considered as part of the broader POS network to support unique user experiences and provide an appropriate level of infrastructure within the POS network.

Design considerations:

- Provided centrally within neighbourhoods within 800 metres or 10-minute walk to residential areas.
- Can be co-located with school sites.
- Typical size 1ha – 5ha to enable different activities and uses to occur simultaneously.
- Provide for both passive and active recreation uses.
- Accessibility friendly, forming part of an overall pedestrian and cycling network to connect key destination points.
- Responsive to natural site features.
- Support good passive surveillance.
- Build a sense of place.
- Assist to preserve local biodiversity.





Arpenteur Park

Figure 3. *Example of Neighbourhood POS*

## District and Sub-District POS

District POS is principally designed to provide for organised formal sport but also accommodate the functions of smaller local and neighbourhood POS. The expectation is that residents are prepared to drive or commute by public transport to these places for structured sporting competitions.

For the purposes of delivering community infrastructure, two categories are described within the City's Community Infrastructure Plan: District Open Space and Sub-District POS.

District POS provide for the sporting requirements of the entire City.

Sub-Districts relate to areas of the City where larger district facilities may not be as easily accessed by the entire population and require a level of service greater than the capacity of Neighbourhood POS. There are five Sub-District catchments (aligned with the City's Community Infrastructure Development Contribution Areas) for the purpose of determining community infrastructure requirements. These catchments include: -

- Coastal North (Rockingham, Safety Bay, Cooloongup, Shoalwater, Peron and Hillman);
- Coastal Central (Waikiki, Warnbro and Port Kennedy);
- Coastal South (Secret Harbour, Singleton and Golden Bay);
- Baldivis (Baldivis North, Baldivis South, including areas east of the Kwinana Freeway); and
- Karnup.

Within a planning context, there is no separate distinction for the 'Sub District' category and should be identified as District POS consistent with the planning framework.

Design considerations:

- Provided within 2 kilometre or 5-minute drive of residential areas.
- Should be located central to the catchment to maximise accessibility.
- Can be co-located with school sites.
- Accommodate the recommended dimensions and supporting amenity for formal sport and recreation.
- Provide for both passive and active recreation uses.
- Located on high order local roads with good passive surveillance.
- Serviced by public transport networks.
- Accessibility friendly, forming part of an overall pedestrian and cycling network to connect key destination points.
- Responsive to natural site features.
- Assist to preserve of local biodiversity.
- Build a sense of place.
- Incorporate a combination of bushland, open parkland for casual play, space for organised sport and complementary community facilities.
- Accommodate multiple user groups, clubs and associations.

In a local context, the location also needs to consider city wide equity and the geographical spread of facilities. The location will be influenced by population projections, availability of other facilities within neighbourhoods and sub districts to perform the required function, as well as the availability of land.





*Source: Department of Sport and Recreation (2012)*

Figure 4. *Example of a District Scale POS Reserve*



Hourglass Reserve



Baldvis South Sport Pavilion

*Source: Nearmap 2020*



Baldvis District Sporting Complex

### *Regional POS*

Regional POS can accommodate important recreation and organised sport spaces as well as significant conservation and/or environmental features. This space may provide substantial facilities for organised sport, play, social interaction, relaxation and enjoyment of nature.

Within Regional POS, including the Foreshore POS reserve, opportunities to facilitate for tourism related activities to encourage regional visitation should be explored. In addition to the conservation (nature) function of these POS reserves, opportunities to integrate recreation areas, such as nature play and walking trails, should be implemented into these POS reserves following consultation with State agencies.

Regional sporting facilities such as Lark Hill and the future Karnup District Sporting field provide for regional sporting needs of the community and integrate recreation and enhancement of the surrounding natural setting into the primary sporting function of these POS reserves.

When sporting space is identified as a necessary regional function, allocations for playing fields and sports facilities should be 20+ha in area.

Regional POS is allocated outside the structure planning process by the Western Australian Planning Commission in consultation with local government.

While land identified within the Metropolitan Region Scheme for 'Parks and Recreation' is considered a regional reserve, in many circumstances these reserves facilitate a local or neighbourhood function. As such, where there are opportunities to incorporate a recreation function into regionally reserved land, this should be explored with relevant State agencies.

A map classifying all areas of POS within the City of Rockingham according to size and accessibility, is shown in **Figure 5**.



**Recommendation 1.1:**

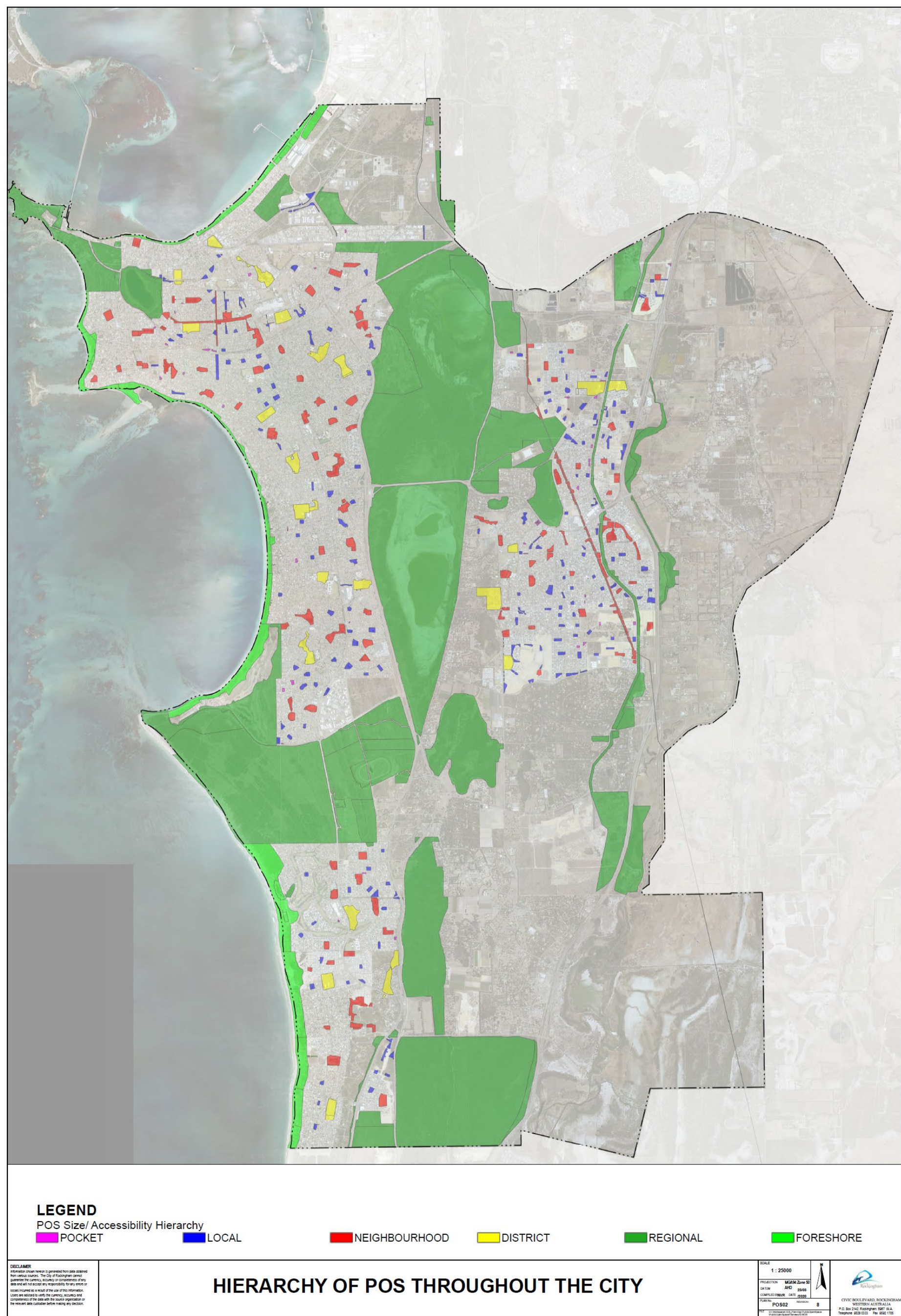
**Apply the classification identified in Table 6 to all City strategies and policies relating to the delivery and management of POS.**



Lark Hill Regional Sporting Complex



Figure 5. *Hierarchy of POS*





### 5.1.2 Element 2 - Size and Distribution

#### **Key Objective 2.1: Future planning must ensure adequate POS is provided to accommodate organised sport.**

The delivery of adequate sporting POS in new urban areas has been challenging under the current *Liveable Neighbourhoods* requirements, and exacerbated by the smaller size of development areas in more recent times, which has limited the ability to secure sporting POS reserves through structure planning as part of the standard POS requirements.

As a result, the provision of POS for senior sized playing fields has been inadequate, and the City has sought to address the shortfall through the purchase of land on Eighty Road for the provision of a District Sporting Complex in Baldivis.

A study undertaken by the Department of Local Government, Sport and Cultural Industries, entitled *Active Open Space (Playing Fields) in a Growing Perth Peel*, suggests for new suburbs, where densities are typical of Perth's suburbs, 1.4% of the subdividable area should be set aside for active POS. It further states that much denser developments should set aside 6.5m<sup>2</sup> of Active POS per resident. These recommendations should provide a basis to advocate for changes to the broader planning framework to define the amount of active POS required for organised sport.

In some circumstances, the City supplements its POS network through shared use agreements to utilise school space for sporting purposes. Typically, this occurs where POS is co-located with school sites. Such arrangements are typically mutually beneficial in terms of the sharing of costs and space and the City should continue to advocate to the Department of Education for further agreements for the sharing of ovals.

In circumstances where POS is proposed to be co-located with a school site, through the Structure Plan process, the City should recommend the provision of senior playing fields to provide flexible spaces that can be utilised for a range of sport and community activities.

There is also a need to advocate for changes to the existing Planning Framework to ensure greater importance and guidance is given to the provision of sporting spaces. Such guidance would assist Local and State government to ensure the adequate provision of POS for organised sport.

In the short term, the City's *Community Infrastructure Plan* addresses additional sporting needs through the delivery of the Baldivis Sporting Complex, the East Baldivis District POS, and the Stage 2 expansion of Lark Hill by 2033. In addition to these measures, there is an opportunity to improve the utilisation of existing ovals provided on government school sites. Outside of school operational hours, these public assets have limited use. While many school sites have agreements in place with the City to utilise POS and facilities on these sites, there are further opportunities for shared use agreements which should be explored.

In the longer term, the *South Metropolitan Peel Sub-Regional Planning Framework* identifies new urban expansion areas within Baldivis and Karnup that will generate an even greater demand for sporting POS reserves.

The preparation of future District Structure Plans, informed by new Community Infrastructure Plans, will need to ensure that the organised sporting requirements of the City's increasing population area appropriately accounted for.

**Recommendation 2.1:**

- **Advocate the State Government to make changes to the planning framework to provide measures on the provision of sufficient POS to accommodate organised sports uses.**
- **Advocate Department of Education to establish agreements at Structure Plan stage for the shared use of ovals for sporting use.**
- **Prepare Community Infrastructure Plans and District Structure Plans to inform the allocation of space for sporting grounds in new urban areas.**
- **Review Planning Policy 3.4.1 - Public Open Space to incorporate guidance on allocation of land for active POS, taking into account the recommendations of the Active POS (Playing Fields) in a Growing Perth Peel study.**

**Key Objective 2.2: Consider POS requirements in established urban areas.**

Various standards for the provision of POS through subdivision have been applied over time, commencing with introduction of the *Stephenson Hepburn Plan* in 1955 through to the current version of *Liveable Neighbourhoods*, with generally ranging between 8% and 10% of subdivisible land being required for POS. For much of the City's development, *Liveable Neighbourhoods* allowed for a minimum POS provision of 8% where the POS was suitably developed, which was commonly undertaken by developers.

The provision of POS is determined in the context of Structure Plan and subdivision processes for the development of land for residential purposes. *Liveable Neighbourhoods* currently requires ten percent (10%) of the gross subdivisible areas must be provided free of cost for the purpose of POS, which is intended to accommodate a range of uses, including recreation, vegetation retention, and drainage.

The existing provision of POS within the City is estimated in Table 7 below:

<b>Table 7: Provision of POS within the City determined in accordance with Current Policy Requirements (excluding Regional and Foreshore POS).</b>		
Locality	Area (Ha)	Proportion of Suburbs urban area (%)
Baldivis	217	12%
Cooloongup	37	12%
Hillman	11	6%
Golden Bay	42	15%
Karnup	10	19%
Port Kennedy	52	9%
Rockingham	54	13%
Safety Bay	39	10%
Shoalwater	11	5%
Singleton	16	8%
Secret Harbour	41	8%
Waikiki	41	8%
Warnbro	45	9%



It is noted that two suburbs, Shoalwater and Hillman, are currently served by less than 8% POS as a result of historical subdivision requirements. Whilst the City is not aware of any community concerns with respect to the availability of POS in these areas, and the recreational requirements of the community are supported by regional open space in these areas, it is appropriate that the City further investigate this through the preparation of discrete POS investigations for these suburbs. These investigations should:

- Investigate the capability of the City's existing POS reserves to meet existing and future recreational demands by preparing POS Strategies for suburbs as required;
- Consider the capacity of nearby Regional and/or Foreshore POS reserves to supplement the shortfall of POS by providing additional recreational opportunities for the community; and
- Guided by State Policy, determine locations where future development and subdivision applications should require approval conditions for the provision or upgrade of POS.

To do this, it is recommended a new plan within the Strategic Asset Management Framework be introduced to guide the redevelopment and ongoing improvement of the City's established POS reserves. The Policy is also recommended to contain a gap analysis for the provision of infrastructure within the POS network and determine the priorities for the redevelopment of POS.

Changes to the utilisation of POS will need to be considered over time to respond to increases in residential densities and reduced areas of private open space within backyards. There is a need to plan for the provision of POS capable of supporting the recreational needs of an increased population and to supplement loss of private recreation space.

**Recommendation 2.2:**

- **Review Planning Policy 3.4.1 - Public Open Space to establish guidance for the provision of POS to support medium and high-density residential development, and the utilisation of cash-lieu in infill development areas.**
- **Prepare discrete POS Strategies in locations where increases in residential density are identified in a Local Planning Strategy, or where current provision of POS is below 8%.**
- **Through the development of a Plan within the Strategic Asset Management Framework, prepare a gap analysis to determine the existing provision of infrastructure and plan for ongoing improvement of the City's POS Reserves.**

**Key Objective 2.3: Ensure new development provides for an appropriate range of POS types to accommodate future recreation**

With recreational demands changing over time, existing POS has been adapted to accommodate these new uses. Examples include skate parks, dog exercise areas, adult exercise equipment and nature play spaces. Larger POS reserves have typically been more capable of accommodating such changes. An assessment of existing POS within the City (see Table 8 below) shows that the majority of POS within the City comprises of larger 'District' and 'Neighbourhood' POS reserves.

<b>Table 8: Composition of the POS within the Classification Hierarchy</b>			
POS Type	Walkable Catchment	Total Area (hectares)	Proportion of POS (%)
Pocket POS	300m	16.42	2%
Local POS	Within 400m or 5-minute walk	153.57	23%
Neighbourhood POS	Within 800m or 10-minute walk	269.11	40%
District POS	Within 2km or a 5-minute drive	236.56	35%
<b>Total</b>		<b>675.66</b>	<b>100%</b>

With recent trends towards the delivery of smaller POS reserves, in response to Liveable Neighbourhood requirements, shrinking backyards, and water sensitive urban design, the allocation of POS is trending towards smaller POS reserves, and the capacity for POS to adapt to changing demands over time has become limited.

It is expected that recreational demands will continue to shift, and while those future changes are difficult to anticipate, larger neighbourhood or district size POS will more readily accommodate future changes.

The City needs to ensure the POS network there is not a proliferation of small and /or irregularly shaped parcels of POS with limited capacity to cater for a range of different functions (Planning Consultants Australia Pty Ltd, 2013).

To ensure that POS delivered to new development provides for a range of recreational opportunities, meets the needs of the community and can accommodate future change, Policy guidance should be provided on the desirable mix of POS types.

### **Recommendation 2.3:**

#### **Review Planning Policy 3.4.1 - Public Open Space to:**

- **Introduce design criteria and parameters to guide the allocation of POS within future structure plan and subdivision proposals.**
- **Clarify the City's assessment requirements for new POS reserves proposed within Structure Plans to ensure new POS reserves demonstrate the capacity to provide functional recreation space.**

### 5.1.3 Element 3 – Function

#### Key Objective 3.1: Define the preferred function of POS

*Liveable Neighbourhoods* provides guidance on the amount of land to be provided for POS through the subdivision process, however, limited guidance on what function public open should serve, and the uses it should accommodate.

POS is required to serve the community for all stages of life, by providing areas which support recreation, physical health, mental well-being, social interactions, contact with nature, drainage and flood management and service infrastructure.

Given the value of POS within the community, the City has a responsibility to ensure there are appropriate provisions for multiple functions available within POS which are accessible to the local community. This is particularly important given the change in development approach, with a number of competing demands dominating the design and usability of POS reserves, resulting in a proliferation of constrained POS, with limited flexibility to support a range of functions.

Table 9: Functions within the POS Hierarchy		
POS Hierarchy	Function	Examples of appropriate infrastructure and natural assets to be contained in POS
Pocket (<0.4ha)	Passive Recreation	Passive recreation space Casual exercise, walking training space for individuals and small groups. Pedestrian or cycling connections Seating Tree retention and shade
Local (0.4-1ha)	Passive Recreation/ Nature	Passive recreation space Pedestrian and/or cycling connections Seating Kickabout spaces Walking / exercise areas Playgrounds Playscapes Grassed recreation / exercise space Gardens / open parkland Native vegetation retention
Neighbourhood (1-5ha)	Passive Recreation/ Active Sport/ Nature	Passive and active recreation spaces Playgrounds Exercise equipment Skateboard/scooter/bicycle tracks BBQ / picnic areas / gazebos Geological / natural features Native vegetation retention Sporting fields Small clubroom * may also include infrastructure providing a local function.

District & Regional (5-20+ha)	Passive Recreation/ Active Sport/ Nature	Passive and active recreation spaces Organised Sporting spaces Clubrooms Walking trails Nature play spaces Indoor recreation facilities Exercise equipment Skateboard/scooter/bicycle tracks BBQ / picnic areas / gazebos Geological / natural features Vegetation retention * may also include infrastructure providing a local or neighbourhood function.
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### Recommendation 3.1:

**Review Planning Policy 3.4.1 - Public Open Space to provide guidance on the intended function and attributes of POS reserves in accordance with Table 9 - Functions within the POS Hierarchy.**

### Key Objective 3.2: Ensure competing land uses do not adversely impact on the recreational function of POS.

The state planning framework encourages the integration of different uses within POS. This includes urban water management drainage requirements, utility infrastructure (such as sewer pump stations, utility corridors), buffers to environmental or land use constraints and the retention of local environmental features such as vegetation and landform (WAPC, 2009). The challenge faced by the City for Local POS is to manage the impact of all the competing land use functions and ensure they can complement the intended recreation or sporting functions.

The City has a responsibility to ensure there is an appropriate provision for POS that can support multiple functions in an accessible manner and are adaptable over time.

POS areas are broadly defined within three primary functions within Table 9 being nature, recreation and sport. Best practice principles encourage POS to be developed to provide a flexible array of functions to support the recreation and overall health and wellbeing of the community.

The use of POS is progressively changing and it is not possible to predict how these spaces will be used long after they are created. The challenge for the City has been in response to the community's use of POS for different forms of recreation. Some examples of recent changes include a trend for the provision of dedicated dog recreation areas, the use of POS for fitness classes, the operation of drones and increasing nature-based play opportunities. POS reserves need to be adaptable to support a range of functions desired by the community and ensure the provision of a variety of types of POS to accommodate varying recreational demands.

Infill development and changes to the demographic profile may influence the community needs with the improvement or redevelopment of existing POS (University of South Australia, 2009). The change faced by the City is to ensure that its existing POS reserves have the flexibility to accommodate changes over time to meet the requirements of an increasing population and changing recreational demands.



**Recommendation 3.2:**

**Introduce design criteria within Planning Policy 3.4.1 - Public Open Space to limit the impact of ancillary land uses within POS reserves designated for a recreational purpose.**

**Key Objective 3.3: Future planning must effectively implement Water Sensitive Urban Design (WSUD) principles and best management practices.**

The state planning framework encourages the integration of urban water management systems within POS.

The challenges impacting the location and function of POS is the implementation of WSUD principles. These challenges include:

- The integration of drainage in POS influences where POS is located in order to accommodate stormwater drainage catchments (Government of Western Australia, 2011).
- It can require a significant land area within individual POS reserves for the purpose of providing drainage swales or living streams (WAPC, 2008).
- The land area required for drainage can be more pronounced on constrained development sites with a high groundwater table. (Government of Western Australia, 2011).

The challenge faced by the City is to ensure water sensitive urban design is developed as a component of POS and not the driving function at the expense of its primary recreation purpose (Planning Consultants Australia Pty Ltd, 2013).

**Recommendation 3.3:**

**Introduce provisions within Planning Policy 3.4.1 - Public Open Space to guide the design application of water sensitive urban design within POS.**

#### 5.1.4 Element 4 - Environmental Considerations

##### **Key Objective 4.1: Future planning must consider measures to adapt to a drying climate.**

The City currently utilises a network of production bores that abstract groundwater for irrigation of POS Reserves. Based on current climate projections, a reduction in groundwater availability may become increasingly more challenging for the City to manage, particularly as additional areas of POS and sporting facilities are developed to meet the needs associated with housing diversity and a growing population. Efficient water use, water recycling and alternative water supplies are should be explored to ensure the availability of water into the future (RPS, 2018).

The preparation of future District Structure Plans for the City's new growth areas should explore a range planning options for the provision of water to irrigate POS.

##### **Recommendation 4.1:**

- **Investigate the potential for treated wastewater, aquifer replenishment and shared ground water allocations to be used for the irrigation of POS Reserves.**
- **Investigate options for non-irrigated POS reserves.**

##### **Key Objective 4.2: Improve the City's tree canopy cover within POS.**

As an element of providing POS for recreation, the City also seeks to expand its existing urban forest or urban green space which encompasses all trees outside of the City's natural areas and conservation POS reserves.

Trees perform a range of important environmental and ecological functions. They are effective at intercepting rainfall, resulting in reduced stormwater runoff and soil erosion, with the scale and intensity of interception increasing with the size and amount of canopy cover (Liveable Neighbourhoods, 2015). Street trees also provide shade to buildings, outdoor recreational spaces, pavements and parking areas.

The Urban Heat Island (UHI) effect is a well understood phenomenon whereby urban areas can be 2.5 - 4.5°C hotter than surrounding rural environments, as solar radiation is absorbed, stored and reflected by hard built form such as roads and buildings (Oliveira et al, 2011). Expanding an urban tree canopy cover to mitigate the impacts of the UHI effect is recommended to be implemented through the City's Greening Plan.

##### **Recommendation 4.2:**

**Incorporate relevant principles established by the City's Greening Plan within Planning Policy 3.4.1 - Public Open Space to ensure urban POS areas can contribute to the greening of neighbourhoods.**

### **Key Objective 4.3: Utilise the City's natural capital for recreation purposes.**

The City's conservation POS reserves comprise 8,257ha of land managed by a range of State agencies and the City. A total of 733ha of contained in POS reserves is under direct management by the City (City of Rockingham, 2017).

Conservation POS reserves are a component of the City's 'natural capital' (the natural features, ecosystem and assets within the environment), underpinning its identity, prosperity and lifestyle. They encompass a variety of landforms and ecosystems throughout the City's coastal, wetland and bushland environments and support a diverse array of native flora and fauna (City of Rockingham, 2017).

Through strategic planning and structure plan processes, the City has an opportunity to expand the amount of significant natural features, landform and habitat within its POS network and integrate these features with recreation opportunities.

There is also opportunity to facilitate and expand upon recreation activities that are contained within conservation POS reserves for the benefit of the local community and broader region.

#### **Recommendation 4.3:**

**Develop a Plan within the Strategic Asset Management Framework to identify and promote recreation opportunities within conservation and natural areas.**

### **Key Objective 4.4: Integrate significant environmental attributes into POS in new Structure Plan areas.**

The planning framework provides guidance for the identification of natural features and landform through the structure planning process. While environmental features are identified through this process, there is limited policy and statutory provisions to ensure locally significant landscape and environmental features are prioritised and retained within POS.

The protection and enhancement of environmental attributes for the cultural and heritage values of an area are an important factor and challenge to appropriately integrate within the design of POS. Research has determined that the protection of environmental features has a strong positive health benefit for the community, as well as economic productivity and regional prosperity (International Secretariat of the Convention on Biological Diversity, 2012). The protection and enhancement of these features assist with place-making by building on the special attributes and character within the City and are maintained in accordance with the City's Bushland Management Plan or Wetland Management Plan.

#### **Recommendation 4.4:**

**Identify locally significant environmental features, vegetation and fauna to be protected through the preparation of Structure Plans whilst complimenting the intended recreational function of the space.**

### **Key Objective 4.5: Plan for Future coastal hazards that may impact the recreational value of coastal POS reserves.**

The City's coastal areas are flanked by Foreshore POS reserves which provide for the retention of coastal environments and accommodate coastal processes, but also compliment the City's POS network by providing recreational space for the community. The recreational function of these spaces vary from local to regional in nature.

The City's coastal zone is already subject to the impacts of coastal processes and these impacts are expected to increase in the future due to the impacts of climate change and sea level rise.

In 2019, the Council adopted its Coastal Hazard Risk Management and Adaptation Plan (CHRMAP), which considers the potential impacts of coastal processes into the future, and provides short and long term recommendations on coastal adaptation into the future.

Planning for the development of recreational spaces within the City's Foreshore POS reserves will need to consider and respond to the future impacts of coastal processes and the recommendations of the CHRMAP.

**Recommendation 4.5:**

**Planning and design for recreational spaces within Foreshore POS reserves and other vulnerable locations is to consider the recommendations of the City's CHRMAP, and align with the preferred adaptation response.**





### 5.1.5 Element 5 – Design

#### **Key Objective 5.1: Bushfire planning requirements must be considered in planning and management of POS.**

The City must consider bushfire risks being appropriately integrated within POS and designed to avoid or limit increased risk to life and property from bushfire (City of Rockingham, 2017).

The challenge faced by the City is to ensure the planning and design of POS does not introduce new or additional bushfire risks which cannot be appropriately managed and become a risk to lives and property. The City also needs to consider the implication of bushfire requirements when planning for POS to ensure that significant trees and vegetation intended for retention are not required to be removed to achieve requirements.

#### **Recommendation 5.1:**

**Introduce provisions within Planning Policy 3.4.1 – Public Open Space to ensure bushfire management and design implications are addressed for the planning and management of POS reserves.**

#### **Key Objective 5.2: Guidance is required to establish an appropriate level of improvement and infrastructure in POS Reserves.**

The City's Community Infrastructure Plan guides the development, timing, design and location of community infrastructure within POS.

In addition to the provision of community infrastructure located on POS reserves, the community's expectations for the distribution of assets such as playgrounds, public toilets and barbeques within POS reserves has increased over time.

POS provided within the developing portions of the City are commonly developed to a higher standard than that required as a condition of Subdivision Approval. *Liveable Neighbourhoods* outlines a minimum standard, requiring full earthworks, basic reticulation, grassing of key areas, pathways that form part of the overall pedestrian and/or cycle network, and maintenance for two summers.

This higher standard of development in new POS areas has raised expectations for the delivery of new infrastructure within established POS reserves and has been an ongoing challenge for the City. There is a need to balance the City's ability to maintain the infrastructure provided within new POS reserves, whilst still providing adequate facilities within existing POS reserves.

The City proposes to guide the delivery of infrastructure in POS Reserves by:

1. Preparing a Plan within the Strategic Asset Management Framework to identify gaps in the provision of infrastructure and provide guidance for the ongoing improvement of the City's POS Reserves; and
2. Preparation of the Strategic Asset Management Plan and an ongoing Five-Year Works Program (Parks Improvement Plan) to strategically upgrade the City's POS reserves to a consistent and appropriate standard.

To guide the identification and delivery of key infrastructure to be contained within POS, the following matters should be considered for key infrastructure located within POS:

(i) Barbeque and Toilet Facilities

There is high demand for the provision of barbeque facilities within POS reserves. A coordinated approach is required for the provision of this infrastructure in POS reserves.

The provision of barbeque and toilet facilities should be considered for POS that can and does accommodate high visitation by the community. Barbeque and toilet facilities should be located on POS containing multiple functions and suitable passive surveillance on Neighbourhood or District POS reserves.

The provision of new barbeque and toilet facilities should also consider the broader POS network to limit the proliferation of this form of infrastructure to areas.

(ii) Community Gardens

Community gardens provide an environment for people to produce food and actively build the health and wellbeing of the community through shared activities. The City supports initiatives to establish gardens on the basis that the creation and ongoing management is conducted by an incorporated body.

(iii) Dog Exercise Parks

There is an increasing demand for dog exercise parks located within the City's POS network. Dog exercise parks require a significant land component and as such, should be sited on Neighbourhood or District POS reserves.

When the need for a dog exercise park is determined by the City, the location of this infrastructure should be considered in consultation with the community.

(iv) Playgrounds and Nature Play

The provision of playgrounds must be considered in relation to the classification of POS, available land area and intended function for a POS reserve. The level of embellishment needs to be considered in context with anticipated patronage and the broader provision of facilities within the POS network.

The provision of nature play is encouraged throughout the POS network as these spaces provide for healthy recreation, social and learning opportunities.

(v) Pump Tracks

Pump tracks are circuits framed by rolling banks, sharp turns and a variety of features which are designed to be ridden by people on bicycles. The circuits are extremely tight with body movements creating the momentum to complete the track without pedalling. The provision of pump tracks should be located on Neighbourhood or District scale POS reserves and consider the available land area and intended function for a POS reserve. This form of infrastructure should be considered as a point of interest within the POS network. As such, the provision of new pump tracks should consider the broader POS network to limit the proliferation of this form of infrastructure on Neighbourhood and District POS reserves.

(vi) Skate Parks

There is increasing demand for the provision of skate parks and youth spaces as a component of POS. It is recognised that young people require 'youth-friendly' spaces in which to meet and socialise. The provision of skate parks should be considered for POS that can and does accommodate high visitation by the community. Skate Parks and youth spaces should be located on POS containing multiple functions and be situated centrally within a community in proximity to public transport routes.

The provision of new skate parks requires community consultation to ensure the community has input into the location and planning decisions.

**Recommendation 5.2:**

- **Develop a Plan within the Strategic Asset Management Framework to be applied to existing POS reserves that:**
  - (i) **Identifies gaps in the provision of infrastructure and provide a framework for the ongoing improvement of the City's POS Reserves;**
  - (ii) **Ensures the City's existing POS areas provide an appropriate level of service to the community which will consider balancing community needs against cost of development and ongoing maintenance/replacement;**
  - (iii) **Outlines a minimum standard of infrastructure provision, which will consider balancing community needs against cost of development and ongoing maintenance/replacement;**
  - (iv) **Guides the provision and management of major infrastructure consistent with the level of service envisaged within the classification of POS reserves; and**
  - (v) **Establishes qualitative assessment criteria for officers to assess the suitability of redeveloping or introducing service infrastructure within an existing POS reserve.**
- **Update Planning Policy 3.4.1 - Public Open Space to introduce provisions to:**
  - (i) **Guide the provision of infrastructure within the POS hierarchy;**
  - (ii) **Improve the balance of competing infrastructure demands and functions located in POS that restrict its usability for recreation; and**
  - (iii) **Clarify the City's assessment requirements for new POS reserves proposed within Structure Plans to ensure new POS reserves demonstrate its capacity to provide functional recreation space.**



**Key Objective 5.3: POS needs to provide for the recreational requirements of a variety of users and experiences.**

The design of POS should encourage the use of POS at different times of day by a wide range of users. Ensuring POS is designed in a flexible manner to provide for a range of functions, requires careful planning and consideration (University of South Australia, 2009). The challenge for the City is to ensure a network of multifunctional POS reserves, which can support a range of activities including sport, recreation, environmental features, water sensitive urban design, and recreation preferences.

The City has a responsibility to ensure public assets, including POS and natural areas, are accessible by people of all abilities (whether it be a physical, sensory, neurological and cognitive, intellectual or psychiatric disability), to enjoy and recreate within.

POS needs to provide elements which allow people of all abilities and ages to interact with, increasing the importance imposed on good design and multi-functional design considerations as part of any proposal for a new or upgrade to POS.

**Recommendation 5.3:**

**Update Planning Policy 3.4.1 - Public Open Space to introduce criteria to:**

- **Consider usability of POS for people who may have a disability; and**
- **Consider accessibility for all users.**

**Key Objective 5.4: POS should provide for a safe and functional environment.**

Personal safety is a key component for the design of POS (Koohsari et al, 2013). The landscape design must provide for safe and perceived safe, pleasant and inviting POS environments (World Health Organisation, 2016). This includes the consideration of efficient and effective public lighting, CCTV coverage in appropriate locations and passive surveillance and activity surrounding POS when there is no natural light.

**Recommendation 5.4:**

**Update Planning Policy 3.4.1 - Public Open Space to introduce additional criteria for Crime Prevention through Environmental Design (CPTED) principles to be applied for the development of POS.**

**Key Objective 5.5: Ensure strategic consideration of the City's POS reserves to have the capacity to accommodate events, local functions and tourism opportunities.**

The capacity of POS to reflect community values and cater for community events, local functions and larger tourism related activities that attract regional visitation, are important factors that need to be captured within the planning and development of POS (RMIT University, 2014). The City's POS areas are an important asset recognised within the City's Strategic Community Plan.

The capacity of Foreshore POS needs to be considered through a comprehensive planning process to ensure the foreshore can meet its full potential to cater for events and accommodate visitation from the broader region.

Further, the capacity of Local POS to accommodate a range of community events and local functions which encourage social interaction must also be considered through the planning process. The capacity of reserves to accommodate for events should be focused on prominent reserves designed to accommodate high patronage.

**Recommendation 5.5:**

**Update Planning Policy 3.4.1 - Public Open Space to introduce design criteria to promote activities, functions and tourism opportunities in accordance with the classification of POS.**

### **5.1.6 Element 6 - Management Priorities**

**Key Objective 6.1: To efficiently and effectively manage POS for the benefit of the community.**

Managing POS requires the co-ordination of the City's priorities for development, maintenance and renewal of POS reserves to serve the community interest. The management of POS is a core function of the City as it requires asset management and an ongoing maintenance function.

Some of the key management priorities the City will need to address moving forward include:

- Balancing community needs with the City's capacity to deliver and maintain infrastructure;
- Ensuring an appropriate level of service is provided throughout the POS hierarchy;
- Balancing the level of enhancement within POS provided by developers with the consideration of the whole of life costs to maintain infrastructure provided to the City;
- Ensure the sustainable availability of water to irrigate POS; and
- Manage coastal hazards that may impact the recreation within the Foreshore POS reserve.

To implement the outcomes determined by a new Plan prepared within the Strategic Asset Management Framework, a Five-Year Works Program (Park Improvement Plan) is recommended to guide the improvement and upgrade of established POS. This plan is intended to guide transparent management of POS and will be used to convey the City's priorities to the community.

**Recommendation 6.1:**

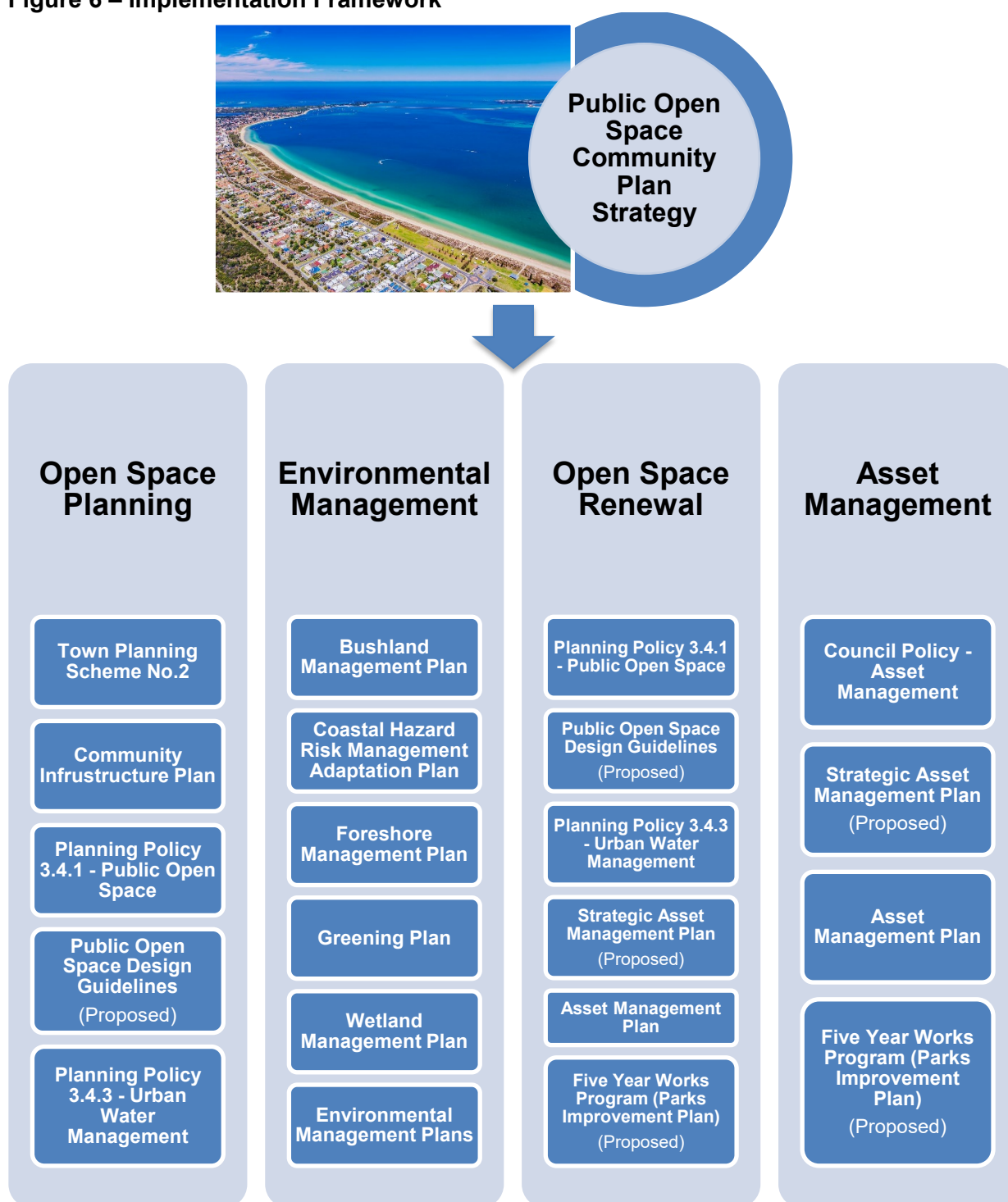
- **Prepare Public Open Space Design Guidelines to replace Appendix 1 Public Open Space Landscape Plan contained within Planning Policy 3.4.1 - Public Open Space, to outline the City's planning criteria for an acceptable and sustainable provision of park infrastructure, considering the classification of POS**
- **Develop a plan within the Strategic Asset Management Framework to address gaps in infrastructure provisions to ensure POS has:**
  - **An appropriate level of service;**
  - **Sets minimum infrastructure requirements; and**
  - **Establishes qualitative assessment criteria for redeveloping/introducing new infrastructure within POS.**
- **Develop a Five-Year Works Program (Park Improvement Plan) to guide redevelopment of POS based on a strategic needs-based assessment.**

## 6. The Way Forward

To achieve the strategic objectives of the Strategy and address the elements and issues identified of the POS Strategy the following actions to guide the City moving forward.

The actions outlined within sections 9.1 – 9.7 will be delivered through the implementation of the documents specified in Figure 6 below. These documents fall into four key themes; asset management; environmental management; planning mechanisms to implement best practice design and plans for the renewal of existing POS reserves:

**Figure 6 – Implementation Framework**



## 7. Measuring success

What will be measured?	The implementation of actions.
When will it be measured?	Within a quarterly interdepartmental meeting to outline strategic issues and implementation of the POS Strategy.  Annually as a bulletin item to the Council and within the review of the Community Infrastructure Plan.
How will it be reported to Council?	As a bulletin item to the Council.

What will be measured?	Review of the Planning Policy 3.4.1 - Public Open Space.
When will it be measured?	Upon completion of review of the Planning Policy.
How will it be reported to Council?	Report to Council for initiation and subsequent adoption of the Policy Amendments.

What will be measured?	The Community's satisfaction with the City's POS reserves
When will it be measured?	Through the annual Customer Satisfaction Survey
How will it be reported to Council?	Report to Council on the Outcome of the Community Survey

What will be measured?	Sustainable use of water resources for irrigating POS reserves.
When will it be measured?	Audit of groundwater allocation volumes for bores; Aquafer recharge volumes.
How will it be reported to Council?	Bulletin to Council

## 8. Risk Management

<i>Risk Description</i>	<i>Risk Rating</i>	<i>Action Required</i>
Inadequate planning for POS results in social, environmental and financial impacts to the City.	Medium	Prepare POS Strategy
Proliferation of small parks resulting in inadequate provisions of areas suitable in accommodating competition sports.	High	Review Planning Policy 3.4.1 – Public Open Space to ensure POS is designed to better facilitate the provisions of Active (sports) Open Space
Maintaining of POS reserves to a high standard to meet the Community's expectations.	Medium	Prepare a new Plan within the Strategic Asset Management Framework; Five Year Works Program (Parks Improvement Plan); and update Planning Policy 3.4.1 – Public Open Space to ensure appropriate standards for the planning, development and management of POS.



## 9. Actions

### 9.1 Action Summary

Task	Cost	Team	Commence	Complete
Apply the classification identified in Table 5 to all City strategies and policies relating to the delivery and management of POS.	Officer time	All teams	2020	2025
<p>Review Planning Policy 3.4.1 – Public Open Space to: -</p> <p>1. Update Planning Policy 3.4.1 – Public Open Space to:</p> <ul style="list-style-type: none"> <li>(i) Introduce design criteria and parameters to guide the allocation of POS within future structure plan and subdivision proposals.</li> <li>(ii) Incorporate guidance on allocation of land for active open space, taking into account the recommendations of the Active Open Space (Playing Fields) in a Growing Perth Peel study.</li> <li>(iii) Clarify the City's assessment requirements for new POS reserves proposed within Structure Plans to ensure new reserves demonstrate its capacity to provide functional recreation space. Provide guidance on the intended function and attributes of reserves in accordance with Table 6.</li> <li>(iv) Guide the provision of infrastructure within the POS hierarchy.</li> <li>(v) Clarify the City's assessment requirements for new POS reserves proposed within Structure Plans to ensure new reserves demonstrate its capacity to provide functional recreation space</li> <li>(vi) Introduce design criteria within Planning Policy 3.4.1 - Public Open Space to limit the impact of ancillary land uses within POS reserves designated for a recreational purpose.</li> <li>(vii) Improve the balance of competing infrastructure demands and functions located in POS that restrict its usability for recreation.</li> <li>(viii) Introduce provisions to ensure bushfire management and design implications are addressed for the planning and management of POS reserves.</li> <li>(ix) Consider usability of POS for people who may have a disability</li> <li>(x) Consider accessibility for all users.</li> </ul>	\$3000 (advertising)	Strategic Planning and Environment	2020	2020/2021

<ul style="list-style-type: none"> <li>(xi) Introduce additional criteria for Crime Prevention through Environmental Design (CPTED) principles to be applied for the development of POS.</li> <li>(xii) Introduce provisions to guide the design application of water sensitive urban design within POS.</li> <li>(xiii) Introduce design criteria to promote activities, functions and tourism opportunities in accordance with the classification of POS.</li> <li>(xiv) Establish guidance for the provision of POS to support medium and high density residential development, and the utilisation of cash-lieu in infill development areas.</li> <li>(xv) Incorporate relevant principles established within the City's Greening Plan within Planning Policy 3.4.1 – Public Open Space to ensure urban POS areas can contribute to the greening of neighbourhoods.</li> </ul>				
<p>2. Prepare Public Open Space Design Guidelines to replace Appendix 1 Public Open Space Landscape Plan contained within Planning Policy 3.4.1 - Public Open Space, to outline the City's planning criteria for an acceptable and sustainable provision of park infrastructure, considering the classification of POS.</p>				
<p>Advocate the State Government to:</p> <ul style="list-style-type: none"> <li>(i) Introduce changes to the planning framework to provide measures for the provision of sufficient POS to accommodate organised sport uses.</li> <li>(ii) Establish agreements at Structure Plan stage for the shared use of ovals for sporting use.</li> <li>(iii) Establish agreements with the Department of Education for the shared use of existing school sites for sporting use</li> </ul>	Officer time	Planning Services  Community Infrastructure Planning  Community and Leisure Facilities	2020	2025

<p>Develop a Plan within the Strategic Asset Management Framework to:</p> <ul style="list-style-type: none"> <li>(i) Address gaps in infrastructure provision and ensure POS has: <ul style="list-style-type: none"> <li>o An appropriate level of service;</li> <li>o Sets minimum infrastructure requirements; and</li> <li>o Establishes qualitative assessment criteria for redeveloping / introducing new infrastructure within a POS reserve.</li> </ul> </li> <li>(ii) Ensure the City's existing POS areas provide an appropriate level of service to the community which will consider balancing community needs against cost of development and ongoing maintenance / replacement.</li> <li>(iii) Outline a minimum standard of infrastructure provision, which will consider balancing community needs against cost of development and ongoing maintenance / replacement.</li> <li>(iv) Guide the provision and management of major infrastructure consistent with the level of service envisaged within the classification of POS reserves.</li> <li>(v) Provide a transparent sustainable approach to the provision of public toilets in POS reserves.</li> <li>(vi) Establish qualitative assessment criteria for officers to assess the suitability of redeveloping or introducing service infrastructure within an existing POS reserve.</li> <li>(vii) Identify and promote recreation opportunities within conservation and natural areas.</li> </ul>	Officer time	Parks Services / Asset Services	2020	2023
<p>Develop the Five-Year Works Program (Parks Improvement Plan) to guide the redevelopment of existing POS reserves based on a strategic needs-based manner.</p>	Officer time	Asset Services / Parks Services	2020	2023



## 9.2 Size and Distribution Actions

Task	Cost	Team	Commence	Complete
Review Planning Policy 3.4.1 - Public Open Space to incorporate guidance on allocation of land for active open space, taking into account the recommendations of the Active Open Space (Playing Fields) in a Growing Perth Peel study.	\$3000 (advertising)	Strategic Planning and Environment	2020	2020/2021
Review Planning Policy 3.4.1 – Public Open Space to establish guidance for the provision of POS to support medium and high density residential development, and the utilisation of cash-lieu in infill development areas.	\$3000 (advertising)	Strategic Planning and Environment	2020	2020/2021
Through the development of a Plan within the Strategic Asset Management Framework, prepare a gap analysis to determine the existing provision of infrastructure and plan for ongoing improvement of the City's POS Reserves.	Officer time	Parks Services	2020	2023
Review Planning Policy 3.4.1 - Public Open Space to:				
(i) Introduce design criteria and parameters to guide the allocation of POS within future structure plan and subdivision proposals.	\$3000 (advertising)	Strategic Planning and Environment	2020	2020/2021
(ii) Clarify the City's assessment requirements for new POS reserves proposed within Structure Plans to ensure new reserves demonstrate its capacity to provide functional recreation space.				

## 9.3 Function Actions

Task	Cost	Team	Commence	Complete
Review Planning Policy 3.4.1 – Public Open Space to:				
(i) Provide guidance on the intended function and attributes of reserves in accordance with Table 6.	\$3000 (advertising)	Strategic Planning and Environment	2020	2021
(ii) Introduce design criteria within Planning Policy 3.4.1 - Public Open Space to limit the impact of ancillary land uses within POS reserves designated for a recreational purpose.				
(iii) Introduce provisions to guide the design application of water sensitive urban design within POS.				

## 9.4 Environment Actions

Task	Cost	Team	Commence	Complete
Develop a Plan within the Strategic Asset Management Framework to identify and promote recreation opportunities within Conservation and natural areas.	Officer time	Parks Services	2020	2023
Incorporate relevant principles established within by the City's Greening Plan within Planning Policy 3.4.1 – Public Open Space to ensure urban POS areas can contribute to the greening of neighbourhoods.	Officer time	Strategic Planning and Environment	2020	2021

## 9.5 Design Actions

Task	Cost	Team	Commence	Complete
<p>Update Planning Policy 3.4.1 – Public Open Space to introduce provisions to:</p> <ul style="list-style-type: none"> <li>(i) Introduce provisions within to ensure bushfire management and design implications are addressed for the planning and management of POS reserves;</li> <li>(ii) Guide the provision of infrastructure within the POS hierarchy;</li> <li>(iii) Improve the balance of competing infrastructure demands and functions located in POS that restrict its usability for recreation;</li> <li>(iv) Clarify the City's assessment requirements for new POS reserves proposed within Structure Plans to ensure new reserves demonstrate its capacity to provide functional recreation space;</li> <li>(v) Ensure to consider usability of POS for people who may have a disability;</li> <li>(vi) Ensure the planning and redeveloped of POS reserves consider accessibility for all users;</li> <li>(vii) To introduce additional criteria for Crime Prevention through Environmental Design (CPTED) principles to be applied for the development of POS; and</li> <li>(viii) To introduce design criteria to promote activities, functions and tourism opportunities in accordance with the classification of POS.</li> </ul>	\$3000 (advertising)	Strategic Planning and Environment	2020	2020/2021

<p>Develop a Plan within the Strategic Asset Management Framework to be applied to existing reserves that:</p> <ul style="list-style-type: none"> <li>(i) Identifies gaps in the provision of infrastructure and provide a framework for the ongoing improvement of the City's POS Reserves;</li> <li>(ii) Ensures the City's existing POS areas provide an appropriate level of service to the community which will consider balancing community needs against cost of development and ongoing maintenance / replacement;</li> <li>(iii) Outlines a minimum standard of infrastructure provision, which will consider balancing community needs against cost of development and ongoing maintenance / replacement;</li> <li>(iv) Guides the provision and management of major infrastructure consistent with the level of service envisaged within the classification of POS reserves; and</li> <li>(v) Establishes qualitative assessment criteria for officers to assess the suitability of redeveloping or introducing service infrastructure within an existing POS reserve.</li> </ul>	Officer time	Parks Services	2020	2023
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## 9.6 Management Actions

<i>Task</i>	<i>Cost</i>	<i>Team</i>	<i>Commence</i>	<i>Complete</i>
Prepare Public Open Space Design Guidelines to replace Appendix 1 Public Open Space Landscape Plan contained within Planning Policy 3.4.1 - Public Open Space, to outline the City's planning criteria for an acceptable and sustainable provision of park infrastructure, considering the classification of POS	\$3000 (advertising)	Strategic Planning and Environment	2020	2020/2022
<p>Develop a Plan within the Strategic Asset Management Framework to address gaps in infrastructure provisions to ensure POS has:</p> <ul style="list-style-type: none"> <li>(i) An appropriate level of service;</li> <li>(ii) Sets minimum infrastructure requirements; and</li> <li>(iii) Establishes qualitative assessment criteria for redeveloping / introducing new infrastructure within a reserve.</li> </ul>	Officer time	Parks Services	2020	2023
Develop a Five-Year Works Program (Parks Improvement Plan) to guide redevelopment of reserves based on a strategic needs-based assessment.	Officer time	Asset Services / Parks Services	2020	2023



## 9.7 Ongoing Actions

<i>Task</i>	<i>Cost</i>	<i>Team</i>
Establish a POS Working Party to ensure the actions specified by the POS Strategy are addressed and to provide a strategic response to the planning, development and management of the City's POS Reserves.	Officer time	Asset Services Engineering Services Land and Development Infrastructure Services Parks Services Strategic Planning Statutory Planning Sustainability and Environment
Planning and design for recreational spaces within foreshore POS reserves and other vulnerable locations is to consider the recommendations of the City's CHRMAP, and align with the preferred adaptation response.	Officer time	Strategic Planning and Environment
Prepare discrete POS Strategies in locations where increases in residential density are identified in a Local Planning Strategy, or where current provision of POS is below 8%.	Officer time	Strategic Planning and Environment
Investigate the potential for treated wastewater, aquifer replenishment and shared ground water allocations to be used for the irrigation of POS Reserves.	Officer time	Land and Development Infrastructure
Identify locally significant environmental features, vegetation and fauna to be protected through the preparation of Structure Plans.	Officer time	Strategic Planning and Environment
Investigate options for non-irrigated POS reserves.	Officer time	Strategic Planning and Environment

Advocate the State Government to make changes to planning framework to provide measures on the provision of sufficient public open space to accommodate organised sports uses.	Officer time	Strategic Planning and Environment
Advocate Department of Education to establish agreements at Structure Plan stage for the shared use of ovals for sporting use.	Officer time	Community and Leisure Facilities
Identify locally significant environmental features, vegetation and fauna to be protected through the preparation of Structure Plans whilst complimenting the intended recreational function of the space.	Officer time	Strategic Planning and Environment
Prepare Community Infrastructure Plans and District Structure Plans to inform the allocation of space for sporting grounds in new urban areas.	Officer time / allocated budget for formulation of new District Structure Plans	Strategic Planning and Environment Community Infrastructure Planning
Through the POS Working Party, establish a process to encourage community engagement and participation in actions relating to the planning, development and management of POS.	Officer time	Asset Services Community Capacity Building Engineering Services Land and Development Infrastructure Services Parks Services Strategic Planning Statutory Planning Sustainability and Environment

## 10. Stakeholder Engagement

Key Stakeholders invited to participate	Contributed? (Yes/No)	Engagement method used
Asset Management Services	Yes	Internal Meetings / Email
Community Capacity Building	Yes	Internal Discussions
Community Infrastructure Planning Services	Yes	Internal Meetings / Email
Community Support and Safety Services	Yes	Internal Discussions
Parks Services	Yes	Internal Meetings / Email
Planning Services	Yes	Internal Meetings / Email
Strategic Planning and Environment Services	Yes	Internal Meetings / Email

## 11. References

Bowler DE, Buyung-Ali L, Knight TM, Pullin AS (2010), *Urban greening to cool towns and cities: A systematic review of the empirical evidence*. *Landsc Urban Plan*. 2010 Sep 15;97(3):147–55.

Department of the Environment and Energy (2015), *National Climate Resilience and Adaptation Strategy*, Australian Government. Available from: <http://www.environment.gov.au/system/files/resources/3b44e21e-2a78-4809-87c7a1386e350c29/files/national-climate-resilience-and-adaptation-strategy.pdf>

Department of the Environment and Energy (2017), *Adapting to climate change: building resilience*, Australian Government. Available from: <http://www.environment.gov.au/land/nrs/about-nrs/australias-protected-areas>

Department of Bush Fire Services. nd. *The Burning Question: The Rationale and the Problems In: SERVICES*, B. F. (ed.). Rosehill: Department of Bush Fire Services.

Department of Sport and Recreation (2011) *Emerging Constraints for Public Open Space in Perth Metropolitan Suburbs*, Government of Western Australia.

Department of Sport and Recreation (2012) *Classification Framework for Public Open Space*, Government of Western Australia.

Department of Sport and Recreation (2013), *Active Open Space (Playing Fields) in a Growing Perth-Peel*, Government of Western Australia.

Department of Sport and Recreation; Department of Water (2014), *Public Parkland: Planning and Design Guide (WA)*.

Foley, Neil (2013), *Active Public Open Space Study: A Review of Policies and Practices that have Impacted on the Provisions of Active Public Open Space Areas in New Suburban Development in the Perth and Peel; Planning Consultants Australia Pty Ltd.*

International Secretariat of the Convention on Biological Diversity (2012), *Cities and Biodiversity Outlook: Action and Policy – A Global Assessment of the Links between Urbanisation, Biodiversity, and Ecosystem Services*

Ives, Christopher; Oke, Cathy; Cooke, Benjamin; Gordon, Ascelin & Bekessy, Sarah (2014), *Planning for Green Open Space in Urbanising Landscapes: Final Report for Australian Government Department of Environment*.

Koohsari MJ, Karakiewicz JA, Kaczynski AT, (2013), *Public Open Space and Walking: The Role of Proximity, Perceptual Qualities of the Surrounding Built Environment, and Street Configuration*. Environ Behav. 2013;45(6):706–36.

Loibl W, Stiles R, Pauleit S, Hagen K, Gasienica B, Tötzer T, et al. (2014) *Improving Open Space Design to Cope Better with Urban Heat Island Effects*. GAIA - Ecol Perspect Sci Soc. 2014 Mar 27;23(1):64–6.

Middle, G., Tye, M., and Middle, I., (2010), *Emerging Constraints for Public Open Space in Perth Metropolitan Suburbs: Implications of Bush Forever, Water Sensitive Urban Design and Liveable Neighbourhoods for Active Sport and Recreation*. A report for the Department of Sport and Recreation WA, Perth.

Nearmap, accessed 17.02.2020, *City of Rockingham 32.3°S, 117.7°E*: Available from: [www.nearmap.com.au](http://www.nearmap.com.au)

Oliveira S, Andrade H, Vaz T. (2011), *The cooling effect of green spaces as a contribution to the mitigation of urban heat: A case study in Lisbon*. Build Environ. 2011 Nov 1;46(11):2186–94.

PLA WA (2012) *Public Open Space in Western Australia – New Residential Developments: A PLA WA Position Paper*.

Planning Institute of Australia (2009), *Healthy Spaces and Places: A National Guide to Designing Places for Healthy Living*.

RMIT University (2017), *Creating Liveable Cities in Australia: Mapping Urban Policy Implementation and Evidence-Based National Liveability Indicators*.

Rofe, Matthew & Kellett, Jon. (2009), *Creating Active Communities: How Can Open and Public Spaces in Urban and Suburban Environments Support Active Living? A Literature Review*.

RPS, (2018) *Rockingham Managed Aquifer Recharge Feasibility Study: Desktop Analysis*, West Perth.

Shi, Wenzheng; Woolley, Helen (2014), *Managing for Multifunctionality in Urban Open Spaces: Approaches for Sustainable Development*; *Journal of Urban Management*.

Susca T, Gaffin SR, Dell'Osso GR. (2011), *Positive effects of vegetation: urban heat island and green roofs*. Environ Pollut. 2011;159(8–9):2119–26.

Smith, R. (2011), *Final Report on Investigation of the House Losses in the Roleystone/Kelmscott Bushfire 6 February 2011*, Fire and Emergency Services Bushfire & Environmental Protection Branch.

Tzoulas K, Korpela K, Venn S, Yli-Pelkonen V, Kaźmierczak A, Niemela J, et al. (2007) *Promoting ecosystem and human health in urban areas using Green Infrastructure: A literature review*. Landsc Urban Plan. 2007 Jun;81(3):167–78.

University of South Australia (2009) *Creating Active Communities: How Can Open and Public Spaces in Urban and Suburban Environments Support Active Living? A Literature Review*

Western Australian Planning Commission (2002), *Development Control Policy 2.3: Public open space in residential areas*, Government of Western Australia, Perth.

Western Australian Planning Commission (2006), *Designing out crime planning guidelines*, Government of Western Australia, Perth.



Western Australian Planning Commission (2008), *Better Urban Water Management*, Government of Western Australia, Perth.

Western Australian Planning Commission (2009), *Liveable Neighbourhoods: A Western Australian Government Sustainable Cities Initiative*, Perth.

Western Australian Planning Commission (2011), *Bush Forever*, Government of Western Australia, Perth.

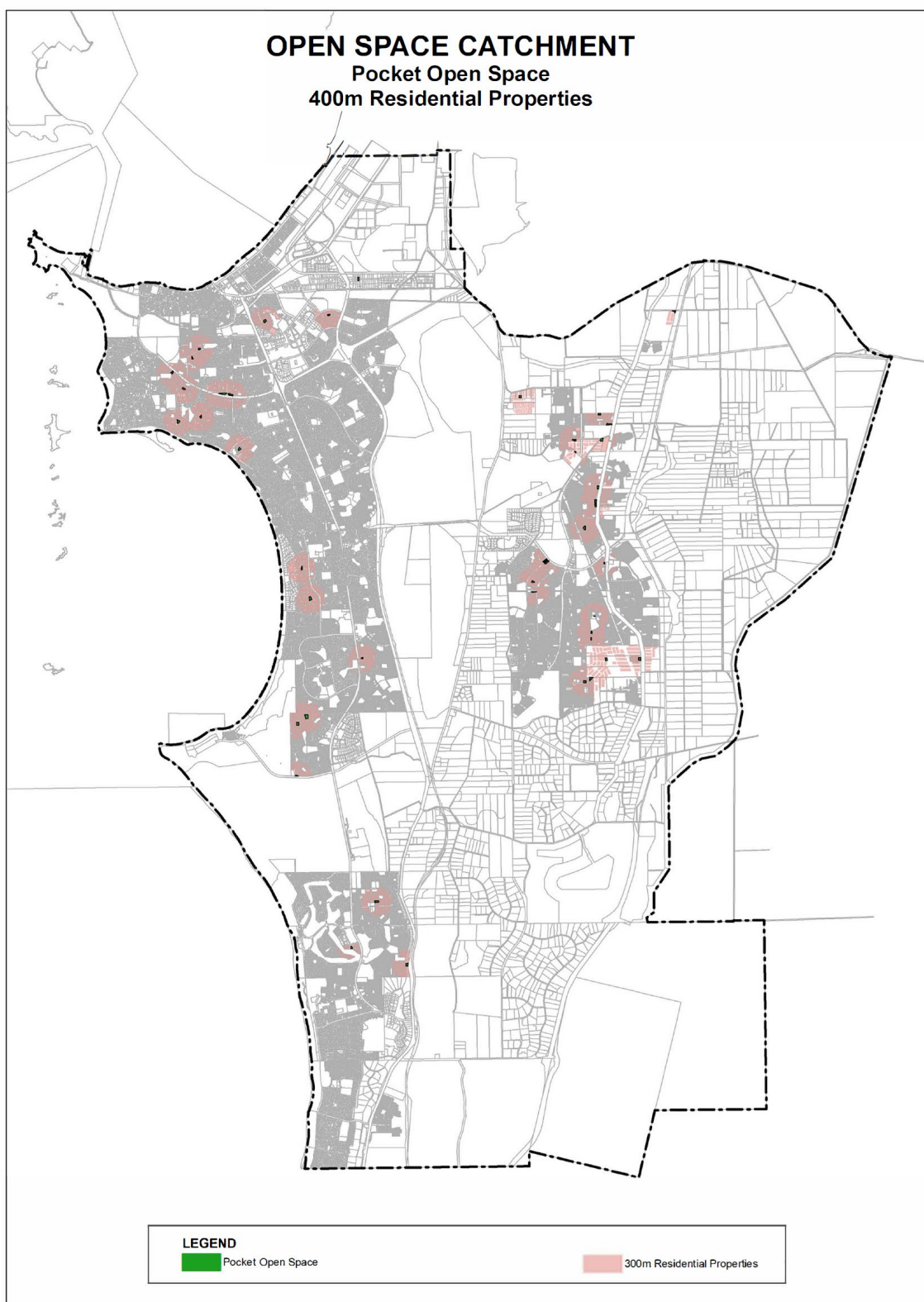
Western Australian Planning Commission (2015), *Metropolitan Region Scheme*, Government of Western Australia, Perth.

Western Australian Planning Commission (2015), *Planning in bushfire prone areas*, Government of Western Australia, Perth.

Western Australian Planning Commission (2018), *Better urban forest planning of Perth and Peel*, Government of Western Australia Perth.

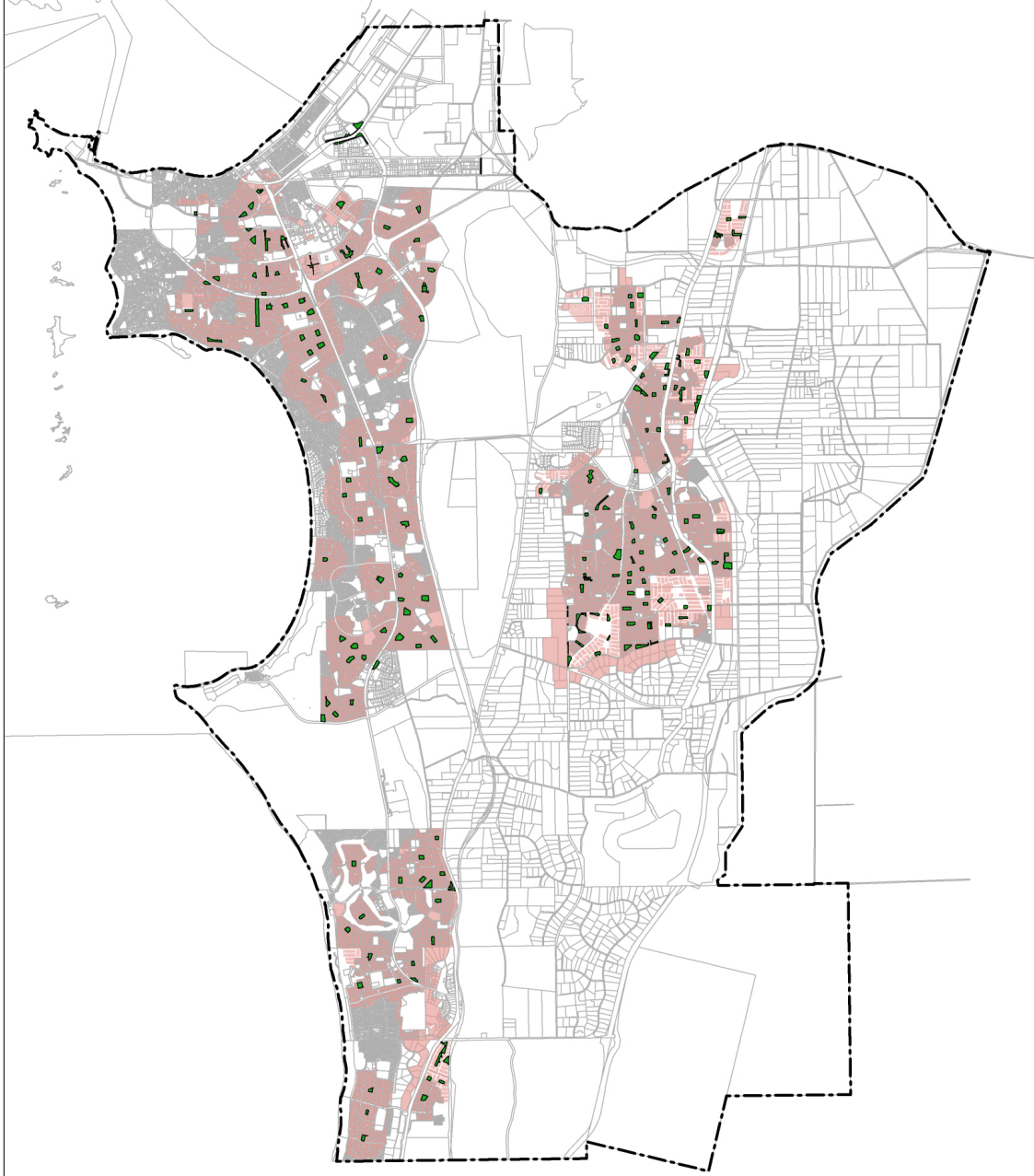
Western Australian Planning Commission (2019), *Design of the Built Environment*, Government of Western Australia Perth.

## Appendix 1 – Catchments to Public Open Space Reserves





# OPEN SPACE CATCHMENT

Local Open Space  
400m Residential Properties



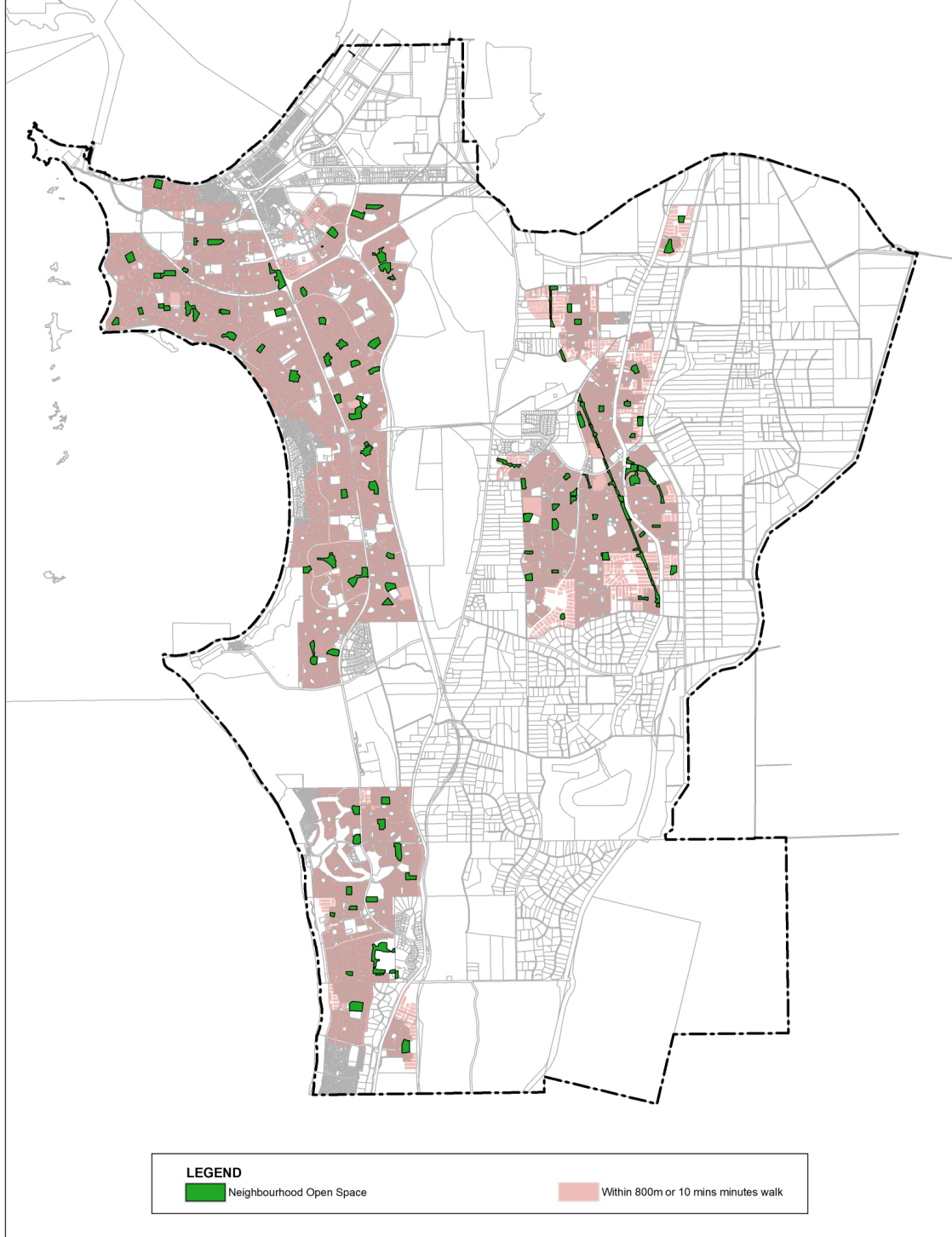
## LEGEND

 Local Open Space

 Within 400m or 5 minutes walk

## OPEN SPACE CATCHMENT

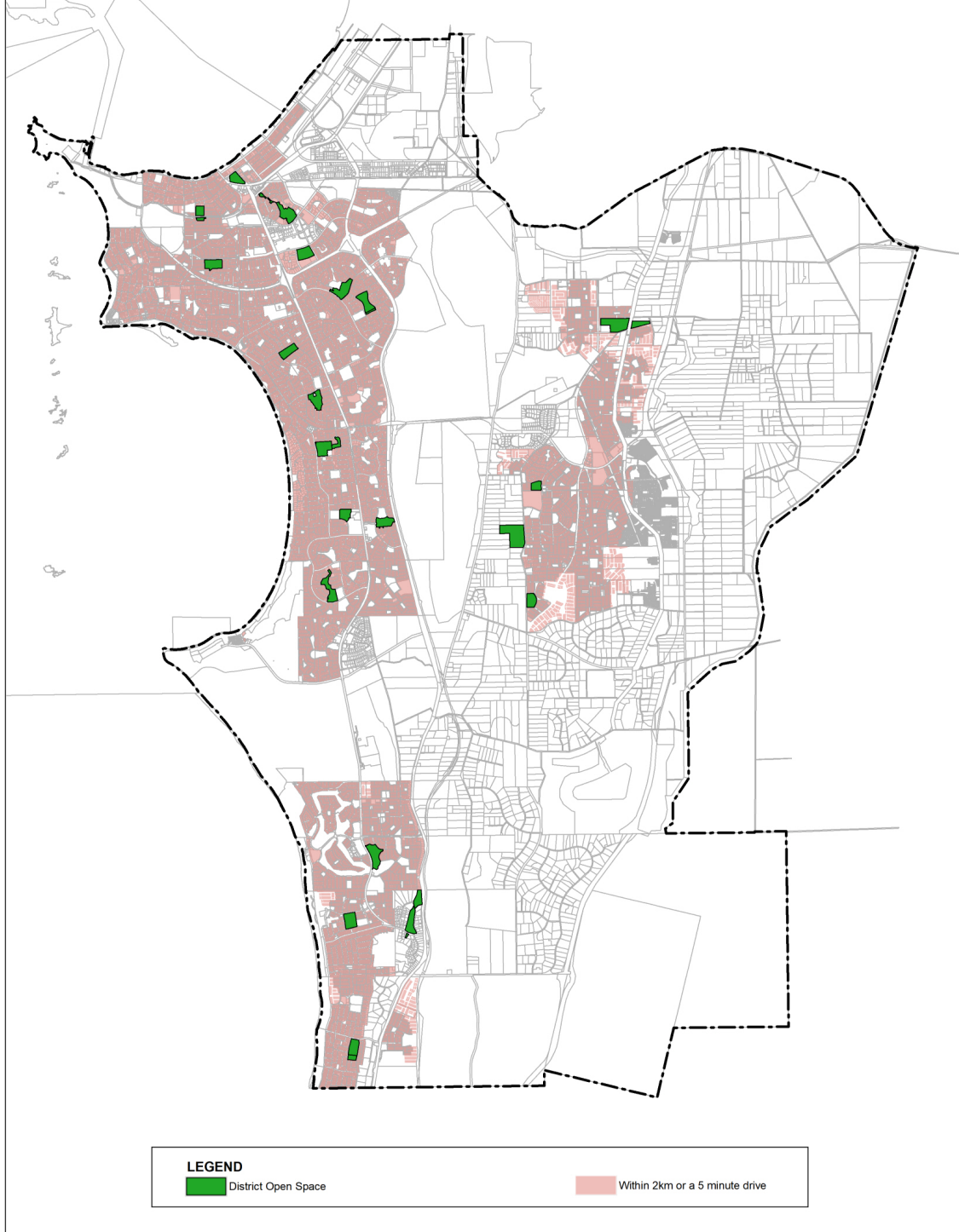
Neighbourhood Open Space  
800m Residential Properties





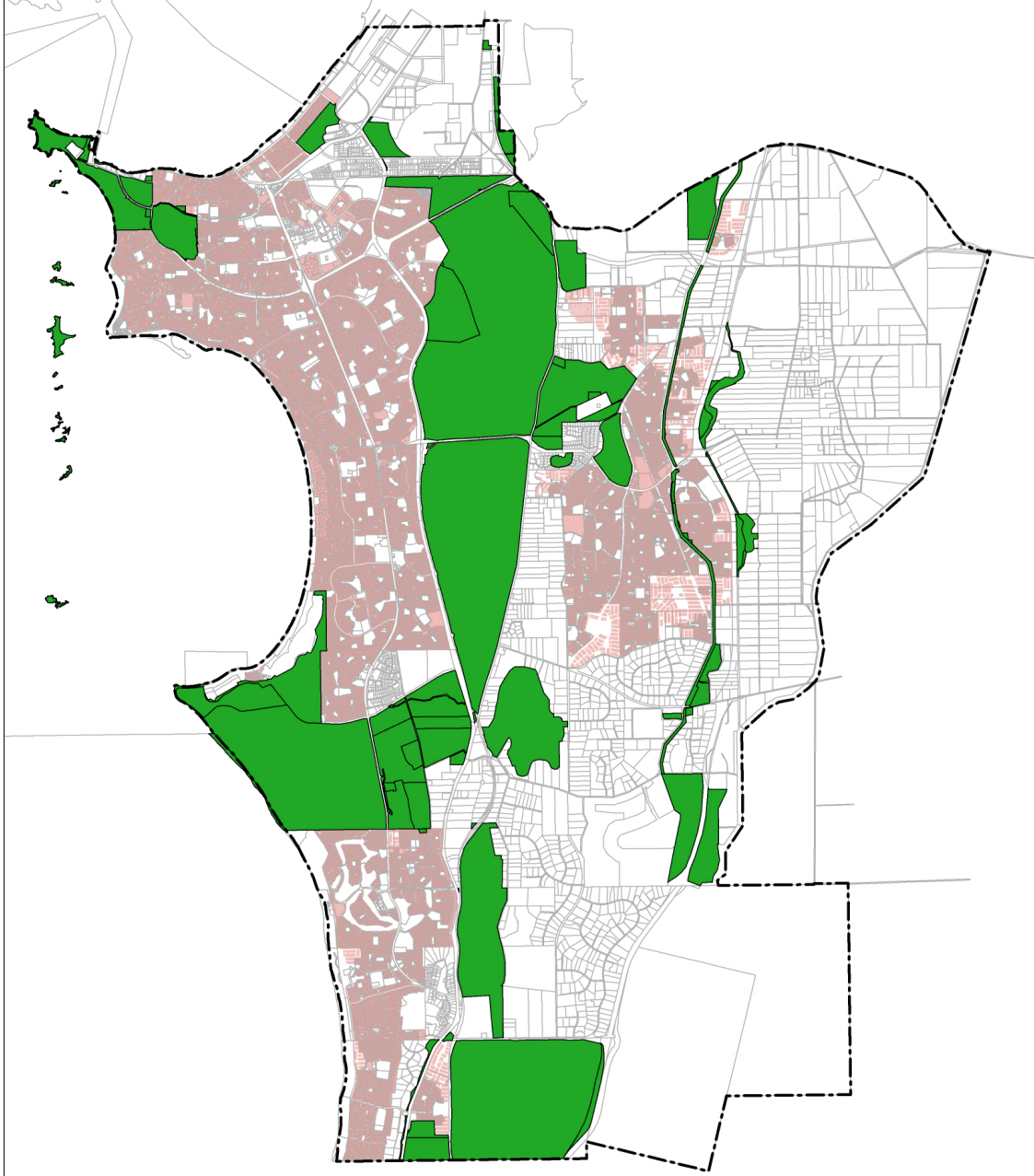
## OPEN SPACE CATCHMENT

District Open Space  
2km Residential Properties




# OPEN SPACE CATCHMENT

Regional Open Space  
10km Residential Properties



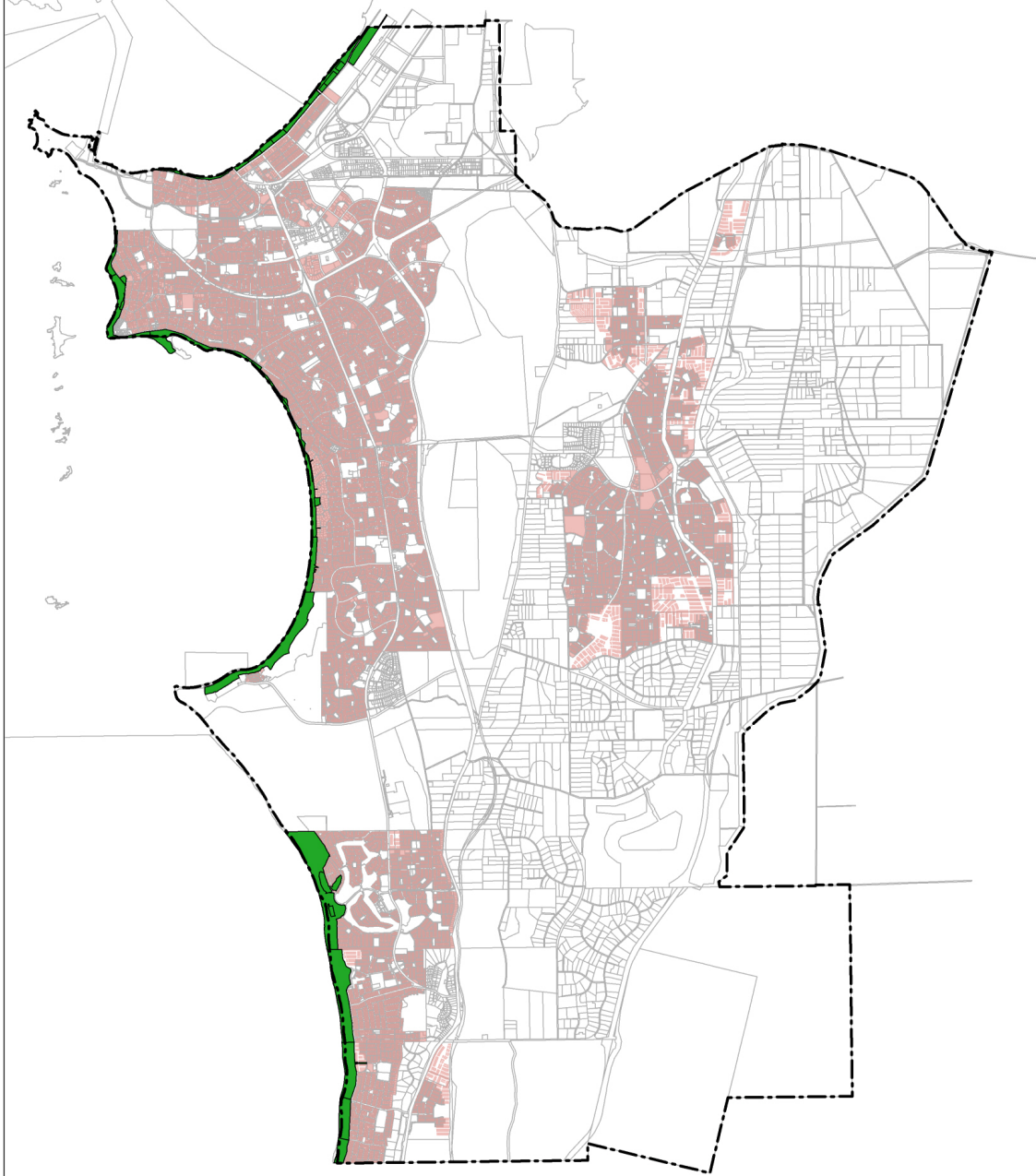
## LEGEND

 Regional Open Space


 Within 10km or a 25 minutes drive


# OPEN SPACE CATCHMENT

Foreshore Open Space  
10km Residential Properties



## LEGEND

 Foreshore Open Space

 Within 10km or a 25 minutes drive



