



CITY OF BELMONT

# **DRAFT** Public Open Space Strategy

Part 2: Detailed Analysis and Findings

**For Public Consultation**

Date of Publication xx/xx/2022



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## **Acknowledgement of Traditional Owners**

“The City of Belmont acknowledges the Noongar Whadjuk people as the Traditional Owners of this land and we pay our respects to Elders past, present and emerging. We further acknowledge their cultural heritage, beliefs, connection, and relationship with this land which continues today.

We acknowledge all Aboriginal and Torres Strait Islander peoples living within the City of Belmont.”

# I Introduction

The City of Belmont's (City) Public Open Space Strategy aims to provide a strategic framework to guide the provision of public open space (POS) to help achieve a vibrant, desirable, and liveable City that demonstrates our care for and appreciation of our natural environment.

This strategy considers:

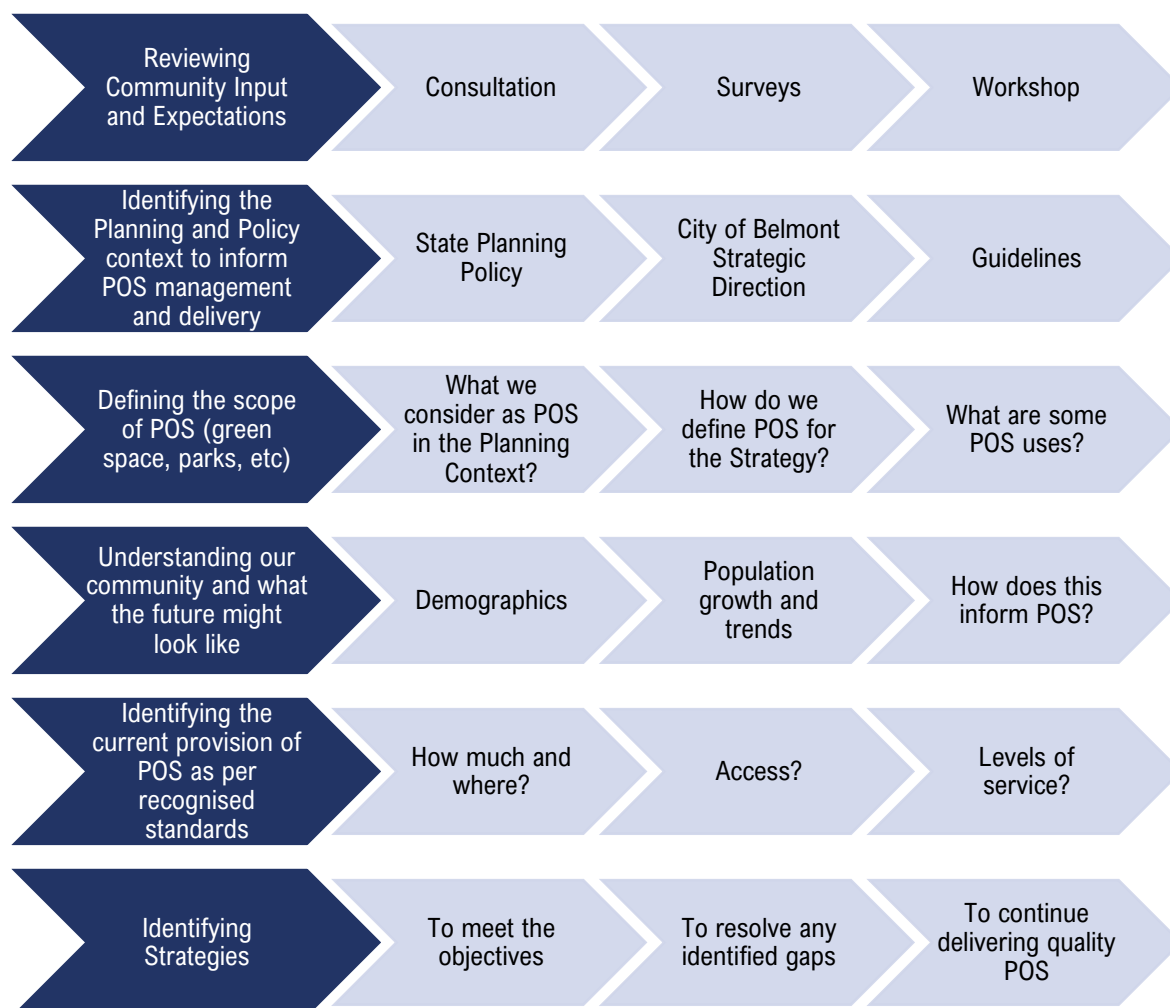
- the relevant state and local planning legislation and policy frameworks
- the current state of our POS
- where the City may have a shortfall now and in the future
- how the City will address any shortfall
- the suitable levels of service for the various types of POS.

The City's POS Strategy has been presented in two parts:

- Part 1 summarises the key points designed for easy and brief uptake of what is important from our Community's point of view
- Part 2 is a more technical document designed to meet the requirements of the integrated planning and reporting standards set by the Western Australian state government. This document includes a systematic review of data to inform the objectives, scope, context and direction of the City's POS Strategy.

## 2 Methodology

The following approach was adopted when developing this strategy:



## 3 Scope

For this strategy, POS is defined per the Metropolitan Regions Scheme and Local Planning Scheme as:

*... any accessible and not-accessible land reserved as 'Parks and Recreation' and 'Civic and Cultural'.*

The following spaces are excluded from any area calculations used in this strategy:

- Fenced or restricted lands reserved as Public Assembly (for example, Ascot Racecourse)
- Green space that falls within the City's local government area but is within Perth Airport and therefore not subject to the City's Local Planning Scheme
- Lands reserved as Parks and Recreation but are utilised for electrical or telecommunication purposes (that is, sites of high risk and are not accessible to the Community)
- Schools.

## 4 The City's Strategic Context

This strategy is aligned with the City's overarching Strategic Community Plan 2020–2040. The City's Strategic Community Plan informs all other council plans and policies.

This POS Strategy is consistent with the following strategic goals identified in the City's Strategic Community Plan:

- **Liveable Belmont**  
We are vibrant, desirable, and liveable.
- **Connected Belmont**  
We can all get to where we want to go.
- **Natural Belmont**  
We care for and enjoy our environment.
- **Creative Belmont**  
We are innovative, creative and progressive.
- **Responsible Belmont**  
We are inclusive, engaging and act with integrity.

For more information on how this POS Strategy aligns with the specific strategic actions of the Strategic Community Plan, please see Appendix B.

Appendix B also outlines the City's other strategies and plans that help inform and/or complement this strategy.

In addition to the City's strategic plans, the Local Planning Scheme (LPS) is pertinent to the setting of the POS Strategy. The LPS sets out the rules for development in the City and helps ensure:

- There is a sufficient supply of serviced and suitable land for housing, employment, commercial activities, community facilities, recreation, and open space
- The protection and enhancement of the City's environmental values and natural resources and promote ecologically sustainable land use and development.

The POS Strategy is a supporting documentation to the City's LPS.

## 5 State Planning Framework

### 5.1 Overview

A review of planning instruments, guidelines, plans, and policies relevant to POS planning and provision was undertaken to inform the preparation of the POS Strategy, identifying:

- Applicable planning frameworks and guidelines
- Expected or ideal levels of provision and services
- The classification or identification of POS.

A summary of these documents and their fundamental principles is outlined in Appendix C.



Under state planning policy, the City can consider the implementation of a developer contribution plan (DCP), whereby the cost of developing infrastructure to support the development new (and established) areas can be recovered from the developer.

This can include very small scale developments, such as the subdivision of a small parcel of land and in these cases, the implementation of a DCP can impact brown field development (development of land that has previously been developed). For example, the cost of contributing to a DCP for a small development, when coupled with development costs and a lower property sale value (particularly within lower socio-economic areas), may impact the financial viability of development and impede brown field densification. The City recognises the benefits of densification and the positive impact this can have on rates revenue and economic viability of the wider area.

That said, in the future the City may consider the development and implementation of a DCP on a case by case basis. For example, in the event larger scale development was to occur in an area there may be considerable costs associated with the development of infrastructure to support the development, such as roads, drainage, POS etc. However, a DCP would only be considered based on a comprehensive review of the development area, cost of infrastructure, existing POS provision and likely impact on the viability of the development, before implementation.

## **5.2 Conclusions**

While the planning and policy documentation at both the State and Local levels of government provides a wide range of recommendations that influence the provision of POS, the key influences and outcomes are:

- Provision of POS in residential areas should meet a goal of 10% of the gross subdivisible area
- POS should provide a balanced mix of conservation, active and passive recreational uses in the district, neighbourhood, and local open spaces
- Regional open space accommodates important recreation and organised sport, alongside significant conservation and/or environmental features
- Provision of quality passive and active POS that is accessible, connected, and sustainable while supporting art, heritage, and culture.

# **6 What Our Community Says**

## **6.1 Introduction**

The Community's input and aspirations have contributed to the objectives, direction, and outcomes of the POS Strategy.

The following surveys and workshops were used to help shape the objectives of the POS Strategy:

- MARKYT® Community Scorecard 2019
- MARKYT® Community Scorecard 2021
- Strategic Community Plan Consultation, 2019
- Local Planning Scheme Review - Resident workshops, 2019
- Local Planning Scheme Review - Resident workshops, 2020.

## 6.2 MARKYT® Community Scorecard 2019

In June 2019, the City initiated a community survey to gauge how the City was performing against the key indicators in the Strategic Community Plan 2016-2036 and to understand the Community's needs and aspirations. Feedback relating to public open space indicated:

- Whilst the performance of conservation and environment was good, the Community felt that our focus had declined
- Playgrounds, parks and reserves were good but were still seen as a community priority, as well as streetscapes which were a higher priority.

Table 1: Streetscapes Challenges identified in the Markyt Community Scorecard Survey 2019

STREETSCAPES	
Challenges Identified by the Community	Actions Suggested by the Community
<ul style="list-style-type: none"><li>• <b>Unkempt and unappealing streetscapes</b></li><li>• <b>Trees are being removed for development</b></li><li>• <b>Not enough tree pruning</b></li><li>• <b>Litter, dumped rubbish and abandoned shopping trolleys in local streets</b></li><li>• <b>Residential and commercial properties are not being taken care of</b></li><li>• <b>Effect on area's image and reputation.</b></li></ul>	<ol style="list-style-type: none"><li>1. Enhance streetscapes across the City</li><li>2. Increase canopy and protect green space</li><li>3. Regular tree maintenance and pruning</li><li>4. Roll out underground power</li><li>5. Encourage residents and businesses to keep properties and shop fronts clean</li><li>6. Increase street cleaning and litter removal.</li></ol>

Table 2: Playgrounds, Parks and Reserves Challenges identified in the Markyt Community Scorecard Survey 2021

PLAYGROUNDS, PARKS AND RESERVES	
Challenges Identified by the Community	Actions Suggested by the Community
<ul style="list-style-type: none"><li>• <b>Outdated play equipment at local parks</b></li><li>• <b>Limited facilities.</b></li></ul>	<ol style="list-style-type: none"><li>1. Enhance local parks</li><li>2. Upgrade playgrounds across the City</li><li>3. Improve facilities, including BBQs, toilets, shade, exercise equipment etc</li><li>4. Protect public open space, plant more trees and natural assets</li><li>5. Consider off-leash dog areas.</li></ol>

## 6.3 MARKYT® Community Scorecard 2021

Similar to 2019, the City initiated a community survey in 2021 to gauge how the City was performing and identify any changes in the Community's perception.

The 2021 survey feedback detected similar challenges to those suggested in the 2019 survey. However, the Community and Wellbeing Scorecards identified the strengths and priorities listed in Table 3 overleaf.

In addition, the comments received from the Community were assessed for key themes:

- Street trees, verges and garden bed plantings needed improved maintenance and should be native
- Parks were rated highly; however, the Community noted playgrounds should continue to be upgraded, including the increased availability of outdoor exercise equipment
- The City should retain mature trees on private property and parks
- Improved park maintenance was also requested
- The City should continue with installing underground power.

**Table 3: Strengths and Priorities identified in the Markyt Community Scorecard Survey 2021**

<b>STRENGTHS Identified</b> by the Community	<b>PRIORITIES Identified</b> by the Community
<ul style="list-style-type: none"> <li>• <b>Playgrounds, parks, and reserves</b></li> <li>• <b>Disability access and inclusion</b></li> <li>• <b>History and heritage.</b></li> </ul>	<ol style="list-style-type: none"> <li>1. Community safety and crime prevention, especially in streets and parks</li> <li>2. Improved streetscapes, trees, and verges – The Community desired more and better maintenance standards</li> <li>3. Increase lighting of streets and public places</li> <li>4. Opportunities to take part in physical activity.</li> </ol>

#### **6.4 Local Planning Scheme Review – Resident Workshops 2019**

The City conducted community workshops for the LPS Review project in 2019 with an aim to:

- Establish a vision for future planning of housing, activity centres and POS in the City and within each local neighbourhood area
- Identify the perceived strengths, weaknesses, opportunities, and threats concerning housing, activity centres, and POS in the City and each local neighbourhood area.

A total of five workshops were held that were specially tailored for each neighbourhood area. Residents expressed their views and aspirations on matters important to their local neighbourhood. The findings contributed to the residents' vision for the future direction of the City, with six key themes identified:

- A desire for a strong sense of community

- Good quality housing
- Liveable green spaces
- Multicultural communities
- Public art
- Safe and inclusive designs.

Table 4 below summarises some of the POS and streetscape improvements identified by the Community.

In general, the Community favoured increased shade within parks and streetscapes, including the planting of flowering plants and natives. The Community also noted that smaller local parks should become focal points for community interaction, play and exercise.

Key suggestions to help achieve the above outcomes included:

- The creation of community gardens within localised catchments
- Increased or improved POS amenities, including BBQs, public toilets and drinking fountains
- Increased spaces for physical exercise and off-leash dog walking
- Increased children's play and youth spaces
- Conversion of open drains into living streams.

The Community was also in favour of increased streetscape amenity and activation, including:

- Increased shade trees
- Underground power (to be investigated with Western Power)
- Creation of pocket/streetscape parks with increased verge gardens, including edible verge gardens.

**Table 4: Summary of Community Feedback and Suggestions by Precinct**

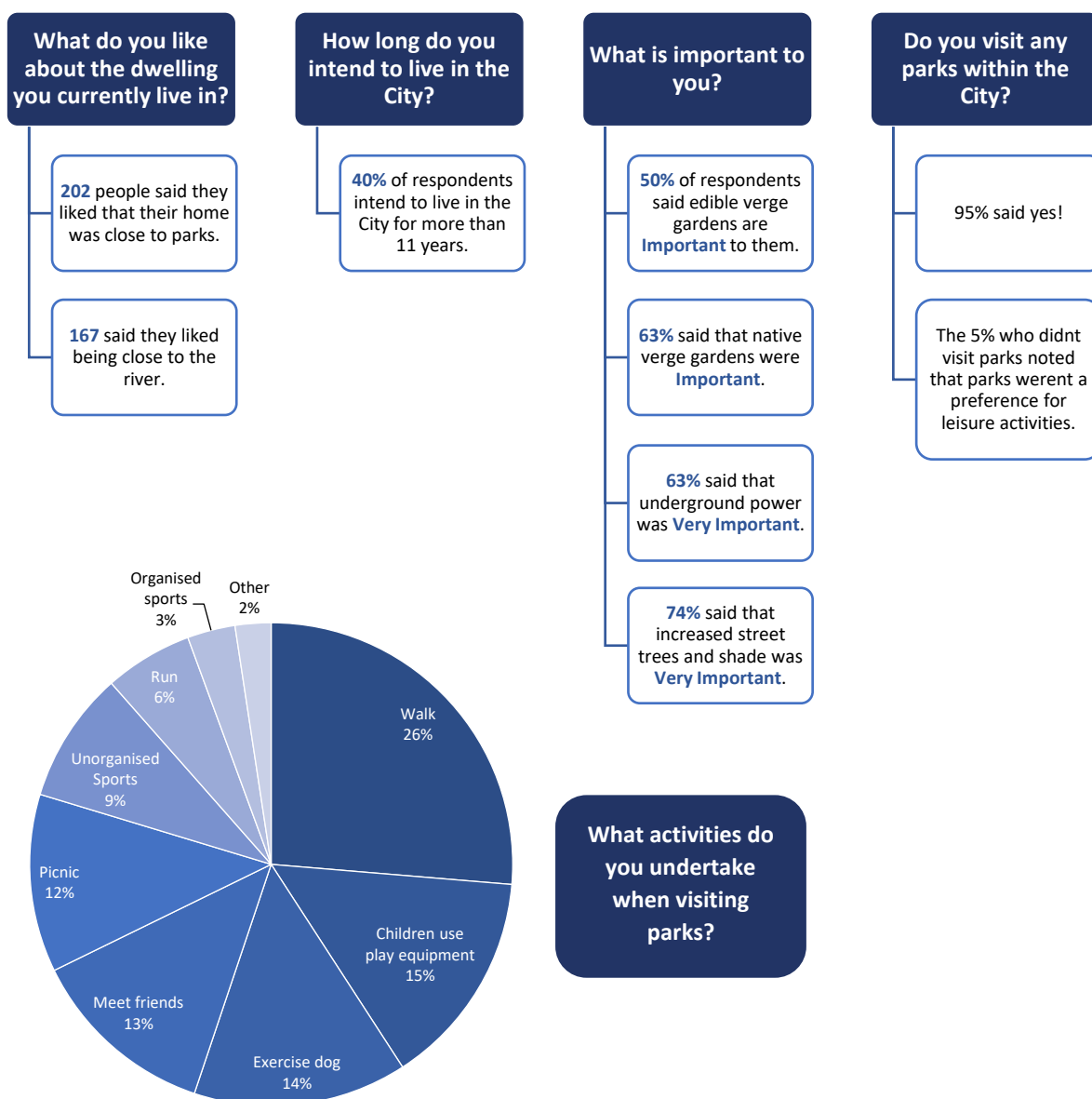
Precinct Workshop	POS Improvements	Streetscape Improvements
<b>Riverside (Ascot)</b>	<ul style="list-style-type: none"> <li>• Increased vegetation across all green spaces and commercial precincts</li> <li>• Increased services/ amenity a priority, including BBQs, toilet facilities, fountains and exercise equipment</li> <li>• Community gardens and activities (i.e. street markets)</li> <li>• Improved ("elaborate") playgrounds.</li> <li>• Additional sporting and youth-focused spaces.</li> </ul>	<ul style="list-style-type: none"> <li>• Increased shade trees/streetscape covered in trees, including native planting and edible (vegetable) gardens</li> <li>• Improved connection between people's front gardens and beautified streetscapes (gardens and verandas overlooking a green street).</li> </ul>
<b>South (Kewdale &amp; Cloverdale)</b>	<ul style="list-style-type: none"> <li>• Improvement of the Belmont Sports and Recreation precinct to include picnic spaces, exercise facilities and BBQs</li> </ul>	<ul style="list-style-type: none"> <li>• Underground power to increase street tree planting and local connections</li> <li>• Increased shade trees/streetscape covered in trees, including native</li> </ul>

Precinct Workshop	POS Improvements	Streetscape Improvements
	<ul style="list-style-type: none"> <li>Increased tree planting</li> <li>Increased public art</li> <li>Community gardens and more vegetation.</li> </ul>	<ul style="list-style-type: none"> <li>planting and edible (vegetable) gardens</li> <li>Conversion of open drains into living streams and streets turned into park strips.</li> </ul>
<b>West (Rivervale)</b>	<ul style="list-style-type: none"> <li>Increase shade and tree coverage within parks</li> <li>Activation of parks within the Springs, particularly riverfront parks, to improve access to the Swan River (water taxi and ferry landing)</li> <li>Inclusion of a community garden and frequent farmers' markets</li> <li>Inclusion of youth-focused plazas, playing fields and street games</li> <li>Upgrade of toilet facilities within the Kooyong Road centre.</li> </ul>	<ul style="list-style-type: none"> <li>Provision of street piazzas, pocket parks, frequent farmers' markets and street games</li> <li>Increased street trees and improved verge treatments to create green connections</li> <li>Aspiration to live in green streetscapes, generously vegetated with trees and having native plants and vegetable patches as part of the verge landscaping.</li> </ul>
<b>East (Cloverdale &amp; Redcliffe)</b>	<ul style="list-style-type: none"> <li>The generous provision of trees and vegetation was also encouraged throughout the precinct</li> <li>Improved public facilities, including toilets, BBQs, and associated picnic amenities</li> <li>Inclusion of community gardens, dog parks and youth plazas</li> <li>Conversion of local drains into living streams.</li> </ul>	<ul style="list-style-type: none"> <li>Future streetscapes to be filled with trees and native vegetation</li> <li>Street pocket parks and front yard flower gardens, veggie patches and front verandas surrounded by gardens complementing the future streetscape.</li> </ul>
<b>Central (Redcliffe &amp; Belmont)</b>	<ul style="list-style-type: none"> <li>Revegetation with new tree canopy is a central objective of the precinct's parkland development</li> <li>Activate Signal Hill reserve through public art</li> <li>Farmers' markets at Centenary Park</li> <li>Provision of new picnic and BBQ facilities, youth plazas, playgrounds, dog parks, and community gardens, as well as improvement of the public toilet facilities</li> <li>Improved lighting of parks.</li> </ul>	<ul style="list-style-type: none"> <li>Tree-covered streetscapes with underground power and increased native planting</li> <li>Conversion of drains to living streams.</li> </ul>

## 6.5 Local Planning Scheme Review – Resident Workshops 2020

The LPS review process held in 2020 included some questions about how residents used, accessed, and valued POS. Of interest, 95% of the 94 respondents said they visit the City's parks. Figure 1 below summarises this feedback.

**Figure 1: Summary of Resident Survey 2020 Responses relating to POS**



## 6.6 Strategic Community Plan Consultation

A revision of the City's Strategic Community Plan 2020-2040 included the collection of community input during November 2019.

The following methods were used to receive feedback:

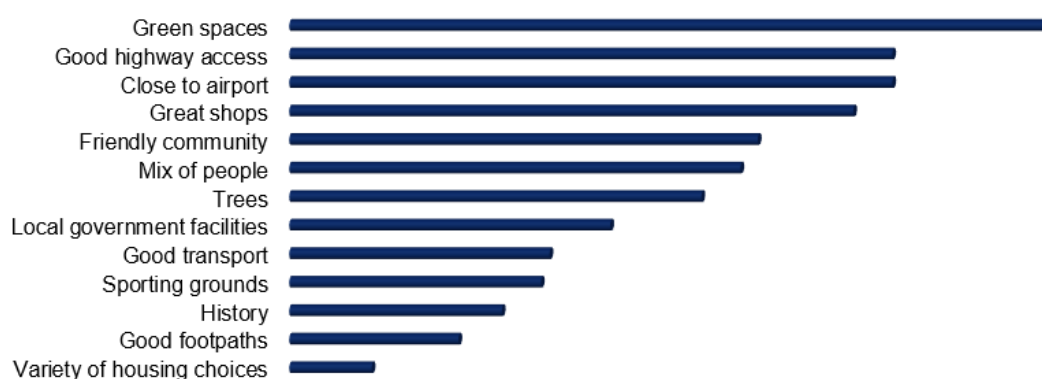
- 314 individuals provided feedback via online or hard copy feedback forms
- 85 attended workshops
- 88 attended stakeholder group meetings
- 248 responded to Quick Polls.

The following interests related to the POS Strategy were identified during the consultation:

- Improved streetscapes, including better lighting and underground power
- Better lighting in parks and the development of pocket parks and community gardens
- More trees to be planted in public spaces
- Improved parks and play areas that support physical and mental health
- Improved facilities that cater for all generations (young people, the elderly, families)
- Improved access to community facilities and public toilets.

Additionally, the participants were also surveyed on what they loved most about Belmont (refer below). The City's green spaces were the most loved aspect of living in the City, with the Community noting that trees (95) and sporting grounds (58) were also valued.

Figure 2 below demonstrates what the participants valued most about living in the City of Belmont.



**Figure 2: Most Valued Aspects of Living in the City of Belmont, 2019**

## 6.7 Conclusions

Based on the feedback received from the Community as outlined above, the issues that mattered most to the Community regarding the POS Strategy are:

- Increasing the provision of amenities within POS (BBQs, toilets, exercise equipment)
- Growing trees and native vegetation within POS and streetscapes
- Improving access to children's play areas and youth plazas

- Enhancing access to the Swan River
- Continuing the placement of power underground to enhance streetscape amenity
- Accommodating community engagement initiatives such as community gardens, markets, or pocket parks within streetscapes.

## 7 Population Projections and Trends

### 7.1 Population Projections

From the perspective of the POS Strategy, population forecasts and demographic summaries can help identify POS needs and demands.

For example:

- What is our population growth, and what does this mean for POS provision and access?
- Will there be a change in population structure that might influence how POS is developed, used, or accessed?
- Are there any key demographic groups who influence or can inform how POS is developed or used?

As of 2020, the estimated resident population for the City of Belmont was 44,642. Forecast.id (2018) predicted that by 2041 the City would be home to 65,659 people. The suburbs of Redcliffe and Rivervale are likely to increase in population from 2026 onwards, following the completion of two significant development precincts (Development Area 6 and The Springs). Please see Figure 3 below.

This forecast indicates a strong population growth of approximately 2% per annum. This also identifies the need to review adequate POS provision as the population increases with infill development, mainly focusing on Redcliffe and Rivervale. Where shortfalls are identified, it will necessitate considering POS development, redevelopment, or expansion in the affected areas.

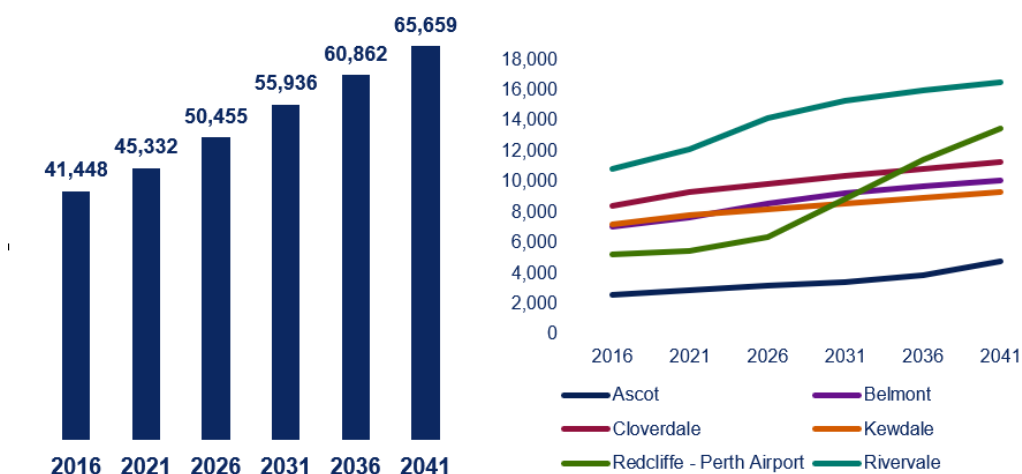


Figure 3: Forecast id (2018) Population Growth for the City of Belmont (left) and by suburb (right)



As the population increases, the distribution of ages in the population may also change. Knowing the age structure of a community (identified by service age groups) can inform user needs and requirements. For example, an ageing population may likely require an increase in supportive design or equipment, or a spike in children may require more playgrounds or nature play opportunities. Table 5, overleaf, projects the expected changes in age groups for the City to 2041.

The most significant predicted change is expected to occur in the parents and homebuilders service age group (35-49). This age group is expected to increase by approximately 70% between 2016 and 2041. However, this service age group is closely followed by the Young Workforce (25-34), which is predicted to increase by 40%. All other service age groups are also expected to increase; however, they are expected to remain relatively steady compared to their respective 2016 population proportions.

Between 2016 and 2031, the City is, therefore, likely to observe a shift in population dynamics from predominantly a young workforce (22.3%) to a community more predominantly characterised by parents and homebuilders (22.4%) (Forecast.id, 2018). The blue-shaded area in Table 5 demonstrates this trend.

Generally, POS supports property prices, making a build or purchase more favourable where there are highly maintained and accessible public open spaces that suit users' needs. First home buyers, new families, or homebuilders (parents and homebuilders) are likely, for example, to prefer living/building in an area where there are green space opportunities that suit their children's needs.

The increase in parents and homebuilders, and tertiary education and independence service age groups indicates the need to improve and increase recreational and sporting facilities to support a more active population.

## **7.2 Population Diversity**

Approximately 29.5% of residents speak a language other than English at home. Since 2011, there has been an increase of 5% of residents speaking another language at home other than English, and approximately 40.5% of residents are born overseas.

It is expected that the diversity of the Community will remain a feature over the next twenty-year period.

## **7.3 Lot Sizes**

The lot and household sizes have decreased throughout the City due to subdivisions and development areas like Ascot. The rise of smaller lot sizes and increased densities has directly resulted in reduced private open space correlating with an increased demand for POS.

## **7.4 Residential Densities**

In 2020, the City had a residential density of approximately 11.2 people per hectare. Based on the projected population of 65,659 in 2041, the City's residential density will be approximately 16.4 people per hectare, increasing about 47%.

**Table 5: City of Belmont Service Age Groups Forecast 2016 - 2041 - Shaded cells indicate the majority or predominant Service Age Group.** Source: Population and household forecasts prepared by .id the population experts (October 2018). (ERP)

CITY OF BELMONT FORECAST AGE STRUCTURE - SERVICE AGE GROUPS								
Service Age Groups	2016		2031		Change	2041		Change
	Number	%	Number	%	2016 -2031	Number	%	2016 - 2041
Babies & pre-schoolers (0 to 4)	2,754	6.6	3,809	6.8	+1,005	4,264	6.5	+1,510
Primary schoolers (5 to 11)	2,854	6.9	4,166	7.4	+1,312	4,810	7.3	+1,956
Secondary schoolers (12 to 17)	1,988	4.8	3,067	5.5	+1,079	3,627	5.5	+1,639
Tertiary education & independence (18 to 24)	4,524	10.9	5,734	10.3	+1,211	6,599	10.1	+2,075
Young workforce (25 to 34)	9,233	22.3	11,541	20.6	+2,307	12,916	19.7	+3,682
Parents & homebuilders (35 to 49)	8,340	20.1	12,505	22.4	+4,165	14,484	22.1	+6,144
Older workers & pre-retirees (50 to 59)	4,448	10.7	5,605	10.0	+1,157	7,104	10.8	+2,656
Empty nesters & retirees (60 to 69)	3,472	8.4	4,232	7.6	+760	5,158	7.9	+1,686
Seniors (70 to 84)	3,017	7.3	4,199	7.5	+1,182	5,212	7.9	+2,195
Elderly (>85)	818	2.0	1,078	1.9	+260	1,485	2.3	+667
<b>Total persons</b>	<b>41,448</b>	<b>100.0</b>	<b>55,936</b>	<b>100.0</b>	<b>+14,488</b>	<b>65,659</b>	<b>100.0</b>	<b>+24,211</b>

## 7.5 Environmental Considerations

Western Australia has warmed since 1910. The average temperature has increased by 1.3°C, and the rainfall has declined in southwest Western Australia. The decline in rainfall is greater than anywhere else in Australia<sup>1</sup>. This trend has been accompanied by declining stream flows and groundwater levels resulting in diminishing water availability for environmental and human uses.

Further, areas of high urban development and low green cover act as 'heat islands' that absorb heat during the day, which is then released at night. Research has demonstrated ambient air temperatures in built-up areas can be 4°C to 15°C warmer than in surrounding vegetated or 'greener' areas. However, parks and well-shaded areas can reduce the local ambient temperature by between 0.5°C to 2°C.

Green spaces provide refuge and relief in urban environments during a heatwave or extreme heat events. This is particularly important for lower socioeconomic areas (who cannot afford home cooling), areas consisting of older people (who are heat vulnerable), and areas with high occurrences of outdoor workforces (who risk dehydration, heat stress and sunburn).

## 7.6 Conclusions

It can be concluded that it will be important when planning POS that:

- The continued growth in all service age groups indicates a need to maintain a balance of services and amenities that suit all age groups
- POS are inclusive of all ages and abilities
- POS options reflect the varied needs and interests of our diverse Community
- The POS supply needs to accommodate a growing population that is attractive to everyone
- Protecting and enhancing our natural environment and green spaces will be essential to help with the urban heat island effect and our planet's climate change challenges.

# 8 Classification Framework

The classification framework used in this strategy is based on the hierarchical classification defined by the Department of Sport and Recreation's *Classification Framework for Public Open Space*. This framework establishes the form and function of different types of POS. The framework is divided into two primary categories, function and catchment.

The primary function of POS is divided into three main categories:

- Recreation spaces
- Sport spaces
- Nature spaces.

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<sup>1</sup> Climate Change in Australia: Climate information, projection, tools and data. [Western Australia \(climatechangeinaustralia.gov.au\)](https://climatechangeinaustralia.gov.au). (Accessed 1 June 2022).

The catchment hierarchy is based on the size and the typical distance a user might travel to visit the site. The catchment hierarchy includes:

- Local space
- Neighbourhood space
- District space
- Regional space.

However, lands reserved as Parks and Recreation can also be utilised for other public uses, such as special purposes (clubs, bowling greens or facilities) and public utilities, such as scheme water supply and drainage. Table 6 identifies the functionality and classification classes with some explanatory information.

**Table 6: Hierarchy Classification and identification of POS by Department Sport and Recreation Guidelines** (DSR – note this is now the DLGSC, Department Local Government Sport and Cultural Industries)

Hierarchical Classification	Description	POS Size and Catchment	Key Primary Purpose
<b>Regional</b>	Lands are reserved under a planning Scheme as Parks and Recreation with a regional focus.	<ul style="list-style-type: none"> <li>• Catchment can range from localised use to a broader regional function.</li> </ul>	<ul style="list-style-type: none"> <li>• Preservation of land at a regional focus for public access and enjoyment, particularly lands connected with existing natural features (river foreshore, coastal areas, remnant vegetation and forest).</li> <li>• Leisure/ recreation.</li> <li>• Formalised sporting uses and events.</li> <li>• Large regional events and festivals.</li> </ul>
<b>District</b>	Consists of sufficient space to accommodate a variety of concurrent uses, including organised sports, children's play, picnicking, exercising dogs, social gatherings, and individual activities.	<ul style="list-style-type: none"> <li>• 5ha to 15+ha.</li> <li>• Within 2km or 5-minute drive.</li> </ul>	<ul style="list-style-type: none"> <li>• Leisure/Recreation.</li> <li>• Formalised sporting uses and events.</li> </ul>
<b>Neighbourhood</b>	Neighbourhood open space serves as the recreational and social focus of a community. Residents are attracted by the variety of features, facilities, and opportunities to socialise.	<ul style="list-style-type: none"> <li>• 1ha to 5ha.</li> <li>• Central to surrounding neighbourhoods, a 10-minute walk.</li> </ul>	<ul style="list-style-type: none"> <li>• Stormwater management (WSD).</li> <li>• Ecological conservation.</li> <li>• Leisure/ recreation.</li> <li>• Informal/ unorganised sporting space.</li> </ul>
<b>Local</b>	Local open space is usually small parklands that service the recreation	<ul style="list-style-type: none"> <li>• 0.4ha to 1ha.</li> </ul>	<ul style="list-style-type: none"> <li>• Stormwater management (WSD).</li> </ul>

Hierarchical Classification	Description	POS Size and Catchment	Key Primary Purpose
	needs of the immediate residential population. Primarily used for recreation and may include nature space.	<ul style="list-style-type: none"> <li>Within 400m or a 5-minute walk.</li> </ul>	<ul style="list-style-type: none"> <li>Ecological conservation.</li> <li>Leisure/ recreation.</li> </ul>
<b>WSD - Water Supply and Drainage Services</b>	Lands reserved for Parks and Recreation but are utilised for water supply services or drainage.	<ul style="list-style-type: none"> <li>Varies dependent on drainage criteria.</li> </ul>	<ul style="list-style-type: none"> <li>Sumps.</li> <li>Linear drains.</li> <li>Sewer/water pumping stations.</li> </ul>

## 9 Objectives and Analysis

Five strategic objectives have been identified to help guide the City's provision of POS (Figure 4). These objectives have been derived from the following detailed analysis.

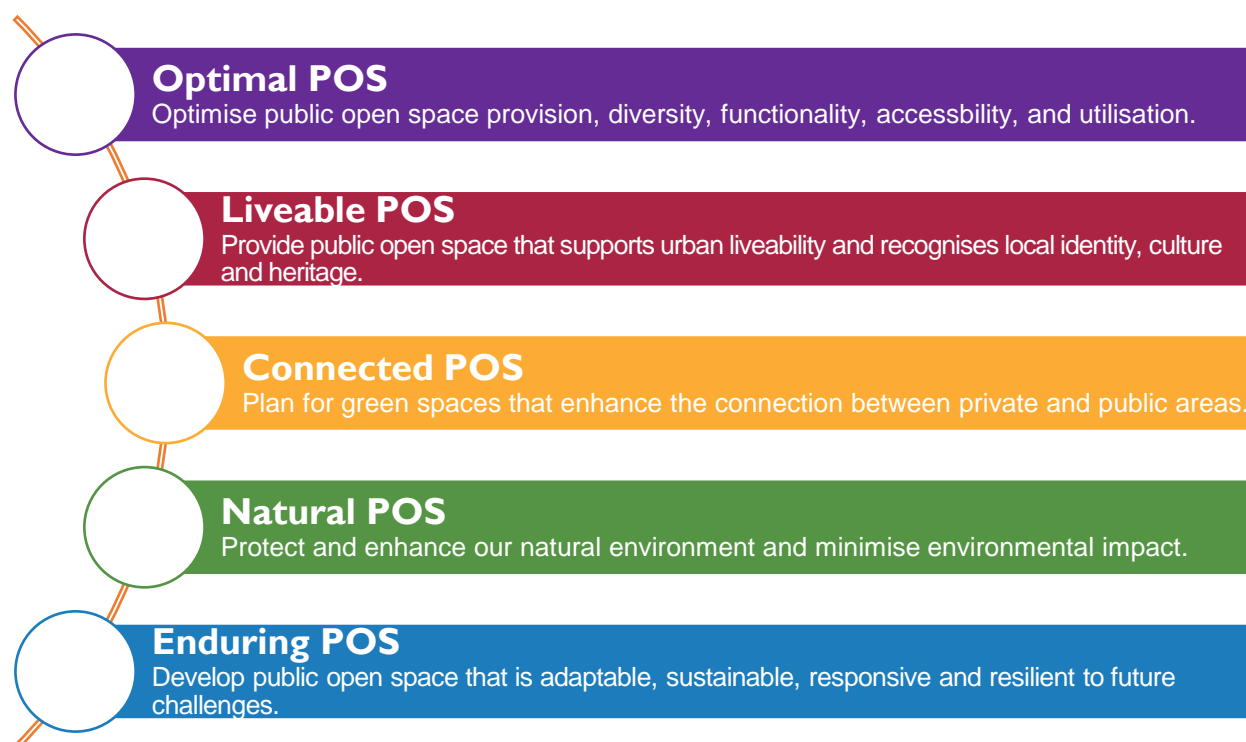


Figure 4: POS Strategic Objectives

# ANALYSIS OF OBJECTIVE 1 - OPTIMAL POS

Optimise POS Provision, Diversity, Functionality, Accessibility and Utilisation.

## 10 The City's Current Public Open Space

### 10.1 The City's Total POS

There are 15 land use zones and reservations within the City of Belmont LPS No. 15, totalling 1,842.1 hectares (Table 7).

Of this, 100.3 hectares are reserved as Parks and Recreation, and 11.6 hectares have been dedicated as Civic and Cultural areas, namely the Faulkner Civic Precinct, which still includes parkland amenities and contributes to the City's overall POS provision. Consequently, the City's LPS caters for 111.9 hectares of POS. In addition, and not included in Table 7, the Community has access to 172.1 hectares of POS reserved as Parks and Recreation under the Metropolitan Region Scheme (MRS).

Therefore, the City has 284 hectares of POS, including a minor proportion that is not accessible to the Community (36.33 hectares including WSD lands).

**Table 7: Land Use Zones and Reservations within the City's Local Planning Scheme**

Land Use Zones and Reservations	Area
Residential	883.5ha
Industrial	297.9ha
Mixed business	147.8ha
Parks and recreation	100.3ha
Local roads	98.0ha
Place of public assembly	75.7ha
Mixed-use	62.7ha
Major distribution roads	56.6ha
Public purposes	41.7ha
Residential and stables	33.0ha
Special development precincts	22.2ha
Civic and cultural	11.7ha
Commercial	9.4ha
Service stations	1.6ha
<b>Grand Total</b>	<b>1,842.1ha</b>

## 10.2 Classifying the City's POS

The total POS provision within the City is shown in Table 8 and summarised by classification and catchment hierarchy.

Table 8 considers the total POS provision, including land reserved:

- As Parks and Recreation that is not accessible (that is, fenced and unusable)
- Utilised for Water Supply, Sewerage and Drainage (WSD) purposes
- Within the MRS as Parks and Recreation. The inclusion of MRS land helps identify access to functional spaces outside the LPS.

The City has access to 284.0 hectares of POS across 163 locations.

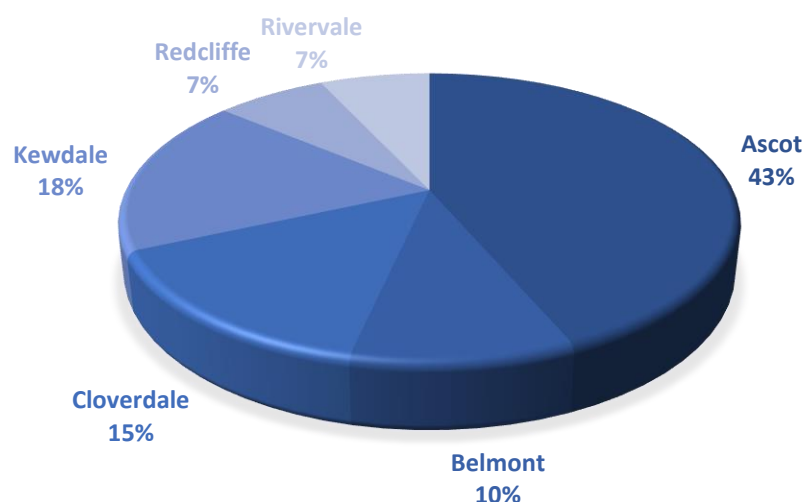
**Table 8: The City's Classification of POS to Liveable Neighbourhood (catchment hierarchy)**

	Regional	District	Neighbourhood	Local	No Category^	Other	Total
<b>Ascot</b>	94.8ha		13.2ha	3.6ha	12.0ha		123.6ha
<b>Belmont</b>		5.8ha	16.1ha	2.6ha	3.5ha	0.3ha	28.3ha
<b>Cloverdale</b>		16.7ha	21.4ha	3.7ha	1.8ha		43.6ha
<b>Kewdale</b>	20.4ha		16.2ha	2.7ha	10.7ha		50.0ha
<b>Redcliffe</b>			12.8ha	5.8ha	1.2ha		19.8ha
<b>Rivervale</b>	7.0ha	3.6ha	1.1ha	4.2ha	2.6ha		18.5ha
<b>Grand Total</b>	<b>122.2ha</b>	<b>26.1ha</b>	<b>80.8ha</b>	<b>22.6ha</b>	<b>31.8ha</b>	<b>0.3ha</b>	<b>283.8ha</b>

<sup>^</sup>No Category includes Parks and Recreation lands utilised for water supply, sewage, drainage, and electrical compounds.

## 10.3 Distribution of the City's POS

The chart below indicates the distribution of POS across the suburbs as a percentage of the City's total POS.



**Figure 5: Distribution of the City's POS by suburb**

## 10.4 Accessible versus Not-Accessible

Whilst the above sections covered gross total POS (including MRS and LPS), some land uses reserved for Parks and Recreation are not accessible to the Community. These are generally lands set aside for WSD or where the use of the land by the Community could pose a risk to personal safety, such as areas assigned for electrical compounds and pump stations.

The Community has access to 247.6 hectares of accessible POS, whilst 36.4 hectares are not accessible. Some areas of POS are also considered Restricted Access, predominantly because these are club or membership-based facilities that may restrict access and use. Due to a high proportion of Parks and Recreation lands in Kewdale serving drainage purposes, over a third of the POS within Kewdale is not accessible. Figures 6 and 7 demonstrate the POS provision throughout the City.

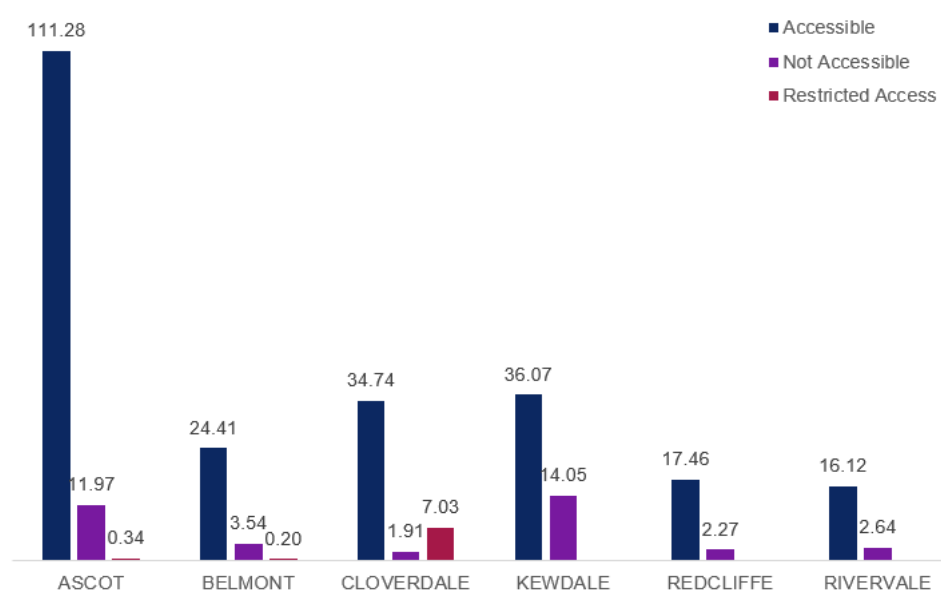


Figure 6: POS as Total Accessible, Not-Accessible or Restricted Access (hectares) by suburb

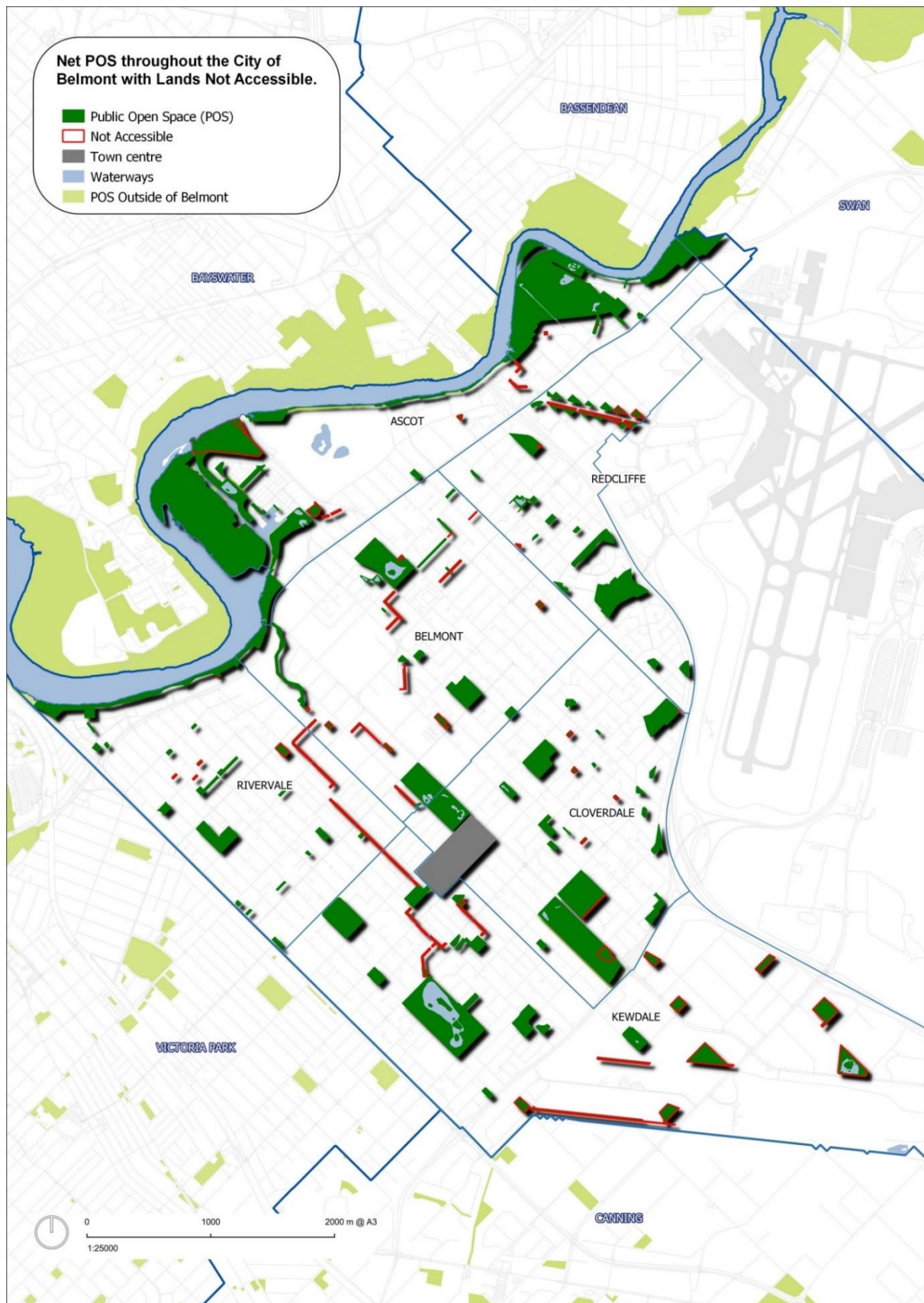
## 10.5 POS Projections and Predictions

As per the current planning guidelines for POS in residential areas (DCP 2.3), a standard of 3.36 hectares per 1,000 persons (excluding school playing fields) is deemed sufficient.

Table 9 identifies the current area of net accessible POS for each suburb against projected population growth (in 5-year increments) and provision of POS per 1,000 head of population. It should be noted that these statistics include MRS lands as they remain publicly accessible. If no additional POS is provided, the City will see a gradual decline in POS provision per head of population as the population rises. The provision of additional POS presents significant challenges, including land acquisition implications, reduction of rateable properties and increased operational costs. That said, the provision of POS to 2040 is considered adequate.



Figure 7: Net POS throughout the City of Belmont with Lands Not-Accessible (i.e. WSD)



**Table 9: Net POS provision (LPS and MRS, including non-accessible sites) by classification and projected POS per head of population-based on current POS levels.** \*Population and household forecasts, 2016 to 2041, prepared by .id, (2019) forecast.id.com.au/Belmont

Open Space Classification	Current Net POS Area (ha)	Hectares of POS per 1,000 people					
		2018	2020	2025	2030	2035	2040
<b>Population*</b>		<b>42,977</b>	<b>44,642</b>	<b>49,162</b>	<b>54,983</b>	<b>59,871</b>	<b>64,669</b>
<b>Local</b>	22.6ha	0.5ha	0.5ha	0.5ha	0.4ha	0.4ha	0.4ha
<b>Neighbourhood</b>	80.9ha	1.9ha	1.8ha	1.7ha	1.5ha	1.4ha	1.3ha
<b>District</b>	26.1ha	0.6ha	0.6ha	0.5ha	0.5ha	0.4ha	0.4ha
<b>Regional</b>	122.1ha	2.8ha	2.7ha	2.5ha	2.2ha	2.0ha	1.9ha
<b>No Category</b>	31.9ha	0.7ha	0.7ha	0.7ha	0.6ha	0.5ha	0.5ha
<b>Other</b>	0.3ha	0.0ha	0.0ha	0.0ha	0.0ha	0.0ha	0.0ha
<b>TOTAL</b>	<b>284.0ha</b>	<b>6.6ha</b>	<b>6.4ha</b>	<b>5.8ha</b>	<b>5.2ha</b>	<b>4.7ha</b>	<b>4.4ha</b>

## 10.6 Conclusions

As the population of the City continues to grow past 2040, further green space opportunities should be explored, including:

- Investigating the acquisition or transfer of land to increase net POS area
- Converting or enhancing existing WSD lands to become accessible
- Consider providing a higher level of service within the City's existing POS, where there is a shortfall in POS
- Co-locating and developing green space in activity centres, schools, and high-density areas.

## 11 The City's Catchment Analysis

### 11.1 Walkable POS Catchments

The application of walkable catchments and the classification/hierarchy of the park is a strategic approach in POS planning to ensure communities have adequate access to various parks of different sizes and levels of service.

The Department of Sport (2012, now the DLGSC) has recommended walkable catchments based on the hierarchical classification of a park, as outlined in Table 10.

Park Classification	DSR Recommended Catchment Size (2012)
Local Open Space (LOS)	Within 400m or a 5-minute walk.
Neighbourhood Open Space (NOS)	Within 800m or a 10-minute walk.
District Open Space (DOS)	Within 2km or a 5-minute drive.

Table 10: DSR Park Classification and Catchment Size

At a minimum, communities should at least be within 400m from a local park whilst still having access to higher service levels at larger parks. Therefore, to identify gaps in provision, the City undertook a mapping exercise of its parks to analyse the catchments and access to any POS.

Notably, Regional Open Spaces (ROS) have not been allocated a recommended catchment size (distance). POS for regional purposes has a variable catchment size depending on the level of development within the parkland. Nevertheless, the City's formal ROS (developed MRS parkland), including Garvey Park and Tomato Lake, are accessible to all residents and regional visitors via a local road network, cycle paths and pedestrian paths. Garvey Park's locality on the banks of the Swan River also makes this parkland accessible via water.

Forster Park and 400 Abernethy Road, Cloverdale (including Gerry Archer Athletics Track, Belmont Sport and Recreation Centre and Belmont Tennis Club) are reserved under the MRS. Still, they are considered District or Neighbourhood Open Spaces due to their size and levels of development (predominantly sporting areas).

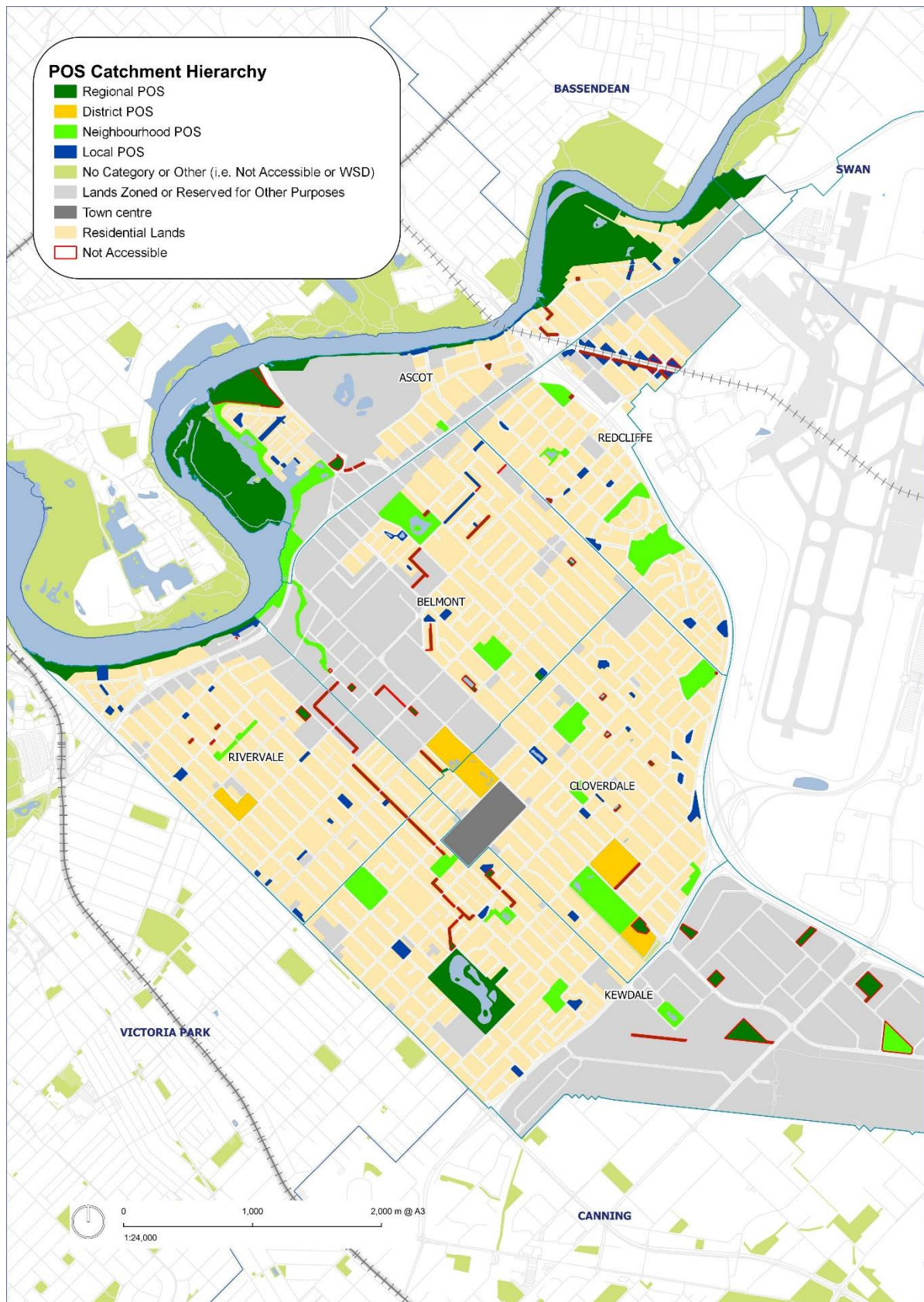
Figure 8 demonstrates the geographical spread of POS and their hierarchical classifications.

There are several options the City can consider where the current level of provision does not meet the ideal level. This can include:

- Acquiring additional land to develop into POS
- Re-purposing existing property owned by the City
- Providing a higher level of service within the City's existing POS, for example, additional equipment or more extensive equipment.



**Figure 8: POS Distribution by DSR Catchment Type (Regional, District, Neighbourhood, Local)**



## 11.2 Access to any Open Space

A review was undertaken to evaluate residential access and walkability to any open space (any park or green space). This assessment also included residential access to parks located within the Town of Victoria Park.

Figure 9 demonstrates residential property access to any form of POS (at 100-metre increments from within 100m to >700m proximity). The areas of particular focus are residential properties located further than 400m from any form of POS to highlight potential issues about the walkability of POS for residents.

This assessment noted:

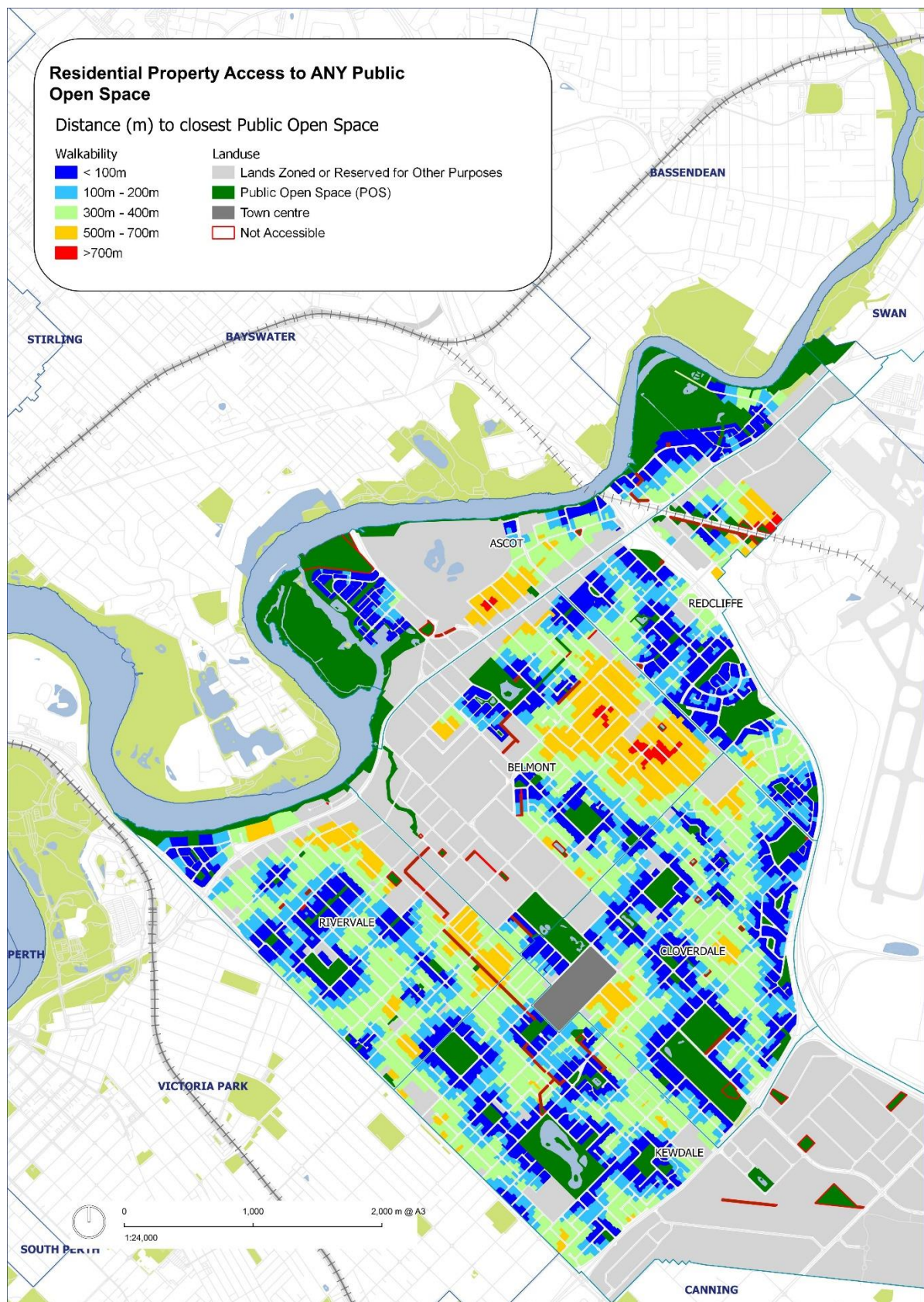
- On average, 28% of residential properties within the City are within 100m of some form of POS
- 88% of properties are within 400m of any POS, with Ascot, Cloverdale, Kewdale and Redcliffe all greater than 90%, Rivervale at 86%, and Belmont at 64%
- The suburb of Belmont has the highest proportion of residential properties (36%) required to travel further than 400m to access any POS. At least 2.3% of Belmont residential properties are further than 700m from any POS.
- Ascot has the highest proportion of properties within 100m of any POS due to the proximity to the Swan River. Notwithstanding this, pockets of residential properties (towards the Stables Zone) are further than 400m from any POS (9%).

Closest POS	Ascot	Belmont	Cloverdale	Kewdale	Redcliffe	Rivervale	Total
<b>No. of Properties</b>	1,076	2,308	2,927	2,393	1,636	2,549	<b>12,889</b>
<b>&lt;100m</b>	52.32%	16.98%	30.27%	26.83%	38.75%	19.50%	<b>28.0%</b>
<b>&gt;100m &lt; 200m</b>	19.98%	15.12%	28.94%	26.87%	27.14%	25.03%	<b>24.3%</b>
<b>&gt;200m &lt; 300m</b>	11.62%	15.68%	24.43%	26.03%	17.91%	26.21%	<b>21.6%</b>
<b>&gt; 300m &lt; 400m</b>	7.16%	16.46%	11.10%	18.18%	10.39%	14.79%	<b>13.7%</b>
<b>&gt;400m &lt;500m</b>	3.44%	13.73%	3.96%	2.09%	3.42%	10.32%	<b>6.5%</b>
<b>&gt;500m &lt;600m</b>	2.60%	10.96%	1.30%	0.00%	1.04%	4.08%	<b>3.4%</b>
<b>&gt;600m &lt;700m</b>	2.32%	8.75%	0.00%	0.00%	0.67%	0.08%	<b>1.9%</b>
<b>&gt;700m</b>	0.56%	2.30%	0.00%	0.00%	0.67%	0.00%	<b>0.5%</b>

Table 11: Residential Access to any POS



Figure 9: Access to any POS; Walkability in 100m Increments



### 11.3 Access to Local Open Spaces

#### Local Open Space Summary Definition

Description	Primary Purposes
<ol style="list-style-type: none"><li>1. Local open space is usually small parklands that service the recreation needs of the immediate residential population</li><li>2. Primarily used for recreation and may include nature space</li><li>3. Usually within 400m or a 5-minute walk of residential properties.</li></ol>	<ul style="list-style-type: none"><li>• Stormwater management (WSD)</li><li>• Ecological conservation</li><li>• Leisure and recreation.</li></ul>

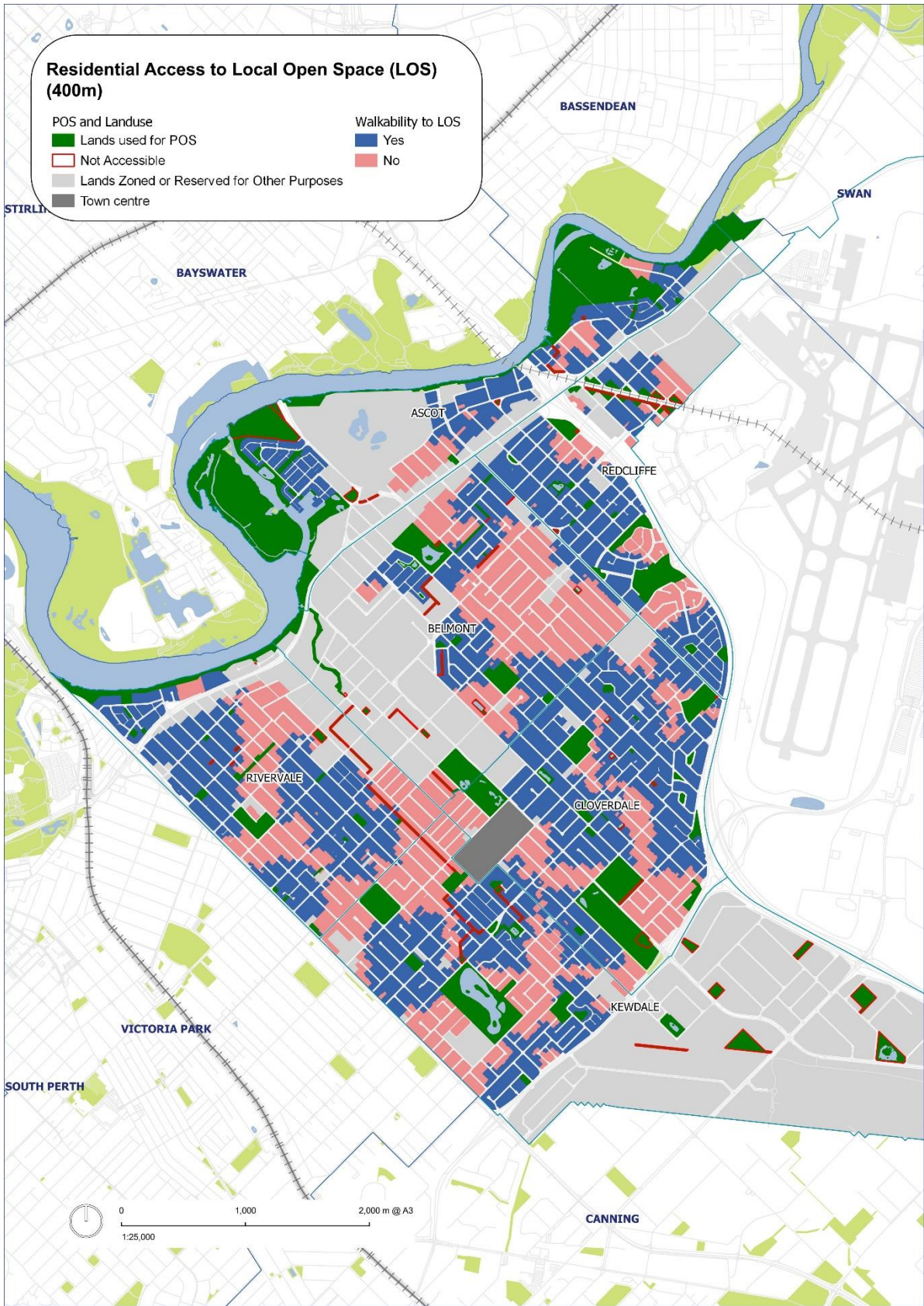
Figure 10 over page demonstrates the distribution of Local Open Space (including MRS) and residential properties within 400m access. On average, 59% of residential lands within the City are within 400m of Local Open Space (LOS), and 88% are within 400m of any POS. Both Belmont and Kewdale have been identified to be below the City average in proximity to LOS.

	Ascot	Belmont	Cloverdale	Kewdale	Redcliffe	Rivervale	Average
<b>Existing access to LOS</b>	84%	41%	67%	50%	72%	58%	59%
<b>Properties within 400m of any POS</b>	91%	64%	95%	98%	94%	86%	88%

Table 12: Residential Properties within 400m of LOS.



Figure 10: Assessment of Residential Accessibility to LOS (400m catchment) (excludes access to other classifications of POS).





## 11.4 Access to Neighbourhood Open Spaces

### Neighbourhood Open Space Summary Definition

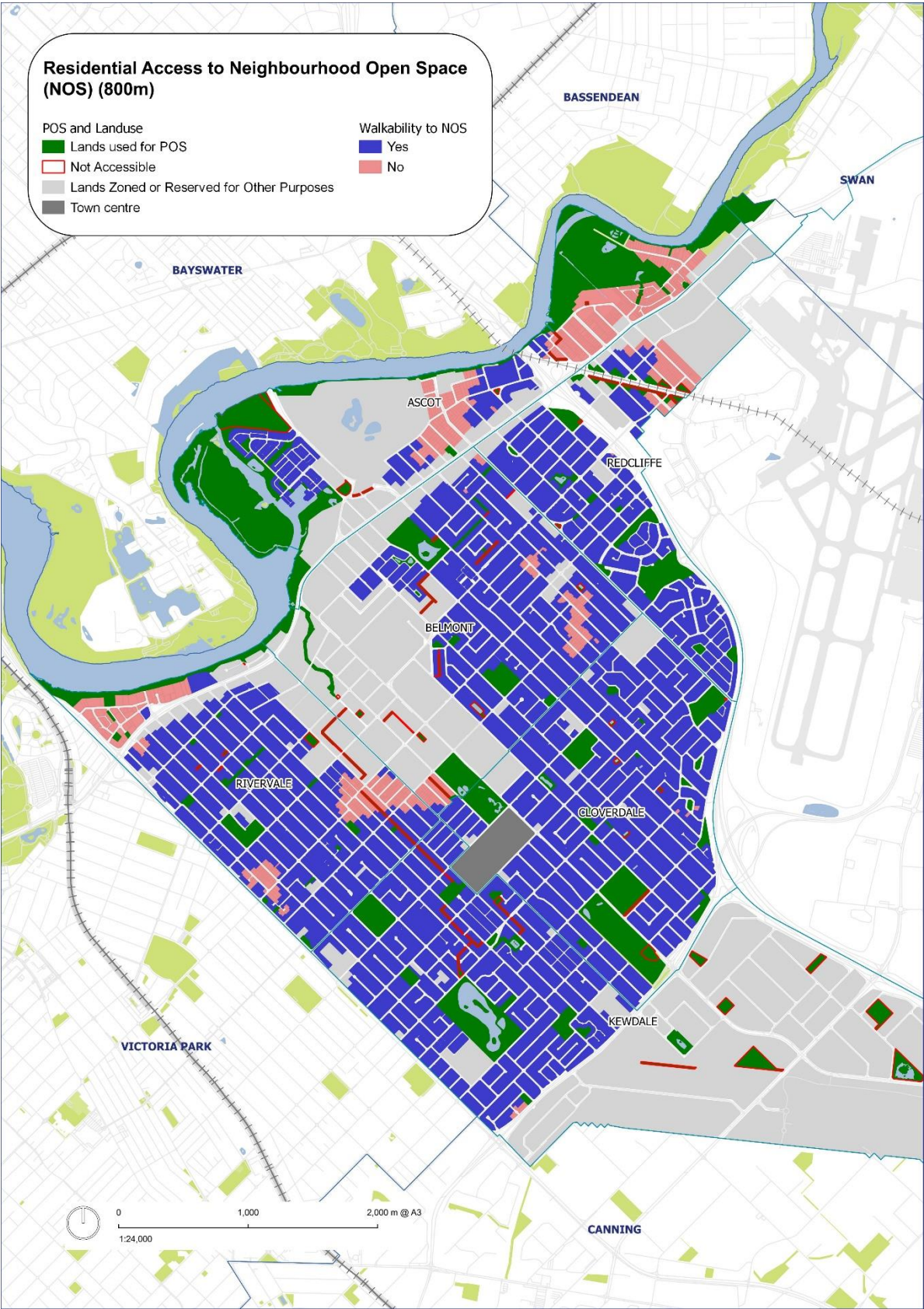
Description	Primary Purposes
<ol style="list-style-type: none"><li>1. Neighbourhood open space serves as the recreational and social focus of a community</li><li>2. Residents are attracted by the variety of features and facilities and opportunities to socialise</li><li>3. Usually within 800m or a 10-minute walk of residential properties.</li></ol>	<ul style="list-style-type: none"><li>• Stormwater management (WSD)</li><li>• Ecological conservation</li><li>• Leisure and recreation</li><li>• Informal/unorganised sporting space.</li></ul>

Figure 11 over page demonstrates the distribution of Neighbourhood Open Space (including MRS) and residential properties within 800m access. On average, 94% of residential-zoned lands within the City are within 800m of Neighbourhood Open Space (NOS). The outlier for access to NOS is Ascot, with only 63% of residential properties having access to neighbourhood open space. However, Ascot has significant access to regional facilities (Garvey Park) and the Swan River foreshore.

	Ascot	Belmont	Cloverdale	Kewdale	Redcliffe	Rivervale	Average
<b>Existing access to NOS</b>	63%	96%	100%	100%	93%	93%	94%
<b>Properties within 800m of any POS</b>	99%	97%	100%	100%	99%	100%	99%

Table 13: Residential Properties within 800m of NOS.

Figure 11: Residential Accessibility to NOS (800m catchment)



## 11.5 Access to District Open Spaces

### District Open Space Summary Definition

Description	Primary Purposes
1. District open space serves as sites that attract people from a district level	<ul style="list-style-type: none"> <li>• Sporting facilities that include district clubrooms</li> </ul>
2. Predominantly these sites are accessed using a vehicle	<ul style="list-style-type: none"> <li>• Civic and cultural facilities</li> </ul>
3. Usually within 2km or a 5-minute drive of residential properties.	<ul style="list-style-type: none"> <li>• Leisure and recreation</li> <li>• Formal sporting space.</li> </ul>

Currently, the City maintains three District Open Spaces (including MRS):

- Forster Park, Cloverdale
- 400 Abernethy Rd, Cloverdale
- Wilson Park, Rivervale.

Figure 12 over the page demonstrates the distribution of District Open Spaces (including MRS) and residential properties within 2km of access. These have been designated 'District' as they service most of the City's sporting access. It is likely that these sites also attract visitors from neighbouring suburbs.

On average, 70% of residential-zoned lands within the City are within 2km of a District Open Space (DOS). Redcliffe and Ascot are further than 2km from the City's three DOS. However, it should be noted that this is not considered an impediment as most visitors accessing district spaces would do so using a vehicle or public transport and are likely to travel further than 2km.

	Ascot	Belmont	Cloverdale	Kewdale	Redcliffe	Rivervale	Average
<b>Existing access to DOS</b>	0%	63%	97%	90%	0%	100%	70%

**Table 14: Residential Properties within 2km of DOS.**

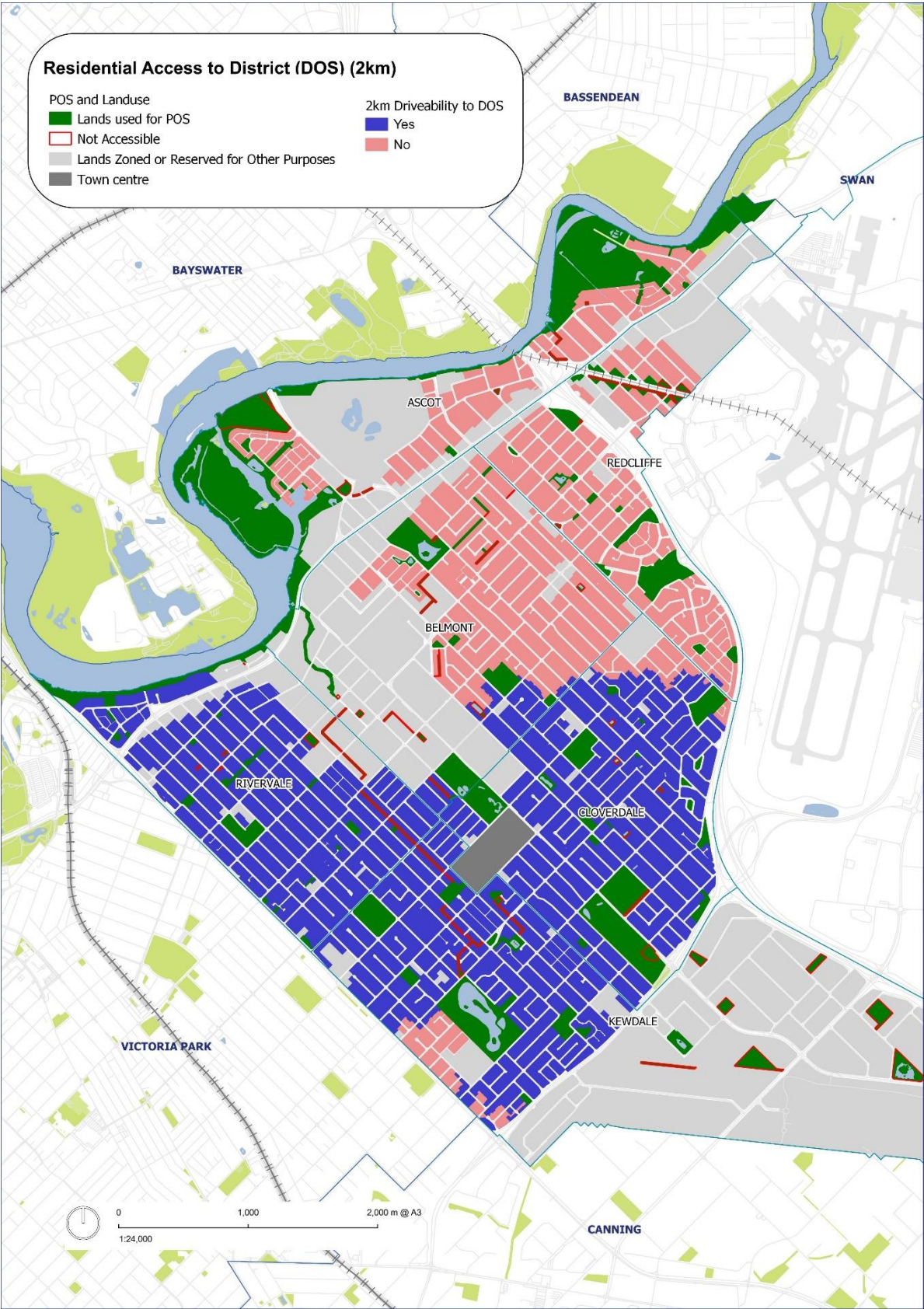
## 11.6 Conclusions

The recommendations arising from the catchment analysis are:

- Investigate opportunities for the re-purposing of WSD to a park
- Consider small-space play equipment that delivers big-space play experiences in suburbs where the proximity to local open spaces is below the City's average
- Investigate additional open space amenities along the Swan River foreshore in Ascot to improve access to greenspace experiences (for example, a local playground)
- Consider providing a higher level of service within the City's existing POS, where there is a shortfall in POS.



Figure 12: Residential Property Access to District Open Space



## **12 Parkland Development**

### **12.1 Recommended Levels of Parkland Development**

This POS Strategy also aims to inform and guide the development level for each type of POS, including the standard of amenities or facilities for the individual park level.

Table 15 identifies suitable amenity levels to cater to the expected visitation or use of the park.

Notably, special consideration might apply to the provision of amenities in areas where a much higher standard is needed to cater for a shortfall in the provision of POS within that catchment or in high-density areas.

### **12.2 POS Renewal, Development and Enhancement**

For the development or redevelopment of any POS, the City will take into consideration:

- Existing access to parks and green space experiences (hierarchical catchments or playground saturation)
- The requirement to address specific user needs and values (within a hierarchical catchment)
- The provision of diverse park spaces or the necessity to introduce new green space experiences
- The suitability of the intended green space experience and its impact on surrounding land uses.

For the redevelopment of larger parcels of POS, particularly district and regional spaces, public consultation and master plan initiatives should be considered and address:

- Emerging community expectations
- The need to increase or reduce the current level of service
- The need to improve associated infrastructure to accommodate the development (parking, accessibility, power, water etc.)
- The impact/effect it may have on other parks (that is, detract users or promote users to use other sites).

**Table 15: Recommended Parkland Development Levels Based on the Hierarchical Catchment**

Park Classification/ Catchment Hierarchy	RECOMMENDED level of development/ facilities	ADVANCED level of development/ facilities
<b>Local Open Space (LOS)</b>  Within 400metres or a 5-minute walk.	<ul style="list-style-type: none"> <li>• Park benches/ seating</li> <li>• Paths</li> <li>• Minor landscaping</li> <li>• Irrigated or unirrigated grass</li> <li>• Park signage (name)</li> <li>• Natural shade cover.</li> </ul>	Plus: <ul style="list-style-type: none"> <li>• Bins</li> <li>• Enhanced landscaping</li> <li>• Small-scale playground equipment</li> </ul>
<b>Neighbourhood Open Space (NOS)</b>  Within 800m or a 10-minute walk.	Facilities identified in LOS Advanced, plus: <ul style="list-style-type: none"> <li>• Formal parkland lighting</li> <li>• Bicycle racks</li> <li>• Medium-scale playground</li> <li>• Gazebos or formal shelters.</li> </ul>	Plus: <ul style="list-style-type: none"> <li>• Barbeque facilities and toilets*</li> <li>• Exercise equipment (section 18.1)</li> <li>• Community gardens (section 18.2)</li> <li>• Wayfinding/ signage</li> <li>• Public art/cultural/heritage</li> <li>• Designated fenced/ enclosed dog exercise or agility areas.</li> </ul>
<b>District Open Space (DOS)</b>  Within 2km or a 5-minute drive.	Facilities identified in NOS Advanced, plus: <ul style="list-style-type: none"> <li>• Sporting reserves (ovals, courts)</li> <li>• Skate park</li> <li>• Pump track</li> <li>• Clubrooms and facilities.</li> <li>• Sport lighting</li> <li>• CCTV</li> <li>• Universal access to public toilet facilities.</li> </ul>	Plus: <ul style="list-style-type: none"> <li>• Public WiFi.</li> </ul>
<b>Regional Open Space (ROS)</b>	As per DOS. Plus, specific facilities or amenities that may complement the regional open space (i.e. community centres, specialised sporting venues, etc.).	

\* The City will only install barbeque facilities where public toilet facilities are available, or in particular precinct areas where residential density is high (for example, The Springs), or where the BBQs are likely to be used primarily by nearby residents who do not need access to ablutions.

## 13 Diversity and Function

### 13.1 Function

There are three core functional elements of POS that need to be balanced to increase the value and useability of public open spaces:

- Open spaces for organised sports
- Leisure spaces for recreational or restorative activities
- Environmental areas to conserve and connect people with nature.

With appropriate planning, larger sites may encompass elements of all three functions, whilst smaller areas may only accommodate a single-use. Descriptions of the three primary functions are displayed in the table below.

<b>Parks - Sport Spaces</b>	<ul style="list-style-type: none"><li>• Sports spaces provide a setting for formally structured sporting activities (DSR, 2012)</li><li>• These spaces typically include facilities and areas for organised sports, including ovals, cricket fields, and mixed-use spaces.</li></ul>
<b>Leisure - Recreation Spaces</b>	<ul style="list-style-type: none"><li>• Recreation spaces provide a setting for informal play and physical activity, relaxation and social interaction (DRS, 2012)</li><li>• Spaces for leisure activities and passive or unorganised sports</li><li>• These spaces can include playgrounds, walking trails, viewsapes and parkland amenities such as gardens.</li></ul>
<b>Environment – Natural Spaces</b>	<ul style="list-style-type: none"><li>• Nature spaces provide a setting where people can enjoy nearby nature and protect local biodiversity and natural area values (DSR, 2012)</li><li>• Spaces for environmental, ecological and biodiversity conservation, however, can also form part of a water sensitive city catchment (stormwater management) and provide the community access to natural elements.</li></ul>

Table 16: Three Primary Functions of Open Spaces

### 13.2 Functional Analysis of the City's Spaces

The City has undertaken an extensive mapping exercise to classify areas reserved as Parks and Recreation (including MRS) to determine their primary function. In some cases, several functions were noted within a single park to assess the Community's access to each functional class realistically. For example, as shown in Figure 13, Centenary Park distinctly accommodates all three functions of **sport**, **recreation**, and **nature**.





**Figure 13: Centenary Park - Classifying Areas Based on Functionality**

The findings are listed below in Table 17. Most sporting spaces are located in Cloverdale, whilst Ascot is predominantly home to recreational and nature areas due to its locality along the Swan River (see Figure 14). However, all suburbs have access to nature and recreational spaces.

Whilst Ascot lacks areas designated as sports space, access to playing fields within Cloverdale, Belmont, and Redcliffe is not restricted. Further information on sports utilisation is covered in section 13.3.

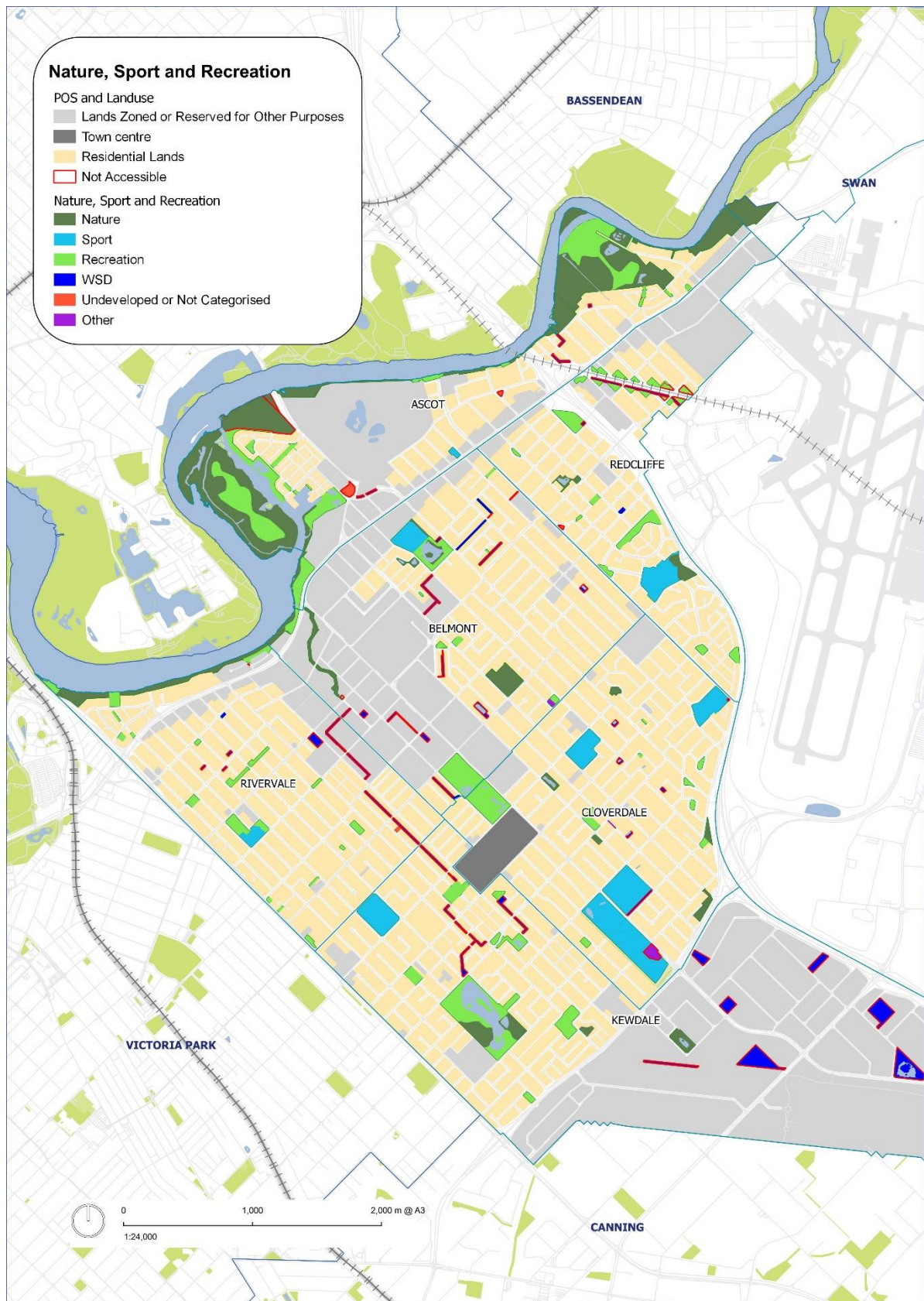
Suburbs	Nature Space	Recreation Space	Sport Space	Other*	WSD	Un-developed	Grand Total
<b>Ascot</b>	86.9ha	34.8ha	0.3ha	0.8ha	0.8ha		123.6ha
<b>Belmont</b>	9.7ha	10.3ha	3.8ha	0.2ha	4.3ha		28.3ha
<b>Cloverdale</b>	3.3ha	8.4ha	30.0ha	1.1ha	0.8ha		43.6ha
<b>Kewdale</b>	7.9ha	22.5ha	5.6ha	0.0ha	14.0ha		50.0ha
<b>Redcliffe</b>	2.7ha	9.9ha	5.8ha	0.1ha	1.3ha		19.8ha
<b>Rivervale</b>	6.4ha	7.6ha	1.7ha	0.0ha	2.7ha	0.1ha	18.5ha
<b>Grand Total</b>	<b>116.9ha</b>	<b>93.5ha</b>	<b>47.2ha</b>	<b>2.2ha</b>	<b>23.9ha</b>	<b>0.1ha</b>	<b>283.8ha</b>



**Table 17: Accessible Parks and Recreational Spaces Based on Category and Suburb**

\*Other: areas that are not currently maintained as a Nature, Recreation and Sport Spaces nor do they provide a specific drainage purpose (WSD), for example the Ascot Kilns land, the Belmont SES and the community facility at Harman Park which are reserved as Parks and Recreation but fall outside of the three primary categories

**Figure 14: Classification of Parks and Recreation Spaces.** Lands that are undeveloped or uncategorised have no definite use.



### 13.3 Sports Spaces

Sports and associated sporting activities are a big part of Australian lifestyles, with 57% of Australian children regularly participating (at least once per week) in organised physical activity outside of school hours. At least 80% of adults regularly participate in physical activity (AusPlay, 2019).

Sporting spaces are also critical in contributing to the health of a community, both physically and mentally. There are strong correlations between being able to access sports spaces and reduced risks associated with cardiovascular disease, obesity, and diabetes. Convenient access to sporting fields can encourage community participation in sporting activities such as football, soccer, rugby, and cricket. Involvement in sports also creates opportunities to connect, socialise and unwind.

The City maintains over 47 hectares of sporting space spread over ten (10) main sporting parks. These grounds accommodate organised sports, sporting events (team competitions), and formalised sporting activities (Figure 15), with many designed for mixed-use, for example, providing facilities for football, soccer and cricket (see Table 18). Additionally, these parks are used for significant community events, like fairs and festivals.

The facilities and amenities that are typically expected within sports spaces include:

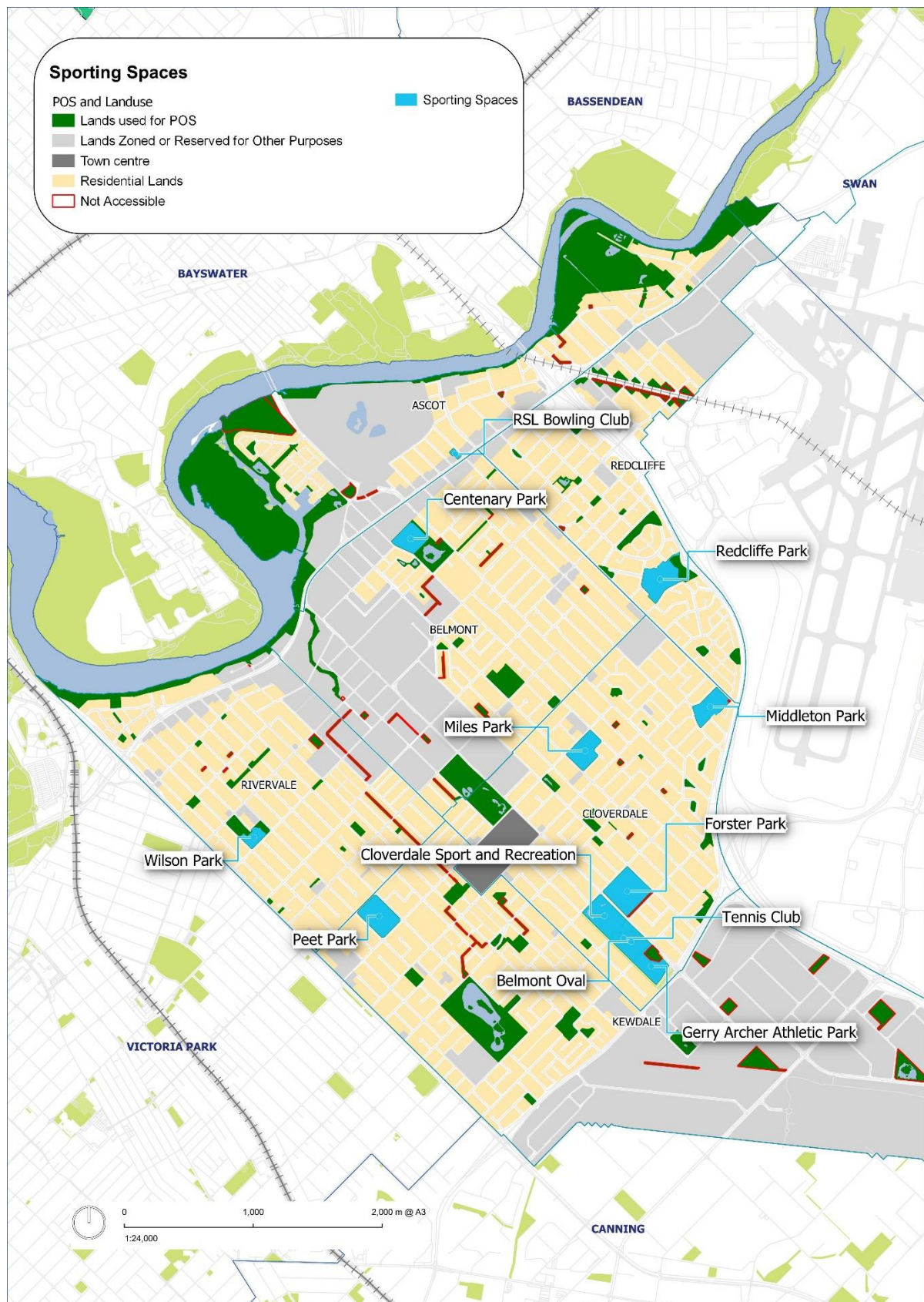
- Sporting equipment and associated infrastructure that enable organised formal sports (for example, turf wickets, practice nets, goal posts, line markings)
- Club rooms and facilities that support the use of these spaces
- Wayfinding signage (informative, interpretive, entrance etc.)
- Turf fields and spaces of sufficient size to accommodate a range of sporting activities
- Lighting for both sporting surfaces, recreational and off-field areas
- Park benches, bins, drinking fountains, BBQs and public toilets
- Hydrozoned and centrally controlled irrigation systems
- Complimentary recreational/ sporting infrastructure to encourage informal and unorganised sports participation (large scale – pump tracks, skate parks, basketball court etc.)
- Car park and bicycle facilities
- CCTV and security initiatives.

<b>Belmont Oval (area)</b>	<b>Middleton Park</b>
<ul style="list-style-type: none"> <li>• 1 x full-size soccer pitch</li> <li>• Dog agility training space.</li> </ul>	<ul style="list-style-type: none"> <li>• Multi-purpose facility</li> <li>• 2 x cricket wicket</li> <li>• 3 x training nets</li> <li>• 2 x junior Australian Rules Football ovals.</li> </ul>
<b>Cloverdale Sports and Recreation Oval</b>	<b>Miles Park</b>
<ul style="list-style-type: none"> <li>• Change room/amenity facilities managed by BSRC</li> <li>• 1 x full-size soccer pitch.</li> </ul>	<ul style="list-style-type: none"> <li>• Multi-purpose facility</li> <li>• 2 x full-size soccer pitches</li> <li>• 3 x modified soccer pitches.</li> </ul>
<b>Centenary Park</b>	<b>Peet Park</b>
<ul style="list-style-type: none"> <li>• Multi-purpose facility and main hall</li> <li>• 1 x full-size rugby oval</li> <li>• 1 x match cricket wicket</li> <li>• 2 x cricket training nets.</li> </ul>	<ul style="list-style-type: none"> <li>• Multi-purpose facility</li> <li>• 2 x junior Australian Rules Football ovals</li> <li>• 1 x modified oval</li> <li>• 1 x cricket wicket</li> <li>• 3 x training nets.</li> </ul>
<b>Forster Park</b>	<b>Redcliffe Park</b>
<ul style="list-style-type: none"> <li>• 1 x multi-purpose facility and main hall</li> <li>• 1 x full-size Australian Rules Football oval</li> <li>• 3 x baseball diamonds.</li> </ul>	<ul style="list-style-type: none"> <li>• Multi-purpose facility and main hall</li> <li>• 6 x tee-ball diamonds.</li> </ul>
<b>Gerry Archer Reserve</b>	<b>Wilson Park</b>
<ul style="list-style-type: none"> <li>• Multi-purpose facility</li> <li>• 1 x grass athletic track</li> <li>• 2 x shot put circles</li> <li>• 2 x discus/javelin circles</li> <li>• 2 x long jump pit</li> <li>• 1 x full-size soccer pitch.</li> </ul>	<ul style="list-style-type: none"> <li>• Netball club room</li> <li>• 16 x netball courts</li> <li>• 1 x full outdoor basketball court.</li> </ul>

**Table 18: The City's Main Sports Grounds and Facilities**



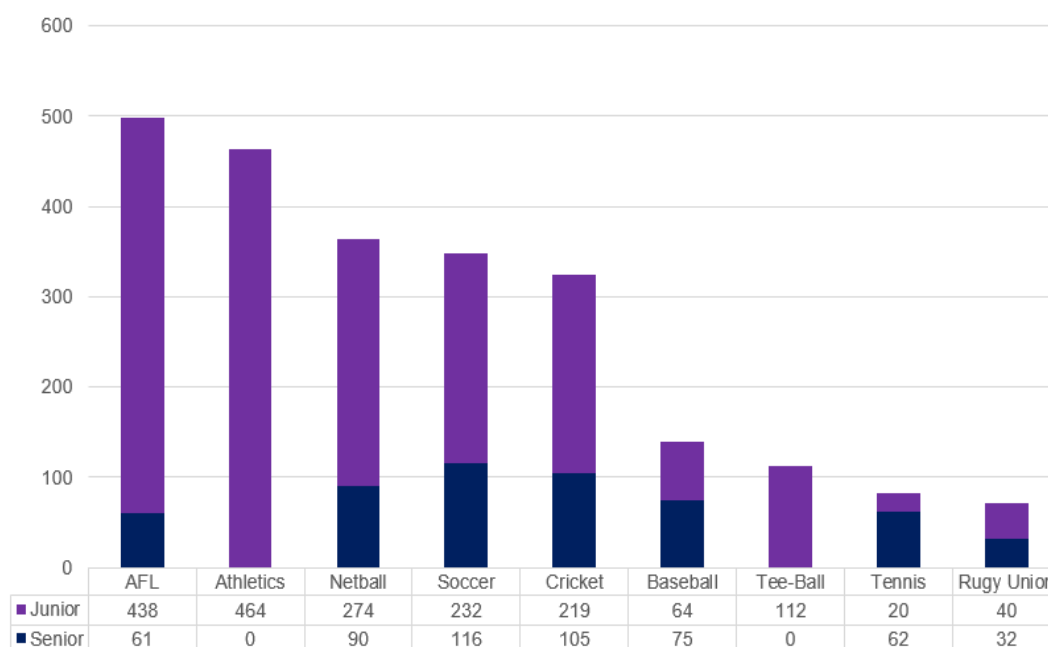
**Figure 15: Sporting Spaces within the City of Belmont**



Access to sporting reserves and ovals is essential to enable physical activity within an urbanised environment. A key focus of sports spaces is to facilitate organised sporting events and associated activities. Within the City, this includes:

- Australian Rules Football
- Athletics
- Soccer
- Netball
- Tee-Ball
- Cricket
- Baseball
- Dog Training
- Rugby Union

Approximately 2,404 people are involved in nine (9) main sports (Figure 16) within the City (as of April 2021), the majority being active members of Australian Rules Football. This membership demonstrates the need for the City's ten (10) sporting reserves to accommodate a range of sporting codes.



**Figure 16: Senior and Junior Sports Participants/Members within the City of Belmont**

Whilst Australian Rules Football is the largest organised sporting group within the City, it ranks just 14<sup>th</sup> in Western Australian senior (adult) participation by activity (including organised and non-organised recreation activities) and third in organised sports for junior (child) participation.

According to the research undertaken by Sport Australia through the AUSPlay survey in 2021, for adults, approximately one-million Western Australians participate in walking as a recreational endeavour, followed by fitness/gym (828,400), running and athletics (365,700) and cycling (273,900). These findings identify potential opportunities when redeveloping or improving green spaces.

The City needs to monitor the utilisation and capacity of each of its playing surfaces to identify opportunities for improved access (participation) or where grounds may be at or over capacity. The City can do this by tracking club participation and seasonal bookings, and the optimisation of bookable spaces will be considered as part of the City's Recreation Strategy.



The available capacity (hours) changes between winter and summer sports based on the ability of the turf to recover after use. As per Table 19 and Figure 17, many sites are at or under capacity (based on 25 hours capacity per week for ovals and 12 hours per week for rectangular pitch sports grounds). These figures do not include casual bookings of the reserves.

Reserve Capacity (hours per week)	Summer (Reserve Capacity per week)	Winter (Reserve Capacity per week)
<b>Belmont Oval (25)</b>	▼ 12 hours under capacity	▼ 12 hours under capacity
<b>BSRC Oval (12)</b>	▼ No booked usage – under capacity	▼ No booked usage – under capacity
<b>Centenary Park (25 and 12)</b>	▼ 10 hours under capacity (25 hours full capacity)	▼ 3 hours under capacity (12 hours full capacity)
<b>Forster Park (12 and 25)</b>	■ Diamond Sports Areas - used at capacity	▼ 4 hours under capacity
<b>Gerry Archer (25 and 12)</b>	■ Athletics Areas – used at capacity	▼ 2 hours under capacity
<b>Middleton Park (25 and 25)</b>	▲ 2 hours over capacity	▼ 1.5 hours under capacity
<b>Miles Park (12 and 12)</b>	▼ No booked usage – under capacity	▲ 18 hours over capacity
<b>Peet Park (25 and 25)</b>	▼ 12.5 hours under capacity	▲ 5 hours over capacity
<b>Redcliffe Park (25 and 25)</b>	■ Diamond Sport Areas used at capacity	▼ 23 hours under capacity
<b>Wilson Park</b>	▼ Hardcourts – under capacity	■ Hardcourts – At club capacity
▼ Under capacity      ■ At capacity      ▲ Above capacity		

Table 19: Reserve Capacity Analysis by Main Park

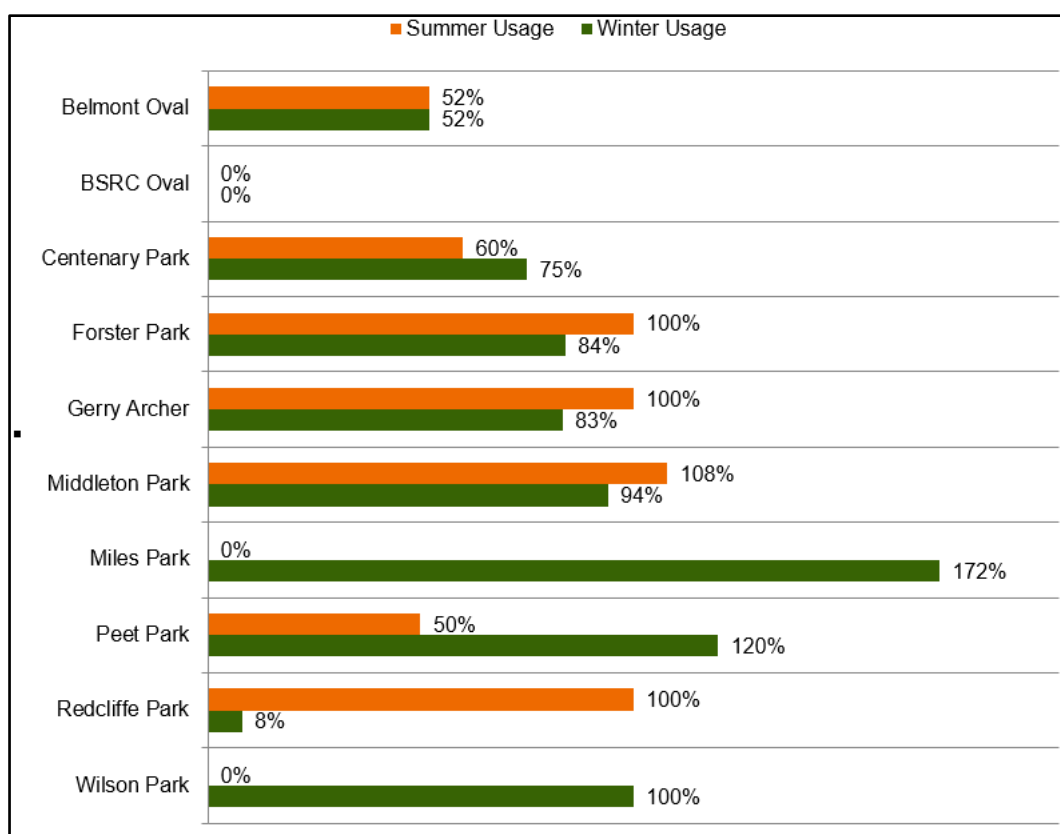
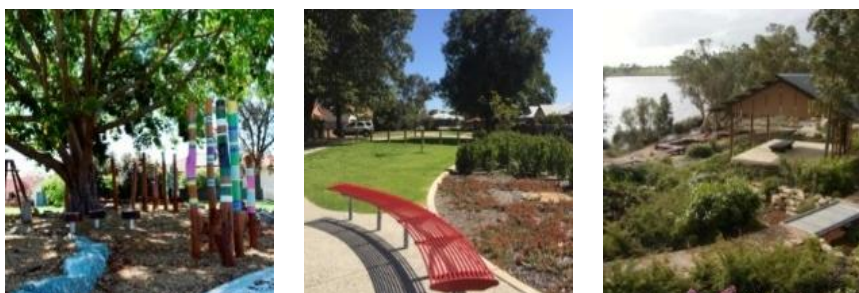


Figure 17: Winter and Summer Percentage of Usage Capacity (based on bookings 2020)

### 13.4 Leisure – Recreational Spaces

Recreational spaces within an urban environment are essential to the area's urban liveability, character, and suburban amenity. The City maintains 57 recreational spaces which can be utilised for informal sports and play (for example, backyard cricket, playgrounds and nature play), relaxation (for example, walking, small ball games) and social interaction (for example, picnics and informal gatherings).

Like sporting spaces, recreational spaces contribute to the health and wellbeing of our Community. However, additional health benefits associated with recreation spaces are often overlooked.



These include:

- Contributing to urban amenity by softening the impacts of built spaces
- Providing areas for physical and mental relaxation (relief from being over-stimulated in a built environment)
- Supporting children's physical and cognitive development through play and exploration opportunities. Playgrounds and nature play spaces provide children opportunities for sensory experiences, social interaction, and physical skill development.

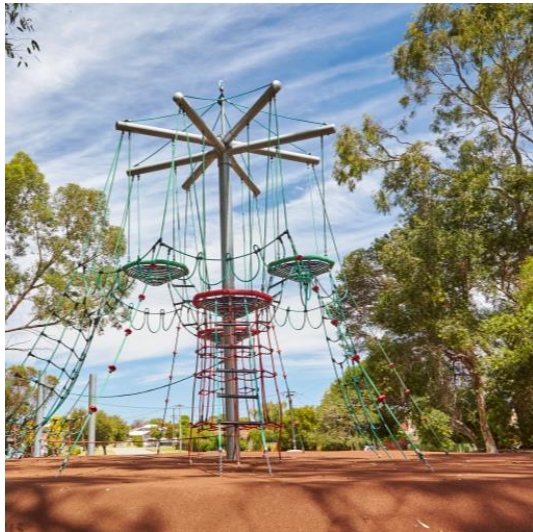
The typical facilities and amenities that are expected within Recreational Spaces are:

- Recreation and leisure equipment and associated infrastructure that enable informal sports and physical activity, relaxation and social interaction (that is, playgrounds, outdoor exercise equipment)
- Recreational/Sporting infrastructure to encourage informal and unorganised sports participation (small scale – table tennis, small bike tracks, basketball half-court etc.)
- Wayfinding signage (informative and interpretive)
- Gazebos, park benches, bins and drinking fountains, plus BBQs and/or public toilets in larger District or Neighbourhood parks or parks in high-density areas
- Appropriate footpath and bollard lighting
- Trails and nature walks
- Community vegetable gardens (where community facilities exist)
- Hydrozoned and centrally controlled irrigation systems.

The City may give special consideration to additional facilities and amenities in recreational spaces where a specific need is required, such as BBQs within high-density residential areas or other amenities where a community need is identified (for example, toilet blocks).

**Table 20: The City's Key Leisure Areas**

Suburb	Name
<b>Ascot / Belmont</b>	Adachi Park
<b>Ascot</b>	Black Swan Island Garvey Park
<b>Belmont</b>	Centenary Park
<b>Belmont / Cloverdale</b>	Faulkner Civic Precinct
<b>Cloverdale</b>	McLarty Park
<b>Kewdale</b>	Peachey Park Tomato Lake Reserve
<b>Redcliffe</b>	Epsom Park Parkview Chase
<b>Rivervale</b>	Bilya Kard Boodja Lookout Copley Park Flame Tree Park



### 13.5 Environment – Natural Spaces

The City has over 65 hectares of natural spaces across 31 sites, including designated Environmentally Sensitive Areas, Bush Forever Sites and Conservation Category and Resource Enhancement wetlands. Additionally, the City maintains smaller natural reserves in larger conservation areas along the Swan River Foreshore.

Generally, spaces reserved for nature allow green space experiences that connect the Community to natural ecological landscapes and elements, such as bushlands and waterways/wetlands. The provision and protection of natural spaces are also pertinent in the conservation of endangered flora and fauna and can form elements within stormwater management systems (that is, wetlands and waterways).



These spaces are intended to remain natural and supportive of ecosystem functioning and biodiversity. Therefore, the City will only consider facilities and amenities that assist the Community in accessing and enjoying natural area values.

The typical facilities and amenities that are expected within Nature Spaces include:

- Interpretive signage
- Park benches
- Specific natural space
- Bins located at entrances
- Trails and nature walks.

**Table 21: The City's Key Natural Areas**

Suburb	Name
<b>Ascot</b>	Ayres Bushland
	Ron Courtney Island
	Garvey Park
	Bush Forever Site (Garratt Road Bridge)
	Black Swan Island
<b>Ascot/ Rivervale</b>	Swan River Foreshore
<b>Belmont</b>	Signal Hill Bushland
	Severin Walk
<b>Cloverdale</b>	Hassett Street Reserve
	P.H. Dod Reserve
<b>Kewdale</b>	Tomato Lake Reserve
	Cottage Park



### 13.6 Incorporating Stormwater into POS

As noted previously, lands reserved as 'Parks and Recreation' are often used for WSD, including stormwater capture, mitigation, and infiltration (sumps, drains and basins). Due to the challenges and risks presented by some of these sites, they are traditionally fenced off or not accessible.

Whilst the City recognises that, in some cases, these spaces need to remain not accessible, there are opportunities to investigate in collaboration with the Water Corporation to convert WSD land into accessible nature spaces. This might be possible where:

- There is sufficient room
- There is a connection to existing and accessible recreational land
- Engineered controls can be put in place.

#### Challenges with WSD sites:

- Steep basins that can rapidly flood
- Stormwater can convey gross pollutants and other hazards
- Required to prevent localised flooding
- POS infrastructure not able to be constructed in floodable areas

Within the LPS, there are approximately 24 hectares of land reserved as Parks and Recreation but are used for water services and drainage. About 50% of the locations are not accessible due to risks associated with stormwater infrastructure. The high-risk sites tend to be smaller, residential lot-sized parcels characterised by steep gradients and are designed to rapidly receive high volumes of stormwater. These higher-risk sites would not be viable or conducive to POS uses.

Stormwater retention and management within green space can also provide an attractive feature if maintained and designed with aesthetics and green space function. For example, Ascot Waters, the lakes at the Faulkner Civic Precinct, Willow Lake Park, and Centenary Park are just a few of the parks within the City that contain permanent water bodies. These water bodies serve as a drainage function and provide users with an attractive water feature. However, these lakes have management issues, particularly during summer when low water levels result in unappealing views.

The City also maintains other WSD green space sites that are more seasonal, including Fulham Street Sump and Wilson Park, which contain floodable areas. These sites are receiving points for significant storm events and provide flood mitigation and infiltration. These sites must also be constructed for drought conditions, impacting landscape design, surface treatment (turf, paths, etc.), and amenities (playgrounds, benches, equipment).

### 13.7 Conclusions

The City should:

- Enhance the activation of the City's sporting grounds through the City's Recreation Strategy
- Regularly monitor the use of sporting grounds
- Consider mixed-use sports facilities, including accommodation for the most popular recreational activities of walking, gym/fitness, running/athletics, and cycling



- Where possible, design streetscapes and car parks with WSUD principles to become water receptors rather than conveyors, for example, utilising permeable pavements, rain gardens, swales, and infiltration bays
- Maintain water bodies with a combination of mechanical (for example, aeration) and ecological (for instance, revegetation) management strategies
- Investigate options to integrate blue-green (water and green space), particularly at parks with stormwater basins or open drains, for example, Forster Park or the linear drains in Kewdale.

## 14 Green Space Access for All

### 14.1 Access for All Ages and Abilities

A primary objective of POS management and delivery is to ensure that it caters for all green space users of all ages and abilities and pets and companion animals such as dogs and horses<sup>2</sup>. Green Space Access for All is not just about physical access alone; it aims to ensure everyone can enjoy the space regardless of age and ability.

Additionally, the POS Strategy supports the 'Anyone Can Play' philosophy. Inclusive play is fundamental in promoting children's cognitive development, including children with unique learning abilities.

To ensure green space opportunities and experiences for all ages and abilities, the design and placement of green space and green space features/elements should:

- Acknowledge people within the local community that have specific user needs – Evidence-Based Design should be considered when installing play equipment or green space elements
- Be inclusive and accessible rather than exclusive and inaccessible (for example, 'Liberty Swings' are accessible only to people with wheelchairs, meaning they risk feeling excluded or different and are not able to participate in other green space experiences)
- Be sourced from suppliers who provide inclusive play solutions
- Include and balance sensory-rich and auditory play with quiet and cozy (retreat) experiences in areas where there is a specific need in the community (that is, sensory play can assist and support children with autism)
- Focus on a variety of social inclusion and interaction opportunities.

### 14.2 Age-Friendly – Welcoming, Safe and Accessible

The City also has an age-friendly plan that addresses older residents' needs. This plan follows the Global Age-Friendly Network, which sits under the Department of Communities affiliate membership of the global network.

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<sup>2</sup> In association with the Ascot Residential and Stables zone under the City's Local Planning Scheme.

The framework identifies eight domains that guide the City's actions to create an age-friendly community. Focus Area Objective 1 of the City's current Age-Friendly Plan recommends that all outdoor spaces are welcoming, safe, and accessible to the elderly.

The quality of life of seniors is affected by their physical environment. The external environment and public buildings significantly impact seniors' ability to age in place. Good access to facilities and green space opportunities for physical activity contributes to an age-friendly community.

Therefore, green space planning and design should include the following design criteria to improve accessibility and age-friendly use:

- Incorporation of 3 metre wide reinforced physical activity footpath (additional benefit, allows traffic access for emergency services or supportive services, for example, ambulance of emergency services)
- Reduce slope/grade wherever possible
- Inclusion of garden/landscaping design elements that support cognitive activity (that is, use of garden elements and plantings which may trigger a memory or sensory responses)
- Provision of rest and quiet contemplation spaces, including benches or gazebos near paths
- Maintain clear sightlines to entrances and exit points and ensure paths are clear of vegetation intrusion or trip risks
- Use of security lighting to increase the perception of safety as required and in consultation with green space users and neighbours
- Reduce or avoid large expanses of blank walls or fences by using vegetative solutions (for example, creepers, vines, or artwork)
- Avoid isolated areas within the park design
- Integrate Crime Prevention Through Environmental Design (CPTED) principles
- Park furniture and exercise equipment are usable by the elderly and promote active lifestyles
- Consider multi-generational equipment that allows grandparents and grandchildren to play and exercise together.

### **14.3 Access to Designated Dog Exercise Locations**

Multiple Australian surveys have identified that over 60% of dog and cat owners refer to their pet as a family member, and most spend on average three to four hours with their pet each day<sup>3</sup>. Dogs, however, tend to lead the way in pet ownership, with 48% of Australian households having at least one dog<sup>4</sup>. The surveys also identified that insufficient room for exercise and activity were becoming barriers for pet owners and why non-pet owners chose not to own a pet.

The City acknowledges the value of pet ownership, including companionship, their calming influence and the promotion of exercise and healthy lifestyles.

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<sup>3</sup> Animal Medicines Australia Pty Ltd. (2019). *Pets in Australia: a national survey of pets and people*. Newgate Communications Pty Ltd

<sup>4</sup> Wilkins, R., Botha, F., Vera-Toscano, E., & Wooden, M. (2020). *The Household, Income and Labour Dynamics in Australia Survey: Selected Findings from Waves 1 to 18*. Melbourne Institute: Applied Economic & Social Research, University of Melbourne.

Walking pets to the local park or through the neighbourhood increases community connectivity and unites people of similar interests. Therefore on-lead and off-lead exercise areas for dogs within POS are important in supporting healthy communities.

The City currently provides 25 designated off-lead dog exercise areas. While these are informal, they are not signed, fenced, and do not contain specialised dog agility equipment; they still provide a place for dogs to be exercised off-lead.



Other considerations for off-lead dog areas include:

- Drinking fountains with dog bowls
- Fencing if adjacent to arterial routes, a park where there is a playground, or to focus activity within one location to assist with maintenance
- Doggy/'poo-ch' disposal bags and bins.

A desktop assessment of residential and registered animal accessibility to a designated off-lead exercise area was undertaken in 2020 and is summarised in Table 22 and Figure 18.

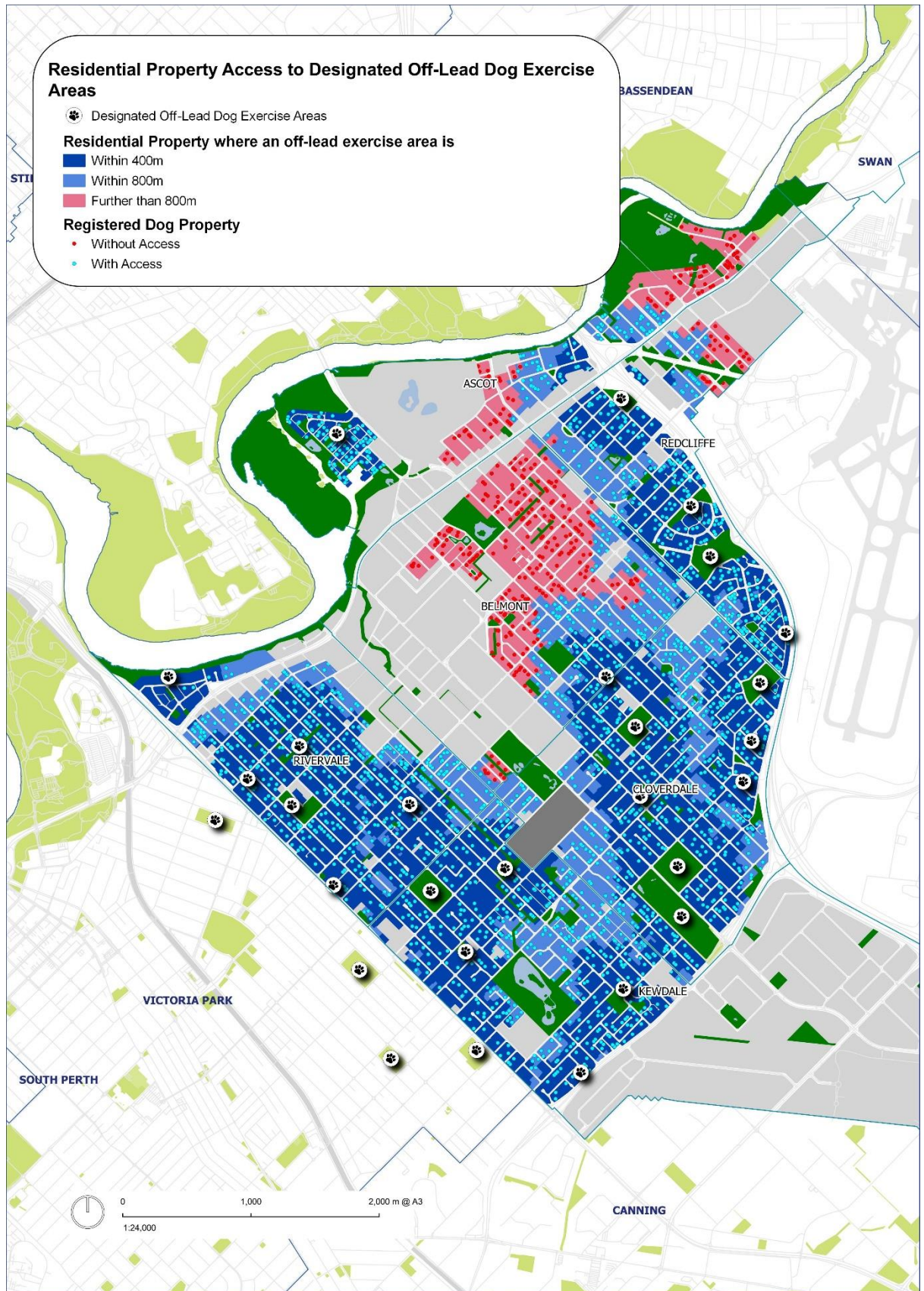
With the increasing popularity of walking other pets on leads, such as cats, rabbits, and ferrets, on-lead exercise areas provide a location where all pet owners can opt to exercise their pets.

**Table 22: Desktop Assessment of City of Belmont Residential Dog Ownership.**

 <b>Residential Properties</b>	 <b>Registered Animals</b>
<ul style="list-style-type: none"> <li>• 19.7% of all residential properties within the City had a registered animal (dog).</li> <li>• 56.8% of all residential properties are within 400m of a designated off-lead dog exercise area.</li> <li>• 28.0% of all residential properties within the City are between 400m and 800m of a designated off-lead dog exercise area.</li> <li>• 15.2% of all residential properties within the City are further than 800m from a designated off-lead dog exercise area.</li> </ul>	<ul style="list-style-type: none"> <li>• A total of 4,181 dogs were registered.</li> <li>• 57.3% were within 400m of a designated off-lead dog exercise area.</li> <li>• 28.2% were between 400m and 800m of a designated off-lead dog exercise area.</li> <li>• 14.5% have to walk further than 800m to access a designated off-lead dog exercise area.</li> <li>• 33.2% of registered animals in the suburb of Ascot and 57.5% in the suburb of Belmont are further than 800m from a designated off-lead dog exercise area.</li> </ul>

The similarity between property access and registered dog access indicates an even distribution of animals across the City rather than being located in one area.

Figure 18: Access to Off-Lead Dog Exercise Areas





#### 14.4 Access to Designated Horse Exercise Locations

A significant and historical land use within the City of Belmont is the Ascot Residential and Stables precinct. Currently, new developments within the Residential and Stables precinct are required to maintain space for a stable; however, they are not required to construct stables or house a horse. Nevertheless, due to the active nature of the Ascot Racecourse and stables precinct, many properties are still registered as stable premises and house horses. As of 30 June 2022, 128 properties within the Residential and Stables precinct were registered with stables. Please refer to Figure 19 for additional information regarding this precinct.

Whilst the Ascot Racecourse provides access to formalised facilities to exercise, train and race horses, horse exercise areas are also located within POS. This includes a horse swimming area in the Swan River at Gould Reserve, a designated horse exercise area at Garvey Park, and a bridle path connecting the Racecourse to Garvey Park via Ascot streets and the foreshore path.

It is recommended that the City engages with the racing community and recreational horse owners to identify opportunities for improvement in areas such as Garvey Park or Gould Reserve to continue to support this unique aspect of our urban community.



Figure 19: Ascot Residential and Stables Precinct with access to Horse Exercise Areas





## ANALYSIS OF OBJECTIVE 2 - LIVEABLE POS

Provide POS that supports urban liveability and recognises local identity, culture and heritage.

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### 15 Urban Liveability and Public Health

The value of and need for green space within urban environments is strengthened by its positive contribution to public health and urban liveability. Green spaces (parks, shaded streetscapes, natural areas, planted civic spaces) assist in improving the urban environment and improve living standards and quality of life.

Green space loss within an urban centre is often caused by increased density, overuse, or replacing natural elements with other urban land uses (residential, industry, commercial, agriculture etc.). Where this occurs, the associated public health attributes are also reduced.

Green space contributes to public health by positively influencing social, physical, and cognitive pathways (Table 23). However, the full extent of these benefits requires formal planning and design to achieve the full health potential of green spaces (for example, the positioning and availability of exercise equipment). This is particularly important in densifying urban environments, where green spaces of various sizes are being accessed for physical and mental health purposes. Further detail on green space play elements is detailed in section 16.

Physical health and green space opportunities can include:

- Accessing district sporting fields for organised sports
- Accessing neighbourhood green space for unorganised sports, use of outdoor gym equipment, picnics and physical activities
- Access to regional points of attraction to interact with natural green spaces (for example, kayaking on the Swan River, bushwalks, picnics).

Therefore, the City should aim to include the elements identified in Table 24 in the planning and design stages of green space, particularly for larger neighbourhood parks or where there is a clear population need (for example, near an aged care facility or in a high-density area).

**Table 23: Health or Liveability Benefits from Green Space**

Green Space Element	Health elements	Health or liveability benefit
<b>Attractive green space for physical activity</b> (organised sports, athletics, running, walking etc.)	<ul style="list-style-type: none"> <li>Increased physical exercise/reduced sedentary lifestyles.</li> <li>Increased community participation (club or association involvement)</li> </ul>	<ul style="list-style-type: none"> <li>Improved cardiovascular health</li> <li>Reduced morbidity</li> <li>Reduced respiratory illnesses</li> <li>Reduced obesity</li> <li>Reduced risk of diabetes</li> <li>Improved community cohesion/participation.</li> </ul>
<b>Attractive green space for community cohesion</b> (picnics, games, relaxing, meetings etc.)	<ul style="list-style-type: none"> <li>Increased community sense of identity and inclusion</li> <li>Improved social capital and cohesion.</li> </ul>	<ul style="list-style-type: none"> <li>Improved mental wellbeing and cognitive function (reduced rates of depression, stress, anxiety, loneliness)</li> <li>Improved community sense of place and ownership of green space</li> <li>Improved family and social relationships and resilience.</li> </ul>
<b>Attractive green space for ecological conservation</b> (bushland, rivers, wetlands etc.)	<ul style="list-style-type: none"> <li>Improved ecosystem services (i.e. water and air filtration)</li> <li>Improving urban liveability (contributes to nicer places to live).</li> </ul>	<ul style="list-style-type: none"> <li>Improved respiratory function/reduced respiratory illnesses</li> <li>Improved biophilia; the appreciation and connection to natural environments</li> <li>Improved climate change resilience (that is, reduced urban heat).</li> </ul>

**Table 24: Achieving Health Benefits**

Green space Element	Infrastructure Opportunities
<b>Attractive green space for physical activity</b> (organised sports, athletics, running, walking etc.)	<ul style="list-style-type: none"> <li>• Ovals and club facilities at all district sporting grounds</li> <li>• Outdoor exercise equipment within neighbourhood spaces, including multi-generational playgrounds to support participation</li> <li>• Marked running tracks on circular paths around.</li> </ul>
<b>Attractive green space for community cohesion</b> (picnics, games, relaxing, meetings etc.)	<ul style="list-style-type: none"> <li>• BBQ facilities at larger regional and neighbourhood parks co-located with public toilets and picnic facilities</li> <li>• Community gardens located in neighbourhood parks co-located with community centres/activity centres</li> <li>• 'Street games' within local parks or neighbourhood parks to provide big-space elements within small spaces</li> <li>• Inclusion of shaded picnic areas within all local spaces</li> <li>• Locating green space activities with equivalent land use (see section 18).</li> </ul>
<b>Attractive green space for ecological conservation</b> (bushland, rivers, wetlands etc.)	<ul style="list-style-type: none"> <li>• Nature play co-located with natural areas, schools and local parks</li> <li>• Planting of native gardens and revegetation of natural areas</li> <li>• Provision of bush trails and wayfinding infrastructure in natural areas.</li> </ul>

## 16 Play and Green Space Experiences – Childhood to Adulthood

Regardless of age and physical ability, green spaces allow everyone to experience their natural world, be socially connected, and participate in or engage in physical activity. This starts from the early years of childhood and extends into adulthood and even into the 'golden years'. However, whilst play and green space opportunities will always be available, particular consideration is required regarding the type/nature of play and the elements that challenge or offer various play experiences that contribute to social, physical or mental wellbeing.

Table 25 summarises green space observations noted in various research projects (journal articles) focused on how people develop and maintain wellbeing with access to green space. The focus of research has been on the physical and mental development of a person in different age groups and how various elements of play or green space experiences contribute positively to each stage of development. As noted previously, and as stated within academic sources, the focus has traditionally been on play as a critical developmental need for children to build physical, cognitive (mental) and social competencies. Providing children opportunities to play is an important developmental factor that underpins their success in their later years (school, relationships and even employment). Further information in relation to playgrounds and play equipment is detailed in section 17.

Notably, too, green spaces foster several developmental and wellbeing benefits for all age groups. Emerging literature in the past decade has proven the benefits of natural elements for elderly populations, particularly in maintaining physical and mental wellbeing. In recognition of this benefit, different playground/equipment providers are now supplying a multitude of inclusive and multi-generational product lines that enable both young and old to participate in green space experiences.

It is noted that the POS Strategy focuses on outdoor POS/green space activities. It does not focus on indoor exercise or fixed recreational activities (gyms, organised training classes, swimming pools, squash courts, etc.). Information relating to these activities will be covered under the City's Recreation Strategy.



**Table 25: Modelled Play Experiences, Play Elements and Play-Health Outcomes by Age Group**

	Play Type	Play Elements	Human-Health Outcomes
<b>The Early Years and Childhood (0 - 14)</b>	Nature play	<ul style="list-style-type: none"> <li>Natural materials (sand, rocks, logs, twigs, leaves etc.)</li> <li>Lose/slippery surfaces</li> <li>Water-based play</li> <li>Natural gardens (trees, flowers, plants)</li> <li>Changes in slope/gradient</li> <li>Spaces for intuitive/inquisitive exploring.</li> </ul>	<ul style="list-style-type: none"> <li>Supports age-appropriate risk and decision making</li> <li>Assists in the development of fundamental movement skills – balance, strength, agility</li> <li>Supports cognitive development – problem-solving, imagination, higher-order thinking skills (creativity, evaluating, analysing)</li> <li>Builds emotional resilience – a sense of identity and self-worth</li> <li>Enhances social competencies - communication, relationship skills, empathy, sharing</li> <li>Connects children with the natural world</li> <li>General physical health benefits.</li> </ul>
	Playgrounds	<ul style="list-style-type: none"> <li>Climb, crawl, hide and run.</li> <li>Swing, slide and balance.</li> <li>Spaces for social interactions.</li> </ul>	<ul style="list-style-type: none"> <li>Supports general physical health – cardiovascular, reduced obesity risks</li> <li>Supports fine motor skills/coordination skills – hand-eye coordination, depth perception, object control and movement etc</li> <li>Provides opportunities to participate and belong to community groups</li> <li>Provides opportunities to develop an understanding of social conventions and social competencies.</li> </ul>
	Playing fields/ spaces	<ul style="list-style-type: none"> <li>Junior sport and athletics spaces</li> <li>Bike paths/ networks.</li> </ul>	
<b>Teens to Young Adults (15 - 24)</b>	Advanced playgrounds/ features	<ul style="list-style-type: none"> <li>Skate parks</li> <li>Pump tracks</li> <li>Bike trails</li> <li>Ball sports.</li> </ul>	<ul style="list-style-type: none"> <li>Advanced social competencies and social communication skills</li> <li>Improved/enhanced physical activity and wellbeing</li> <li>Engagement with others and social inclusion.</li> </ul>
	Outdoor gym/ exercise equipment or sports hubs and clusters	<ul style="list-style-type: none"> <li>Climbing/gymnastic frames.</li> <li>Half courts.</li> <li>Outdoor table tennis etc.</li> </ul>	<ul style="list-style-type: none"> <li>Improved physical wellbeing – cardiovascular, strength, weight</li> <li>Engagement with others and social inclusion.</li> </ul>
	Competitive Playing fields	<ul style="list-style-type: none"> <li>Organised sports ovals (AFL, soccer, rugby, cricket)</li> <li>Athletics facilities.</li> </ul>	<ul style="list-style-type: none"> <li>Enhanced engagement with organised sports (club participation).</li> <li>Improved physical health – lower rates of obesity and cardiovascular risks.</li> <li>Improved mental wellbeing – a sense of belonging.</li> </ul>
<b>Adulthood (25 - 64)</b>	Outdoor exercise equipment clusters or trails	<ul style="list-style-type: none"> <li>Gymnast Frames.</li> <li>Aerobic and anaerobic fitness trails (static and dynamic equipment)</li> <li>Ninja courses.</li> </ul>	<ul style="list-style-type: none"> <li>Improved physical health – lower rates of obesity and cardiovascular risks</li> <li>Improved mental wellbeing – retained a sense of belonging and self-worth (reduced depression, stress and anxiety).</li> </ul>
<b>Seniors (65 onwards)</b>	Inclusive Outdoor exercise equipment	<ul style="list-style-type: none"> <li>Stability/balance, flexibility, and coordination frames</li> <li>Walking tracks.</li> </ul>	<ul style="list-style-type: none"> <li>Improved physical strength and wellbeing (cardiovascular, balance, coordination) will result in reduced debilitating health conditions (cardio, falls, sprains)</li> <li>Supports cognitive function and memory.</li> </ul>
	Nature spaces	<ul style="list-style-type: none"> <li>Walking trails</li> <li>Gardens</li> <li>Contemplation spaces</li> <li>Rest spaces</li> <li>Sensory gardens</li> <li>Streetscape gardens.</li> </ul>	<ul style="list-style-type: none"> <li>Supports physical activity – mobility, cardiovascular and weight management</li> <li>Helps regulate memory loss/ recall (dementia)</li> <li>Improved recovery times from illness/injury</li> <li>Improved mental wellbeing – preventative depression.</li> </ul>

## 17 Playgrounds and Play Equipment

### 17.1 Accessibility to Playgrounds

This strategy acknowledges the benefits of playgrounds and play equipment, particularly in supporting early childhood development (3 to 12 years of age), community connectivity and a sense of belonging. The size, level of service, and type of playground (for example, nature play versus standard combination units) will depend on the park's locality, access to other playgrounds or play experiences near the park, and surrounding demographics (requirement to provide age-appropriate).

A desktop assessment of residential property access to playgrounds (excluding type or level of service) has identified that:

- The City has 46 playground locations spread across the City
- 29% of residential properties within the City are within 200m of a playground, and at least 66% are no further than 400m from a playground
- 22% of properties within the suburb of Belmont are 800m away from a playground, significantly above the average of 10%
- 1% (n=65) of residential properties are further than 800m from a playground
- The Redcliffe suburb has excellent access to playgrounds, with at least 85% of properties within 400m of a playground.

Distance	Ascot	Belmont	Cloverdale	Kewdale	Redcliffe	Rivervale	The City Average
200m	33%	19%	26%	26%	46%	30%	29%
400m	29%	28%	41%	42%	39%	41%	37%
600m	21%	30%	27%	28%	11%	24%	24%
800m	14%	22%	6%	5%	3%	5%	9%
>800m	3%	1%	0%	0%	0%	0%	1%
	100%	100%	100%	100%	100%	100%	100%

Table 26: Playground Accessibility




### 17.2 Levels of Service – Playgrounds and Play Equipment

The City has adopted an informal approach on standard levels for playgrounds, generally supplying playground equipment that is appropriate for the size of the park (local, neighbourhood, district) and its proximity to other playgrounds and estimated or expected catchment size (for example, an isolated local park with a larger catchment would likely have a more extensive playground).




The City's replacement program for playgrounds tends to be at the end of the asset life of the equipment and is captured in the City's Asset Management Plan – Playground Replacements.



At the end of the asset life of playgrounds, the City will program either:

	<b>Replacement Like-For-Less</b>	Redundancy or reduction in service if proven the playground is no longer required locally or a smaller level of service is adequate. For example, this may be appropriate where a major POS upgrade has occurred nearby.
	<b>Replacement Like-For-Like</b>	The playground equipment, function, and level of service are adequate for the locality but need replacing.
	<b>Upgrade</b>	Additional playground features or a larger or more specialised layout are required. This may occur where there is a shortfall of POS, changes in demographics and/or increased densification.

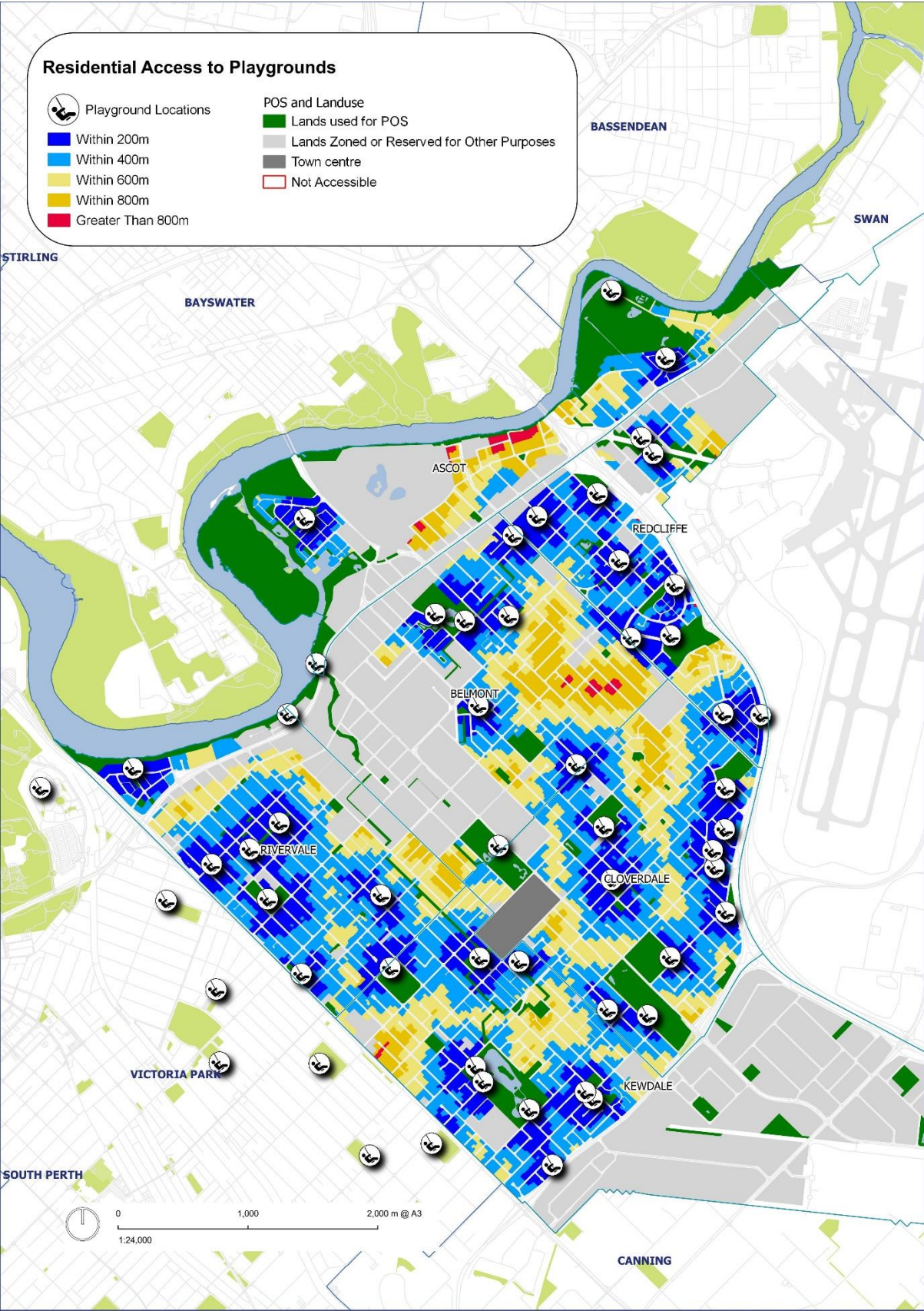
Typically when determining the playground replacement requirement, the following justification is required:

	<b>Replacement Like-For-Less</b>	Demonstrate the playground is no longer required within this locality by demonstrating access to another playground or higher level of service.
	<b>Replacement Like-For-Like</b>	Demonstrate that Like-For-Less or Like-For-Additional is not required - Proceed with like-for-like replacement.
	<b>Upgrade</b>	Undertake an assessment of the level of service deemed necessary for this locality (demographics assessment, survey, current access to other localities, the need to provide a higher level of service or a different form of green space attraction).

The following questions should be considered when planning a playground renewal or upgrade project:

- Do residents within at least 600m of this playground have access to any other playground or play experience? (for example, if this playground is altered, what impact does it have on others in the vicinity?)
- Is the immediate area (800m catchment) saturated or lacking in service levels?
- Does the park provide a level of service for a regional catchment, special development precinct or high-density area? (for example, Ascot Waters, The Springs)
- Is the playground project connected to or linked with another larger project? (for example, Forster Park Pump Track, Wilson Park Master Plan)
- Could a playground replacement project provide additional green space or play experience? (for example, replace combination unit with nature play)
- Does the playground provide a specific level of service? (for example, older youth playground, senior-friendly etc.).

Figure 20: Residential Property Access to a Playground



## **18 Co-Locating Specialised Outdoor Exercise and POS Experiences**

To maximise use and access to specific or specialised POS experiences, the City should aim to co-locate experiences with complementary land uses or infrastructure.

For example, community gardens could be located within a neighbourhood or district park (to allow for space) and be within an area of high residential density where residents have insufficient space for their garden. Likewise, locating outdoor exercise equipment or inclusive/age-friendly equipment near care facilities reduces travel requirements and provides access to specific populations who will utilise these spaces.

The decision framework around determining the appropriate location needs to remain relatively flexible in each event. This would allow requests or the placement of POS experiences to be assessed on a case-by-case basis. Notwithstanding, the guideline below should inform the locating of these experiences.

### **18.1 Outdoor Exercise Equipment**

The placement of outdoor exercise equipment provides the Community with ‘free’ exercise and physical activity infrastructure. This can contribute to addressing and improving public health issues such as obesity, poor mental health and cardiovascular disease. It is, however, recommended that the decision framework to locate outdoor exercise equipment includes:

- Not installing units or circuits within 800m of another outdoor exercise equipment/location
- Promoting exercise that requires the use of static equipment (that is, body weight and agility with no moving parts) rather than dynamic equipment (that is, additional resistance and moving parts)
- Considering whether the unit or circuit will have a complementary or negative impact on existing parkland infrastructure (for example, detracts from existing playgrounds, complements existing sporting spaces)
- Installing the equipment where space is available within a neighbourhood or district open spaces (note, smaller and individual static units may be considered in local open spaces where there is a defined need)
- Co-locating equipment with drinking fountains and natural shade and other facilities that promote or encourage outdoor exercise.

This strategy has not addressed the lifecycle, durability, and management of outdoor exercise equipment; these aspects will be discussed in the City’s Recreation Strategy.

### **18.2 Community Gardens**

Community gardens or food growing spaces have grown in popularity in Australia, predominantly within inner-city and highly urbanised areas where there is less access to green private open space.



Typically, these spaces include garden beds or growing areas that provide the local community with an opportunity to grow fruit, vegetables and other edible plants. Additionally, community gardens contribute to community identity and cohesion.

Various community garden projects across Australia have also reported benefits, including:

- Healthier eating habits
- Improved knowledge of gardening, food and nutrition
- Participating in a low-intensity form of exercise
- Promoting sustainability initiatives (composting, low carbon food production, waste reduction)
- Opportunities for multi-generational and multi-cultural nodes of interest
- Opportunities for low socioeconomic communities to participate.

There are multiple benefits associated with designing and delivering a well-planned and community championed garden. However, the opposite is equally valid. Unfortunately, many community gardens have failed due to poor design, poor community 'ownership', and an expectation that the local government will continue maintenance (harvesting, replanting, mulching, etc.).

The decision framework in locating a community garden should consider:

- Is there an ongoing and demonstrated commitment from the community to establish and maintain the garden?
- Is the garden located in a space where there is sufficient space and does not impact existing amenities?
- Does the design of the community garden promote security, accessibility and inclusivity?
- Will the community garden be well resourced, including access to a secure water supply; can it sustain itself with minimal surveillance; will it require the input of synthetic fertilisers, herbicides or pesticides?
- Will the proposed location impact adjacent land uses?



**Figure 21: Left: Community Garden at Copley Park. Right: Belmont Community Garden at Wilson Park**

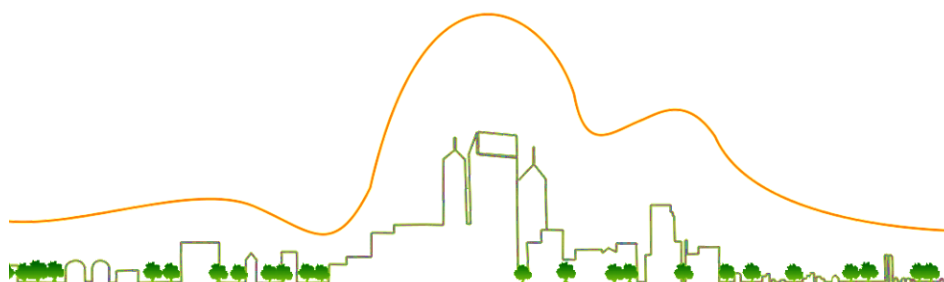
As a thriving community garden requires a high degree of dedication from a community group to ensure the continued operation of the garden, the City will consider the development of a community garden upon request rather than initiate the development of a community garden without the demonstrated interest.

## 19 Green Space and Urban Heat

Through the natural process of photosynthesis, trees and plants release water and can cool the local environment. This cooling effect is increased when combined with irrigation and water availability. To further support urban liveability, green space and streetscapes should reduce urban heat by enhancing green space and street trees.

Research has demonstrated ambient air temperatures in built-up areas can be 4°C to 15°C warmer than in surrounding vegetated or 'greener' areas. Areas of high urban development and low green cover act as 'heat islands' that absorb heat during the day and then release heat at night. However, parks and well-shaded areas can reduce the local ambient temperature by between 0.5°C to 2°C, making a difference on days above 35°C when public health and heat-related health risks are exacerbated.

In 2016, the City assessed the level of tree canopy across different land uses. The highly accurate aerial mapping of tree canopy identified that the highest performing land uses were land reserved for Parks and Recreation (including MRS) and Civic and Cultural purposes (canopy cover averages ranging between 33% to 57%). Residential lands had tree coverage of 17% on average. An investigation by the Department of Planning, Lands and Heritage (Western Australian Government) in 2018 identified that Parklands within the City had, on average, 30% canopy cover whilst residential areas had, on average, 9% cover. Different methods of collecting the data likely contributed to the different results. Either way, this data will be important when considering future strategies to reduce urban heat and when assessing the success of these.



**Figure 22: The Urban Heat Island Effect**



In urban environments, green spaces provide communities refuge and relief during a heatwave or extreme heat events. This may be critically important in lower socioeconomic areas (who cannot afford home cooling), areas consisting of older people (who are heat vulnerable) and areas consisting highly of outdoor workforces (who risk dehydration, heat stress and sunburn).

Therefore, it should be a consideration of POS design and planning to reduce urban heat and provide cooling opportunities by:

- Maintaining irrigated turf surfaces that offer large areas of evapotranspiration (being the evaporation of moisture from the soil and transpiration of moisture from the leaves of the plants)
- Integrating blue-green infrastructure to increase water access (that is, WSUD)
- Improving and increasing natural shade elements around playgrounds, picnic areas and community buildings
- Increasing street tree coverage to create corridors of green coverage and to increase shade over bitumen and pathways
- Increasing shade over paths in green spaces
- Allowing trees in POS and streetscapes (unless under powerlines) to grow to their full biological and ecological potential, including canopy size and spread with minimal pruning. (Notably, as per the City's Urban Forest Policy, the City will not prune for aesthetic purposes).

## 20 Green Space Design: Cultural Inclusion, Landscape and Historical Perspective

Wherever possible, green spaces should be designed to acknowledge and retain local cultural values. The City has achieved this in various parks that acknowledge Aboriginal and Torres Strait Islander, post-European and ecological history.

### 20.1 Aboriginal and Torres Strait Islander Perspectives

As of 2016, the City had an estimated 40,083 residents, with 993 residents identifying as Aboriginal and Torres Strait Islander peoples.

The City acknowledges the Whadjuk people of the Noongar Nation, as the Traditional Owners of this land, Whadjuk Boodja. The City partners with internal and external stakeholders to help ensure the history and culture of Aboriginal and Torres Strait Islander peoples are respected, remembered and celebrated.

In line with these values, the City has implemented green space design principles that acknowledge and demonstrate Aboriginal and Torres Strait peoples' heritage and culture, which is especially important when works physically impact the land.

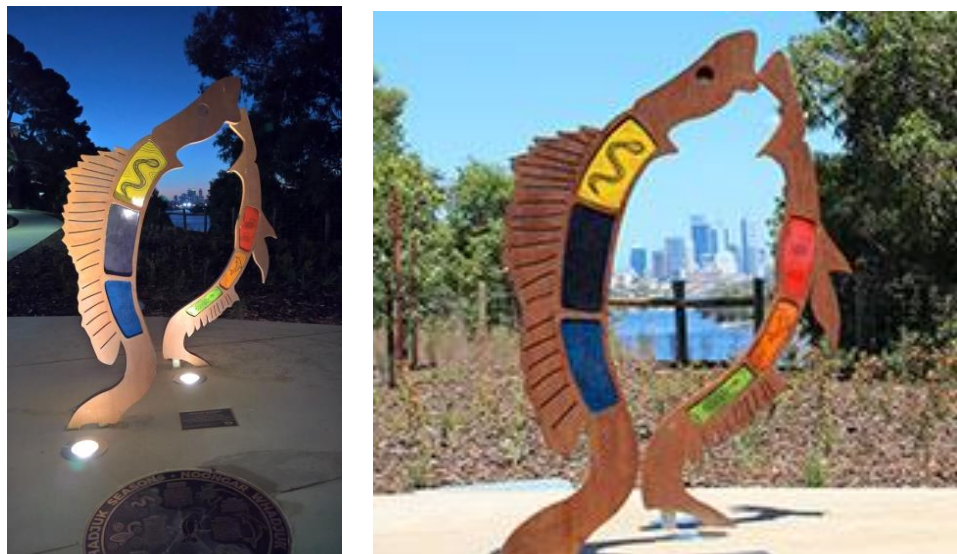
This has included:

- The naming of *Bilya Kard Boodja Lookout* at Tanunda Drive in Ascot (see Figure 22 over page) to acknowledge and commemorate our Noongar heritage and associated artwork and interpretative signage. (Bilya means 'River', Kard means 'Hill', and Boodja indicates 'Land/Country' in Noongar language).

- Inclusion of signage at Centenary Park showcasing local native birds and their Noongar names
- In-path artwork at Goodwood Parade boat ramp showcasing Derbyl Yerrigan (Swan River) imagery
- Installation of flora signage incorporating Noongar names and uses along the “Jida Bida Path” (Small Bird Path) nature walk within Tomato Lake bushland.

It is recommended to continue to work closely with local Aboriginal and Torres Strait Islander people and incorporate their perspectives and culture into green space design by:

- Including Noongar language and names within park signage and wayfinding
- Consulting with Whadjuk Noongar stakeholders on local native plants to be included within landscaping, particularly those that are significant to Noongar culture (food, medicinal, ritual etc.), including educational signage
- Incorporating Noongar cultural elements within green space design, including meeting spaces or yarning circles
- Identifying significant Whadjuk cultural and heritage sites within POS
- Researching significant and registered heritage sites before work is planned and seeking appropriate consultation approvals.



**Figure 23: Bilya Kard Boodja Lookout artwork was unveiled in December 2016 and created by Peter Farmer junior and Kylie Graham.**

## 20.2 Post-European Perspectives

Urban development commenced in the pre-1900s in Rivervale and steadily moved east, with Cracknell Park and Peet Park likely the first parcels of land developed as green space. On 1 July 1961, the Belmont Park Road District Board became the Shire of Belmont following the *Local Government Act 1960*. City status (WA Electoral Commission, 2007) was attained on 17 February 1979.

A significant part of the City's post-European history is associated with the horse racing industry, brick kilns and peri-urban agriculture. It is through this history that some parks have received their names. For example:

- Peet Park in Kewdale was named after the founder of Peet and Co. (Real estate agents established in 1895)
- Tomato Lake in Kewdale was named after vegetable garden growers
- Ayres Bushland in Ascot was named after Frank Ayres, a prominent district identity whose name was synonymous with the first caravan park in Belmont.

It is recommended to recognise the post-European history of the City with POS to:

- Continue entry statement or wayfinding signage demonstrating each park's historical significance, including educational signage within the park where appropriate
- Through the City of Belmont Museum, document any changes to green spaces for future reference
- Undertake research before work is planned to identify the risk of impacting historical value.

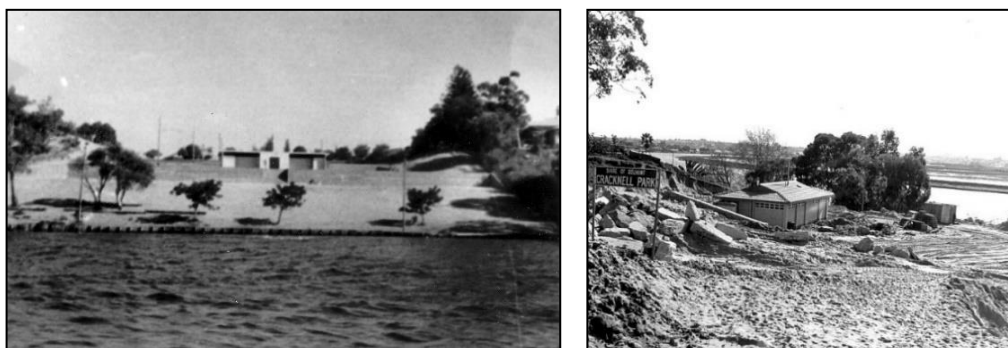


Figure 24: Left: Cracknell Park, Rivervale, circa 1950. Right: Cracknell under construction circa 2000 (right).



Figure 25: Early Playgrounds. Left: Tomato Lake. Right: Children at Arlunya Park, circa 1979.

## 20.3 Ecological Perspectives

Before extensive clearing for urban development, the pre-European vegetation included 2,082 hectares of the Bassendean Complex (Central/ South), 1,512 hectares of the Southern River Complex (majority within Perth Airport) and 201 hectares of the Guildford Complex (Collective Local Biodiversity Strategy 2018, EMRC).

This ranged from jarrah, marri and wandoo (*Eucalyptus marginata*, *Corymbia calophylla*, *E. wandoo*) along the Swan River (extending inland approximately to where Great Eastern Highway is situated) and jarrah, banksia or casuarina (*Eucalyptus marginata*, *Banksia* spp., *Allocasuarina* spp.) within the central part extending south east from the river.

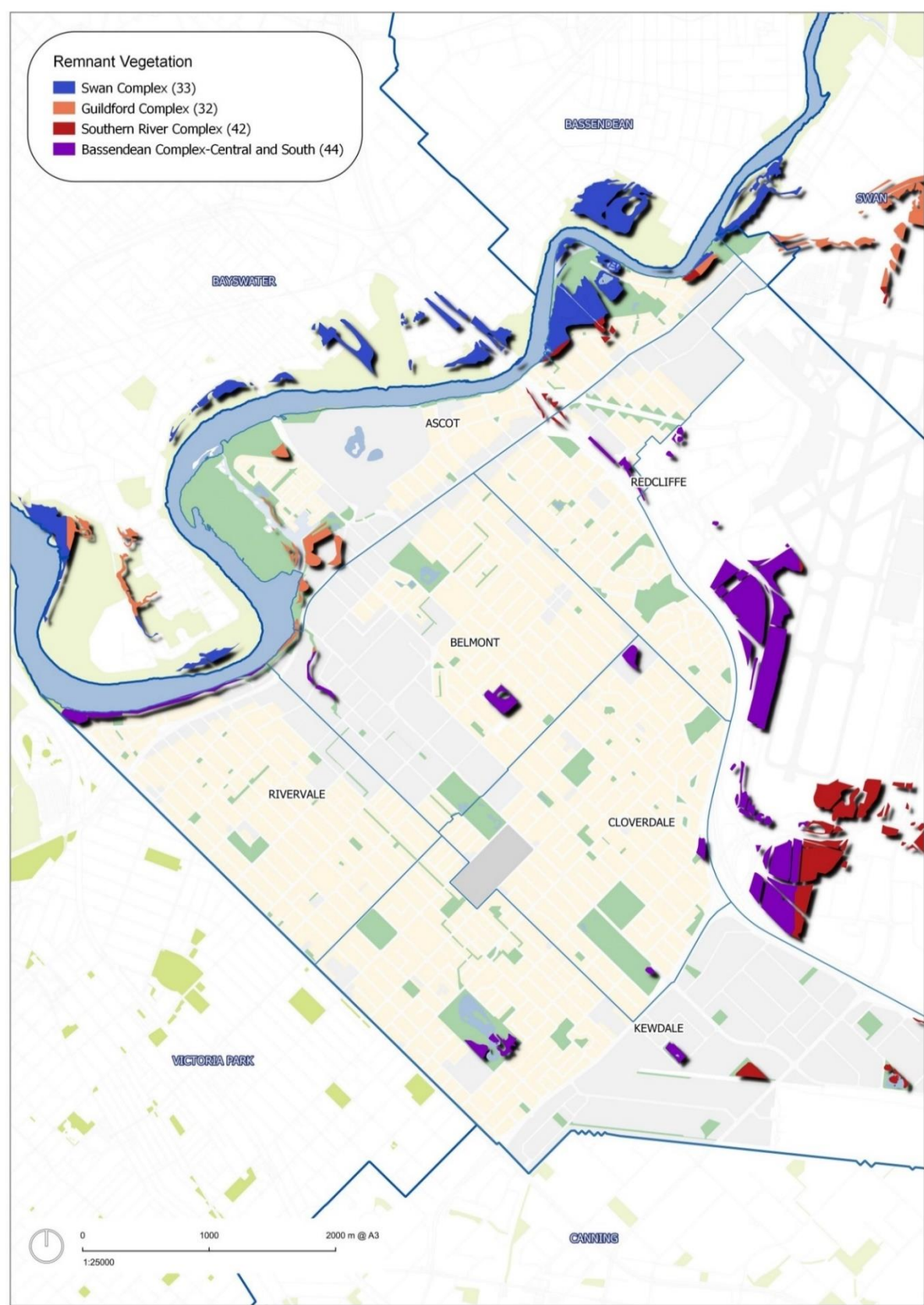
Most of the remnant vegetation within the City was progressively cleared for urban development, with some pockets along the Swan River, Tomato Lake and Perth Airport remaining (Figure 26). However, as residential development grew and urban landscape aspirations changed, much of the native vegetation, even within reserves, was cleared and altered to fit more European garden qualities. By 1965 most remnant vegetation within residential areas had been removed. Even sites such as Signal Hill, a bush block located within the City, were cleared for telecommunications and significantly disturbed. This historical clearing has substantially disturbed the original ecological services and heritage.

**Table 27: Vegetation Complexes known to the Belmont Areas**

Vegetation Complex	Summary Description
<b>Bassendean Complex-Central and South</b>	Vegetation ranges from woodland of <i>Eucalyptus marginata</i> (Jarrah) - <i>Allocasuarina fraseriana</i> (Sheoak) - <i>Banksia</i> species to low woodland of <i>Melaleuca</i> species sedge lands on the moister sites. This area includes the transition of <i>Eucalyptus marginata</i> (Jarrah) to <i>Eucalyptus tottiana</i> (Pricklybark) in the vicinity of Perth.
<b>Southern River Complex</b>	Open woodland of <i>Corymbia calophylla</i> (Marri) - <i>Eucalyptus marginata</i> (Jarrah) - <i>Banksia</i> species with fringing woodland of <i>Eucalyptus rudis</i> (Flooded Gum) - <i>Melaleuca raphiophylla</i> (Swamp Paperbark) along creek beds.
<b>Guildford Complex</b>	A mixture of open forest to tall open forest of <i>Corymbia calophylla</i> (Marri) - <i>Eucalyptus wandoo</i> (Wandoo) - <i>Eucalyptus marginata</i> (Jarrah) and woodland of <i>Eucalyptus wandoo</i> (Wandoo) (with rare occurrences of <i>Eucalyptus lane-poolei</i> (Salmon White Gum)). Minor components include <i>Eucalyptus rudis</i> (Flooded Gum) - <i>Melaleuca raphiophylla</i> (Swamp Paperbark).
<b>Swan Complex</b>	Fringing woodland of <i>Eucalyptus rudis</i> (Flooded Gum) - <i>Melaleuca raphiophylla</i> (Swamp Paperbark) with localised occurrence of low open forest of <i>Casuarina obesa</i> (Swamp Sheoak) and <i>Melaleuca cuticularis</i> (Saltwater Paperbark).



Figure 26: Remnant pre-European Vegetation Mapping





It should be an objective of green space design and development to:

- Where appropriate, implement landscape design and planting with local, native plant species (collected from provenance seed where possible), particularly within buffer zones of Environmentally Sensitive Areas
- Through appropriate design and landscaping, revegetate with flora species that attract and conserve native fauna species
- Implement interpretative signage which promotes the ecological history and educates the community on biodiversity
- Continue to conserve and revegetate remnant areas to promote and encourage ecosystem services and endemic vegetation complexes (see section 22).

## ANALYSIS OF OBJECTIVE 3 - Connected POS

Plan for green spaces that enhance the connection between private and public areas.

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### 21 Public and Private Realm Interface

Since 1955, under Perth's existing POS planning framework, the allocation of POS (10%) has not increased. In developed urban spaces, this also means that available green space as a sum of both public and private space has decreased due to lifestyle aspirations within the private domain (housing size typology, gardens, amenities etc.). Consequently, the Community becomes more dependent on POS for access to green spaces.

This strategy aims to guide and influence the integration of the private and public realms, particularly where private space abuts or overlooks public space in parks or key streetscapes.

#### 21.1 Why is it important?

Appropriate integration of private green space (for example, front and rear gardens) and public green space (adjacent streetscapes, parks etc.) aids in achieving pleasant urban environments that:

- promote community cohesion
- support urban liveability
- encourage passive surveillance.

As populations grow and density increases, private open space tends to be reduced, which results in an increase in community reliance on POS as a means of recreation and community connection. However, if planned poorly, the private and public green space connection remains incomplete and therefore disjointed, resulting in a missed opportunity and decreased value of both open spaces.

#### 21.2 What does it look like?

To achieve integration, appropriate planning policies and strategies need to address the public-private green space interfaces in regards to form and function:

- **Form:** the built and natural physical space, inclusive of all its elements
- **Function:** the specific functionality, role or purpose intended for that space.

Traditionally, the function influenced and dictated the form's design, which remained relatively singular in focus and often compartmentalised (single form: single function). This meant that the function stays within the form and is exclusive. However, the City's vision would be for the function of green space (or elemental parts) to cross into other forms, an example being streetscapes.

Streetscapes (form) were often designed with transport and conveyance or services in mind (function), which has resulted in larger transport corridors with minimal or neglected green space or other natural functions. However, the integration between streetscapes and private open space as green space means that the design (form) of streetscapes now needs to acknowledge several functions: trees, gardens, community connections, and amenities.

Table 28 summarises the elements which support or detract from integrating private and public green space.

**Table 28: Private and Public Green Space Integration**

Supports integration	Does not support integration
<ul style="list-style-type: none"> <li>• Provide passive surveillance between spaces that provide some privacy back to the private domain. For example, front fencing or treatments should be permeable</li> <li>• Retention of permeable spaces to support the growth of significant shade trees and gardens</li> <li>• Appropriately designed paths, streetscapes, pocket parks (rest points) and appropriate fencing promote pedestrian transport and community cohesion</li> <li>• Streetscapes designed as green spaces encourage social interaction (pocket parks, community gardens, shade trees, amenities)</li> <li>• Public green space should be designed with access points, paths and amenities along 'desire lines' (routes people are most likely to walk to a destination) that connect the private and public realm</li> <li>• Appropriate setbacks and streetscape widths encourage green space development within the space.</li> </ul>	<ul style="list-style-type: none"> <li>• Solid/impermeable interfaces separating both public and private realms (creates hiding spaces and removes surveillance potential)</li> <li>• Dominating high-speed, straight-line traffic flow reduces pedestrian or cyclist use</li> <li>• Narrow verges are predominantly restricted by crossovers</li> <li>• Noise-generating green space amenities (playgrounds, skate parks etc.) are located too close to residential or noise-sensitive land uses (complaints)</li> <li>• Poor access or unplanned path networks create a perception of risk or unsafe environments</li> <li>• Restrictive policy detracts community ownership of green spaces.</li> </ul>

The following initiatives will be considered to achieve improved private and public interface:

- Infrastructure design to support the growth of significant shade trees and gardens
- Streetscape and green space design supports pedestrian movement and connectivity
- Green spaces are included in streetscape design to encourage social interaction, including pocket parks, community gardens, shade trees and amenities
- Planning policies and strategies should support public-private green space interfaces.

## ANALYSIS OF OBJECTIVE 4 - Natural POS

Protect and enhance the connection between private and public spaces.

## 22 Conservation and Protection of Natural Assets

The retention of green spaces as POS also allows for the retention and conservation of natural environmental qualities, including native vegetation complexes, flora and fauna species and ecosystem services and functions (wetlands, vegetation etc.).

Approximately 106.3 hectares of Parks and Recreation lands within the City's planning scheme and the MRS are considered natural areas. The majority (76.4ha) is located within Ascot due to the Swan River and remnant vegetation within the Swan and Canning Rivers Development Control Area. Additionally, parks such as Tomato Lake, Severin Walk, Centenary Park, and Garvey Park have areas containing remnant vegetation that has been restored. These remnant spaces are maintained as natural areas whilst being surrounded by recreational functions (irrigated turf, recreational activity space).

Some POS locations are managed solely as natural areas, including Signal Hill Bushland, Bush Forever Sites, P.H. Dod Reserve and Hassett Street Reserve. These areas do not contain any adjacent sporting or recreational function (that is, no irrigated turf, no sporting facilities, and no concrete paths). This allows residents living in an urban environment to experience surroundings that more closely represent and resemble the vegetation and natural features before clearing.

### 22.1 Management and Enhancement of Natural Areas

The City has a strong history of revegetating natural areas. This commitment continues by identifying the following green spaces as 'conservation priority' areas:

Conservation Priority Green Spaces	
<ul style="list-style-type: none"><li>• Tomato Lake bushland</li><li>• Pellegrini Wetland</li><li>• Garvey Park and Ron Courtney Island</li><li>• Ayres Bushland</li><li>• Signal Hill Bushland</li><li>• Hassett Street Reserve</li></ul>	<ul style="list-style-type: none"><li>• P.H. Dod Reserve</li><li>• Noble Park</li><li>• Redcliffe Park east</li><li>• Hassett Street Bushland</li><li>• Bush Forever sites</li><li>• Swan River Foreshore (Goodwood Boat Ramp to Bilya Kard Boodja Lookout).</li></ul>



These sites should be promoted as conservation priority green spaces to encourage conservation. The City's Environment and Sustainability Strategy (supporting document for the LPS) contains more information on the protection of remnant vegetation and biodiversity. That said, green space management must conserve natural assets and priority areas by:

- Reducing the number of artificial assets located within these areas or opting for assets that complement the natural environment (that is, exposed dirt paths versus concrete paths, avoiding lighting that may disturb native fauna)
- Controlling weeds and revegetating conservation priority areas with provenance seed (where possible) or local, native flora species to encourage a return to pre-European vegetation complexes
- Managing natural area assets in line with best practice and excluding, where practical, artificial management practices.

## **22.2 Biodiversity within Green Spaces**

Action can also be taken relevant to natural areas and other green spaces such as streetscapes and recreational parks to protect and enhance flora and fauna.

This may include:

- Reducing mechanical disturbance for the construction of infrastructure such as paths and amenities
- Implementing interpretative and information signage that promotes living with wildlife, native ecological function, waterways and native flora and fauna to encourage the uptake and acceptance of conservation measures and natural conditions
- Where required, restricting domestic animals (that is, cats, dogs, horses) that may threaten native flora and fauna through physical barriers or legislative control
- Where required to protect sensitive areas, controlling public access to designated paths or walkways and prevent or control vehicle access
- Where needed, implementing control methods to deter feral animals such as pest birds, foxes and rabbits.

# **23 Park Treatments and Environmental Considerations**

## **23.1 Waterwise Parks**

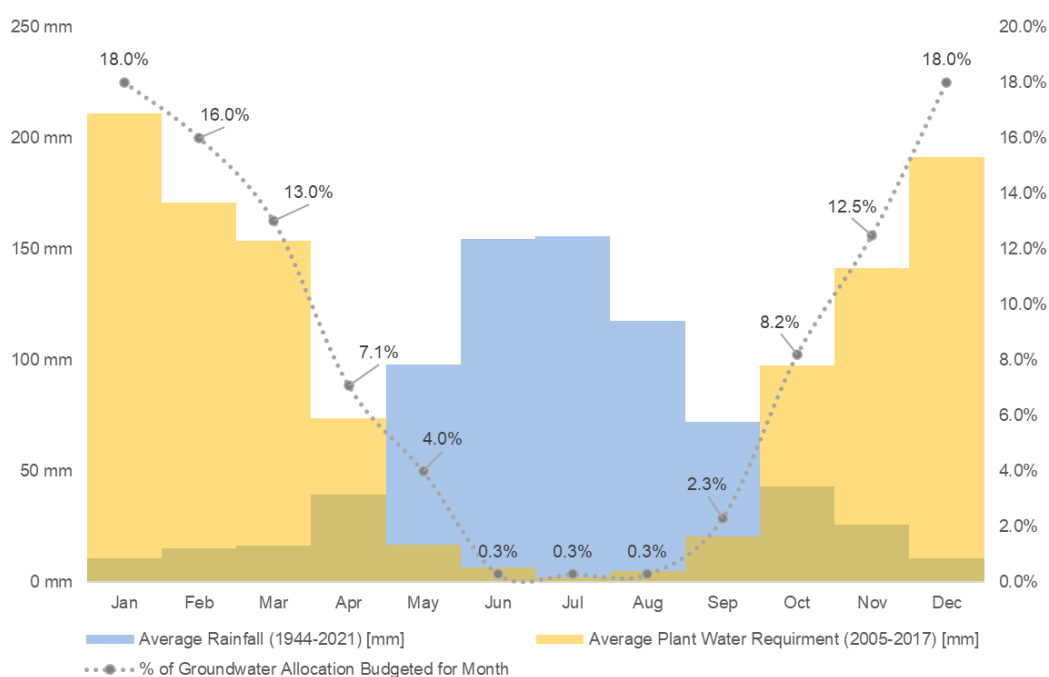
There is continued pressure to use water wisely in a drying climate. However, as the need for irrigated green space increases within an urban environment, there is also a need to increase water usage to maintain high-quality recreational areas, sporting reserves and even streetscapes and green corridors. Notwithstanding this, the City acknowledges that the use of the world's most valuable resource, water, must be done wisely to achieve the most value from our scarce water resource.

Therefore, throughout all irrigated green space, the City should aim to optimise water use to achieve quality green space without overuse or water waste. This can be achieved through:

- Hydrozoning and ecozoning irrigated recreational reserves
- The use of smart technologies and equipment that optimises water programming and delivery
- The use of native low water requirement planting where appropriate
- Design and installation of irrigation systems by licenced and qualified practitioners and tradespeople
- Implementation of the City's Groundwater Use Management and Operating Strategy as per Western Australian legislation and guidelines
- Where practicable, reduce irrigated turf areas and replace them with irrigated Waterwise garden beds (ecozoning)
- Where possible, source and utilise fit-for-purpose water supplies other than potable water (scheme supply) or groundwater, including stormwater or surface water supplies
- Consider consolidated non-potable schemes to irrigate new estates, including shared bores and City managed infrastructure.

## 23.2 Irrigation Demand

The City irrigates green space throughout the irrigation season (generally October to April) to match plant water requirements and budgets water allocation based on evaporation and monthly rainfall (Figure 27). A small amount of water is allocated for June, July and August (during the winter sprinkler ban) to allow for testing and maintenance of systems, which is required to ensure systems operate efficiently during the summer months (peak irrigation season).



**Figure 27:- Portion of Water Allocation as a Percentage of Total Annual Allocation for Irrigated Green Spaces.**

### 23.3 Energy Efficient Parks

The City uses approximately 520,000kWh for green space management, predominantly due to irrigation, aeration and lighting of reserves. This represents about 10% of the City's total electricity use. Energy use, however, is a necessity in order to:

- Deliver water in irrigation (pumps)
- Light sporting fields (lighting towers)
- Assist with managing waterbodies (aerators and pumps).

The City's energy use is monitored to reduce CO<sub>2</sub> emissions, and until March 2022, carbon offsets were purchased for 25% of electricity use at contestable sites. However, after May 2022, the City is now using 100% renewable energy for these sites.

To reduce the overall energy consumption to maintain green space sites, the City should explore the implementation of:

- Variable speed pumps that use energy appropriate to the amount of water being delivered
- Investigate the use of solar to offset the running of diurnal pumps (aerators, fountains, waterfalls)
- Where applicable, use solar-stored path or wayfinding lighting with motion sensors.

### 23.4 Fertiliser and Pesticides

Natural area assets are often impacted by human activity or urban activities that negatively impact natural features. Maintaining green space within a natural setting is not exempt from this. Therefore, the City manages its application of fertilisers and pesticides as per national and state best practice guidelines. The City also monitors upcoming alternative methods of non-chemical weed control. This assists in reducing both environmental/ecological impact and public concern.

Urban stormwater and drainage water often convey nutrients collected from various land uses. These nutrients tend to promote the growth of algae or nuisance plants in wetlands and waterways. The City's lakes and wetlands often experience summer algal blooms, consisting of single-celled cyanobacteria (blue-green) to thick filamentous surface blooms, impacting aesthetics and the ecosystem quality and function.



**Figure 28: Algal Bloom at Tomato Lake.**

Therefore, the City manages its fertiliser application within these Natural Areas by:

- Applying foliar applications rather than granular or liquid-based options
- Implementing vegetative buffers (where practical) between irrigated turf and wetland edges
- Using surface application methods rather than fertigation to reduce the risk of overspray or run-off of nutrients into waterways.

## **ANALYSIS OF OBJECTIVE 5 - Enduring POS**

Develop POS that is adaptable, sustainable, responsive and resilient to future challenges.

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### **24 POS Analysis of Risks and Future Challenges – Adapting to Changes Within the Community**

The City conducted an analysis of the risks and future requirements of POS. The investigation studied the current challenges and constraints whilst considering potential emerging risks and challenges. Table 29 summarises the conclusions derived from this process.

The risks and challenges have also been considered within the remaining four objectives underpinning the POS Strategy, which are broadly summarised below:

- Future demand and user specific requirements of residents such as demographics, age, physical challenges etc.
- Consideration of CPTED and community perceptions of safety
- Community expectations and lifestyle changes, improving health and wellbeing
- Recognition of identity, cultural and historical connection within POS
- Changes in property types and density impacting demand
- Environmental demands, the wise use of resources, assessing the environmental impact of activities
- Protection of vegetation, including increasing the vegetation and tree canopy
- Integration of private and public realm, improved passive surveillance.

To ensure the City is adaptive to potential change, consideration of the risks and challenges identified through this analysis will be incorporated in business case development for new POS projects.



**Table 29: Summary of Risks and Challenges**

<b>Risk</b>	<b>Focus</b>
<b>Population Growth</b>	<ul style="list-style-type: none"> <li>• Increased demand, use and access to POS</li> <li>• Multi-use/functional POS</li> <li>• Increased POS maintenance requirements</li> <li>• Increased CPTED requirements</li> <li>• Increased residential density/reduced private POS</li> <li>• Increased passive surveillance</li> <li>• Age accessible POS</li> <li>• Increased demand in nocturnal/night-time use of POS (lighting)</li> <li>• Ageing population</li> <li>• Poor community cohesion/need to support community cohesion.</li> </ul>
<b>Climate Change</b>	<ul style="list-style-type: none"> <li>• Hotter temperatures</li> <li>• A decline in rainfall - Water scarcity/shortages</li> <li>• Reduced irrigated POS availability/accessibility/quality</li> <li>• Change/Loss in biodiversity (species diversity)</li> <li>• Increased natural disasters - storms and fires</li> <li>• Increase in heat-related mortality and morbidity</li> <li>• Increased drainage/flood requirements within POS</li> <li>• Increased demand in nocturnal/night-time use of POS (lighting)</li> <li>• Increased shade requirements</li> <li>• Decreased outdoor/increased indoor lifestyles</li> <li>• Increased dry/non-irrigated parks.</li> </ul>
<b>Community Needs/Values</b>	<ul style="list-style-type: none"> <li>• Increased CPTED requirements</li> <li>• Requirement for LGA to support active lifestyles (public health)</li> <li>• Multi-use/functional POS</li> <li>• Increased demand in nocturnal/night-time use of POS (lighting)</li> <li>• Increased demand, use and access to POS.</li> </ul>
<b>Community Sporting Trends</b>	<ul style="list-style-type: none"> <li>• Increased demand, use and access to POS</li> <li>• Multi-use/functional POS</li> <li>• A decline in organised sports participation</li> <li>• Increased demand in nocturnal/night-time use of POS (lighting)</li> <li>• Increased diversity and access requirements</li> <li>• The conflict between vegetation and sporting space.</li> </ul>
<b>Change in Built Environment</b>	<ul style="list-style-type: none"> <li>• Increased residential density/reduced private POS</li> <li>• Reduced vegetation on private property</li> <li>• Increased passive surveillance</li> <li>• Road reserves used for parking.</li> </ul>

**Table 29: Summary of Risks and Challenges (cont'd)**

<b>Risk</b>	<b>Focus</b>
<b>Technological Changes</b>	<ul style="list-style-type: none"> <li>• Decreased outdoor/increased indoor lifestyles</li> <li>• Increased private use of technology integrated with POS (for example, wayfinding, geocaching)</li> <li>• Decreased need for POS</li> <li>• Increased demand for outdoor recreation equipment (for example, exercise equipment).</li> </ul>
<b>Economic Sustainability</b>	<ul style="list-style-type: none"> <li>• Increased expenditure on POS</li> <li>• Demand to upgrade POS</li> <li>• A decline in organised sports participation</li> <li>• Increased POS maintenance requirements.</li> </ul>
<b>Natural Hazards</b>	<ul style="list-style-type: none"> <li>• A decline in rainfall - water scarcity/shortages</li> <li>• Bushfire prone areas</li> <li>• Flood prone areas (current and future)</li> <li>• Insufficient water/risk of contamination of water sources for irrigation</li> <li>• Known or suspected contaminated sites</li> <li>• Water table decline</li> <li>• Nutrients (fertilisers) introduced to waterways/groundwater.</li> </ul>
<b>Legislative Environment</b>	<ul style="list-style-type: none"> <li>• Clearing of native vegetation without a permit</li> <li>• Non-compliance (that is, overuse of groundwater).</li> </ul>

## 25 Monitor and Review

The City will continue to consult with our Community to understand their needs and aspirations for public open space and review the Strategy and Implementation Plan at least every two years, or sooner as required, to help refine the strategy outputs.

Reviewing the POS Strategy and Implementation Plan on a regular basis enables the City to refine the strategy outputs based on community feedback and to ensure it continues to align with the strategic direction of the City and the WA state government. The Implementation Plan will identify the strategic actions required to enable the City to achieve its vision and outcomes for public open space.

The key to measuring the success of the implementation of this strategy will be our Community's satisfaction with parks and open spaces. This will be measured by undertaking customer satisfaction surveys on a regular basis.

## A Definitions and Acronyms

Term or Acronym	Definition
City	The City of Belmont
CPTED	Crime Prevention Through Environmental Design
DOS	District Open Space
Ha	Hectares
kWh	Kilowatt-hour(s)
km	Kilometres
LGA	Local Government Authority
LOS	Local Open Space
LPS	Local Planning Scheme
m	Metres
MRS	Metropolitan Region Scheme
NOS	Neighbourhood Open Space
Pocket parks	Pocket parks are parks that are smaller than 0.5 ha and service the residents in the immediate area (approximately 300m) and are most often used as recreation or nature spaces.
POS	Public Open Space
ROS	Regional Open Space
WAPC	Western Australian Planning Commission
WSD	Water Supply, Sewerage and Drainage
WSUD	Water Sensitive Urban Design

## B City of Belmont Strategic Framework Summary

### B1.1 City of Belmont's Strategic Community Plan 2020-2040

Goal	Strategy   What we will do
<b>Liveable Belmont</b>	1.1 Respect, protect and celebrate our shared living histories and embrace our heritage 1.5 Encourage and educate the Community to embrace sustainable and healthy lifestyles.
<b>Connected Belmont</b>	2.1 Design our City so that it is accessible to people of all ages and abilities 2.2 Make our City more enjoyable, connected and safe for walking and cycling.
<b>Natural Belmont</b>	3.1 Protect and enhance our natural environment 3.4 Provide green spaces for recreation, relaxation, and enjoyment 3.5 Promote energy and water efficiency, renewable energy sources, and reduce emissions and waste.
<b>Creative Belmont</b>	4.1 Promote the growth of arts and culture 4.2 Embrace technology, creativity, and innovation to solve complex problems and improve our City 4.3 Support and collaborate with local schools and businesses.
<b>Responsible Belmont</b>	5.1 Support collaboration and partnerships to deliver key outcomes for our City 5.5 Engage and consult the Community in decision-making 5.7 Engage in strategic planning and implement innovative solutions to manage growth in our City.

### B1.2 Belmont On the Move – Integrated Movement Network Strategy (March 2017)

- The City has a key opportunity for developing a sustainable transport network by linking the substantial number of parks and recreation facilities across the City
- Investigates the development of a green network to connect parks and recreation facilities for cyclists and pedestrians
- Considers priority locations for bicycle parking, repair stations and water fountains in the five-year implementation plan.

### B1.3 Environment & Sustainability Policy and Strategy 2016-2021

- The Environment and Sustainability Policy outlines the City's commitment to environmental performance outcomes, the protection of the natural environment and biodiversity values which are often located within POS
- The focus of the Environment and Sustainability Strategy is to proactively develop objectives and actions that will result in the enhancement of the natural environment and improvements in environmental performance



- Efficient use of energy, water, paper, and other resources, reducing waste generated and implementing renewable energy technologies to minimise the City's corporate carbon footprint.

### **B1.4 Reconciliation Action Plan 2015-2017\***

- Celebrate, recognise and promote Aboriginal and non-Aboriginal cultures, heritage, traditions and wellness within the Belmont area
- Develop and implement the use of significant Noongar Whadjuk names within relevant resources, public information, public spaces and public buildings
- Include Aboriginal cultures, heritage and traditions within parkland design to encourage all people to feel welcomed and accepted and to promote Aboriginal culture and heritage.

### **B1.5 Access and Inclusion Plan 2018-2021**

- Under the *Disability Services Act 1993* (WA), local governments are required to develop and implement a Disability Access and Inclusion Plan to ensure people with disability have equal access to services and facilities (Outcome 2).
- The City's Access and Inclusion Plan fulfils the requirements of the Act.
- The POS Strategy recognises the significance of creating open spaces that are accessible to, and inclusive of, all abilities.

### **B1.6 Age-Friendly Plan 2017-2021**

- The Age-Friendly Plan addresses the needs of older residents, guiding the City's actions to create an age-friendly community
- The quality of life of seniors is affected by the physical environment in which they live. The external environment and public buildings have a major impact on the ability of seniors to age in place. Good access to buildings and opportunities for physical activity through welcoming open spaces contributes to an age-friendly community
- Focus Area Objective 1 of the Plan states: Outdoor spaces and the built environment are welcoming, safe, and accessible in the City of Belmont.

### **B1.7 Strategies under development or review**

- **The Recreation Strategy** will inform the future provision of sport, exercise, and recreation facilities within the City
- **The Community Infrastructure Plan** will provide guidance in relation to the effective use of the City's community infrastructure, ensuring there is a considered approach to planning and consolidation.
- **The Streetscape Enhancement Strategy** will guide the City in relation to the management of streetscapes, including verges, cul-de-sac heads, roundabouts and entry statements (for key entry points to the City).

## C State Government Framework Summary

### C1.1 Plan for the Metropolitan Region Stephenson & Hepburn Report 1955

- Provided the basis for the development of the Perth Metropolitan Area and set out requirements and standards which have guided planning in the Metropolitan Region since that time
- A standard of 3.36 hectares per 1000 persons (excluding school playing fields) is deemed sufficient for POS
- Standard contribution of 10% of the gross subdivisible area for POS has been applied since 1956 and is reflected in the Western Australian Planning Commission's (WAPC) Development Control Policy 2.3 'Public Open Space in Residential Areas'.

### C1.2 Metropolitan Region Scheme (MRS)

- The MRS is established under the *Planning and Development Act 2005*.
- The MRS applies a 'Parks and Recreation' reservation to land deemed to have regional significance for ecological, recreation, or landscape purposes
- Private land reserved for 'Parks and Recreation' under the MRS is required to be vested to the Crown upon any subdivision of land.

### C1.3 The State Planning Strategy - Statement of Planning Policy No. 1 'State Planning Framework'

- In 2014 the WAPC adopted the State Planning Strategy in order to plan for development up to 2050.
- Ensure neighbourhoods include appropriate local open space
- Local structure plans and local planning schemes identify sufficient land to accommodate community facilities.
- Protection of environmental assets and the wise use and management of resources are essential to encourage more ecologically sustainable land use and development and contribute to a more sustainable future.
- Conservation of ecological systems and biodiversity, including ecosystems, habitats, species, and genetic diversity
- Assisting in the conservation and management of natural resources, including air quality, energy, waterways, and water quality
- Protecting areas and sites with significant historic, architectural, aesthetic, scientific, and cultural values from inappropriate land use and development.
- Adopting a risk-management approach that aims to avoid or minimise environmental degradation and hazards.
- Prevent environmental impacts that may result from sitting incompatible land uses together.

### C1.4 WA Planning Commission – Development Control Policy Manual

- POS in Residential Areas' has as a basic component of the policy a requirement that 10% of the gross subdivisible area of a conditional subdivision. (section 152 of the Planning and Development Act 2005)
- All residential development in the State is complemented by adequate, well-located areas of POS that will enhance the amenity of the development and provide for the recreational needs of residents. (WAPC Policy DC 2.3)
- Facilitate the provision of land for community facilities in conjunction with land ceded for POS - such as community centres, branch libraries and day-care centres. (WAPC Policy DC 2.3)
- Protect and conserve the margins of wetlands, watercourses and the foreshores adjacent to residential development. (WAPC Policy DC 2.3)
- Balance between incidental open space, readily accessible to all residents, and recreational open space in larger units suitable for active leisure pursuits. (WAPC Policy DC 2.3)
- Ensure that adequate facilities are available for both passive and active recreation during workers' leisure periods within industrial areas. (WAPC Policy DC 4.1)
- Ensure that adequate facilities are available for both passive and active recreation during workers' leisure periods within industrial areas. (WAPC Policy DC 4.1)
- Take into consideration the size of the workforce in the area, the proximity of existing POS and the scale of a new development being proposed. (WAPC Policy DC 4.1)
- Land may also be required to be given up as POS in order to provide for buffer strips between industrial uses and any adjacent non-industrial areas. (WAPC Policy DC 4.1)
- Lots may be created to conserve significant environmental features and remnant vegetation (WAPC Policy DC 3.4)
- Where a proposal is compatible with the use and zoning of surrounding land, the nature and purpose of the reserved land and the environmental character of the location, lands reserved for Parks and Recreation or Regional Open Space within the MRS can be used as POS, including for incorporated clubs and community groups (WAPC Policy DC 5.3).

### C1.5 WA Planning Commission – Liveable Neighbourhoods (2009)

- Applies to structure planning and subdivision for greenfield sites and for the redevelopment of large brownfield and urban infill sites
- Parks can accommodate state-of-the-art urban water management processes; incorporate; streams, floodplains and wetlands (both natural and constructed), storm detention measures including basins, stormwater infiltration and other water quality treatment devices. (Element 1 - Community design)
- Identify and retain areas of natural and cultural significance that are of adequate significance or can contribute to establishment of a sense of place or identity. (Element 1 - Community design)

- Urban environments deliver improved social and Community outcomes relative to conventional development - focus on walkable mixed-use communities that are well served by services, facilities and public transport and designed to create a special sense of place for each Community. (Element 1 - Community design)
- People in communities interact socially, build social capital and access physical activity as a contributor to physical and mental health. (Element 1 - Community design)
- People in communities interact socially, build social capital and access physical activity as a contributor to physical and mental health. (Element 1 - Community design)
- Street trees that provide a generous canopy at maturity should be planted in most streets (except rear laneways) for pedestrian shade and shelter, streetscape amenity, and traffic management. (Element 2 - Movement network)
- Lots fronting streets, major streets, and parkland such that development enhances personal safety, traffic safety, property safety and security; and contributes to streetscape and park quality. (Element 3 – Lot layout)
- Regional, District and local open space can be created efficiently through careful structure planning and site-responsive design. (Element 4 – Public parkland)
- To facilitate the provision of the POS contribution and its development as part of the subdivision process and to enhance local amenity. (Element 4 – Public parkland)
- To ensure that POS is integrated into the urban structure to produce both land-use efficiency and long-term sustainability. (Element 4 – Public parkland)
- Provide a balance between conservation and active and passive recreational uses in District, neighbourhood, and local open space. (Element 4 – Public parkland)
- Urban water management should be achieved by creating areas of open space (including multiple-use linear parks along drainage lines, and some streets with median swales), that can be used for urban stormwater management, to enhance water quality without compromising efficient urban structure. (Element 1 - Community design).

### **C1.6 Department of Sport and Recreation - Classification Framework for Public Open Space (2012)**

- Identifies and formalises the function categories of Sporting, Recreational and Nature spaces
- Sporting spaces provide a setting for formally structured sporting activities
- Recreational spaces provide a setting for informal play and physical activity, relaxation, and social interaction
- Nature spaces provide a setting where people can enjoy nearby nature and protect local biodiversity and natural area values
- Provides uniform guidance on catchment hierarchy of Local, Neighbourhood, District and Regional open space in relation to purpose and function, access, size, design, and activities
- Assigned walkable catchments based on the hierarchical classification of a park, Local Open Space should be within 400m or a 5-minute walk, Neighbourhood Open Space within 800m or a 10-minute walk and District Open Space within 2km or a 5-minute drive

- **Regional open space (ROS)** may accommodate important recreation and organised sports spaces as well as significant conservation and/or environmental features. The size is variable depending on function, however, if combined with sporting spaces should be greater than 20 ha. Walkable access is not required due to these sites serving a regional function
- **District open space (DOS)** is principally designed to provide for organised formal sport. DOS will very likely include substantial recreation space and some nature space. Sized 5 ha to 15 ha and within 2 kilometres or a 5-minute drive
- **Neighbourhood open space (NOS)** serves as the recreational and social focus of a community. Residents are attracted by the variety of features and facilities and opportunities to socialise. Sized between 1 ha to 5 ha, within 800 metres or a 10-minute walk
- **Local open space (LOS)** is usually small parklands that service the recreation needs of the immediate residential population. Sized between 0.4 ha and 1 ha, within 400metres or a 5-minute walk.

### C1.7 Directions 2031 and Beyond (2020)

- By 2031, Perth and Peel people will have created a world-class liveable city; green, vibrant, more compact, and accessible with a unique sense of place
- Guides infill targets of 47%
- Protect our natural and built environments and scarce resources; respond to social change and optimise the land use and transport conditions that create vibrant, accessible, healthy, and adaptable communities
- Protect and manage significant biodiversity areas
- Protect matters of national environmental significance
- Protect water resources
- Mitigate and adapt to climate change
- Reduce waste generation and encourage reuse and recycling
- Expand and enhance our open space network
- Integrate natural resource management into land-use planning
- Provide quality passive and active POS.

### C1.8 Perth and Peel @ 3.5 million (2018)

- The Perth and Peel @ 3.5 million provides guidance on land use planning and infrastructure in the Perth and Peel regions to help accommodate 3.5 million people by 2050
- The framework aims to limit unsustainable urban sprawl and encourage greater housing diversity to meet changing community needs.
- The framework determines the location of new homes and jobs to make the best use of existing and proposed infrastructure and aims to protect important environmental assets.
- The framework encourages greater infill development with almost half of the forecast 800,000 new homes built through infill development. The majority of these will be built within the Central sub-region and around key transport links of the Metronet station precincts.



### **C1.9 Department of Planning, Lands and Heritage - Bush Forever (2000)**

- Identifies regionally significant bushland based on criteria relating to its conservation value. (SPP 2.8 Bushland Policy for the Perth Metropolitan Region)
- Comprehensive representation of all the ecological communities originally occurring in the region, principally through protecting a target of at least 10% of each vegetation complex.