

# **PART 2 - BACKGROUND INFORMATION AND ANALYSIS**

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## INTRODUCTION

The purpose of Part 2 is to detail the relevant background information and analysis which supports the planning directions and actions outlined within Part 1 of the Local Planning Strategy (the Strategy).

Sections 2 and 3 provide a summary of the relevant State, regional and local planning documents and contexts, and includes the implications for the City of Rockingham's Local Planning Strategy direction.

Section 4 of this volume includes the local government profile which delivers the background information and analysis relating to the current demographic profile, urban growth and settlement patterns, environment and heritage, economy and employment and infrastructure position in the City. Importantly, it focuses on the trends and questions that arise for the City of Rockingham. The key planning opportunities and issues this analysis raises that will influence future development and land use of the City are described, to underpin the Strategy direction and actions.





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## STATE AND REGIONAL PLANNING CONTEXT



## 2.1 STATE PLANNING STRATEGY 2050

The State Planning Strategy provides the strategic context and basis for the coordination and integration of land use planning and development across Western Australia, regional and local jurisdictions. It contemplates a future in which high standards of living, improved public health and an excellent quality of life are enjoyed by present and future generations of Western Australians.

The State Planning Strategy proposes that diversity, liveability, connectedness and collaboration must be central to achieving the vision of sustained growth and prosperity, and establishes principles, strategic goals and directions to ensure the development of the State progresses towards this vision.

Perth, the State's capital, will remain a main international gateway to Western Australia and will function as its financial, administrative, and social centre. With regards to the City, the primary areas of state significance include:

- + The Western Trade Coast, one of Western Australia's major economic and employment hubs; and
- + Fleet Base West, located on Garden Island which is a major defence base in the Indian Ocean for the Australian Defence Force.
- + Rockingham Strategic Centre (RSC). The RSC is the primary activity centre between Fremantle and Mandurah servicing a broad urban catchment that attracts people from the Cities of Rockingham, Kwinana, Mandurah and parts of the Shire of Serpentine Jarrahdale.

## 2.2 STATE PLANNING POLICIES

State Planning Policies (SPP's) are prepared under Part 3 of the *Planning and Development Act 2005* and provide the highest level of planning policy control and guidance in Western Australia. SPP's considered to be specifically relevant to the City of Rockingham are outlined and described in **Table 1**.

**Table 1: State Planning Policy Overview and Local Planning Strategy Implications**

STATE PLANNING POLICY	POLICY OVERVIEW	LOCAL PLANNING STRATEGY IMPLICATIONS
<b>SPP 1 – State Planning Framework Policy</b>	<p>SPP 1.0 restates and expands on the key principles of the State Planning Strategy in planning for sustainable land use and development. It brings together existing State and regional policies, strategies, and guidelines within a central State Planning Framework, which provides a context for decision making on land use and development in Western Australia.</p> <p>The Framework informs the WAPC, local government and others involved in the planning process on State level planning policy, which is to be taken into consideration, in order to ensure integrated decision-making across all spheres of planning.</p> <p>The framework identifies relevant policies and strategies used by the WAPC in making decisions and may be amended from time to time. The framework is the overarching SPP. Additional SPPs set out the WAPC's policy position in relation to aspects of the State Planning Strategy principles.</p>	<p>The updated Strategy and new Scheme will need to address the vision and principles of the State Planning Strategy.</p>
<b>SPP 2 – Environment and Natural Resources Policy</b>	<p>SPP 2.0 is a broad sector policy and provides guidance for the protection, management, conservation, and enhancement of the natural environment. The policy promotes responsible planning by integrating environment and natural resource management with broader land use planning and decision-making. SPP 2.0 outlines general measures for matters such as water, air quality, soil and land quality, biodiversity, agricultural land and rangelands, basic raw materials, marine resources, landscapes, and energy efficiency. These general measures should be considered in conjunction with environmentally based, issue-specific state planning policies which supplement SPP 2.0.</p> <p>With respect to landscape, the Policy states that planning strategies, schemes and decision-making should:</p> <ol style="list-style-type: none"> <li>1. Identify and safeguard landscapes with high geological, geomorphological or ecological values, as well as those of aesthetic, cultural or historical value to the community, and encourage the restoration of those that are degraded.</li> <li>2. In areas identified in (1) above, consider the level or capacity of the landscape to absorb new activities and incorporate appropriate planning and building design and siting criteria to ensure that new development is consistent and sensitive to the character and quality of the landscape.</li> <li>3. Consider the need for a landscape, cultural or visual impact assessment for land use or development proposals that may have a significant impact on sensitive landscapes.</li> </ol>	<p>The City has identified the importance of protecting and enhancing the environmental values and natural resources in the Scheme area through preparation of its Environmental Protection Strategy.</p> <p>The proposed approach aligns closely with the objectives and intent of SPP 2.0. The LPS and subsequent LPS4 will need to respond and expand on a range of environmental and natural resources issues covered including, but not limited to, the following:</p> <ul style="list-style-type: none"> <li>+ Flood, storm surge inundation, and coastal erosion;</li> <li>+ Environmental conservation;</li> <li>+ Public water drinking source areas; and</li> <li>+ Protection of areas pertaining to agricultural and cultural significance.</li> </ul> <p>The LPS will need to identify and protect areas of ecological significance.</p> <p>The LPS will need to identify and protect areas of landscape significance.</p>

STATE PLANNING POLICY	POLICY OVERVIEW	LOCAL PLANNING STRATEGY IMPLICATIONS
<b>SPP 2.1 – The Peel Harvey Coastal Plain Catchment</b>	<p>PP 2.1 ensures that land use changes within the Peel Harvey Estuarine System are controlled to avoid and minimise environmental damage, while balancing economic viability of the primary sector. SPP 2.1 aims to improve the social, economic, ecological, aesthetic, and recreational potential of the catchment. SPP 2.1 outlines policy provisions relative to rezoning proposals, various land use-based requirements, including subdivision requirements and retention of vegetation.</p>	<p>The City falls in the Peel-Harvey Coastal Plain Catchment area (PHCP) and therefore requires appropriate planning mitigation measures to avoid environmental damage. The PHCP identifies the provisions of the Scheme that are to be guided by the objectives and provisions applicable in Environmental Protection Policies and SPPs. The LPS will need to provide adequate commentary, and existing provisions in the Scheme pertaining to the PHCP should be retained.</p>
<b>Draft SPP 2.4 – Basic Raw Materials</b>	<p>SPP 2.4 recognises basic raw materials as a finite resource and promotes the importance of their extraction in support of regional development and agriculture within Western Australia. Its primary purpose is to facilitate the responsible extraction of basic raw materials while ensuring that any extraction avoids, minimises, and mitigates detrimental impacts on the community and environment.</p> <p>SPP 2.4 supports land use conflict being addressed as early as possible in the planning process. Principal considerations for decision-makers include considering the suitability or otherwise of basic raw material extraction on planning and environmental grounds; ensuring broad compatibility between land uses and avoiding development of sensitive land uses within separation distances.</p> <p>The Policy encourages sequential land use, whereby extraction and rehabilitation can occur in advance of longer-term use and development</p> <p>SPP 4.2 is supplemented by the Basic Raw Materials Guidelines and applies to land zoned Rural under the Metropolitan Region Scheme.</p>	<p>This policy encourages the recognition of significant basic raw materials resources within the planning framework and includes provisions for their protection, access, and use, including consideration to establishing buffers around extractive industries via Special Control Areas and/or appropriate separation distances to sensitive land uses.</p> <p>High-grade building sand and limestone are extracted to support the local construction industry, primarily out of Karnup and Baldivis. It will be important for the LPS to identify the potential sources of basic raw materials within the City of Rockingham, and where necessary establish appropriate protection mechanisms in the Scheme in accordance with SPP 2.4 requirements.</p> <p>Extraction of resources must consider sequential land use planning and balance the protection of significant landform structures.</p>
<b>SPP 2.5 – Rural Planning</b>	<p>The aim of the State Planning Policy 2.5 Rural Planning policy (SPP 2.5) is to guide protection and preservation of rural land based on important economic, natural resource, food production, environmental and landscape values. Broad compatibility of land uses is essential to enable this outcome for rural areas. Its objectives are to:</p> <ul style="list-style-type: none"> <li>+ Support primary production through the protection of rural land, prioritising agricultural land and land required for animal premises and food production;</li> <li>+ To promote regional development through provision of ongoing economic opportunities on rural land;</li> <li>+ To promote sustainable settlement in, and adjacent to, existing urban areas;</li> <li>+ To protect and improve environmental and landscape assets; and</li> <li>+ To minimise land use conflicts.</li> </ul>	<p>The City has a vast array of different land uses ranging from coastal development areas to rural land. Rural land within the Scheme area is guided by the Rural Land Strategy (RLS) and Local Bushland Strategy which sets out the objectives and policy provisions for which Council shall have due regard in the assessment of land use planning proposals.</p> <p>The LPS will need to provide adequate commentary and existing provisions in the Scheme and the Rural Land Use and Local Bushland Strategy pertaining to rural land. This should be reviewed while having consideration for the recently prepared Environmental Protection Strategy.</p>



STATE PLANNING POLICY	POLICY OVERVIEW	LOCAL PLANNING STRATEGY IMPLICATIONS
	<p>The Policy includes a suite of policy measures and planning requirements applicable to rural living proposals. In particular, it states that rural living precincts should:</p> <ul style="list-style-type: none"> <li>+ Be located on land which is predominantly cleared of remnant vegetation, or the loss of remnant vegetation through clearing for building envelopes, bushfire protection and fencing is minimal and environmental values are not compromised.</li> <li>+ Demonstrate and achieve improved environmental and landscape outcomes and a reduction in nutrient export in the context of the soil and total water management cycle, which may include rehabilitation as appropriate.</li> <li>+ Minimise and manage bushfire risk and natural hazards in accordance with State policy, without adversely affecting the natural environment; and</li> <li>+ That proposals in areas of extreme bushfire risk will not be supported.</li> </ul> <p>SPP 2.5 is supplemented by the Rural Planning Guidelines, which provide additional information on the context and assist in the implementation of SPP 2.5 and related Development Control Policy 3.4: Subdivision of rural land.</p>	<p>Determination of recommended lot sizes for 'rural living' development is a major consideration in maintaining a character of development consistent with the intent of both the State and local planning frameworks which place significant emphasis on the protection, conservation and enhancement of the natural environment.</p>
<b>SPP 2.6 – State Coastal Planning Policy</b>	<p>SPP 2.6 provides for the long-term sustainability of Western Australia's coast and is relevant to those local governments that contain coastal areas. The purpose of the policy is to provide guidance for decision-making within the coastal zone including managing development and land use change, establishment of foreshore reserves and protecting, conserving, and enhancing coastal values.</p> <p>SPP 2.6 outlines criteria for the consideration of development and settlement arrangements, including building height limits within local planning frameworks and management of water resources. It further acknowledges the importance of coastal planning strategies, coastal hazard risk management approaches, coastal foreshore reserves and community participation in coastal planning. SPP 2.6 is supplemented by the State Coastal Planning Policy Guidelines and Coastal Hazard Risk Management and Adaptation Planning Guidelines.</p>	<p>The LPS will need to consider the following:</p> <ul style="list-style-type: none"> <li>+ How existing and future development interfaces with coastal areas;</li> <li>+ How water is managed, particularly the impacts of stormwater and how it relates to foreshore reserves;</li> <li>+ Coastal hazard risk management and adaptation planning (CHRMAP);</li> <li>+ Coastal protection and foreshore management strategies; and</li> <li>+ Establishment of foreshore reserves.</li> </ul>
<b>SPP 2.7 – Public Drinking Water Source Policy</b>	<p>The purpose of SPP 2.7 is to inform decision makers of the protection of Public Drinking Water Supply Areas throughout the State. It is intended that this be implemented through the preparation of strategic plans, regional and local planning schemes, conservation and management strategies, and other relevant plans or guidelines, as well as through decision-making on subdivision and development applications.</p>	<p>Potable water for the City's residents is supplied by the Water Corporation, and is sourced from dams, ground water extraction and desalination plants. Groundwater in the region comprises unconfined, semi-confined, and confined aquifers that exist as separate layered systems. The LPS should identify water resources that offer significant economic, social and/or environmental values. They should then be afforded an appropriate level of protection under the Planning Scheme.</p>

STATE PLANNING POLICY	POLICY OVERVIEW	LOCAL PLANNING STRATEGY IMPLICATIONS
<b>SPP 2.8 – Bushland Policy for the Perth Metropolitan Region</b>	<p>SPP 2.8 seeks to provide a policy and implementation framework that will ensure bushland protection and management issues in the Perth Metropolitan Region are appropriately addressed and integrated with broader land use planning and decision-making. The primary purpose of the policy is to secure the long-term protection of biodiversity and associated environmental value sites, being Bush Forever areas.</p> <p>The policy recognises the protection and management of significant bushland areas as a fundamental consideration in the planning process, while also seeking to integrate and balance wider environmental, social, and economic considerations.</p> <p>The policy supports the preparation of local bushland protection strategies to enable the identification of locally significant bushland sites for protection and management outside Bush Forever areas.</p>	<p>To ensure protection of natural areas (particularly those that are located on privately owned land) the City undertook a Local Natural Area Assessment, to identify areas worthy of protection.</p> <p>This culminated in the preparation of the City of Rockingham Environmental Protection Strategy which is a key informing document of the LPS. It provides guidance on potential protection measures, including the preparation of local planning policies' and potential provisions for inclusion in LPS4.</p>
<b>Draft SPP 2.9 – Planning for Water</b>	<p>SPP 2.9 provides guidance in the planning, protection and management of surface and groundwater catchments, including consideration of availability of water and waterways management, wetlands, waterways, and estuaries and their buffers, and implementation of total water cycle management principles in the land use planning system. The policy recognises that planning should contribute to the protection and management of water resources through implementation of policy measures that identify significant water resources, prevent the degradation of water quality and wetland vegetation, promote restoration and environmental repair, and avoid incompatible land uses.</p>	<p>The Rockingham Scheme area includes several groundwater catchments. The City has identified this as an essential part of its future and attempts to mitigate adverse impacts to these areas through Town Planning Scheme provisions and local planning policies. The LPS will need to provide adequate commentary and provisions in the new Scheme pertaining to protection of local water assets.</p> <p>Further details are provided in Section 4.4 Environment.</p>
<b>SPP 3 – Urban Growth and Settlement</b>	<p>SPP 3.0 is a broad sector policy that sets out the principles and considerations which apply to planning for urban growth and settlement in Western Australia. The purpose of this Policy is to facilitate sustainable patterns of urban growth and settlement by setting out the requirements of sustainable settlements and communities and the broad policy for accommodating growth and change. SPP 3.0 outlines general measures to create sustainable communities, plan liveable neighbourhoods, coordinate services and infrastructure, manage rural-residential growth and plan for Aboriginal communities. These general measures should be considered in conjunction with issue-specific urban growth and settlement state planning policies which supplement SPP 3.0.</p>	<p>The LPS should reflect and build on the urban growth and settlement policies to identify sufficient land to meet future population and housing needs for at least a 10-year period.</p> <p>It is the purpose of this Strategy to provide analysis on whether the existing planning framework can adequately address the growth in population and dwellings anticipated, and if not, recommend changes to the planning framework to enable sustainable and responsive to community need settlement patterns.</p>
<b>SPP 3.4 – Natural Hazards and Disasters</b>	<p>SPP 3.4 encourages local governments to adopt a systemic approach to the consideration of natural hazards and disasters. The objectives of this policy are to include planning for natural disasters as a fundamental element in the preparation of planning documents, and through these planning documents, minimise the adverse impacts of natural disasters on communities, the economy, and the environment. SPP 3.4 sets out considerations for decision makers in relation to hazards including flood, bushfire, landslides, earthquakes, cyclones, and storm surges.</p>	<p>Rockingham has unique geography which includes Garden Island, pristine coastline, densely populated urban areas, and rural residential areas. As a result, sea level rise and the impacts of bushfires have been identified by the City as risks. LPS should provide adequate commentary to assist with statutory implementation into the Scheme where greater control is required.</p>

STATE PLANNING POLICY	POLICY OVERVIEW	LOCAL PLANNING STRATEGY IMPLICATIONS
<b>SPP 3.5 – Historic Heritage Conservation</b>	<p>SPP 3.5 sets out the principles of sound and responsible planning for the conservation and protection of Western Australia's historic heritage. The policy seeks to conserve places and areas of historic heritage significance and to ensure development does not adversely affect the significance of heritage places and areas.</p> <p>SPP 3.5 primarily relates to historic cultural heritage noting that Aboriginal heritage and natural heritage are protected by other legislative instruments. Historic cultural heritage includes heritage areas, buildings and structures, historic cemeteries and gardens, man-made landscapes and historic or archaeological sites with or without built features.</p> <p>The policy contains development control principles and considerations for decision-makers for where development is proposed within a heritage place and heritage area. The policy also states that care should be taken by decision-makers to minimise the extent to which land use zoning and other planning controls conflict with, or undermine, heritage conservation objectives.</p>	<p>The City has identified the importance of heritage conservation with the inclusion of the Heritage Conservation and Development Local Planning Policy.</p> <p>A Heritage Strategy will form the basis of the LPS (from a heritage perspective). Engagement with local Aboriginal representatives should be considered to build on previous work.</p> <p>Recommendations on whether existing provisions in the planning framework and the municipal heritage inventory pertaining to heritage conservation are current and relevant.</p>
<b>Draft SPP 3.6 – Development Contributions for Infrastructure</b>	<p>Draft SPP 3.6 sets out the principles and requirements that apply to both development and community infrastructure in new and established areas. Its primary purpose is to promote the efficient and effective provision of public infrastructure to meet the demands arising from population growth and development. The policy is intended to apply across all development settings, including urban, industrial, and greenfield growth areas and regional towns.</p> <p>Implementation of this policy is primarily through local planning schemes, improvement schemes or structure plans as well as subdivision and development proposals. In determining the suitability for infrastructure contributions, decision-makers are required to consider six underlying principles, including need and nexus, transparency, equity, certainty, consistency, and accountability.</p> <p>SPP 3.6 is supplemented by the Infrastructure Contribution Implementation Guidelines (the Guidelines) that provide additional information regarding the preparation and operation of development contribution plans (DCPs) in areas where coordinated development of infrastructure and cost sharing is required.</p> <p>The Guidelines recognise that the DCP must have a strategic basis and be linked to the local planning strategy and strategic infrastructure plan and program which identify the infrastructure and facilities required over the life of the DCP (generally up to 10 years for new greenfield development, or longer for the delivery of city-wide Community Infrastructure), and the cost and revenue source.</p>	<p>Development contribution areas form a key part of local planning requirements. Any land proposed for urban development in the Scheme area will need to have consideration for infrastructure contributions, and the positive impacts on the local community.</p> <p>This will include adequate recommendations for implementation into the new Scheme should changes to existing provisions be required.</p> <p>Karnup will require long term DCP arrangements that will need to be guided by a DSP together with a framework contained within the Scheme.</p> <p>The LPS will provide high-level guidance to specify circumstances in which Council will or will not prepare DCP arrangements.</p>



STATE PLANNING POLICY	POLICY OVERVIEW	LOCAL PLANNING STRATEGY IMPLICATIONS
<b>SPP 3.7 – Planning in Bushfire Prone Areas</b>	<p>SPP 3.7 provides a framework in which to implement effective, risk-based land use planning and development outcomes to preserve life and reduce the impact of bushfire on property and infrastructure. The policy emphasises the need to identify and consider bushfire risks in decision-making at all stages of the planning and development process while achieving an appropriate balance between bushfire risk management measures, biodiversity conservation and environmental protection.</p> <p>The policy applies to all land which has been designated as bushfire prone by the Fire and Emergency Services Commissioner as well as areas that may have not yet been designated as bushfire prone but are proposed to be developed in a way that introduces a bushfire hazard.</p> <p>SPP 3.7 should be read in conjunction with the deemed provisions, Guidelines for Planning in Bushfire in Prone Areas and Australian Standard 3959: Construction of buildings in Bushfire Prone Areas.</p>	<p>Any land proposed for urban development in the LPS will need to have consideration for relevant bushfire hazards in accordance with SPP 3.7. This will include the LPS providing necessary guidance for areas that may require future structure planning.</p> <p>The City's Bushfire Risk Management Plan 2018-22 was prepared as an implementation tool in response to SPP 3.7. It is nearing its expiry and there could be an opportunity for a review to be undertaken. The LPS will need to consider how this document relates to SPP 3.7 and determine whether the guidance and recommendations are adequate.</p> <p>In Rural areas the Strategy needs to consider provisions to seek a balance between bushfire risk mitigation measures and the associated adverse environmental impacts associated with the clearing of remnant vegetation.</p>
<b>SPP 4.1 – Industrial Interface</b>	<p>SPP 4.1 guides planning decisions with the aim of protecting the long-term future operation of industry and infrastructure facilities, by avoiding encroachment from sensitive land uses and potential land use conflicts. The policy encourages the use of statutory buffers; facilitating industrial land uses with off-site impacts within specific zones and compatible interface between strategic/general industry zones and sensitive zones.</p> <p>Draft SPP 4.1 supports land use conflict being addressed as early as possible in the planning process. It is also expected that land use conflict will be subsequently considered at each stage of the planning framework, increasing in detail at each level. The policy recognises the overlap of various environmental, health and safety regulations and guidelines and outlines considerations for decision-makers in this regard.</p>	<p>The LPS should ensure that industrial sites or local strategic significance are protected from encroachment through use of buffers or appropriate interface treatment. Conflicts between industrial land and sensitive land uses should be minimised.</p> <p>Industries which generate off-site impacts should be located in relevant industrial zones and ensure that off-site impacts can be contained within these zones.</p> <p>LPS should provide commentary to ensure adequate protections are put in place, particularly where new areas may be proposed.</p>
<b>Draft SPP 4.2 – Activity Centres for Perth and Peel (SPP 4.2) (August 2020)</b>	<p>Draft SPP 4.2 and its Guidelines apply to the preparation and assessment of the relevant components of planning instruments that relate to activity centres within the Metropolitan (Perth), Peel and Greater Bunbury Region Scheme areas. Draft SPP 4.2 seeks to provide a consistent approach for the planning and development of a hierarchy and network of activity centres that meets community needs, and provides economic and environmental benefits, enables the distribution of a broad range of goods and services, and facilitates retail, commercial and mixed used developments.</p>	<p>The City previously prepared the Local Planning Policy – Local Commercial and Activity Centre Strategy which establishes the objectives, principles, and key strategies for retailing and commercial development in the City..</p> <p>As this document has been reviewed in 2021-2022, the LPS will need to align with any proposed recommendations. This will include:</p> <ul style="list-style-type: none"> <li>+ a Needs Assessment prepared in accordance with SPP4.2</li> </ul>

STATE PLANNING POLICY	POLICY OVERVIEW	LOCAL PLANNING STRATEGY IMPLICATIONS
	<p>Draft SPP 4.2 encourages the preparation of precinct structure plans for strategic, secondary, district and specialised activity centres. Neighbourhood and local activity centres may require either a precinct structure plan or local development plan, at the discretion of the decision-maker.</p>	<ul style="list-style-type: none"> <li>+ Defining changes to the hierarchy of centres.</li> <li>+ Defining boundaries and guidance for preparation of precinct structure plans.</li> <li>+ The LPS will need to address the provision of land recommended to be zoned to meet the floorspace needs identified by the needs assessment.</li> </ul>
<b>SPP 5.2 - Telecommunications Infrastructure</b>	<p>SPP 5.2 recognises telecommunications infrastructure as an essential service and aims to balance the need for this infrastructure and the community interest in protecting the visual character of local areas. The policy aims to provide clear guidance pertaining to the siting, location and design of telecommunications infrastructure and sets out specific exemptions for where the policy requirements do not apply.</p> <p>Decision-makers should ensure that telecommunications infrastructure services are located where it will facilitate continuous network coverage and/or improved telecommunications services to the community while not comprising environmental, cultural heritage, social and visual landscape values.</p>	<p>Telecommunications maintains a critical role in infrastructure requirements for local and regional areas.</p> <p>LPS4 should retain existing provisions in the Scheme pertaining to telecommunications infrastructure as currently identified within the City's planning framework.</p>
<b>SPP 5.4 – Road and Rail Transport Noise and Freight Considerations in Land Use Planning</b>	<p>SPP 5.4 provides guidance for the performance-based approach for managing and mitigating transport noise associated with road and rail operations.</p> <p>This policy applies where noise sensitive land uses are located within a specified distance of a transport corridor, new or major road or rail upgrades are proposed or where works propose an increase in rail capacity resulting in increased noise. The policy also sets out specific exemptions for where the policy requirements do not apply.</p> <p>SPP 5.4 supports noise impacts being addressed as early as possible in the planning process for the purpose of avoiding land use conflict and achieving better land use planning outcomes. Considerations for decision-makers include ensuring that the community is protected from unreasonable levels of transport noise, while also ensuring the future operations of transport corridors.</p> <p>SPP 5.2 is supplemented by the Road and Rail Noise Guidelines.</p>	<p>SPP 5.4 should be considered as part of the LPS to structure future policies based on road and rail expansion works as part of any major infrastructure expansions.</p> <p>The policy should be used in the LPS to ensure land use planning adequately considers the relationship between development and potential noise impacts generated from road and rail infrastructure.</p>
<b>SPP 7.0 – Design of the Built Environment Policy</b>	<p>SPP 7.0 is a broad sector policy relevant to all local governments. The policy sets out the objectives, measures, principles, and processes which apply to the design and assessment of built environment proposals through the planning system. It is intended to apply to activity precinct plans, structure plans, local development plans, subdivision, development, and public works.</p>	<p>Priority implications for SPP 7.0</p> <ul style="list-style-type: none"> <li>+ Application of principles in planning instruments</li> <li>+ LPP policy considerations</li> <li>+ Statutory development standards</li> </ul>

STATE PLANNING POLICY	POLICY OVERVIEW	LOCAL PLANNING STRATEGY IMPLICATIONS
	<p>The policy contains 10 design principles which set out specific considerations for decision-makers when considering the above proposals. These include, context and character, landscape quality, built form and scale, functionality and build quality, sustainability, amenity, legibility, safety, community, and aesthetics. The policy also encourages early and on-going discussion of design quality matters and the use of design review.</p> <p>These principles should be considered in conjunction with the range of supporting State Planning Policies that provide design quality guidance for specific types of planning and development proposals.</p>	<p>The 10 principles of good design sufficiently address the formulation of future design-related policies or precinct planning exercise. The principles should also be considered when proposing any new development areas or infill areas.</p>
<b>SPP 7.2 – Precinct Design</b>	<p>SPP 7.2 provides guidance for precinct planning with the intent of achieving good planning and design outcomes for precincts within Western Australia. The policy recognises that there is a need to plan for a broader range of precinct-based contexts and conditions to achieve a balance between greenfield and infill development. Objectives of the policy include ensuring that precinct planning, and design processes deliver good-quality built environment outcomes that provide social, economic, and environmental benefit to those who use them.</p> <p>Precinct types include activity centres, station precincts, urban corridors, residential infill and heritage precincts. These areas are recognised as requiring a high-level of planning and design focus in accordance with a series of precinct outcome considerations as outlined in the policy. The policy also encourages the use of design review.</p>	<p>As recommended in SPP 4.2, the City has numerous activity centres with an expansive and diverse hierarchy. Future planning in many of these areas will be guided by SPP 7.2.</p> <p>The LPS will also consider those centres which have opportunities to activate the land around them, stimulating redevelopment and urban infill.</p> <p>The key elements and design considerations of precinct design are to be incorporated in the design of the new centres.</p> <p>The LPS will need to provide the strategic rationale for where and why precinct structure planning should occur, and what areas require updating through use of 'Planning Areas'.</p>
<b>SPP 7.3 – Residential Design codes Volume 1 and Volume 2</b>	<p>SPP 7.3 – Residential Design Codes Volume 1 and 2 provides the basis for the control of residential development throughout Western Australia for single houses, grouped dwellings and multiple dwellings. The purpose of the policy is to address emerging design trends, promote sustainability, improve clarity and highlight assessment pathways to facilitate better outcomes for residents. They are also used for the assessment of residential subdivision proposals.</p> <p>The policy outlines various objectives for residential development, planning governance and development process and sets out information and consultation requirements for development proposals. The policy also makes provision for aspects of specified design elements to be varied through the local planning framework.</p> <p>SPP 7.3 – Residential Design Codes Volume 1 and 2 should be read in conjunction with the supporting Guidelines.</p>	<p>Volume 2 and nominate densities according to relevant R-coding.</p> <p>Any primary controls set for mixed use or apartment development should incorporate the 'considerations for local government' under each design element in Part 2 of Volume 2.</p> <p>The relationship of the local planning framework with updates to current R-Codes may be considered through the Scheme review or precinct planning processes. There is also a need to consider potential provisions to assist with normalisation of hundreds of LDP's around the City that are fronting onto POS, or have other purposes.</p>



## 2.3 SUB-REGIONAL PLANNING CONTEXT

The WAPC prepares various regional planning instruments to guide land use and development at the regional and sub-regional level, including:

- + Regional Strategies
- + Regional Planning Schemes
- + Regional and Sub-regional planning strategies and structure plans

Regional planning instruments considered to be specifically relevant to the City are outlined and described in **Table 2**.

**Table 2: Regional planning instrument overview and Local Planning Strategy Implications**

REGIONAL PLANNING INSTRUMENT	REGIONAL PLANNING INSTRUMENT OVERVIEW	LOCAL PLANNING STRATEGY IMPLICATIONS
<b>Metropolitan Region Scheme</b>	The Metropolitan Region Scheme (MRS) outlines objectives for regional development and provides a statutory mechanism to assist strategic planning, by setting out broad land use zones, setting aside areas for regional open space, protection of environmental values and other regional infrastructure purposes, and assisting in coordinating the provision of major infrastructure. Local government planning (including local planning schemes) is required to be consistent with the broad land uses under the MRS.	As part of the Perth Metropolitan Region, the City is subject to the MRS. Any planning directions and actions included in the LPS that may require changes, will need to be cognisant of the relevant implications and processes of doing so.
<b>Perth and Peel @3.5 Million</b>	Perth and Peel@3.5Million provides a high-level strategic plan for the future growth of Perth and Peel. The framework aims to accommodate 3.5 million people by 2050 by planning for proposed infrastructure and promoting a vibrant, compact, and connected city.  The four sub-regional planning and infrastructure frameworks (North-West, North-East, Central, and South Metropolitan Peel) work in conjunction with the strategy to promote sustainable development, and liveable environments to ensure sustainable growth of both the population and city.	The LPS should outline how the City will plan to meet its obligations for urban consolidation and infill in the short-medium term. Specifically, the LPS should: <ul style="list-style-type: none"> <li>+ Recognise the benefits of increased local population in terms of activity, vibrancy, and business sustainability</li> <li>+ Target population growth in new strategic areas, while maintaining the majority of residential areas at existing densities;</li> <li>+ Support development of high-quality design, providing benefits to the community; and</li> <li>+ Establish a comprehensive work program for additional studies to inform future amendments to the Scheme and to provide a basis for future review of the LPS.</li> </ul>
<b>South Metropolitan Peel Sub-Regional Framework (2018)</b>	The Southern Metropolitan Peel Sub-Regional Framework works in conjunction with Perth and Peel @ 3.5million to guide the strategic growth of the southern sub-region of the Perth Metropolitan area. The document seeks to enable the creation of a more consolidated urban form to allow for the growing population while still	The South Metropolitan Peel Sub-Regional Framework (2018) (the Regional Framework) identifies the City as a Strategic Centre, with several district centres and nodes identified.  The City is identified as the principal centre of the south-western sector with large and increasingly growing urban catchment areas. The following areas identified in the Regional Framework are applicable to the Local Planning Framework:

REGIONAL PLANNING INSTRUMENT	REGIONAL PLANNING INSTRUMENT OVERVIEW	LOCAL PLANNING STRATEGY IMPLICATIONS
	<p>ensuring existing communities, environments and infrastructure are accommodated for.</p> <p>This document seeks to promote liveable and vibrant communities while still ensuring the future development of transport and infrastructure to support the growing metropolitan region.</p>	<ol style="list-style-type: none"> <li>1. Activity Centres with a key focus on population-driven growth;</li> <li>2. Specialised Activity Centres;</li> <li>3. Strategic Industry Centres;</li> <li>4. Updates to existing rural areas to facilitate urban expansion;</li> <li>5. METRONET expansion of the Rockingham-Karnup Corridor and its possible upgrade from a high frequency to high-priority transit corridor; and</li> <li>6. Rockingham-Kwinana-Karnup Road network upgrades.</li> </ol> <p><b>Summary</b></p> <p>To achieve the objectives and targets contained within the Framework, the City's Local Planning Framework is required to be reviewed to address the following Strategic Planning considerations:</p> <p><u>Consolidated Urban Form</u></p> <ul style="list-style-type: none"> <li>+ Ensure Local Planning Strategy/ Scheme Amendments stipulate provisions and actions that achieve the requirements of the Framework.</li> <li>+ Prepare District (Standard) Structure Plans (where appropriate), generally prior to region scheme zoning.</li> <li>+ Complete planning investigations for land identified as 'Urban Investigation'.</li> <li>+ Prepare Precinct Structure Plans over strategically identified activity centres to address infill and employment targets set by the framework.</li> <li>+ Establish minimum urban infill dwelling targets and identify sites consistent with the principles of urban consolidation.</li> <li>+ Encourage the review of endorsed structure plans to achieve a minimum average density of 15 dwellings per gross urban hectare.</li> </ul> <p><u>Economy and Employment</u></p> <ul style="list-style-type: none"> <li>+ Promote employment nodes including activity centres, specialised centres, Industrial areas, Industrial Expansion areas.</li> <li>+ Protect employment land from uses inconsistent with employment objectives.</li> <li>+ Protect strategic industries and land classified for this purpose, together with their buffers, from the encroachment of non-strategic and/or incompatible land uses.</li> <li>+ Improve employment self-sufficiency to reach target.</li> </ul>

REGIONAL  
PLANNING  
INSTRUMENTREGIONAL PLANNING INSTRUMENT  
OVERVIEW

## LOCAL PLANNING STRATEGY IMPLICATIONS

*Movement and Access*

- + Undertake ongoing monitoring of the movement network, refine plans as appropriate and implement transportation upgrades/construction to road, rail, public transport and active transport infrastructure.
- + Investigate the opportunity to upgrade Read Street-Warnbro Sound Avenue-Dampier Drive, from a high-frequency to high-priority transit corridor, in conjunction with potential additional urban infill opportunities along this key transport corridor.
- + Make provision for transit corridors.

*Community and Social Infrastructure*

- + Provide land within the sub-region for sport and recreation, regional level health facilities, education and cemeteries.
- + Complete an infrastructure capacity report to accompany urban infill strategies.
- + Optimise use of existing infrastructure, with urban infill and employment opportunities utilising the principles of urban consolidation.
- + Facilitate shared infrastructure corridors.
- + Identify and/or protect sites for regional service infrastructure provision.

*Environment and Landscape*

- + Identify and protect ecological linkages, where appropriate.
- + Design district and local open space to utilise green network principles.
- + Undertake various environmental studies including landscape assessment and coastal planning/sea level rise to support proposals.

*Natural Resources*

- + Determine the more -detailed staging and sequencing for development sites with basic raw materials.
- + Prepare and implement water management strategies in accordance with the South Metropolitan Peel Regional Water Management Strategy and Better Urban Water Management framework.
- + Retain, consolidate, and rehabilitate vegetation and habitat as required.
- + Establish strong working relationships with relevant government agencies and stakeholders to activate public lands and integrate them into the existing areas with appropriate networks.

## 2.4 DEVELOPMENT CONTROL AND OPERATIONAL POLICIES

**Table 3: Development control and operational policies**

POLICY	POLICY OVERVIEW	LOCAL PLANNING STRATEGY IMPLICATIONS
<b>WAPC DC 1.1</b> Subdivision of Land – General Principles	This policy seeks to control subdivision of land, number, size and arrangement of lots within the framework of the relevant legislation, regulations, and policy.	Further consideration of general subdivision and the impacts on the locality will be explored through development of the LPS.
<b>WAPC DC 1.2</b> Development Control – General Principles	This policy deals with the general principles and policies used by the WAPC in its determination of applications for approval to commence development. The policy also focusses specifically on alignment with the Metropolitan Region Scheme (MRS). Development Control Policy 1.2 is currently under review, with a draft currently available.	In developing planning directions and actions for the LPS, changes to the MRS may arise in certain instances to allow the vision and objectives (of the LPS to be met). In these instances, specific actions regarding amendments to the MRS will need to be outlined, ensuring that policy measures are adequately considered.
<b>WAPC DC 1.5</b> Bicycle Planning	This policy describes the planning considerations which should be considered in order to improve the safety and convenience of cycling. This document sets out policy objectives and measures to achieve greater consideration of cyclists' needs and to promote an understanding of cyclists' requirements by planning consultants, developers, and State and local government.	<p>The identification of cycling routes is in conjunction with the Long-Term Cycle Network for Perth and Peel and collaboration with the Department of Transport (DOT). This strategy identifies strategic cross-boundary routes that link parks, schools, community facilities and transport services. It also allows flexibility for LGAs to modify according to local situations.</p> <p>The City has identified under the Strategic Community plan to facilitate quality public open space, walkways/cycleways, and amenities for the local community. The LPS should have consideration for the benefits of cycling to improve long-term mode share, contributing to a more sustainable transport future. Future cycling facilities and routes provisions should be reviewed in a Sustainable Transport Strategy.</p>
<b>WAPC DC 1.6</b> Planning to Support Transit Use and Transit Oriented Development	This policy seeks to maximise the benefits to the community of an effective and well used public transit system by promoting planning and development outcomes that will support and sustain public transport use through greater integration of land use and transport planning. The policy focusses primarily on existing high frequency public transport routes.	<p>The City has identified the need to facilitate attractive, sustainable suburbs that provide housing diversity, quality public open space, walkways, amenities, and facilities for the local community. With high frequency transport in the form of both trains and buses, further consideration on how to improve transit-oriented development opportunities will need to be explored through development of the LPS.</p> <p>This will have consideration for existing studies / projects such as the City's Housing Opportunities Study and the Rockingham Precinct Structure plan. Both of which include exploration for establishment of a defined Tier 2 transit system.</p>



POLICY	POLICY OVERVIEW	LOCAL PLANNING STRATEGY IMPLICATIONS
<b>WAPC DC 1.7</b> General Road Planning	<p>This policy brings together in one document all those operational planning policies of the WAPC which apply generally to the planning of roads. The policy refers to the functional road classification system in Liveable Neighbourhoods (2009).</p> <p>The policy establishes requirements for land contributions and the construction of various categories of roads and outlines principles that apply to aspects of the planning and provision of all types of roads. It also clarifies the role of roads as service corridors for public utilities</p>	<p>The City has identified in the Strategic Community Plan to plan and develop sustainable and safe infrastructure. Further consideration on how general road planning will impact the City will be addressed through development of the LPS having specific consideration for where the upgrade (existing) or construction (new) of roads is required to support future growth in the City, and be reflected on the LPS Maps.</p>
<b>WAPC DC 1.9</b> Amendment to Region Schemes	<p>This policy establishes the range of considerations which the WAPC or its delegate will consider when forming an opinion about the substantiality of an amendment to a region planning scheme.</p>	<p>As described in WAPC DC 1.2 there may be instances in which the LPS recommends amendments to the MRS to support implementation of the LPS. In doing so, it is recommended that the principal considerations outlined in Section 4 of DC 1.9 are reviewed to ensure any proposed amendments can be reasonably justified.</p>
<b>WAPC DC 1.9</b> Freeway Services Centres	<p>This policy outlines the location and design measures related to the establishment of freeway service centres and roadhouses throughout the State.</p>	<p>In the City, Kwinana Freeway is identified as an 'existing freeway' under the policy with Mandurah Road shown as a 'future freeway'. Given that the City already has a freeway service centre either side of the Kwinana Freeway (in the Baldivis locality) it is not anticipated that this policy will be of relevance to the LPS moving forward.</p>
<b>WAPC DC 2.2</b> – Residential Subdivision	<p>This policy sets out the Western Australian Planning Commission's requirements for the subdivision of land into residential lots. It is related to the site area per dwelling standards contained in the R-Codes, and to other State Policies and Development Controls.</p> <p>Historical lot size differences and application of contemporary R-Coding's results in some lots not aligning with allocated R-Code minimum and average lot sizes. Lot size variation under this policy is intended to facilitate flexibility to complete subdivision of these lots as intended under the local planning framework.</p>	<p>The LPS is likely to identify several areas suitable for urban growth. Future subdivision of these areas will be required to have consideration for the objectives and requirements of this policy. LPS should provide specific guidance in planning actions where required, to ensure alignment to community consultation results. Workshops and an online engagement mapping and survey were undertaken with the local community in August–September 2022 to inform the future residential housing preferences in the City.</p> <p>For areas with subdivision potential such as Rockingham, Shoalwater, Safety Bay, Waikiki, Singleton and Golden Bay, battle-axe development typology is highly discouraged.</p>

POLICY	POLICY OVERVIEW	LOCAL PLANNING STRATEGY IMPLICATIONS
<b>WAPC DC 2.3 –</b> Public Open Space in Residential areas	<p>This policy sets out the requirements for creation of public open space in the subdivision of land for residential purposes. It seeks to ensure that all residential development is complemented by adequate, well-located public open space. It also seeks to protect and conserve watercourses and foreshores adjacent to residential development.</p> <p>The normal requirement is that for residential subdivision, where practicable 10% of the gross subdivisible area be given up free of cost and ceded to the Crown as public open space.</p>	<p>The City has adopted Public Open Space PP 3.4.1 to guide the allocation of POS for developments. <i>Liveable Neighbourhoods</i> further sets out relevant criteria to assess the subdivision of land into residential lots.</p> <p>The City's Public Open Space Community Plan Strategy suggests applying POS classifications and hierarchies to all City strategies and policies relating to the delivery and management of POS.</p> <p>It should also incorporate guidance on allocation of land for active POS under current policy requirements. For areas with increased residential density or their POS provision does not meet the current provision of 8%, action of preparing discrete Strategies is needed.</p>
<b>WAPC DC 2.4 –</b> School sites	<p>This policy statement contains the WAPC's general requirements for school and TAFE college sites in residential areas and recognises the need to consider any requirements for higher education facilities.</p>	<p>The LPS will be required to conduct a high-level assessment of existing education facilities in the City to understand implications for the future population.</p> <p>In areas where structure planning has not occurred, the LPS will need to provide adequate guidance on the number and size of schools which are to be provided in these areas.</p>
<b>WAPC DC 2.6 –</b> Residential Road Planning	<p>This policy sets out the WAPC's requirements for the planning and design of roads in residential areas and provides guidelines for the design and layout of residential roads.</p>	<p>This policy requires greater consideration during structure planning. For the LPS, the primary role of the document will be to map out the road hierarchy particularly for higher order roads. This will include any future planned or upgraded roads.</p>
<b>WAPC DC 3.4</b> – Subdivision of Rural Land	<p>This policy sets out the principles used to determine applications to subdivide rural land. It aligns with the policy objectives set out in SPP 2.5 and identifies special circumstances in which rural subdivision may be considered by the WAPC.</p>	<p>With substantial amounts of land allocated for rural in the City, this policy needs to be considered where any substantial subdivision and/or development of rural land is proposed. This would include consideration for any rural areas which may require rezoning (both in the MRS and LPS4). Where any changes are proposed in the LPS, adequate justification for any planning actions and directions would need to be provided.</p>
<b>WAPC DC 4.1 –</b> Industrial Subdivision	<p>This policy sets out the principles and objectives that guide the subdivision of industrial land. It seeks to ensure that the State can deliver on its industrial needs with a full range of industrial services, supported by efficient movement networks, public open space and considerations for amenity impacts of adjacent uses.</p>	<p>Several areas have been identified for industrial or light industrial uses. Subdivision in these areas will need to have consideration for the policy measures and guidance provided in this policy. Further, if the LPS proposes any new industrial or light industrial areas adequate justification and guidance will be required to support any zoning changes that may be required as a result.</p>

POLICY	POLICY OVERVIEW	LOCAL PLANNING STRATEGY IMPLICATIONS
<b>Liveable Neighbourhoods</b>	<p>Liveable Neighbourhoods is an operational policy for the design and assessment of structure plans (regional, district and local) and subdivision for new urban (predominantly residential) areas in metropolitan areas and country centres, on greenfield and large urban infill sites. While the policy is under review as part of the DesignWA project, it provides comprehensive guidance on eight specific design elements:</p> <ul style="list-style-type: none"> <li>+ Community design.</li> <li>+ Movement network.</li> <li>+ Lot layout.</li> <li>+ Public parkland.</li> <li>+ Urban water management.</li> <li>+ Utilities.</li> <li>+ Activity centres and employment.</li> <li>+ Schools.</li> </ul>	<p>Where structure planning is required in greenfield areas, new development will be required to have consideration for Liveable Neighbourhoods.</p> <p>Liveable Neighbourhoods is currently under review. It will eventually be replaced by SPP 7.1 – Neighbourhood Design once it becomes operational.</p> <p>The LPS will need to consider the changes proposed and ensure strategic directions are adequately captured.</p>
<b>Better Urban Water Management</b>	<p>Better Urban Water Management policy guides implementation of SPP 2.9 by providing a framework for how water resources should be considered at each stage of the planning process and assigning actions and requirements to each. This applies to both new greenfield and urban renewal projects where residential, commercial, industrial and rural residential uses and development are proposed, including in rural townsites areas.</p> <p>Under this policy, Local Planning Strategy should:</p> <ul style="list-style-type: none"> <li>+ Apply the requirements of state and regional planning policy, including SPP 2.9 Water Resources;</li> <li>+ Propose local and regional catchment management objectives and preliminary design objectives for all elements of the total water cycle;</li> <li>+ Map the surface and groundwater catchments and sub-catchments;</li> <li>+ Undertake a desktop analysis of past land use with the potential for contamination;</li> <li>+ Discuss water sources for drinking and other water needs;</li> <li>+ Depict the location of future conservation reserves, multi-use open space corridors, urban bushland belts and greenways, waterway corridors and wetlands to be protected; and</li> <li>+ Propose a strategy to ensure that surface and groundwater quality and quantity information is available at an appropriate time to inform future land use planning decisions.</li> </ul>	<p>This policy demands the City:</p> <ul style="list-style-type: none"> <li>- Consider total water cycle management at all stages of the planning process, and</li> <li>- Implement water sensitive urban design.</li> </ul> <p>The policy also requires the City to ensure that developments are water sensitive through:</p> <ul style="list-style-type: none"> <li>- Their role in assessing the water management reports required by Better Urban Water Management;</li> <li>- Producing local planning policies related to water sensitive urban design and provision of water for public open space;</li> <li>- Adoption of local government guidelines for subdivisional development (Institute of Public Works Engineering Australia 2011);</li> <li>- Amendment of local (town) planning schemes to incorporate Better Urban Water Management requirements; and</li> <li>- Producing a water management strategy.</li> </ul>

## 2.5 POSITION STATEMENT AND GUIDELINES

Table 4: Position Statements and Guidelines

POSITION STATEMENT	OVERVIEW	LOCAL PLANNING STRATEGY IMPLICATIONS
<b>Renewable Energy Facilities</b>	<p>This document outlines the WAPC requirements to support the consistent consideration and provision of renewable energy facilities within Western Australia.</p> <p>The policy identifies assessment measures to facilitate appropriate development of renewable energy facilities. It seeks to ensure these facilities are in areas that minimise the impact on the environment, natural landscape, and urban areas while maximising energy production returns and operational efficiency.</p>	<p>The City has identified in the Strategic Community Plan a requirement for future generations. Specifically relating to infrastructure planning, responsive planning and control of land use, climate change adaptation, sustainable water solutions, and alternative energy applications.</p> <p>The WAPC's State Planning Strategy 2050 promotes renewable energy initiatives. To help implement this, the local planning framework can effectively manage the development assessment of renewable energy facilities.</p> <p>The LPS can, in a broad sense, strategically identify areas where renewable energy facilities could be considered having consideration for the City's Sustainability Strategy.</p> <p>The City has identified the only feasible renewable energy facility to be implemented into the Scheme area is a 'waste to energy facility' which thermally treats the waste and converts the recovered energy into steam to produce electricity.</p> <p>'Renewable energy facility' should be considered for inclusion in the City's new Local Planning Scheme as a separate land use with appropriate control mechanisms.</p>
<b>Special Residential Zone</b>	<p>This position statement outlines the WAPC intent to discontinue the special residential zone in local planning schemes. The objectives of this position statement are to:</p> <ul style="list-style-type: none"> <li>+ Phase out the special residential zone in local planning schemes; and</li> <li>+ Provide general guidance for subdivision and development of existing special residential zoned land.</li> </ul>	<p>As outlined in the Special Residential Zone Position Statement, it is the position of the DPLH that this zoning has several adverse impacts with regards to subdivision and future development. It has therefore been removed from Schedule 3 of the LPS Regulations.</p> <p>The City has several clusters of land zoned 'Special Residential', including parts of the suburbs of Warnbro, Baldivis, and Golden Bay. These areas primarily aim to protect existing landscape or environmental character.</p> <p>It has been recommended in the Rural Land Strategy to include sites from Precinct 1A – Rural Wedge which provides for 5,000m<sup>2</sup> lots.</p> <p>The LPS will be required to consider the future planning implications of these areas to ensure that the existing intent of the Scheme can be maintained and adapted to meet the requirements of the State Planning Framework.</p>



POSITION STATEMENT	OVERVIEW	LOCAL PLANNING STRATEGY IMPLICATIONS
<b>Residential Accommodation for Ageing Persons</b>	<p>This position statement outlines the WAPC's requirements to support the provision of residential accommodation for ageing persons within Western Australia's local government planning framework. This position statement seeks to remove planning process barriers and encourage the provision of an appropriate supply and diversity of options for residential accommodation by establishing consistent, simplified, and streamlined approval pathways, within a strategically led planning framework.</p> <p>The local planning strategy should be commensurate with the extent of opportunities and constraints identified, including consideration of:</p> <ul style="list-style-type: none"> <li>+ The identification of specific sites and/ or locations where appropriate</li> <li>+ Incentives intended to be outlined in local planning schemes or other local government planning instruments (such as a Council-endorsed position) to facilitate increased supply, where required, including: – development-based incentives such as density, height and plot ratio bonuses – other mechanisms such as surplus land sales/lease/joint venture programs</li> <li>+ Consideration of acceptable development standards, including built form outcomes, design criteria, streetscape requirements, permissible height, density and development setbacks intended to be outlined in local planning schemes or other local government planning instruments.</li> </ul>	<p>The position statement provides specific guidance for the assessment and investigation of the residential accommodation needs that should be considered in the preparation of an LPS. The LPS will respond to the issues identified in the Seniors Strategy 2017-2021 and those that will form part of the 2023-2028 Seniors Strategy.</p> <p>The LPS may identify sites for aged care accommodation which are not zoned and require further liaison with government agencies and authorities.</p> <p>From a statutory perspective, if the LPS determined sufficient demand for residential accommodation for ageing persons, then new land use definitions (and associated permissibilities) should be considered for 'Residential Aged Care Facility' and 'Independent Living Complex'.</p>





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## LOCAL PLANNING CONTEXT

# 3.1 STRATEGIC COMMUNITY PLAN 2019-2029

The City's Strategic Community Plan (SCP) was adopted in 2018, following a major strategic review and extensive community engagement. A minor review of the SCP was subsequently undertaken in 2020. The key themes, outcomes, and objectives relevant to the land use planning are identified in **Table 4**.

**Table 5: Strategic Community Plan Alignment**

ASPIRATIONS	OUTCOMES	OBJECTIVES RELEVANT TO STRATEGY
<b>Actively Pursue Tourism and Economic Development</b>	1. Coastal destination 2. Investment attraction 3. Marketing and promotion 4. Attractions and events 5. Infrastructure investment – local, regional, and state 6. Business development 7. MICE (meetings, incentives, conferences, and events)	1.1 Facilitate access and safety to promote the City as a coastal tourism destination. 2.1 Activate the coastal precincts of Rockingham. 3.1 Speak to City's attractions in terms of liveability for the local community, visitors, investors, and businesses. 4.1 Grow knowledge, appreciation and involvement in local art, culture, and heritage. 5.1 Attract opportunities for future infrastructure investment. 6.1 Provide safe and efficient roads and parking and other infrastructure. 7.1 Identify and attract conferences and high-profile business and sporting events to the City to develop its profile as a destination of choice for events and entertainment.
<b>Grown and Nurture Community Connectedness and Wellbeing</b>	8. Youth development and involvement 9. Accessibility 10. Aboriginal heritage and inclusion 11. Community engagement 12. Community capacity building 13. Community safety and support 14. Services and facilities	8.1 Effective communication with at-risk youth and vulnerable individuals. 9.1 Create attractive, sustainable streetscapes and green spaces to support the City's ageing population. This could include capitalising on the existing services / transit networks in established aged care areas and key transit corridors. 10.1 Identify and implement strategic plans to support and strengthen relationships with Aboriginal people. 11.1 Provide the community with relevant, timely information and effective engagement. 12.1 Facilitate access to safe, affordable accommodation to meet all needs including itinerants, homeless people, those at risk, youth, and the elderly. 13.1 Facilitate access to health facilities, services, and programs to achieve good general and mental health in the community. 14.1 Plan and develop sustainable and safe infrastructure.



ASPIRATIONS	OUTCOMES	OBJECTIVES RELEVANT TO STRATEGY
<b>Plan for Future Generations</b>	15. Infrastructure planning 16. Responsive planning and control of land use 17. Climate change adaptation 18. Sustainable waste solutions 19. Alternative energy applications 20. Preservation and management of bushland and coastal reserves 21. Liveable suburbs	15.1 Identify and plan for future land use requirements. 16.1 Mitigate effects of climate change and assessment of natural disaster risks. 17.1 Adopt and encourage sustainable practices that support responsible and sustainable disposal of waste. 18.1 Adopt and encourage sustainable practices to facilitate alternative energy solutions. 19.1 Embrace new technology and apply alternative energy solutions. 20.1 Encourage the sustainable management and use of the City's bushland and coastal reserves. 21.1 Facilitate attractive, sustainable suburbs that provide housing diversity, quality public open space, walkways, amenities, and facilities for the local community.
<b>Deliver Quality Leadership and Business Expertise</b>	22. Effective governance 23. Revenue sources 24. Leadership in sustainability 25. Strategic and sustainable financial planning 26. Management of current assets 27. Benchmarking and optimising performance 28. Key stakeholder partnerships	22.1 Strengthen leadership, advocacy, and governance capabilities. 23.1 The City has several opportunities to sell, lease or rezone several landholdings. 24.1 Promote sensible and sustainable growth and development. 28.1 Identify and foster relationships to achieve enhanced community outcomes.

## 3.2 PREVIOUS LOCAL PLANNING STRATEGY

A local planning strategy is a fundamental component of the local planning framework. It sets out the long-term strategic planning directions for a local government.

The local government is required to prepare a local planning strategy under the *Planning and Development (Local Planning Schemes) Regulations 2015* (LPS Regulations) which shall set out the long-term planning directions for the local government, apply to any state or regional planning policy that is relevant to the strategy, and provide the rationale for any zoning or classification of land under the local planning scheme.

Planning in the City has not previously been shaped by a local planning strategy, due to the existing Town Planning Scheme being implemented at a time when one was not required.

This LPS is the first prepared for the City.

## 3.3 LOCAL PLANNING SCHEME

The City of Rockingham's Town Planning Scheme No. 2 (TPS2) sets out the way land is to be used and developed within the Scheme area and classifies areas for land use and includes provisions to coordinate infrastructure and development. Since the adoption of TPS2 in 2004, over 180 amendments to TPS2 have been adopted to keep the scheme current and facilitate land use and development within the scheme area. In February 2010, the WAPC advised that it accepted Council's decision to prepare a new Local Planning Scheme. It is noted that in September 2017, TPS2 was amended for consistency with the *Planning and Development (Local Planning Schemes) Regulations 2015*, by deleting clauses that were superseded by the Deemed Provisions.

On 27 July 2021 Council approved, pursuant to Regulation 66(3) of the *Planning and Development (Local Planning Schemes) Regulations 2015*, a recommendation being made to the WAPC that a new City of Rockingham Local Planning Scheme No.4 (LPS4) should be prepared and the current TPS2 repealed upon the approval of LPS4. The Report noted that the State's Spatial Framework and Sub-Regional Structure Plan were key considerations for preparation of the new Scheme and LPS.

Considering the above, it is expected that LPS4 will be the primary instrument for delivery of the vision and planning direction of the new LPS. The scheme text and maps should be read in conjunction with the LPS.

The preparation of LPS4 will be based on the model provisions of the LPS Regulations and includes:

- + The identification of new aims to address current land use planning issues;
- + The standardisation of local reserves and zoning;
- + A review of the land use classifications;
- + A review of land use permissibility within the zoning table to ensure best practice;
- + Review and establish new development requirements for specific zones;
- + Inclusion of enabling provisions for precinct planning and design review;
- + Review Special Control Areas; and
- + The inclusion of Supplemental provisions and interpretations/definitions.

## 3.4 LOCAL PLANNING POLICIES

Local Planning Policies (LPP) may be prepared by the City in accordance with Division 2 of Schedule 2 of the LPS Regulations in respect of a particular class or classes of matters specified in the policy, and may apply to the whole scheme area or part of the scheme area.

The City currently has 39 operational LPP's, a summary of which is provided in **Table 6**. The type, date of operation, purpose, and function varies. LPP's have been grouped into several categories including 'Strategic Planning', 'Development Control – Strategic Centre', 'General Planning (Design)', and 'General Planning'.

**Table 6: Local Planning Policies**

NAME	CATEGORY	PURPOSE OF LOCAL PLANNING POLICY / RECOMMENDATIONS	ADOPTION DATE / REVIEW STATUS
3.1.1 Rural land Strategy (RLS)	Strategic Planning	The purpose of the RLS is to set out the objectives and policy provisions which the City shall have due regard to in the assessment of land use planning proposals on rural land. It should be read in conjunction with the provisions of TPS2 relating to the Rural, Special Rural and Special Residential zones.	Revised July 2020
3.1.2 Local Commercial Strategy	Strategic Planning	This Strategy has been prepared in the context of population projections applicable to the whole Southwest Corridor including all existing and known commercial proposals in the Corridor as provided by the Ministry for Planning. In particular, the new commercial strategies currently being developed for the adjoining local authorities of Kwinana and Mandurah.	Revised July 2018
7.2 – Local Bushland Strategy	Strategic Planning	This LPP addresses bushland of local significance rather than regionally significant bushland. The ultimate purpose of this Policy is to provide the City with guidance in the assessment of proposals to rezone, subdivide and develop land where remnant bushland of local significance is present.	December 2001
7.3 – Cockburn Sound Catchment	Strategic Planning	The purpose of this LPP is to protect and improve the marine waters of Cockburn Sound by minimising contaminant inputs (particularly nutrients) from diffuse land use sources.	Adopted August 2004
3.2.1 Development Policy Plan – City Centre Sector	Development Control – Strategic Centre	The City Centre will continue to be the tertiary economic and employment focus of the RSC with the retail anchor of an expanded shopping centre merging with 'Main Street' mixed use development, civic buildings, and major public spaces, including the City Square and the proposed Central Promenade Piazza. Provision will be made for offices and higher density apartments over street level retail and commercial tenancies.  <i>Note: It is recommended that this LPP be repealed once the RPSP is operational.</i>	Revised August 2014
3.2.2 Development Policy Plan – Smart Village Sector	Development Control – Strategic Centre	This LPP provides a more detailed planning vision and policy framework for the sector, based on the concept of a sustainable, medium to high density urban village within close proximity to a central, high frequency transit corridor.  <i>Note: It is recommended that this LPP be repealed once the RPSP is operational.</i>	Adopted April 2012



NAME	CATEGORY	PURPOSE OF LOCAL PLANNING POLICY / RECOMMENDATIONS	ADOPTION DATE / REVIEW STATUS
3.2.5 Development Policy Plan – Waterfront Village Sector	Development Control – Strategic Centre	To fund and implement an ongoing strategy of civic improvements, mixed use urban renewal and townscape consolidation. It also provides greater opportunities for people to live and recreate in a high amenity environment within walking distance of the beach.  <i>Note: It is recommended that this LPP be repealed once the RPSP is operational.</i>	Revised July 2019
3.2.6 – Northern Waterfront Sector	Development Control – Strategic Centre	This LPP provides a more detailed planning vision and policy framework for the Northern Waterfront Sector.  <i>Note: It is recommended that this LPP be repealed once the RPSP is operational.</i>	Adopted June 2014
3.2.8 – Development Policy Plan – Campus Sector	Development Control – Strategic Centre	This LPP provides a more detailed planning vision and policy framework for the sector. A logical policy area boundary has been defined in which the land use and townscape characteristics of individual precincts are described and illustrated.  <i>Note: It is recommended that this LPP be repealed once the RPSP is operational.</i>	Adopted November 2014
3.2.9 Development Policy Plan – Eastern Sector	Development Control – Strategic Centre	This LPP provides a more detailed planning vision and policy framework for the sector. A logical policy area boundary has been defined in which the land use and townscape characteristics of individual precincts are described and illustrated.  <i>Note: It is recommended that this LPP be repealed once the RPSP is operational.</i>	Adopted September 2014
3.2.12 – Development Policy Plan – Southern Gateway and Rockingham Station Sectors	Development Control – Strategic Centre	This LPP provides a more detailed planning vision and policy framework for the Southern Gateway and Rockingham Station sectors. The policy area boundaries generally follow those illustrated in the endorsed Centre Plan.  <i>Note: It is recommended that this LPP be repealed once the RPSP is operational.</i>	Adopted August 2016
3.2.3 – Secret Harbour Town Centre	General Planning (Design)	This LPP applies to all applications for development and subdivision within the Secret Harbour Town Centre, and to any proposed modification to the IDP. The Policy is structured such that it contains a set of General Requirements that pertain to the entire Secret Harbour Town Centre. Council will assess all applications against the relevant criteria as set out in Part 6 – ‘General Requirements’ of this Policy.  <i>Note: LPP may be repealed once a PSP has been prepared.</i>	Adopted February 2009
3.2.4 – Baldivis Town Centre	General Planning (Design)	This LPP is structured such that it contains a set of General Requirements that pertain to the entire Baldivis Town Centre, and precinct requirements that relate more to the dedicated precincts within the Town Centre. The City will assess all applications against the relevant criteria in the General Requirements and Precinct Requirements.  <i>Note: LPP may be repealed once a PSP has been prepared.</i>	Revised August 2013

NAME	CATEGORY	PURPOSE OF LOCAL PLANNING POLICY / RECOMMENDATIONS	ADOPTION DATE / REVIEW STATUS
3.3.8 – East Rockingham Development Guidelines	General Planning (Design)	This LPP been formulated to provide developers with a user-friendly set of planning criteria and to ensure that the East Rockingham Industrial Park has a consistent high standard of development and visual amenity expected by the community. LPP is likely to be revoked.	Adopted May 2008
3.3.23 – Waikiki Hotel Site – Urban Design Guidelines	General Planning (Design)	The purpose of this LPP is to establish a framework of planning principles and development controls to deliver an appropriate redevelopment of the site.	Adopted December 2017
3.3.1 – Control of Advertisements	General Planning	Clause 5.3 of TPS2 details the provisions which control advertisements. In this regard, clause 5.3.1(a) states that the erection, placement, and display of advertisements and the use of land or buildings for that purpose is development within the definition of the Act requiring, except as otherwise provided, the prior planning approval of the City.	Revised August 2022
3.3.2 – Bed and Breakfast Accommodation	General Planning	The purpose of this Planning Policy is to set out the objectives and policy provisions which the City shall have due regard to in the assessment and determination of Bed and Breakfast development applications.	Revised 2018
3.3.4 Cash-in-lieu of Car Parking	General Planning	The purpose of this Planning Policy is to set out the objectives and policy provisions which the City shall have due regard to in its consideration of applications seeking to pay cash-in-lieu of the provision of carparking.	Revised 2017
3.3.5 – Child Care Premises	General Planning	The purpose of this Planning Policy is to set out the objectives and policy provisions which the City shall have due regard to in the assessment and determination of applications for Development Approval for the establishment of Child Care Premises.	Revised 2019
3.3.7 – Display Home Centres	General Planning	The purpose of this Planning Policy is to set out the objectives and policy provisions which the City shall have due regard to in the assessment and determination of applications for Development Approval for the establishment of Display Home Centres. The Planning Policy also seeks to ensure the suitable transition of the land use from Display Home Centre to 'dwelling(s)' when the Display Home Centre has ceased operation.	Revised 2020
3.3.9 – Fast Food Outlets	General Planning	The purpose of this LPP is to set out the objectives and policy provisions which the City shall have due regard to in the assessment and determination of applications for Development Approval for the establishment of Fast-Food Outlets.	Revised March 2019
3.3.10 – Home Occupations and Home Businesses	General Planning	The purpose of this LPP is to set out the objectives and policy provisions which the City shall have due regard to in the assessment and determination of applications for Development Approval for Home Occupations and Home Businesses.	Revised May 2018
3.3.11 – Motor Vehicle Wrecking Premises	General Planning	The purpose of this LPP is to set out the objectives and policy provisions which the City shall have due regard to in the assessment and determination of applications for planning approval for the establishment of Motor Vehicle Wrecking Premises.	Adopted May 2008

NAME	CATEGORY	PURPOSE OF LOCAL PLANNING POLICY / RECOMMENDATIONS	ADOPTION DATE / REVIEW STATUS
3.3.13 – Parking of Commercial Vehicles	General Planning	The purpose of this LPP is to set out the objectives and policy provisions which the City shall have due regard to in the assessment and determination of applications for Development Approval for the parking of Commercial Vehicles throughout various zones.	Revised 2019
3.3.14 – Bicycle Parking and End of Trip Facilities	General Planning	The aim of this LPP is to facilitate the appropriate provision of secure, well designed, and effective on-site bicycle parking and end-of-trip facilities to encourage the use of bicycles as a means of transport and access to and within the City.	Revised 2019
3.3.15 – Bulk Earthworks	General Planning	This LPP sets out the City's position in dealing with Development Applications to ensure that Bulk Earthworks are managed to achieve various outcomes, particularly the mitigation of off-site sand and dust movement.	Adopted 2014
3.3.16 – Tele-communications Infrastructure	General Planning	The purpose of this LPP is to provide guidance for the assessment and determination of Development Applications for Telecommunications Infrastructure within the City of Rockingham that cannot be classified as low-impact facilities.	Revised September 2017
3.3.17 – Variations to Building Envelopes	General Planning	The purpose of this LPP is to set out the objectives and policy provisions which the City shall have due regard to in its assessment and determination of applications to vary the location and size of Building Envelopes.	Revised January 2020
3.3.18 – Salvage Yards	General Planning	The purpose of this LPP is to set out the objectives and policy provisions which the City shall have due regard to in the assessment and determination of planning applications for Salvage Yards.	Adopted May 2008
3.3.19 – Licenced Premises	General Planning	The purpose of this LPP is to provide guidance for the assessment and determination of Liquor License Applications and Development Applications within the City of Rockingham.	Amended April 2017
3.3.21 – Heritage Conservation and Development	General Planning	The City of Rockingham contains a significant collection of heritage places as identified in its Municipal Heritage Inventory. LPP 3.3.21 – Heritage Development and Design is intended to replace the existing LPP. The new LPP is intended to assist property owners and managers to understand and appreciate the cultural heritage significance of heritage places and seeks to conserve and protect these places within the City. The LPP will ensure that heritage significance is given due weight in decision making for applications for Development Approval.	Revised June 2022
3.3.22 – Medium Density Single House Development Standards – Development Zones	General Planning	The purpose of this LPP is to set out acceptable variations to the deemed-to-comply provisions of the Residential Design Codes (R-Codes) for medium density single houses in Development Zones, as included in WAPC Planning Bulletin 112/2016.	Adopted June 2016
3.3.24 – Parklets	General Planning	This LPP applies to all applications for Development Approval for Parklets within the City.	Adopted October 2019

NAME	CATEGORY	PURPOSE OF LOCAL PLANNING POLICY / RECOMMENDATIONS	ADOPTION DATE / REVIEW STATUS
3.3.25 – Percent for Public Art – Private Developer Contribution	General Planning	The objective of this LPP is to facilitate private sector funded participation in the provision of public art in a publicly visible location within the boundaries of an approved development site or, within the vicinity of an approved development.	Adopted April 2021
3.3.26 – Guidelines to Establishing a Heritage List	General Planning	This LPP is based on the Guidelines prepared by the Heritage Council of WA and seeks to achieve transparency and consistency in the designation of places on the City's Heritage List. It will also provide clear guidance on how challenges to a proposed inclusion on the City's Heritage List will be assessed and ensure that the Heritage List is maintained in a manner and form consistent with TPS2.	Proposed Early 2023
3.3.27 – Community Consultation	General Planning	This LPP specifies the type of proposals that can be considered as a 'Complex Application for Development Approval' under the LPS Regulations.	Proposed 2023
3.4.2 – Subdivision Fencing	General Planning	The criteria set out in this LPP will be applied by the Council in the assessment of 'Proposed Structure Plans' in the Development Zone, with advice provided to the Commission regarding the subdivision of land and in the consideration of detailed engineering drawings and building permit applications.	Adopted February 2009
3.4.3 – Urban Water Management	General Planning	This LPP applies to proposals that facilitate residential (on both rural and urban land), commercial and industrial zoning, subdivision, or development; and is also consistent with the responsibilities applied to the activities, works, services and programs conducted by the City.	Adopted December 2019
7.1 – East Rockingham Industrial Park: Environmental Planning	General Planning	The primary objective of this LPP is to establish guiding principles and policies for the environmental acceptability of industrial development on industrial zoned land within the City of Rockingham, predominantly within the IP14 area.  Note: This LPP will cease to have effect when Scheme Amendment No. 178 is gazetted. This LPP will be replaced with a Planning Procedure or similar which sets out the Environmental Information requirements for Industrial Development Applications in East Rockingham.	Adopted 2004
7.4 – Design Review Panel	General Planning	The objective of this LPP is to provide guidelines for the selection and appointment of members to the Design Review Panel involved with the assessment of development applications and to facilitate an improvement in the urban design and built form outcomes.	Adopted August 2017

## 3.5 STRUCTURE PLANS

Structure plans (including standard structure plans and precinct structure plans) can be prepared in accordance with Division 2 of Schedule 2 of the Regulations for land within the Scheme area to provide the basis for zoning and subdivision of land.

### STANDARD STRUCTURE PLANS

Over the last few decades, the majority of development in the City has occurred via greenfield subdivision. As such, there is an extensive list of operational plans as evidenced on **Figure 1** and in **Table 7**. With over 60 operational structure plans in the City, an assessment of all LPP's listed on the City's website will be undertaken as part of the LPS preparation in line with the LPS Guidelines.

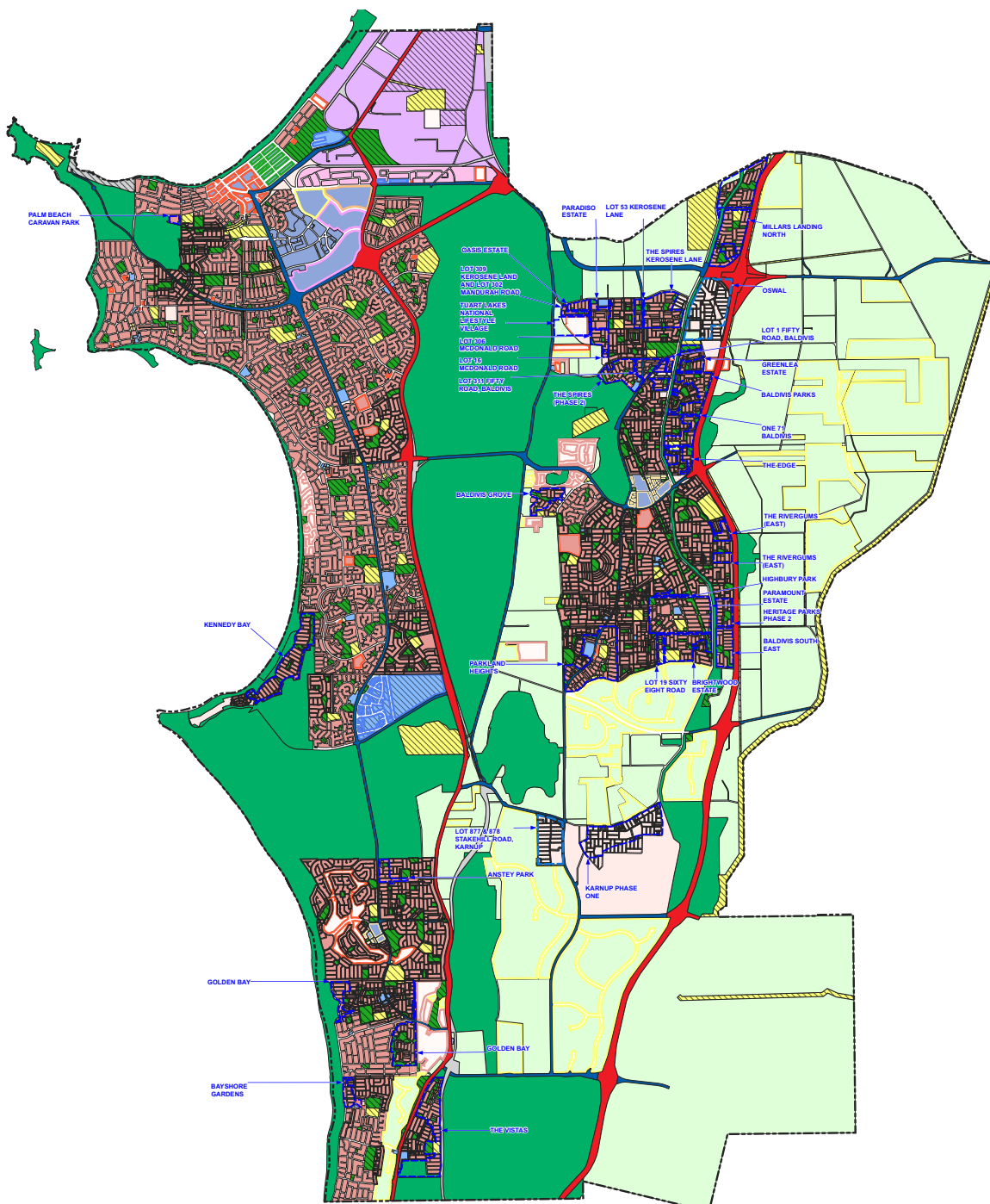




Table 7: Summary of Status of Structure Plans

NAME	WAPC APPROVAL	PURPOSE	LPS IMPLICATIONS / RESPONSES
<b>North Baldivis District Structure Plan</b>	August 2000	The City commissioned the preparation of this DSP for the proposed urban areas of Baldivis located north of Safety Bay Road. The Structure Plan area includes all the 'Urban' and 'Urban Deferred' zoned land located within Kerosene Lane, Baldivis Road, Safety Bay Road, and Mandurah Road. The study area is referred to as Baldivis (North).	TBA
<b>South Baldivis District Structure Plan</b>	October 2004	<p>The Council commissioned the preparation of this DSP to replace a plan prepared by Taylor Burrell Planning Consultants, acting on behalf of the developer of the Settlers Hills Estate to support the rezoning and development.</p> <p>The following factors led the preparation of the revised District Structure Plan:</p> <ul style="list-style-type: none"> <li>+ The extension of the Kwinana Freeway led to the City receiving increasing enquiries from landowners and developers regarding the development of land in the area;</li> <li>+ A number of Structure Plans had been prepared on the basis of the 1993 Structure Plan;</li> <li>+ Neighbourhood design, particularly given the release of the Liveable Neighbourhoods, had changed considerably since 1993;</li> <li>+ The alignment of the Nairn Road reservation in the MRS had been modified; and</li> <li>+ The Education Department had reviewed its requirements for schools which led to a reduction in the number of schools required in the area.</li> </ul> <p>A draft Plan was subsequently prepared incorporating the following elements:</p> <ul style="list-style-type: none"> <li>+ The location and density of residential areas (including future population and dwelling estimates);</li> <li>+ Demand for local retail facilities;</li> <li>+ Provision of public open space (POS);</li> <li>+ Provision of primary and high schools; and</li> <li>+ Neighbourhood road hierarchy.</li> </ul>	TBA
<b>East Baldivis District Structure Plan</b>	25/02/2014	This LSP comprises approximately 376.5 hectares of land bounded by Millar Road to the north, Kwinana Freeway to the east, Safety Bay Road to the south, and Baldivis Road to the west.	TBA
<b>*Baldivis Parks</b>	21/02/2014	This LSP has been prepared to guide the subdivision and development of approximately 59 hectares of land on Lot 9019 (the land formerly comprising Lots 104, 105, 541, 543, 544 and 100) Baldivis Road, East Baldivis.	TBA
<b>The Edge</b>	15/09/2015	This LSP area covers approximately 27 hectares over Lots 921 and 922 Baldivis Road and Lot 3 Key Close. The LSP establishes a statutory planning framework that provides a comprehensive guide for future land use and development, while recognising the site's context and physical setting.	Completed, to be normalised.

NAME	WAPC APPROVAL	PURPOSE	LPS IMPLICATIONS / RESPONSES
<b>One71 Baldivis</b>	18/08/2015	This LSP covers approximately 37 hectares over Lots 746- 750 and Lot 545 Baldivis Road. The urbanisation and development of the subject land provides further opportunities to maximise the catchment to existing and planned infrastructure through consolidation of urban development in the East Baldivis cell.	TBA
<b>Greenlea Baldivis</b>	16/10/2015	The LSP proposes development of the land for 'Residential' purposes at densities ranging between R25 and R40, plus associated public reserves, predominantly open space in the form of an eastward expansion of the Baldivis Reserve District Playing Fields facility.	TBA
<b>Millars Landing</b>	05/09/2017 Amt 23/07/2019 (minor)	The LSP provides for a variety of housing choice through the provision of a range of densities and lot sizes accommodating a population of approximately 2,100 people through the provision of up to 795 lots.	TBA
<b>Millars Landing North</b>	15/03/2022	The structure plan proposes a range of residential densities supporting approximately 650 dwellings, a Local Centre supporting up to 2500m <sup>2</sup> of floorspace, an extensive network of public open space linking into the Tramway and a playing field.	Potential expansion of Local Centre to Neighbourhood Centre as identified by Needs Assessment
<b>Lot 16 McDonald Road</b>	13/12/2016	This LSP guides a planning framework to facilitate the zoning and development of approximately 1.8 hectares of land in the north Baldivis area for residential purposes.	Completed, to be normalised.
<b>*Paradiso Estate</b>	11/02/2011	Contains Spud Shed Neighbourhood Centre and Baldivis Gardens Primary School	TBA
<b>*The Spires Phase 2</b>	12/03/2014	This LSP provides an overarching planning framework to guide and facilitate the development of 54.57 hectares of land at Baldivis for urban purposes and contains the Baldivis North Neighbourhood Centre.	TBA
<b>Lot 306 McDonald Road</b>	21/09/2016	The LSP has been prepared to guide subdivision and development of some 13.115 hectares of land on Lot 306 McDonald Road, Baldivis	TBA
<b>*Lot 311 Fifty Road, Baldivis</b>	13/04/2015	N/A	TBA
<b>Lot 53 Kerosene Lane</b>	17/12/2018	This LSP provides the rationale, justification and planning framework to guide and facilitate the development of approximately 11.16 hectares of land for urban purposes.	TBA
<b>The Spires Kerosene Lane</b>	4/12/2019	N/A	TBA
<b>Lot 1 Fifty Road</b>	23/04/2021	This LSP report provides the rationale, justification and planning framework to guide and facilitate the development of approximately 4.04 hectares of land for urban use. Provides for Fifty Road Local Centre	TBA
<b>*Tuart Lakes National Lifestyle Village</b>	27/12/2006	Future Special Use for Park Homes. Sleeve gated community with residential development	Expires October 2025

NAME	WAPC APPROVAL	PURPOSE	LPS IMPLICATIONS / RESPONSES
<b>Lot 5-8 Kerosene Lane</b>	19/07/2017	This LSP provides the rationale, justification and planning framework to guide and facilitate the development of approximately 8.11 hectares of land for urban purposes.	TBA
<b>Lot 309 Kerosene Lane and Lot 302 Mandurah Road</b>	28/05/2018	N/A	TBA
<b>South East Baldivis</b>	08/01/2021	This LSP consists of Lots 1006, 1007 and 1272 Baldivis Road, Lot 1 Serpentine Road, and Lot 503 (of no street address), Baldivis. The LSP is generally bound by the Kwinana Freeway (east), Baldivis Road (west), Serpentine Road (north) and Sixty-Eight Road (south) and comprises approximately 27 hectares of land.	TBA
<b>*Parkland Heights</b>	26/06/2012	This LSP proposes continued development of the land predominantly for residential purposes at a range of residential densities and includes a Neighbourhood Centre and associated public reserves.	TBA
<b>*The Rivergums (East)</b>	17/09/2015 (minor)	This LSP is located 8km southeast of the Rockingham Town Centre and is immediately south of the Baldivis Town Centre. An existing Structure Plan is already in place with the last modification dated July 2015. The structure plan provides for residential development at a broad range of densities, a linear corridor of open space providing for both recreation and integrated drainage function and co-located lower and secondary school.	TBA
<b>*Highbury Park</b>	23/07/2007	Portion of Makabye Primary School	Completed, to be normalised.
<b>*Paramount Estate</b>	19/12/2014	This LSP proposes the creation of 879 residential lots (with densities ranging from R20 through to R40), a primary school, retirement village, community site and a neighbourhood centre at the heart of the new community.	TBA
<b>*Brightwood Estate</b>	13/07/2015	This LSP measures approximately 53 hectares, comprising lots 569 and 1263 Baldivis Road and lots 20 and 21 Sixty-Eight Road, Baldivis.  The Sixty-Eight Road LSP draws on the vital elements of the South Baldivis District Structure Plan, which provides a clear framework for future land use and development for the site.	TBA
<b>Lot 19 Sixty-Eight Road</b>	21/08/2018	This LSP provides for the creation of approximately ninety-two (92) residential lots, with densities ranging between R25 and R40.  The LSP also acknowledges the provision of land for a high school site consistent with the South Baldivis District Structure Plan and Department of Education requirements, as well as a permeable and robust road layout that connects to adjoining constructed and planned road networks.	TBA

NAME	WAPC APPROVAL	PURPOSE	LPS IMPLICATIONS / RESPONSES
<b>*Baldivis Grove</b>	26/11/2014	This LSP covers a total area of approximately 25.2 hectares, comprising lot 335 Eighty Road, lot 1001 Pike Road and a portion of lot 601 Mandurah Road, Baldivis.  Once developed the Pike Road Structure Plan will provide for the creation of a diverse range of high-quality housing that will appeal to a wide spectrum of the market; with densities ranging from R5 to R40.	TBA
<b>Heritage Park Phase Two</b>	08/11/2017	This LSP provides an overarching planning framework to guide and facilitate the development of 18.8 hectares land at Lots 986 and 993 Baldivis Road, Baldivis for urban purposes.  The LSP provides for an integrated and coordinated approach to an appropriate mix of residential land uses and infrastructure, necessary to create a strong and vibrant community.	TBA
<b>*Golden Bay</b>	29/09/1994	This LSP allows for the creation of approximately 2200 dwellings over approximately 155 hectares located between Secret Harbour and the existing Golden Bay community.	TBA
<b>*The Vistas</b>	23/04/2013	This LSP has been prepared to guide the subdivision and development of 113 hectares of land on Lots 805, 3 and 806 Mandurah Road, Karnup.  The LSP provides an overarching planning framework to guide and facilitate the development of 113 hectares of land at Karnup for urban purposes.	TBA
<b>Palm Beach Caravan Park</b>	17/01/2019	This LSP has been prepared to guide the development of Lots 1512 Lake Street and 5000 Fisher Street.  The LSP supports the development of the site for predominantly residential purposes to a residential density of R60.	Planning controls for DA43 to be reviewed
<b>*Anstey Park</b>	22/02/2002	Low-density residential structure plan in Secret Harbour.	Expires Oct 2025 DCP 1 applies to this SP area
<b>*Bayshore Gardens</b>	4/09/1994	This LSP comprises vacant land in the western and southern portions. The northeast corner of the site has recently been subdivided and developed for residential purposes.  The LSP proposes continued development of the land predominantly for residential purposes, inclusive of a range of densities ('R20', 'R25' and 'R40'), plus associated public reserves.	TBA

*\*Note: These Structure Plans were all approved prior to the LPS Regulations 2015 coming into effect. In accordance with Clause 28 of Schedule 2 of the LPS Regulations, the Subdivision Guide Plan is taken to have been approved on the date that the Town Planning Regulations 1967 were repealed and replaced by the current LPS Regulations.*

## PRECINCT STRUCTURE PLANS

Given the recency of SPP 7.2 and relevant changes to the LPS Regulations, the City does not currently have any operational Precinct Structure Plans. However, one is currently being prepared for the RCS as described below.

Adopted in 2009, the Rockingham Strategic Regional Centre – Centre Plan (the Centre Plan) was prepared as part of a major two-stage review and expansion of the City's previous 1995 Development Policy Plan. The Centre Plan endeavours to accommodate a sophisticated coastal Activity Centre servicing an eventual population of approximately 275,000 people in the Rockingham/Kwinana area. Reflecting the important regional role of the Rockingham Strategic Centre. In 2020, a comprehensive review of this plan commenced to review and modernise the planning framework for the centre. This will include the preparation of the City's first Precinct Structure Plan. Given the importance of the RSC, these works have proceeded ahead of preparation of the LPS. However, there is an expectation that the LPS supports implementation of this document by providing strategic justification where necessary to ensure alignment between the two documents.

This LPS has also identified a number of areas which would benefit from future precinct structure planning, these are identified in **Section 4.2.1**.

## 3.6 LOCAL DEVELOPMENT PLANS

The Scheme Review Report contains a list of broad Local Centres Local Development Plans (LDPs) and Neighbourhood Centre LDPs.

The City does not intend to provide a detailed account of its 224 LDPs, as this information has limited value to the LPS process and the City notes the approved LDPs are satisfactory in their existing form.

The City recognises that many historic Local Development Plans (previously Detailed Area Plans) will expire from October 2025 and the corresponding planning controls will revert to the provisions contained within Residential Design Codes.

Some LDPs address unique site responsive design requirements (for example noise design requirements, building envelopes and activity centres built form controls) that will need to be reconciled within LPS4 on an ongoing basis.

## 3.7 OTHER RELEVANT DOCUMENTS

The purpose of this section is to briefly outline any other strategies, plans and policies that have been prepared by the State Government agencies that have relevance to the Strategy. As climate change is a pressing global issue that creates both challenges and opportunities for Western Australia, the Western Australian Climate policy is acknowledged as having relevance to the preparation of this Strategy.

**Table 8: Other Relevant Strategies, Plans and Policies**

NAME OF STRATEGY, PLAN, POLICY	DATE	PURPOSE	IMPLICATIONS FOR LOCAL PLANNING STRATEGY
Western Australian Climate Policy	November 2020	<p>The Western Australian Climate Policy outlines the priority themes and practical actions the State Government is taking to enhance climate change resilience. These include the following:</p> <ul style="list-style-type: none"> <li>+ Clean manufacturing and future industries;</li> <li>+ Transforming energy generation and use;</li> <li>+ Storing carbon and caring for our landscapes;</li> <li>+ Lower-carbon transport;</li> <li>+ Resilient cities and regions; and</li> <li>+ Government leadership.</li> </ul>	<p>The City has identified in the Strategic Community Plan a requirement for future generations, specifically relating to climate change adaptation, sustainable waste solutions, alternative energy applications, and the preservation and management of bushland and coastal reserves.</p> <p>Specifically relating to infrastructure planning, responsive planning and control of land use, climate change adaptation, sustainable water solutions, and alternative energy applications.</p>





# 04



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## LOCAL GOVERNMENT PROFILE

The profile of the City of Rockingham is presented and analysed in this section to provide robust, appropriate background and rationale for the strategic path outlined in Part 1. The Local Government Profile is organised under the following headings:

- + Demographic Profile
- + Urban Growth and Settlement
- + Economy and Employment
- + Environment and Heritage
- + Infrastructure

Trends, issues, opportunities and constraints detailed within the Local Government Profile are addressed in the strategy directions, actions and mapping found in Part 1. Where relevant the information for the City is provided and contrasted with WA benchmarks. The intent is to highlight the key issues which form the basis for the planning principles underlying this strategy and its associated planning scheme.

# 4.1 DEMOGRAPHIC PROFILE AND POP. FORECAST

## 4.1.1. DEMOGRAPHIC PROFILE

### POPULATION DISTRIBUTION

With a geographical extent of 257km<sup>2</sup> the City is one of the largest local government authorities in the Perth Metropolitan Region. It is bordered by the City of Kwinana (north), City of Mandurah and Shire of Murray (south), Shire of Serpentine Jarrahdale (east), and the Indian Ocean (west).

The 2021 estimated resident population for the City as estimated by the ABS/profile.id is 140,595. According to the 2021 ABS Census, the City has 124,560 people living in 50,382 occupied private dwellings.

In terms of the key areas of concentration of the population, there are 17 localities in the City, which are divided into five precincts (see **Figure 2**). These precincts were formed based on the City's physical context, as well as the geospatial distribution of strategic and district centres. It is also related to them being defined in previous policy documents (importantly the recent Needs Assessment and LCACS).

The population distribution is displayed in **Table 9** grouped by the five precincts, and it demonstrates that there were approximately 55,000 dwellings at the 2021 ABS Census. Baldivis is clearly the City's largest existing urban area with over 35,000 dwellings. This is followed by the Rockingham – Peron – Garden Island localities which are driven primarily by the Rockingham Strategic Centre. General population distribution outside of these areas is relatively consistent throughout the City.

**Table 9: Population Distribution**

LOCALITY	POPULATION*	DWELLINGS*	HOUSEHOLD SIZE
<b>PRECINCT 1 – ROCKINGHAM</b>	<b>48,230</b>	<b>23,225</b>	
Cooloongup	6,599	2,904	2.34
Hillman – East Rockingham	2,128	1,021	2.21
Rockingham – Peron – Garden Island	15,930	8,436	1.98
Safety Bay	7,365	3,479	2.33
Shoalwater	4,195	2,341	2.06
Waikiki	12,013	5,044	2.53
<b>PRECINCT 2 – WARNBRO / PORT KENNEDY</b>	<b>23,363</b>	<b>9,343</b>	
Port Kennedy	12,968	4,930	2.77
Warnbro	10,395	4,413	2.54
<b>PRECINCT 3 – SOUTH COASTAL</b>	<b>21,142</b>	<b>7,941</b>	
Golden Bay	5,465	2,216	2.70
Secret Harbour	11,860	4,200	3.00
Singleton	3,817	1,525	2.79
<b>PRECINCT 4 – BALDIVIS</b>	<b>36,246</b>	<b>13,657</b>	
Baldivis North	10,815	4,285	2.69
Baldivis South	25,431	9,372	2.88
<b>PRECINCT 5 – KARNUP</b>	<b>2,023</b>	<b>740</b>	
Karnup – Keralup	2,023	740	2.92
<b>TOTAL</b>	<b>131,013</b>	<b>54,905</b>	

Source: .profile id / 2021 ABS Census Enumerated



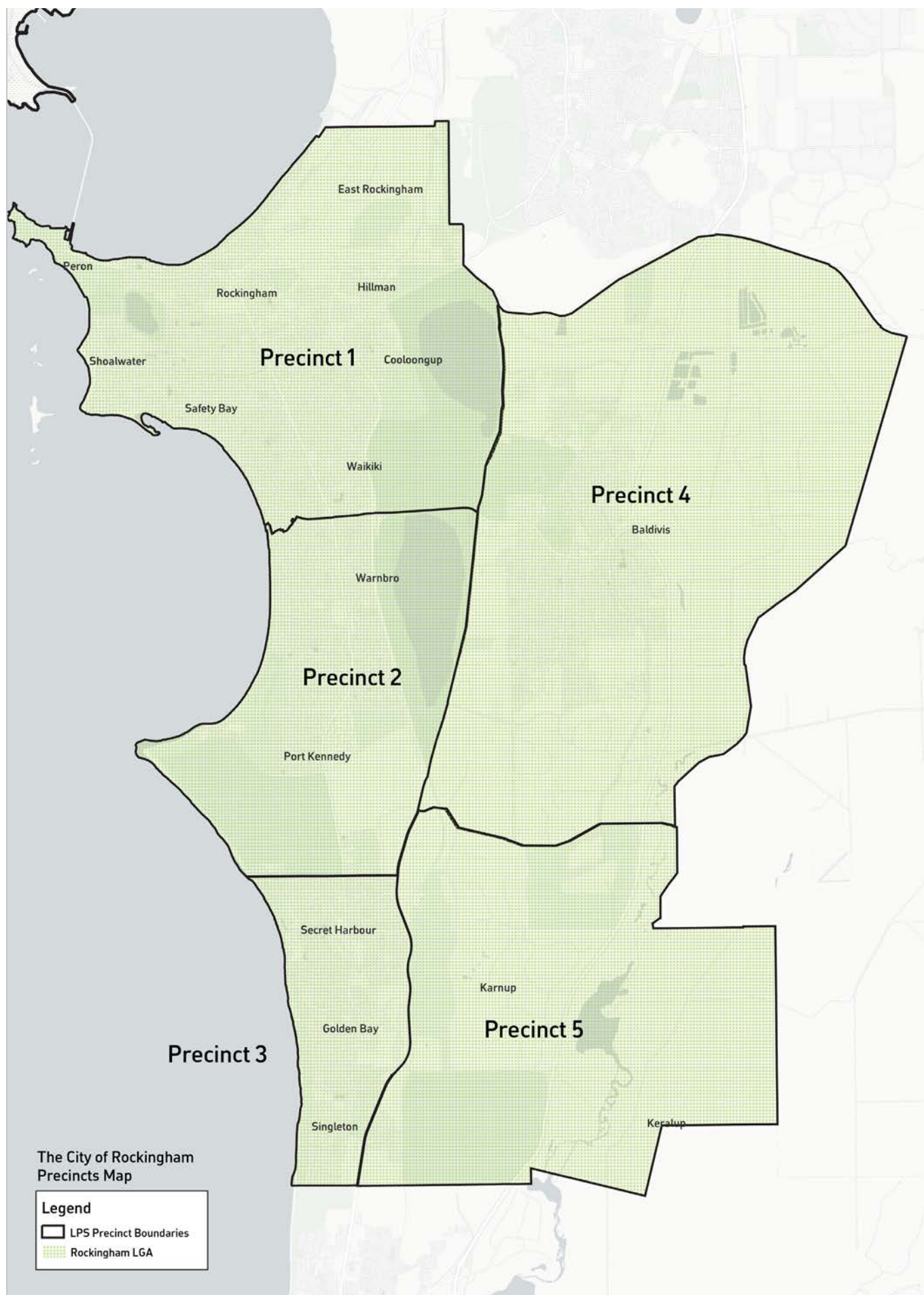


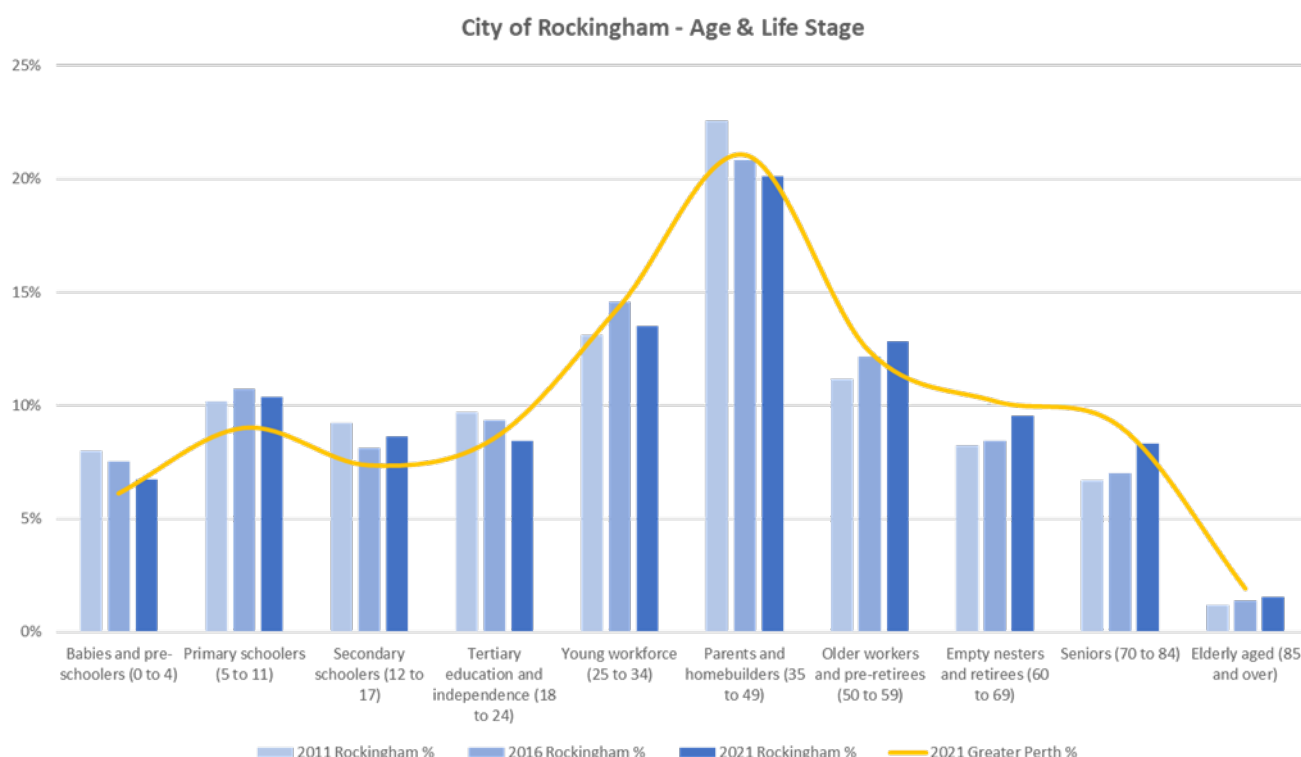
Figure 2: Precincts within the City of Rockingham

## AGE AND LIFE STAGES

The age and associated life stages of an area indicates the level of demand for age based services and facilities such as child care. It further directs the City's residential role and function and how it is likely to change in the future. As at the 2021 Census, Greater Perth has a median age of 37 years and the City has a slightly younger median age of 36 years. This is due to the City having a higher proportion of people in the younger age groups (under 15) and a lower proportion of people in the older age groups (65+). Overall, 22% of the population was aged under 15 years, and 14% were aged 65 years and over, compared with 19% and 16% respectively for Greater Perth.

Reflecting this age structure, Primary school students make up 31% of students attending an educational institution in the City, above the 28% in Greater Perth. There are also slightly more Secondary school students in the City (24%) when compared to Greater Perth (22%). A key difference is that while 16% attend a University in Greater Perth only 9% in the City do, whereas vocational institution attendance is on par.

Changes to the age profile of the City's population over the past decade are highlighted in **Figure 3** below. Growth over time in Older Workers/Pre-Retirees, Seniors and Empty Nesters is notable and the housing implications for these people is discussed in **Section 4.2.1**. Primary and Secondary school aged children/teens and their parents continue to be prevalent in the City at above Greater Perth averages. Younger workers and those in their independence and post-school education years are below metropolitan averages. Opportunities for jobs and education for these cohorts are key issues in retention in the City.



**Figure 3: Age Groups and Life Stages 2011 - 2021 City of Rockingham**

Source: ABS Census, 2016

## SENIORS STRATEGY

The City defines the senior population as a person that is 60 years and older or if from an Aboriginal and Torres Strait Islander background older than 50 years. In 2021 the senior population comprises 19% of the total population in the City. By 2036, this number is expected to increase to 40,493 people (or 20.6% of the total population). Additionally, the number of people with dementia will increase six-fold to 5,969 in 2050.

Seniors are attracted to Rockingham for its coastal lifestyle living, the feeling of a “small town community” while having access to essential services and infrastructure. Currently, Seniors are satisfied with:

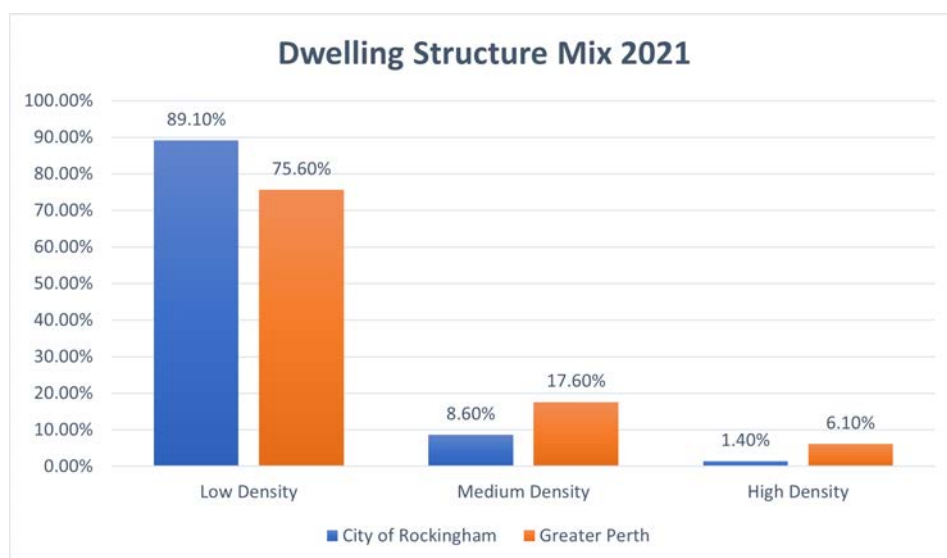
- + Quality of the City’s parks and gardens;
- + Affordability, safety and comfort of the Rockingham Connect Community Service; and
- + Accessible information that is appropriate for them.

Understanding the future needs of seniors is important to ensure future housing provision and strategic planning matches and responds to their needs. Some of the issues and opportunities for the Strategy are identified and outlined in the below sections.

## HOUSING TYPES

As demonstrated on **Figure 4** about 89.1% of City residents were living in separate houses as at the 2021 Census, which is a much higher low density dwelling proportion than the Greater Perth average of 75.6%. For the purposes of this section, the below definitions sourced from Profile.id apply:

- + ‘Low density’ includes all free-standing dwellings separated from neighbouring dwellings by a gap of at least half a metre.
- + ‘Medium density’ includes all semi-detached, row, terrace, townhouses and villa units, plus flats and apartments in blocks of 1 or 2 storeys, and flats attached to houses.
- + ‘High density’ includes flats and apartments in 3 storey and larger blocks.



**Figure 4: Dwelling Structure Mix**  
Source: idcommunity/ 2021 ABS Census



The severe lack of dwelling diversity is clearly illustrated in the graph above with the gaps in both medium and high density typologies evident. **Table 10** highlights how the City's overall lack of diversity is represented across the localities. It shows that the Rockingham locality provides almost all the City's high-density dwellings, and the majority of its medium density dwellings. This is due primarily to the development which has occurred in the Rockingham Strategic Centre, the City's largest residential and employment hub.

**Table 10: Housing Diversity**

LOCALITY	LOW DENSITY	MED. DENSITY	HIGH DENSITY	OTHER
Baldivis North	92.2%	3.8%	1.2%	1.2%
Baldivis South	96.6%	3.3%	0.0%	0.0%
Cooloongup	91.0%	8.8%	0.0%	0.2%
Golden Bay	96.6%	2.5%	0.0%	0.9%
Hillman – East Rockingham	76.4%	2.0%	0.0%	1.0%
Karnup – Keralup	99.6%	0.0%	0.0%	0.0%
Port Kennedy	93.5%	6.5%	0.0%	0.0%
Rockingham – Peron – Garden Island	62.5%	29%	7.9%	0.3%
Safety Bay	92.7%	5.8%	1.5%	0%
Secret Harbour	98.3%	1.6%	0.0%	0.0%
Shoalwater	73.8%	25.9%	0.3%	0.0%
Singleton	99.7%	0.0%	0.0%	0.0%
Waikiki	97.7%	2.2%	0.0%	0.0%
Warnbro	94.98%	4.9%	0.0%	0.0%

There is growing concern with the lack of housing diversity in the City of Rockingham, particularly in new urban areas where most of the housing consists of 3–4-bedroom single storey dwellings on smaller, narrow, front-loaded lots. This continued low-density suburban development is not affordable as it lacks the diversity of housing opportunities required to accommodate different income levels, lifestyle choices, and household types in the City. A sprawled city with a predominantly low density housing stock is also not sustainable as public transport including proposed mid-tier transit solutions for the City centre cannot be efficiently utilised due to a lack of critical mass/adequate density; it also encourages a higher usage of private cars where amenities and services are located far from walkable distance.

Without changes to the current planning framework, the predominance of low-density suburban development and low levels of infill development will prevent any significant increases in housing diversity, density and choice. It is therefore imperative that options are explored to promote a more consolidated urban form that fosters a more sustainable pattern of urban development. Planning for a sustainable pattern of urban development requires urban growth options that provide the community with diverse housing opportunities. The resultant housing diversity will have the following benefits:

- + Provide for a variety of housing styles, types and sizes to ensure a greater lifestyle choice;
- + Providing the opportunity for people (ageing in place);
- + Reduce travel times and costs by providing options to live near employment, education establishments, and amenities;
- + Accommodate a more diverse range of people, thus avoiding potential negative social issues from clustering vulnerable groups; and

- + The shift towards a more sustainable form of urban development needs to apply to the planning of new urban areas, as well as to infill development within established residential areas.

For further details on how this is to be achieved, refer to the Housing section.

## HOUSEHOLD COMPOSITION AND DWELLING SIZE

According to the 2021 Census, the predominant household type in the City is family households, with 74% of this type, with a lower proportion of lone-person households (22.4%), compared with 71.5% and 24%, respectively, for Greater Perth. The needs of couple families with children represent 32.8% of the City's population and when added with one parent households at 12.6% this demographic (at 45.4%) is comparable to Greater Perth (at 42.3%). However, it should not be inferred that larger homes and lots are necessarily a requirement for a high quality of life for such households. Secondly, the needs of lone person households, especially Seniors, are important considerations in the future provision within the City.

In addition to demographic changes, social trends are also expected to influence housing needs in the future. Key trends identified by demographers and relevant to the City of Rockingham as highlighted in the City's Issues Paper prepared for this Strategy are:

- + Younger people seeking housing closer to social amenities, public transit, and avoiding car ownership.
- + 'Empty Nesters' are seeking smaller, lower maintenance properties, and downsizing to fund retirement; however, this would vary subject to their different retirement funding sources such as superannuation tax concessions or pension.
- + Lifestyle choices, and changes to home buying decisions, wants and needs; and
- + Growing desire for "lock and leave" properties.

These changing trends have not been responded to well in the past housing market, where in the South West region of metropolitan Perth almost 90% of the housing sales were large dwellings with three or more bedrooms (WA Government Housing Affordability Report, 2016). Currently, the City has a very high proportion (60%) of dwellings that have four bedrooms or more. A further 29% have three bedrooms, with 1-2 bedroom dwellings making up just 9% of the City's housing stock. In contrast, less than half (46%) of Greater Perth dwellings have four bedrooms or more, followed by three bedrooms 37% and 0-2 bedroom dwellings comprising 16% of the dwelling stock (ABS Census, 2021).

A mismatch of household sizes, household types and the number of bedrooms could cause problems in housing affordability, and other socio-economic issues such as homelessness. The City's ageing population, younger demographic such as students e.g. Murdoch University, TAFE's, key worker accommodation (Garden Island navy personnel), and hospitality workers (Rockingham Beach foreshore area) are all contributing to a growing demand for smaller accommodation. With the housing stock profile currently available, there is a clear shortage of smaller dwellings and opportunity presented in delivering well-integrated smaller/micro accommodation in designated growth areas such as an Activity Centre, Karnup station precinct and proposed transit corridor.

This housing typologies and population desires gap will also hinder the future strategic alignment in attracting local employment opportunities in the City of Rockingham, and this is further discussed in the Employment section.

## HOUSING TENURE

In 2021, around 45.9% of households took out a mortgage with the purchase of their dwelling in the City of Rockingham, 24.2% were renting, and 24.2% fully owned their dwellings, compared with 40.5% have a mortgage, 24.2% are renting and 24.25% own their homes outright across Greater Perth.

From 2016 to 2021, households in Rockingham showed their preference towards purchasing rather than renting, where the total percentage of people with a mortgage and full ownership increased from 67.1% in 2016 to 70.1% in 2021; while the total percentage of people with rentals only increased 0.1%. Although this is due to market preference, it could also be attributed to the lack of rental property options in the city, specifically small to medium sizes. In general, housing tenure data reflects social-economic indicators and housing supply gaps.

To accommodate the emerging lone household types populated by the young, aged, key workers and students, the City would preferably diversify the available housing types, especially for rental properties. Currently the dominant presence of large-sized dwellings in the market, designed for family households, is prohibiting the availability of affordable and diversified housing options.

## SOCIO-ECONOMIC INDEXES FOR ADVANTAGES AND DISADVANTAGES

The Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD) contains both disadvantage (e.g. unemployment, housing types, low incomes or education levels and lack of internet access) and advantage (e.g. professional occupation, high income, higher education levels, larger houses) indicators. It provides a general view of the relative level of disadvantage in one area compared to others. The relative socio-economic advantage and disadvantage is defined by the ABS in terms of people's access to material and social resources, and their ability to participate in society.

There are numerous SA1 areas of the City that are considered disadvantaged (see **Figure 5**). The deep red SA1 areas shown in the following map are given the lowest 30% scoring and considered as disadvantaged among Western Australia; the green SA1 areas are given the highest 40% scoring and considered advantaged. Not only will disadvantaged areas experience limited access to material and social resources, but also people who live in those areas have higher levels of disease risk factors and generally have lower use of preventative health services.

Disadvantaged areas are primarily distributed within Precinct 1 (clustering from city centre) and part of Precinct 2 of the City (along Read Street / Warnbro Sound Avenue Corridor). The spatial distribution of disadvantage also mirrors the spatial distribution of homelessness. Knowing where the disadvantaged areas are helps the local government to prioritise the allocation of resources, infrastructure, and services.

## HOUSING AFFORDABILITY

The term 'housing affordability' refers to the relationship between expenditure on housing (prices, mortgage payments or rents) and housing incomes, which is discussed in terms of rental and purchasing aspects. To understand the relative cost of purchasing dwellings in the City, analysis of spatially represented sales price data from REIWA is captured in the two maps below for House and Unit median prices over the past 12 months (to May 2022). This highlights that for much of the City house prices are in the \$400,000-500,000 bracket though Hillman/Cooloongup and Warnbro have lower house price medians of \$300,000-400,000.

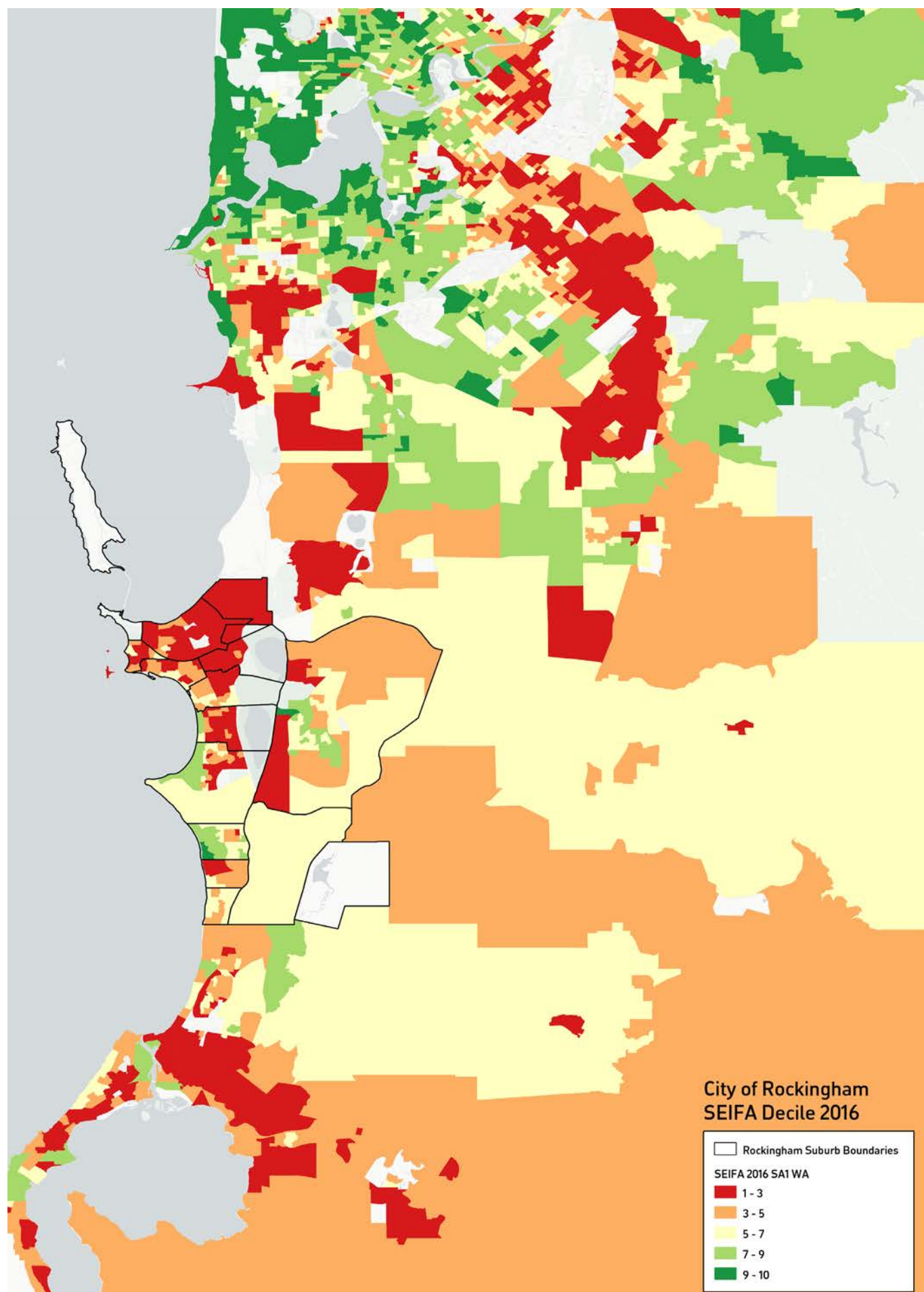


Figure 5: SEIFA Index across the region  
Source: SEIFA ABS 2016 State Decile

There are fewer units available and therefore sold in the City as illustrated in the second map (with some gaps where no stock sold in those suburbs over the past year). Those that have been sold over the past 12 months are in many cases less than \$300,000 which is the lowest price median category (with suburbs having units in this median price point including Waikiki, Warnbro, Cooloongup, Safety Bay and Warnbro). The remaining suburbs are in the second lowest median category of \$300,000-\$400,000, these include Baldivis, Rockingham, Port Kennedy, and Secret Harbour.

For rental affordability, according to SGS Economics Rental Affordability Index, a household with an annual income of \$95,000 in the City of Rockingham has an index ranging from 109 to 144, which is considered acceptably affordable in Q2/2021. Conversely, a single pensioner living in the City with an annual income of \$35,000 would receive a low score ranging from 48 to 56, which is considered severely unaffordable,

For purchasing affordability, properties located south of Perth are popular with buyers due to their relative affordability. In the City centre of Rockingham, its median housing price has experienced an increase of 13% from \$380,000 in 2017 to \$430,000 in 2021. Baldivis, designated to be the future residential development hotspot, has a median housing price which has experienced an increase of around 6% from \$404,000 in 2017 to \$427,500 in 2021.

According to a 2016 Department of Communities (Housing Authority at the time) report, only 13% of sales in the sub-region were affordable to low-income households, and almost no sales were affordable to very low-income households. Housing diversity remains an issue where almost 90% of housing sales have three or more bedrooms.

### **SOCIAL HOUSING AND HOMELESSNESS**

In Rockingham, the increase of the cost of land and housing over the past decade has affected a growing number of people in relation to affordable housing, particularly those with low-to-moderate incomes. The impact is felt across different demographics such as young people wanting to leave their parent's home, couples searching for a house to start a family, or seniors coping with increased rents. The lack of affordable housing limits the opportunities for aspiring households and leads to worsening levels of financial and personal stress and significant societal costs in terms of social dysfunction and economic underachievement.

From previous analysis of the demographic profile, the problems which hinder the development of affordable housing could be summarised as follows:

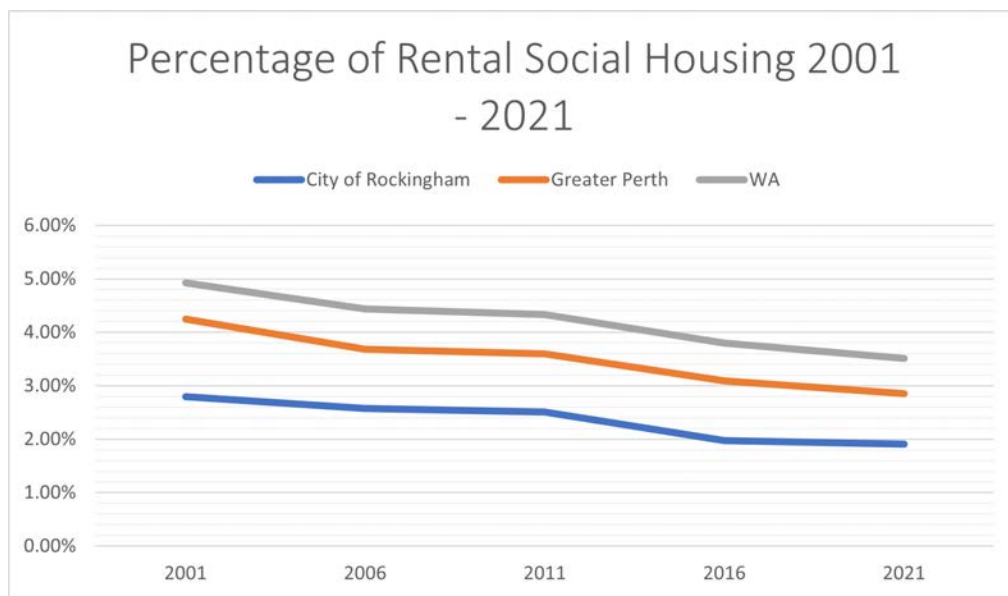
- + Housing stock mismatching the changes in demographics;
- + The lack of a compact urban form which prevents the use of public transportation, particularly for those low to moderate income households who don't have cars;
- + Decreasing housing affordability; and
- + Need for adaptable housing as most dwellings did not incorporate universal design elements which inadequately address the needs of people with disability. Inaccessible housing widens the already existing disadvantage gap of Rockingham.

In general, the Commonwealth and State Government control the macro-economic and taxation policies that most affect the cost of housing; and the private market controls what type of housing will be available. However, having acknowledged the limited ability of local government to influence outcomes in this space, there are still mechanisms for local governments to protect and foster the provision of affordable housing. This is especially important when the impact of lack of affordable housing are felt often at a local



level. Such mechanism could be planning tools, strategic partnerships, financial initiative and leadership, advocacy, and community development. The changing in demographic composition and household sizes present opportunities for integrating micro-typology housing units in new development hot spots, for instance in Baldivis and Karnup. Future employment and transit-oriented development should also be considered for the allocation of future affordable housing.

The total number of rental social housing in the City has increased over the past 20 years from 734 (34,250 in WA) in 2001, to 961 (36,148 in WA) in 2021. However, this increase did not match the growth in population proportionally; the City has experienced a steady decrease in the percentage of rental social housing from 2.8% 2001 to 1.9% in 2021, a trend being observed in Greater Perth and WA (**Figure 6**).



**Figure 6: Percentage of Rental Social Housing Changes 2001 - 2021**

Source: Profile id/ ABS Census 2022

This issue is especially problematic for low-income households in the City, typically the group who has a higher demand for social housing. The percentage for those living in rental social housing has decreased from 2.8% in 2001 to 1.9% in 2021, with the total number of low income households increasing from 734 to 961. In short, there is a trend towards more low income households, but less social housing units being allocated to them. Often when this disproportion occurs, cases of homelessness increase.

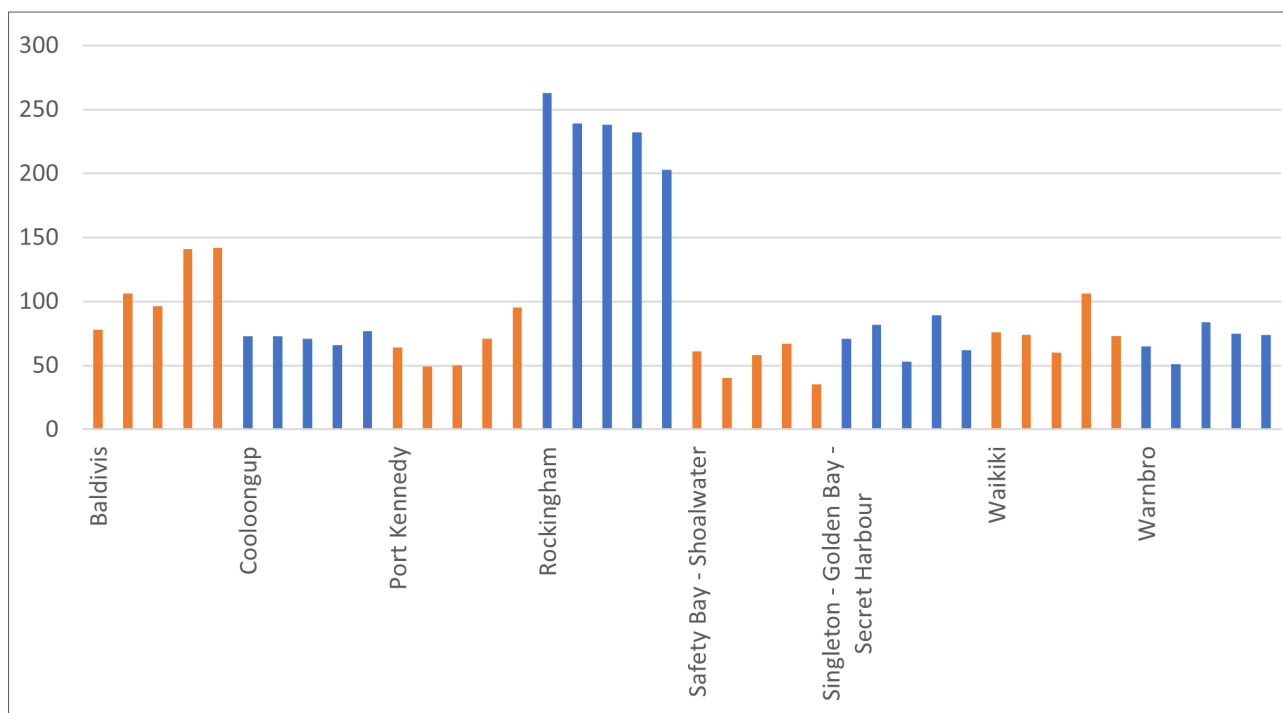
Homelessness is a growing issue across WA; although the number of people experiencing homelessness in Western Australia remained steady between the 2011 and 2016 Census, anecdotal evidence from community members and service providers suggests that the number of people who are experiencing homelessness in our community is increasing in more recent times. This issue was raised by the City's Councillors as a key concern.

Homelessness is attributed mainly to causes such as domestic and family violence, financial difficulties, relationship breakdown, housing crisis and inadequate dwelling conditions. According to Australian Institute of Health and Welfare, the suburbs of Rockingham, Baldivis, Waikiki, and Warnbro have the highest number of people who have sought assistance from specialist homelessness services agencies (see **Figure 7**). This is also reflected in the relatively disadvantaged status of these areas.

To tackle the homelessness issue, the City of Rockingham has committed the Housing First



Homelessness Initiative and the building of the Common Ground transitional accommodation facility in the region. Housing First is a model for supporting people experiencing chronic homelessness who have complex needs, particularly around mental health. Common Ground facilities are a model of purpose-built permanent, supportive housing for adults who have experienced chronic homelessness or are low-income earners.



**Figure 7: Homelessness Service Collection Total Clients in Localities 2014-2019**

Source: Australian Institute of Health and Welfare (AIHW) 2022

The Department of Communities is the main provider for rental social housing to eligible households across WA. In 2020, the Department of Communities received a stimulus with an estimated value of \$319 million to coordinate the Social Housing Economic Recovery Package (SHERP). The package assists the delivery of new social housing properties, refurbishing existing public and community housing properties, and the maintenance of regional social housing properties.

Since the spatial distribution of disadvantaged and homeless people in the City are similar and reflective of the SEIFA map, it is reasonable to suggest the future social housing and affordable housing should be spatially focused on being provided in the city centre area of Precinct 1 and along Read Street / Warnbro Sound Avenue Corridor.

## EMPLOYMENT

The predominant occupations in Rockingham are technicians and trade workers which comprised 20.5% of the total workforce in 2016. This figure is higher than the 15.6% of Greater Perth. Contrastingly, the professional occupations in Rockingham is 13.4% and significantly lower than Greater Perth's 22.2%.

While the occupation data is recorded where the residents work, it does not reflect other indicators of employment, the reason being that there is a large number of residents who travel outside of the City for work (55.6%), particularly professionals. The discussion of employment self-sufficiency and the implications for the LPS are discussed in further detail in **Section 4.3**.

## EDUCATION

Educational qualifications critically indicate socio-economic status and potential opportunities to identify skill gaps in the labour market. Overall, the educational qualification in the City of Rockingham has improved from 2016 to 2021:

- + People with no qualification has decreased from 42% in 2016 to 40% in 2021;
- + Vocational qualifications had an increase of 3,611 people representing 28.8% of the population (an increase of 1.6%). This is 8.5% higher than the Greater Perth average (20.3% in 2021).
- + People with an advanced diploma or diploma increased by 1,665 people representing growth of 0.8%, which is now on par with the Greater Perth average (9.8% in 2021).
- + Although there has been an increase of 2,943 people with a Bachelor or higher degree from 10.6% in 2016 to 12.5% in 2021, the figure is still well below the Greater Perth average of 26.5% in 2021.

The variance in vocational education qualifications and Bachelor's or higher degrees compared to Greater Perth is explained by the strong presence of skilled blue-collar labour in the industry employment sectors that dominate in the City such as health care, mining and construction. There is a relatively high proportion of persons with Certificate III and IV as their highest level of educational attainment indicating that a large portion of residents work in trades and related roles. It is likely the residential construction industry and high rates of growth in the City and sub-region are linked with this employment profile. However, there are opportunities for wholesale and retail uses that support trades-persons and skilled professionals.

Further, the general education level is also significantly lower than Greater Perth. In 2021, only 47.4% of population completed year 12 in high school while comparing to Greater Perth's 59.6%. This gap could be correlated to the provision and allocation of primary and high schools per dwellings in the city; the disadvantaged areas often have a lower ratio of schools to dwellings. This gap will be addressed in the following section in relation to current allocation of primary and high schools across the city.

## INCOMES

Household income with other data sources such as qualifications and occupations underpin the City of Rockingham's general socio-economic status, household's wellbeing and access to economic opportunities. The median household income in the City is \$1,724/week which is below the Greater Perth median of \$1,865/week. Median individual incomes in the City at \$786/week are also lower than Greater Perth at \$859/week.

Commentary below from Needs Assessment in the LCACS for 2016 data that may be reviewed in light of 2021 data but at present it holds.

A lower proportion of households in the City earn incomes in the highest quintile when compared to Greater Perth and comparable Strategic Centres (only Mandurah has a lower percentage with Joondalup, Cannington and Armadale having higher percentages in this top earning bracket). This indicates that residents are required to spend a greater proportion of their income on convenience retail and accordingly, will spend less on comparison shopping (e.g. fashion, furniture, gifts, toys, books).

The City of Rockingham will need to monitor the potential shift in income levels in the City as Westport develops and attracts more strategic and knowledge-intensive employment to the sub-region (as workers in these roles generally earn higher incomes). Should this eventuate, the businesses will likely adapt to changing purchasing behaviours by these households and the outcome could be changes in

floorspace requirements, such as a shift towards a greater retail focus on comparison goods.

The City is forecasting significant dwellings growth over time and may attract construction businesses to support this development. Employment land (i.e. light industrial land and service commercial) should develop to offer services and products that directly support the significant number of construction businesses, particularly with continued residential dwelling development.

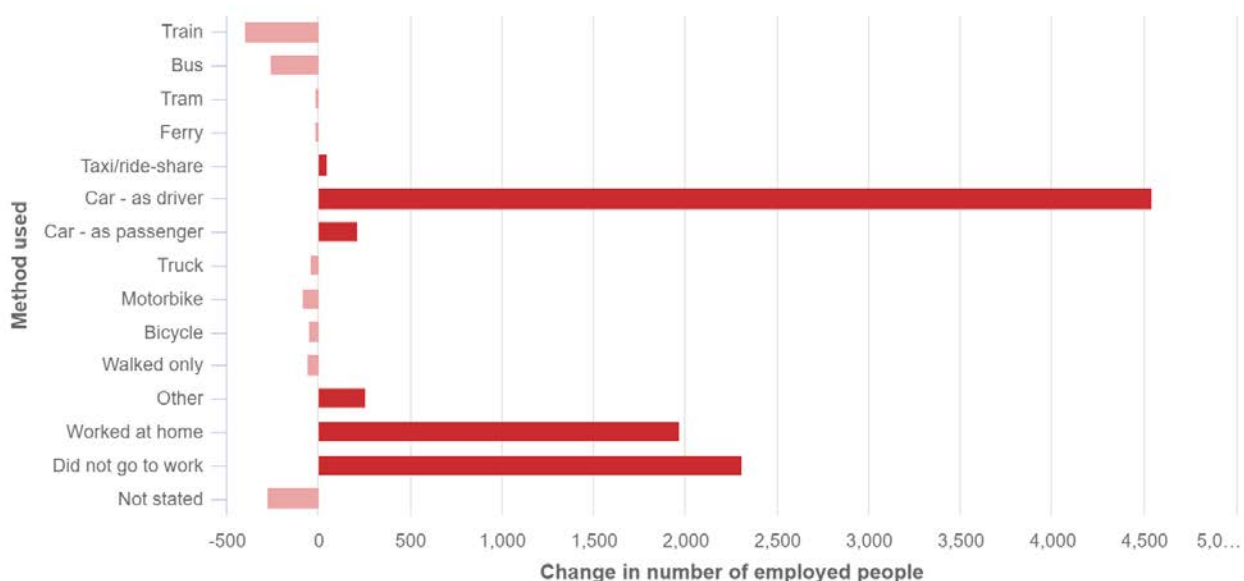
## CAR OWNERSHIP AND PUBLIC TRANSPORT TO WORK

In 2021, households in the City continue to be vehicle dependent with 58% of households having two or more vehicles per dwelling and just 3.9% with no vehicles. The predominant private car dependence is strongly correlated to Rockingham's low density urban structure where mass public transit system, services and infrastructures cannot be accessed by residents within walking distance. In general, transit service levels and urban density play a major part in determining urban car use per capita.

**Figure 8** illustrates the changes in 'method of travel to work' data from the 2021 census indicated a 'business as usual' scenario as the use of private cars remained as a predominant method of getting to work (67.6%). Public transport usage declined with 4.8% of people catching the train (down from 6.3% in 2016) and 2.1% catching the bus (down from 2.9%). The data also demonstrates that are substantially higher amount of people either worked from home (increase of 2.7%) or did not go to work (increase of 2.1%). These findings are consistent with broader workplace trends which have had short-term impacts as a result of COVID-19.

### Change in method of travel to work, 2016 to 2021

City of Rockingham - Total employed persons



Source: Australian Bureau of Statistics, Census of Population and Housing, 2016 and 2021 (Usual residence data). Compiled and presented in profile.id by .id (informed decisions).

**.id** informed decisions

**Figure 8: Method of Travel to Work**

Source: profile.id/ ABS Census 2022

## DEMOGRAPHIC PROFILE SUMMARY

- + Demographic changes such as the decreasing average household size, general ageing of the population, and future changes in household structure are resulting in demand for greater housing diversity, including smaller dwelling stock in highly accessible and good amenity locations.
- + The growth within the 60+ age group, combined with the high percentage of one and two person households is likely to exacerbate the existing disconnect between housing needs and the housing needed to support this demographic unless greater diversity in new housing is encouraged.
- + The City remains an attractive place for family households with children through the opportunities for future education and employment for both parents and their children. The ability to access opportunities without reliance on private vehicles is an important consideration and highlights that good integration and connections from residential areas to activity centres, parks, schools and childcare centres are important considerations.
- + Occupations, education levels and incomes in the City are focused in the trades and technical roles, and vocational education. The nexus between incomes and spend on housing indicates housing stress is impacting on an above Greater Perth average proportion of households in the City.
- + The planning framework does not appropriately facilitate a wider choice of dwelling types, especially in key locations such as the RSC. Increasing the proportion of people with walkable access to centres and housing suited to their needs are important considerations for the LPS that this profile highlights.
- + Numerous areas in the city are in disadvantage, particularly in Precinct 1 and 2 and along Read St transit corridor. More attention is needed for these areas on the provision of facilities and resources.
- + Affordable housing is an ongoing issue which needs to be addressed. The amount of social housing units in the City does not proportionally match the increasing number of low income households. Delivery of future affordable and social housing will require collaboration with the Department of Communities and other housing providers to explore how new opportunities can be delivered in both infill / greenfield areas.
- + The city centre held the highest number of homeless persons, and is also one of the highest disadvantaged areas in the City.
- + Delivery of housing that is suitable for varied life stages and lifestyles, and addresses transport and affordability of housing costs is essential to responding to the City's changing demographics. The shift towards a more sustainable form of urban development needs to apply to the planning of new urban areas, as well as to infill development within established residential areas, especially close to activity centres and corridors.
- + Low dwelling density across the city will hinder the direction towards a sustainable future as most residents rely greatly on private car ridership rather than public transportation.

## 4.1.2. POPULATION FORECAST

### CITY OF ROCKINGHAM

According to forecast.id (last evaluated in May 2021) the population of the City in 2022 is estimated at 142,742 residents compared to an estimated 128,992 in 2016. This represents an additional 13,480 people and an Average Annual Growth Rates (AAGR) growth rate of 1.7%. Central to this LPS is estimating the future population that will reside in the City, to ensure appropriate land supply, housing, and jobs to accommodate growth.

**Table 11** provides a summary of the DPLH's WA Tomorrow (2019) forecasts in bands from low range (Band A) through to the highest projections range (Band E). This LPS is planning for a 15 year timeframe, therefore the 2031 data has been extrapolated using the same AAGR for each of the bands to provide estimates for the period to match the lifetime of the LPS (to 2036). In terms of annual growth rates, WA Tomorrow is projecting a 1.89% population increase for Band A low growth, and a 2.05% annual increase under the Band E, high growth scenario. The growth scenarios represent faster growth than has been experienced in the period from 2016–2021.

**Table 11: WA Tomorrow Population Bands**

PERSONS PER WA TOMORROW BAND					
YEAR	BAND A	BAND B	BAND C	BAND D	BAND E
2021	142,660	145,620	146,840	148,450	150,790
2026	158,900	162,940	164,160	165,980	169,730
2031	177,160	181,100	182,800	184,800	188,600
2036	188,939	194,929	197,083	199,616	204,429
Pop Change 2021-2036	46,279	49,009	50,243	51,166	53,639
AAGR 2021-2036	1.89%	1.96%	1.98%	1.99%	2.05%

Source: DPLH WA Tomorrow, 2019 and Hames Sharley

In addition to the WA Tomorrow forecasts, it is noted that the City possess an alternative population forecast set and these projected population and dwellings are summarised in **Table 12**. It demonstrates that the City is forecast to accommodate approximately 200,000 people by 2036, representing an additional 61,408 people and 24,351 dwellings (at an AAGR of 2.45%).

**Table 12: City of Rockingham Population Forecasts**

	2021 - 2036					
	2021	2026	2031	2036	CHANGE	AAGR
Population	139,613	158,085	178,985	201,021	148,450	150,790
Dwellings	55,729	62,817	71,187	80,080	165,980	169,730

Source: idcommunity, June 2020

*It is acknowledged that the estimated residential population is higher than the enumerated residential population provided in Table 11.*

The forecasted growth rate in the City's population forecast is higher due to the following assumptions and inputs to models outlined in the table below:



COHORT COMPONENT MODEL	HOUSEHOLD PROPENSITY MODEL	HOUSING UNIT MODEL
<ul style="list-style-type: none"> <li>+ Base year population by age</li> <li>+ Base year population by gender</li> <li>+ Fertility rates</li> <li>+ Death rates</li> <li>+ Migration rates</li> </ul>	<ul style="list-style-type: none"> <li>+ Household relationship by five year age group and sex</li> <li>+ Household type by size</li> <li>+ Average number of children per one and two parent family</li> </ul>	<ul style="list-style-type: none"> <li>+ Base year dwelling and households</li> <li>+ Residential building activity and demolitions</li> <li>+ Base year population in non-private and private dwellings</li> </ul>

Source: forecast.id, City of Rockingham

## PRECINCTS AND LOCALITIES

**Table 13 - Table 17** demonstrate how this growth is forecasted to occur spatially. It provides a summary of the expected population and dwelling growth across all five precincts.

**Table 13: Precinct 1 - Rockingham Population Forecast**

SUBURB	POPULATION				DWELLINGS				CHANGE 2021-2036	
	2021	2026	2031	2036	2021	2026	2031	2036	POP	DW
Cooloongup	6,849	6,845	6,827	6,853	2,896	2,909	2,926	2,951	+4	+55
Hillman – East Rockingham	2,226	2,274	2,298	2,350	990	1,001	1,018	1,043	+124	+53
Rockingham – Peron – Garden Island	10,146	11,039	11,433	11,801	4,649	4,967	5,067	5,167	+1,655	+518
Rockingham City Centre	6,844	7,637	8,810	11,032	3,906	4,368	5,060	6,346	+4,188	+2,440
Safety Bay	7,910	8,279	8,414	8,496	3,597	3,764	3,839	3,893	+586	+296
Shoalwater	4,361	4,477	4,542	4,558	2,339	2,359	2,379	2,399	+197	+60
Waikiki	13,146	13,936	13,782	13,755	5,177	5,473	5,505	5,556	+609	+379
<b>TOTAL</b>									<b>+7,363</b>	<b>+3,801</b>

**Table 14: Precinct 2 - Port Kennedy / Warnbro Population Forecast**

SUBURB	POPULATION				DWELLINGS				CHANGE 2021-2036	
	2021	2026	2031	2036	2021	2026	2031	2036	POP	DW
Port Kennedy	13,770	13,919	14,518	15,279	4,997	5,185	5,487	5,817	+1,509	+820
Warnbro	10,966	10,941	10,897	10,859	4,426	4,453	4,483	4,513	-107	+87
<b>TOTAL</b>									<b>+7,363</b>	<b>+3,801</b>

Table 15: Precinct 3 - South Coastal Population Forecast

SUBURB	POPULATION				DWELLINGS				CHANGE 2021-2036	
	2021	2026	2031	2036	2021	2026	2031	2036	POP	DW
Golden Bay	5,177	6,345	7,654	8,408	2,108	2,560	3,057	3,362	+3,231	+1,254
Secret Harbour	12,603	13,156	12,973	12,727	4,301	4,635	4,679	4,689	+124	+388
Singleton	4,350	5,014	5,320	5,421	1,628	1,842	1,975	2,043	+1,071	+415
<b>TOTAL</b>									<b>+7,363</b>	<b>+3,801</b>

Table 16: Precinct 4 - Baldivis Population Forecast

SUBURB	POPULATION				DWELLINGS				CHANGE 2021-2036	
	2021	2026	2031	2036	2021	2026	2031	2036	POP	DW
Baldivis North	11,454	17,582	24,795	29,463	4,272	6,520	9,205	10,945	+18,009	+6,673
Baldivis South	27,345	32,317	36,137	39,080	9,537	11,190	12,656	13,824	+11,735	+4,287
<b>TOTAL</b>									<b>+7,363</b>	<b>+3,801</b>

Table 17: Precinct 5 - Karnup Population Forecast

SUBURB	POPULATION				DWELLINGS				CHANGE 2021-2036	
	2021	2026	2031	2036	2021	2026	2031	2036	POP	DW
Karnup - Keralup	2,468	4,324	10,582	20,938	906	1,591	3,851	7,532	+18,470	+6,626
<b>TOTAL</b>									<b>+7,363</b>	<b>+3,801</b>

### 4.1.3. DWELLING YIELD ANALYSIS

The Local Planning Strategy Guidelines determine that a dwelling yield analysis should be undertaken prior to identifying any new areas for residential intensification (infill development) or residential expansion (greenfield development). The primary purpose of this dwelling yield analysis is to determine if sufficient capacity exists throughout the City to accommodate an increased dwelling yield in line with the requirements of the State planning framework. The analysis/estimation undertaken is an exploration of existing opportunities for infill and greenfield without making any changes to the local and/or state planning framework.

**Section 4.1.2 Population Forecast** demonstrates that by 2036 the City is forecast to accommodate a total of approximately 80,080 dwellings. With 54,871 dwellings recorded at the 2021 ABS Census it can be ascertained that the City has a dwelling target between 24,000 – 25,000 by 2036 to help meet the forecasted gap.

Estimated dwelling forecasts by precinct are summarised as follows:

- + **Precinct 1:** 3,800 dwellings
- + **Precinct 2:** 907 dwellings
- + **Precinct 3:** 2,057 dwellings
- + **Precinct 4:** 10,960 dwelling
- + **Precinct 5:** 6,626 dwellings

If achieved, this would represent approximately half of the City's targeted 51,130 dwellings by 2050 (as set out in the PP3.5 Framework).

***Note: It should be noted that the above targets are forecasts only, and that the LPS may propose an alternate distribution of dwellings.***

It is anticipated that delivery of the dwellings target will occur through a combination of infill and greenfield development opportunities. However, before areas are allocated for residential intensification or expansion it is important to understand the capacity of the City's existing zoned land to accommodate new dwellings. As such, the following analysis has been undertaken:

- + **Opportunities for Intensification:** This explores the development potential of existing areas, looking primarily at whether land has been developed to the capacity specified by the relevant residential density code. It considers these opportunities through factors such as lot size, tenure, age of housing stock, and proximity to amenity.
- + **Opportunities for Expansion:** This explores areas of the City that remain undeveloped, though are already zoned for residential development.

The above opportunities are explored for each of the City's precincts below.

Table 18: Infill Intensification Yields by Precincts

	INFILL INTENSIFICATION (HIGH YIELD SCENARIO)	EXPANSION SHORT TERM 2020/21 – 2024/25	EXPANSION MEDIUM TERM 2025/26 – 2029/30	EXPANSION LONG TERM 2030/ 31 +	TOTAL EXPANSION
<b>Precinct 1</b>	<b>2,232</b>				
Rockingham	11126 (RSC PSP)	343	958	550	1851
East Rockingham	0	0	0	0	0
Waikiki	664	30	40	115	225
Shoalwater	581	0	0	0	0
Safety Bay	662	0	0	0	0
Hillman	100	0	0	0	0
Cooloongup	225	0	0	0	
<b>Precinct 2</b>	<b>1,017</b>				
Port Kennedy	615	0	0	0	0
Warnbro	402	0	0	0	0
<b>Precinct 3</b>	<b>1,621</b>				
Secret Harbour	438	0	0	0	0
Singleton	469	0	156	0	156
Golden Bay	714	0	710	26	736
<b>Precinct 4</b>	<b>913</b>				
Baldivis North	183	2300	4556	3418	10274
Baldivis South	730				
<b>Precinct 5</b>	<b>38</b>				
Karnup	38	3200	246	200	3646
<b>TOTAL</b>	<b>5,821 (without RSC)</b>				<b>16,888</b>

## PRECINCT 1 – ROCKINGHAM

The Rockingham Precinct is the City's oldest, most populous and significant precinct due to it containing the RSC, Rockingham District Hospital, Rockingham Station, the Enterprise Service Commercial precinct and East Rockingham Industrial Area. A summary of the dwelling capacity in each suburb is described below:

- + **Rockingham (Strategic Centre)** – **Figure 9** demonstrates that there is substantial development / subdivision potential in the RSC. The City, through its draft Rockingham Precinct Structure Plan (RPSP) has determined that there is potential to accommodate approximately 11,000 new infill dwellings (primarily through grouped and multiple dwelling typologies).
- + **Rockingham (other)** – Historically, development in Precinct 1 occurred along the coastline in the suburbs of Rockingham and Shoalwater. Original lot sizes in these areas were traditional quarter acre blocks (1,012m<sup>2</sup>). In Rockingham, the prevailing R-Code is R20 resulting in substantial opportunities for subdivision. As shown on **Figure 9**, the prevalence of strata properties shows that this has already been occurring. There are an additional 126 lots that have the potential to be subdivided.
- + **Rockingham (east of Victoria Street)** – Despite having a prevalence of large lots with subdivision potential under the prevailing R40 density code, the presence of the Rockingham Industrial Area buffer means further subdivision and development opportunities are limited.
- + **Shoalwater** – Like Rockingham, residential properties in Shoalwater are some of the oldest and largest in the City. The primary difference between the two areas is that Shoalwater has large areas coded R15 along the coastline with pockets of R40 and R20 distributed throughout the suburb. Based on unsubdivided sites 581 additional dwellings could be delivered in Shoalwater.

*Note: Shoalwater may have opportunities for additional dwellings through subdivision potential and future activity centres.*

- + **Safety Bay / Waikiki** – Like Shoalwater and Rockingham, the older parts of these suburbs are found primarily along the coastline. As such, the larger and older lots capable of subdivision can be found in these locations. However, as demonstrated in the City's CHRMAP, a substantial amount of these properties are at future risk of coastal erosion and drainage issues. Taking into account the coastal hazards and based on un-subdivided sites 1,326 additional dwellings could be delivered in Safety Bay / Waikiki.

*Note: Future housing opportunities in Waikiki and Safety Bay will be expected in existing activity centres.*

*Note: Future subdivision in Safety Bay may wish to consider CHRMAP and drainage issues, while also acknowledging opportunities for an activity centre.*

- + **Cooloongup / Hillman** – Based on the underlying lot configurations and planning controls, the areas of Hillman and Cooloongup have very limited opportunities to accommodate future subdivision and development (without intervention).





Figure 9: Precinct 1 Dwelling Yield Analysis

## PRECINCT 2 – PORT KENNEDY AND WARNBRO

The Port Kennedy / Warnbro Precinct contains primarily low density residential development which has been delivered over many decades (from around the 1970s). The southern and eastern parts of the precinct comprise Parks and Recreation Reserves under the MRS as shown on **Figure 10**. With regard to existing development potential, opportunities are limited with capacity for further subdivision isolated to individual lots scattered around the Precinct.

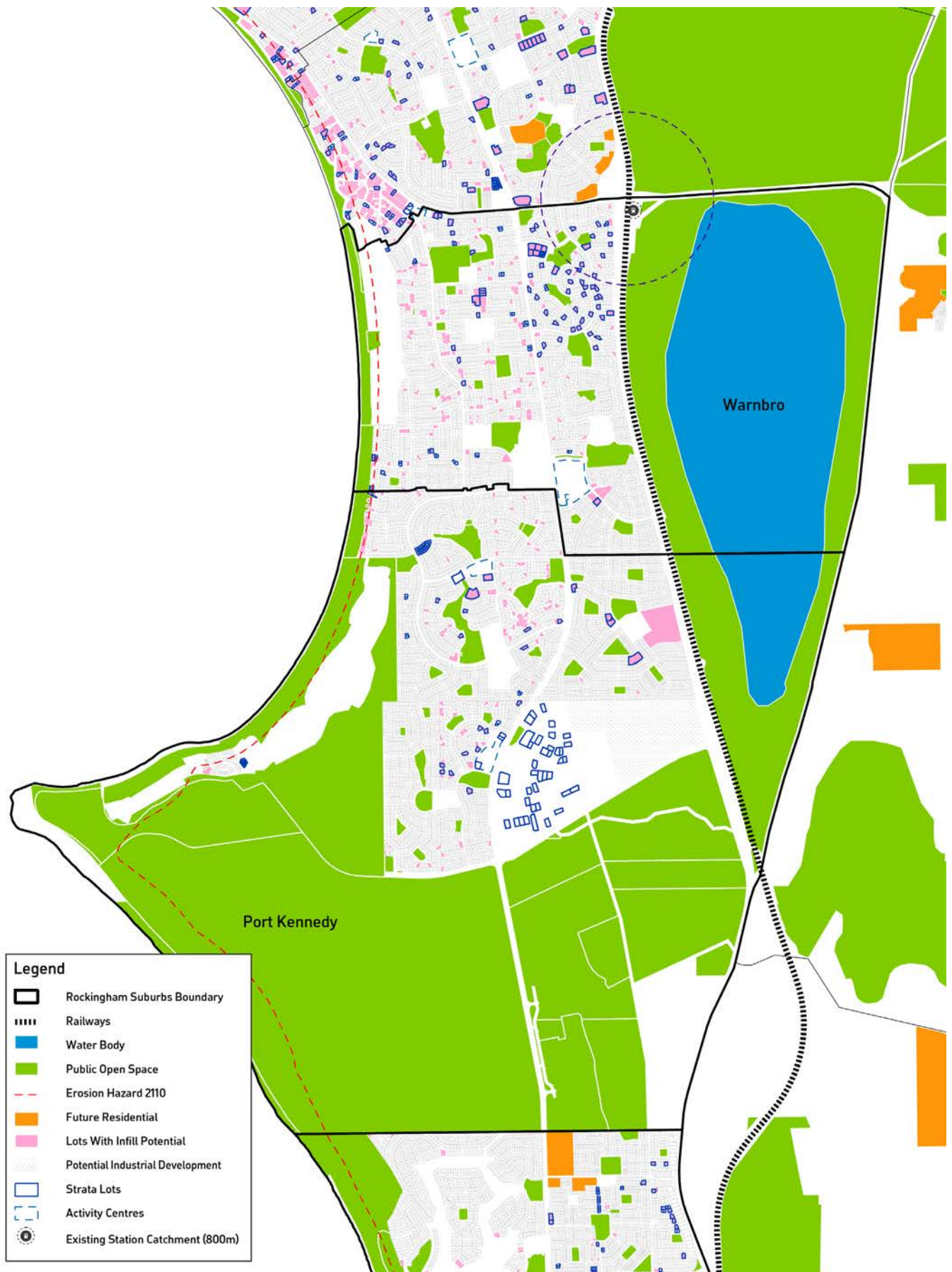


Figure 10: Precinct 2 Dwelling Yield Analysis



## PRECINCT 3 – SOUTH COASTAL

The South Coastal Precinct comprises the suburbs of Secret Harbour, Golden Bay, and Singleton. The precinct contains an approximate 200m wide foreshore reserve along the western boundary, with low density residential development the most prevalent development pattern. Development opportunities are shown on **Figure 11** and can be summarised as follows:

- + **Infill Development** – Opportunities exist in parts of Singleton and Golden Bay for further subdivision. These areas capable of development represent the original lots delivered in these areas pre-1985. 1,621 additional dwellings could be provided for if subdivision was to occur.
- + **Greenfield Development** – All three suburbs contain pockets of undeveloped land that is zoned for residential. In most cases, they form part of existing structure plans with subdivision already occurring in most of these pockets. 892 additional dwellings are planned to be delivered in these areas.



Figure 11: Precinct 3 Dwelling Yield Analysis

## PRECINCT 4 – BALDIVIS

As one of the City's newer suburbs future development opportunities in the Baldvis Precinct are focussed primarily on greenfield development, with numerous pockets of urban zoned land in both the north and south of the suburb as shown on **Figure 12**. The areas are capable of delivering approximately 10,274 additional dwellings through greenfield development.

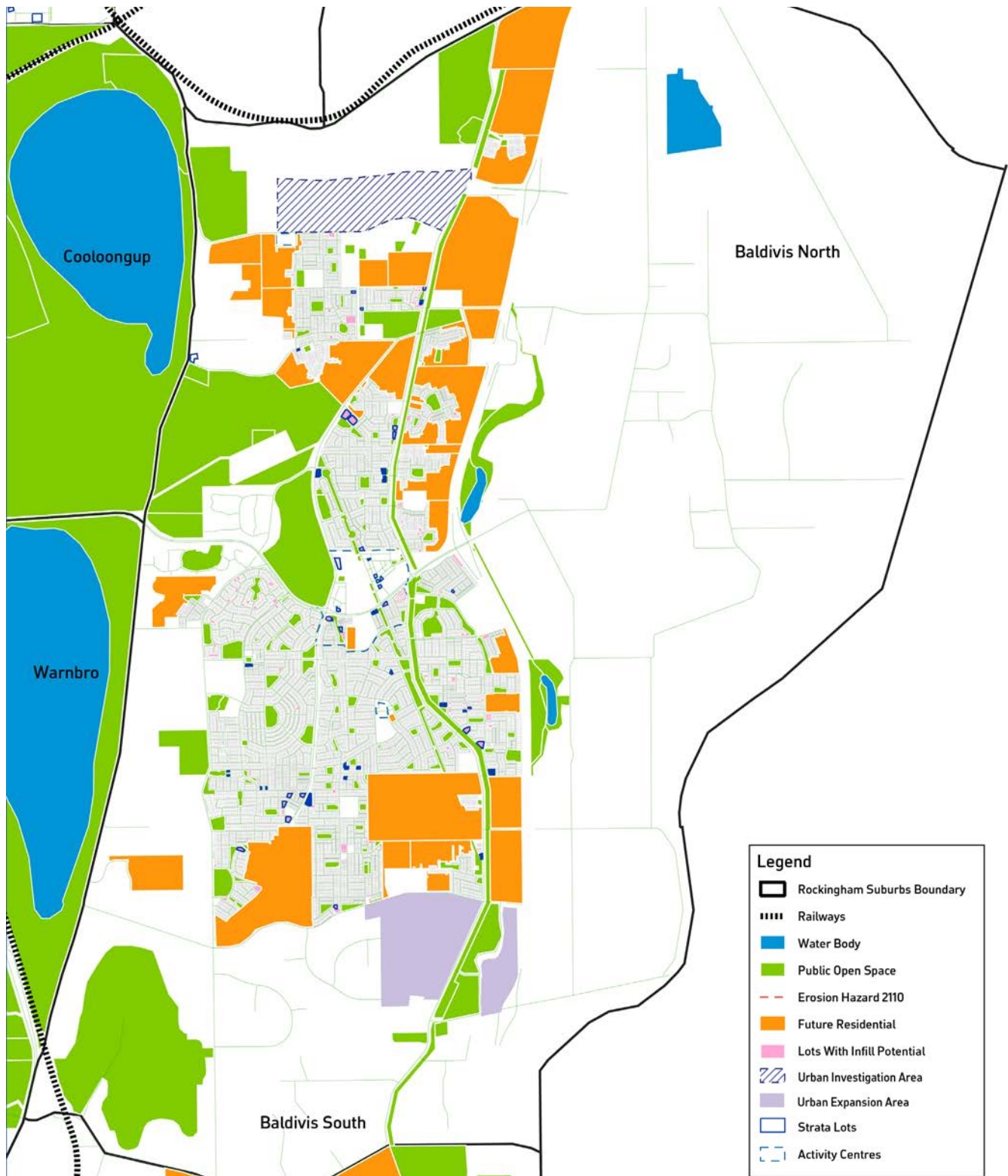


Figure 12: Precinct 3 Dwelling Yield Analysis

## PRECINCT 5 – KARNUP

Like Baldavis, Karnup is an emerging area. Future development opportunities are focussed primarily on greenfield development, with two primary pockets of existing zoned land as shown on **Figure 13**. These areas are capable of delivering 3,646 additional dwellings. The suburb of Keralup does not currently include any land zoned for future residential development.

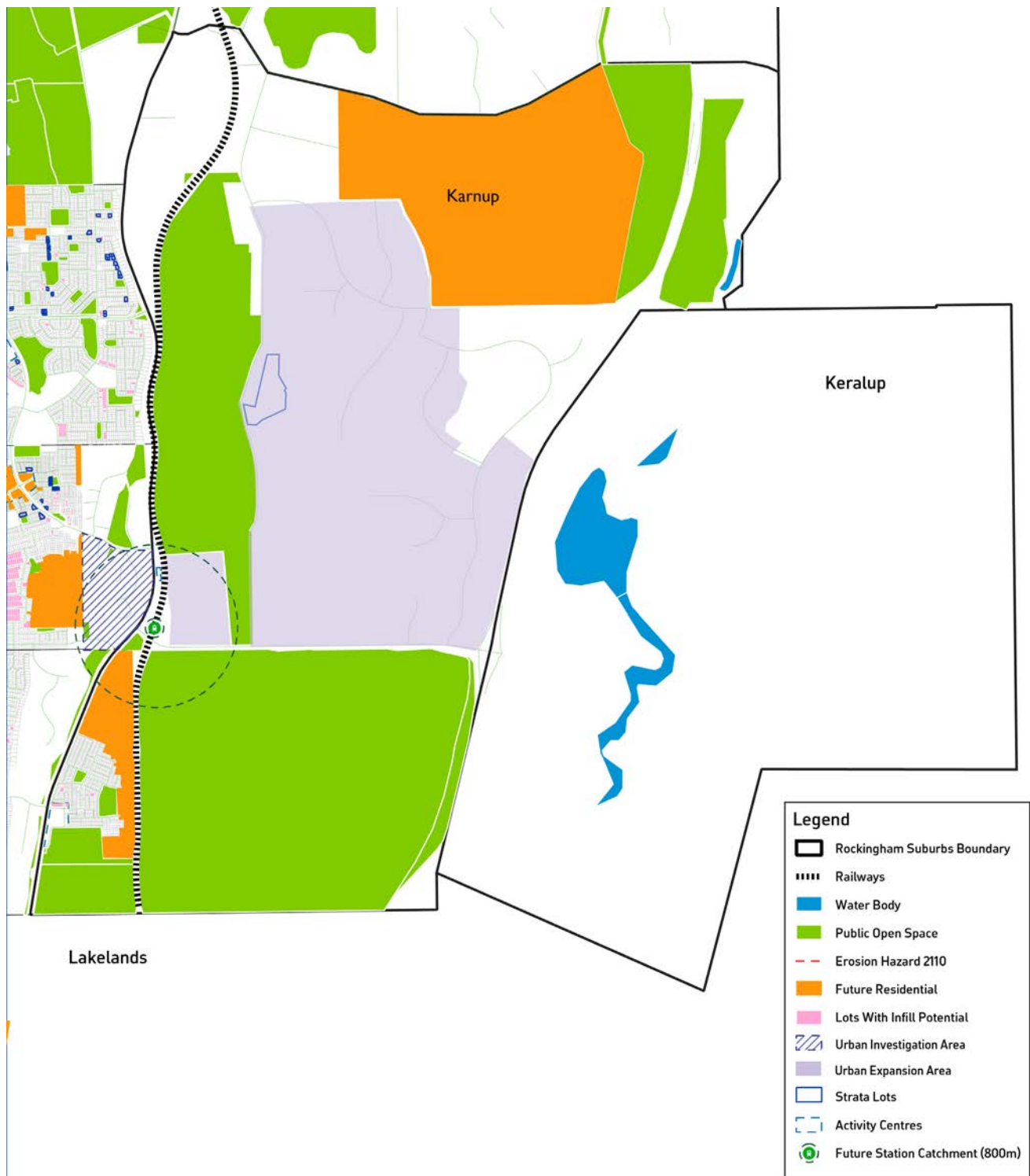


Figure 13: Precinct 3 Dwelling Yield Analysis



## DWELLING YIELD ANALYSIS SUMMARY

- + RSC contains substantial existing capacity to accommodate infill development. This falls primarily within the boundary of the RPSP, which has identified capacity for approximately 11,000 new infill dwellings which is more than the City's entire 2031 target (as set out in PP3.5).
- + Some capacity for residential subdivision exists on large lots in older parts of the City's coastal suburbs such as Rockingham, Shoalwater, Safety Bay, Waikiki, Singleton and Golden Bay. However, this would primarily be in the form of the battle-axe subdivision development typology which is not a preferred outcome (refer to **Section 4.2.1 Housing**).
- + Substantial opportunities for future urban expansion exist (via greenfield development), concentrated primarily in Precinct 4 Baldivis and Precinct 5 Karnup. There are also smaller pockets in Precinct 3 Coastal South.
- + Based on the dwelling yield analysis it has been confirmed that approximately 22,709 dwellings can be accommodated without intervention, incorporating approximately 5,821 infill dwellings, and 16,888 greenfield dwellings.
- + Dwelling yield analysis suggests a shortfall of 2,291 dwellings in order to achieve the 25,000 dwellings target. Section 4.2.1 Housing provides further analysis for how to address this shortfall.

## 4.2 COMMUNITY, URBAN GROWTH AND SETTLEMENT

The speed and scale of urbanisation brings challenges, including meeting accelerated demand for affordable housing, well-connected transport systems, and other infrastructure, basic services, and jobs. Ensuring population growth does not adversely impact the City of Rockingham's ability to provide an inclusive, healthy, resilient, and sustainable local government is essential to help shape a positive future, and to create opportunities for all.

The City has a proud history. The Traditional Owners of the area now known as Rockingham are the Nyoongar people. The City sits on the boundary of the Whadjuk and Binjareb Nyoongar people's territories. The histories of Aboriginal peoples in connection to what is now known as the City of Rockingham today relates to mainly the social organisation, land relationships, events and experiences in the area, as the current boundaries of the City do not reflect the Aboriginal cultural groupings prior to the Contact and Settlement period.

The City was first settled by Europeans when Sulphur Town was established on Garden Island in 1829. Port Rockingham was once the busiest port in the State by tonnage of goods shipped through the jetties at the end of Railway Terrace. However, when the viability of loading timber declined the associated beachfront and townsite was subsequently transformed into one of the State's favourite family holiday and day trip destinations. As such, initial development occurred along the waterfront, capitalising on the coastal amenity.

Today, the City of Rockingham is one of the fastest growing local government areas in the metropolitan area and is home to a strong, diverse, and growing population. As evidenced in the demographic profile, by 2036, the City of Rockingham's population is expected to increase by approximately 50,000-60,000 people to over 190,000. This growing population will influence demands on the economy, housing, transport, open space, health and community facilities. Population projections prepared for the City show that, in conjunction with substantial population growth over the next 20 years, the City's age structure is expected to change, with 60+ age segment growing over the past decade from 16.8% in 2011 to 19% in 2021.

The Strategy sets out the long-term direction for land use, and considers how population, demographics, and housing stock can be influenced to meet future population and growth projections. The growth within the 60+ age group, combined with the high percentage of one and two person households is likely to exacerbate the existing disconnect between housing needs and the existing housing stock for this demographic.

This section explores how this growing population will influence demands on housing, open space, and community facilities, and how elements such as rural land, heritage, and built form character will be influenced.

## 4.2.1. HOUSING

*“Western Australia’s demographics and household structures are changing rapidly, yet the diversity of the available housing stock remains relatively static.” (State Planning Strategy 2050)*

As demonstrated in **Section 4.1.2 Population Forecast**, the City’s population is forecast to increase by approximately 60,000 people with an additional 25,000 dwellings required throughout the lifetime of this LPS. This substantial growth highlights that housing is one of the primary focus areas for the LPS.

As a precursor to preparing the LPS, internal workshops (City Officers and Elected Members) and a Community Engagement Program were conducted to seek ideas, aspirations and issues regarding key strategic planning matters such as the delivery of housing (refer **Appendix 1 - Engagement Outcomes Report**).

The key issues identified through this engagement (and subsequent analysis) pertaining to housing can be summarised as follows:

- + Demographic changes such as decreasing average household size, general ageing of the population, and future changes in household structure are resulting in demand for greater housing diversity including smaller dwellings stock.
- + Greater consideration for households with specific housing needs, such as housing for the ageing population, housing for persons with special-needs, and affordable housing for lower income households.
- + Requirement for greater urban consolidation through infill development in the outer metropolitan Perth and Peel region is identified through the Perth and Peel @ 3.5 Million land use planning frameworks. This aligns with community feedback which suggested that infill development should be favoured over continued urban sprawl. Where infill development does occur, it should be concentrated in areas with access to quality amenity (e.g. public transport, employment).
- + Impact of (new) residential development on the character and amenity of existing residential areas and neighbourhoods needs to be carefully managed, including management of the interfaces between residential areas and public spaces such as schools, public open space, pathways, and infrastructure.
- + The need to promote quality and environmentally sustainable residential development, particularly in greenfield areas where there are concerns for ongoing environmental impact.

This section of the LPS explores how land use planning can assist with addressing the issues above, while also ensuring the forecasted housing targets can be met through appropriately delivered infill and greenfield development.

## URBAN CONSOLIDATION

As the primary strategic land use planning document, this LPS seeks to align with the approach set out in the PP3.5 spatial plan (and supporting sub-regional frameworks). One of the primary objectives of this framework is to deliver a more consolidated urban form that places a greater emphasis on increased urban infill, by maximising the use of existing infrastructure particularly where there are concentrations of existing amenity such as public transport and employment opportunities. The PP3.5 Framework is underpinned by 10 urban consolidation principles as shown on **Figure 14**.

Principle	Description
<b>1. Housing</b>	Provide well-designed higher-density housing that considers local context, siting, form, amenity and the natural environment, with diverse dwelling types to meet the needs of the changing demographics.
<b>2. Character and heritage</b>	Ensure the attractive character and heritage values within suburbs are retained and minimise changes to the existing urban fabric, where appropriate.
<b>3. Activity centres</b>	Support urban and economic development of the activity centres network as places that attract people to live and work by optimising land use and transport linkages between centres; protecting identified employment land from residential encroachment, where appropriate, and avoiding contiguous linear or ribbon development of commercial activities beyond activity centres.
<b>4. Urban corridors</b>	The focus for higher-density residential development. Where appropriate, located along transit corridors and promoted as attractive places to live by optimising their proximity to public transport while ensuring minimal impact on the surrounding urban fabric and the operational efficiency of the regional transport network.
<b>5. Station precincts</b>	Where appropriate, focus development in and around station precincts (train stations or major bus interchanges as set out under the METRONET initiative) and promote these precincts as attractive places to live and work by optimising their proximity to public transport while ensuring minimal impact on the operational efficiency of the regional transport network.
<b>6. Industrial centres</b>	Promote the current and proposed supply and/or development of industrial centres as key employment nodes and prevent incompatible residential encroachment on these areas.
<b>7. Public transport</b>	Ensure that most transit corridors are supported by quality higher-density residential land uses and identify where new or improved public transport services will be needed to meet long-term growth, especially current and future train station precincts.
<b>8. Infrastructure</b>	Ensure more efficient use of existing and planned infrastructure to achieve a more sustainable urban environment. Protect existing and proposed infrastructure from incompatible urban encroachment to promote a system where land use developments and infrastructure are mutually compatible.
<b>9. Green network</b>	Preserve and enhance, where appropriate, the green network of parks, rivers, sport/recreation areas, facilities for active open space, conservation and biodiversity areas, and areas with a high level of tree canopy coverage, considered important for the health and wellbeing of the community.
<b>10. Protection</b>	Avoid, protect and mitigate environmental values and promote development that contributes to maintaining air quality and minimises risks of inundation from sea-level rise, flooding or storm surge events and bushfire damage.

**Figure 14: Urban Consolidation Principles**

Source: Western Australian Planning Commission

The above principles apply to both infill and new urban areas, with the development of new and evolution of existing activity centres into vibrant, mixed use community hubs that are integrated with high quality public transport connections. New development should also be focussed around station precincts and along urban corridors.

These opportunities are interrogated further in this section for greenfield and infill development areas.

## INFILL DEVELOPMENT AREAS

**Section 4.1.3 Dwelling Yield Analysis** provided an in-depth assessment of the existing redevelopment capacity of infill areas (without intervention). It determined that outside of the RSC, opportunities for infill without increasing densities in existing low-density suburbs were limited or would lead to encouraging undesirable development patterns such as battle-axe subdivision.

The PP3.5 Framework provides an urban infill target for Rockingham of 14,678 dwellings (32,300 population) by 2050. This infill target equates to 28.7% of new dwellings which is well below the Directions 2031 target of 47%. The document does not articulate how the infill targets were derived, and where the infill development is likely to occur. It is considered that the target for infill development is very low when compared with the total projected increase in population.

The LPS process provides an opportunity to investigate options for urban infill. This section of the LPS includes more thorough analysis on the infill 'hotspots' identified within the City. In line with the Urban Consolidation principles above, the following locations were identified as warranting further investigation for infill redevelopment:

### + Station Precincts

- Rockingham / Warnbro (existing)

### + Activity Centres

- Rockingham Strategic Centre
- Baldivis District Centre
- Warnbro District Centre
- Secret Harbour District Centre
- Neighbourhood Centres (multiple)
- Local Centres (multiple)

### + Along Transit Corridors

- Read Street / Warnbro Sound Avenue Corridor (between Rockingham Waterfront and Warnbro Station)

These areas are identified on **Figure 16**, having had consideration for the findings of the pre-lodgement engagement.

### Pre-Lodgement Engagement: Best Locations for Infill

The most frequent responses were locating infill development close to public transport, and close to town/city/employment centres. This reflects that while respondents would like housing development to be contained to existing residential areas, they have a strong preference for this to be strategically located to align with the public transport network and key employment centres.

While recreational facilities and public open space might be an important consideration, the responses suggest that impacts on transport networks and how people will travel to and from work should play a larger role when determining infill locations.

To align with contemporary planning practice, future planning in areas identified for urban consolidation will likely be in the form of Precinct Structure Plans. Which would be prepared in accordance with *SPP 7.2 – Precinct Design*.



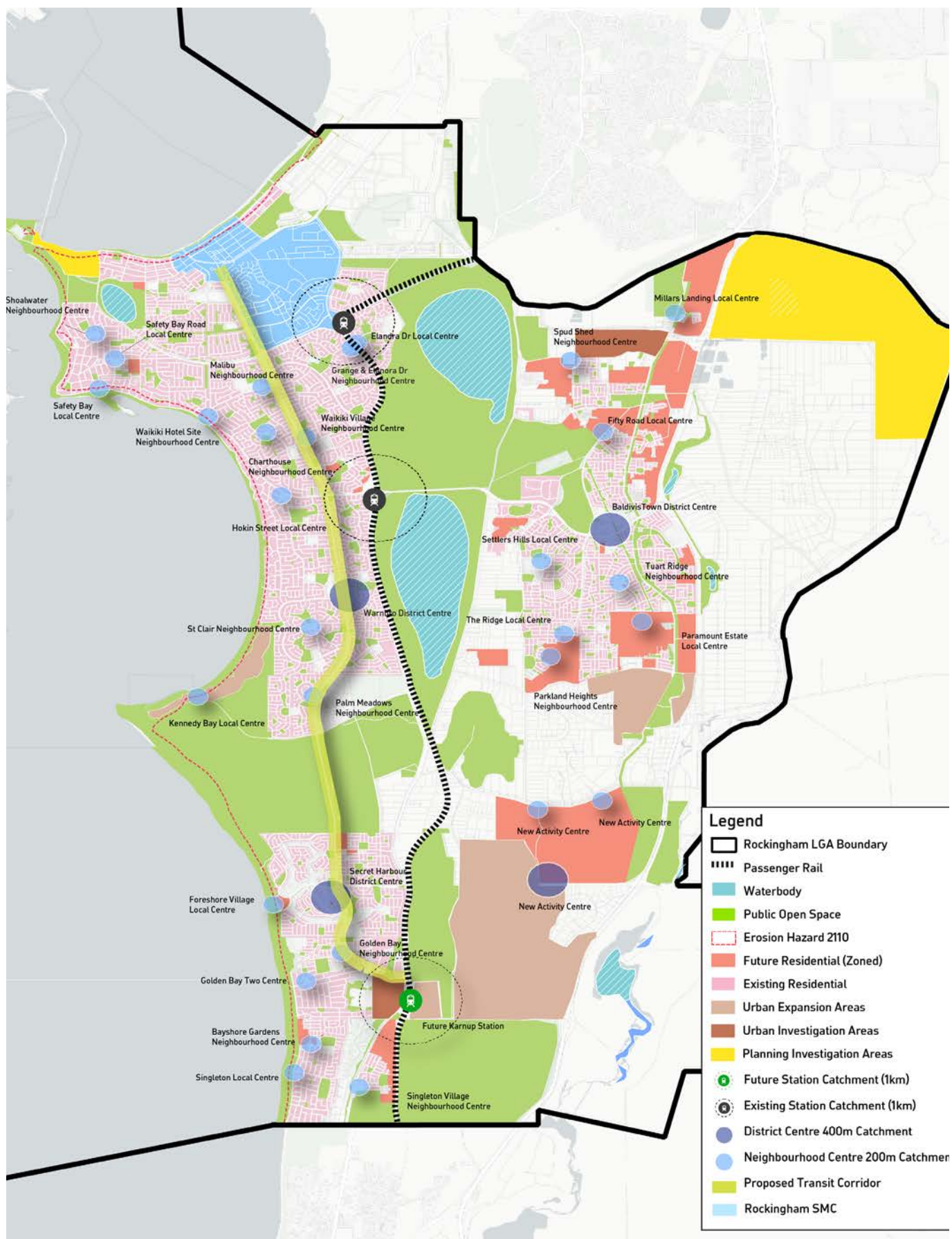


Figure 16: Future Development Areas

## STATION PRECINCTS

Station precincts are generally defined as the 1km walkable catchment which surrounds a train station. Station precincts are areas with the potential to accommodate transit-oriented development (TOD). A key principle of TOD is to facilitate an increase in both residential (housing diversity and density) and non-residential (employment generating land) development in close proximity to public transport. This ensures that the urban environment supports affordable opportunities to live and work in close proximity to transport. This was reaffirmed in the additional community engagement undertaken in August 2022.

The challenge with the City's two existing stations, Rockingham and Warnbro, is that their locations adjacent to major road infrastructure substantially limits these development opportunities (see below for further information). There is an opportunity for the proposed future Karnup Station Precinct to explore how housing and employment can be better integrated into the station environment.

### **ROCKINGHAM STATION PRECINCT**

The Rockingham train station is located in the southern portion of the RSC. Despite its relative proximity, it is disconnected due to its location adjacent to major road infrastructure. These existing physical barriers significantly limit the efficiency and effectiveness of the Rockingham Station walkable catchment. Interventions that improve housing density and diversity, as well as station access (for pedestrians and cyclists) should be considered.

Given its strategic importance, the Rockingham Station Precinct is an ideal location to explore opportunities for redevelopment and attract private sector investment. Key areas for exploration include:

- + A significant central development on the westernmost station car park;
- + Higher density residential along the inner "edges" of the existing residential quadrants to create a "habitable wall";
- + Pedestrian breaks through the inner "edges" including one directly in to the east side of the station, to increase the walkable catchment; and
- + The use of Public Access Ways (PAW) enhancement lots to create a safer and more appealing pedestrian environment from the existing PAW.

### **WARNBRO STATION PRECINCT**

Warnbro Station Precinct is identified as a 'Transit Node' by METRONET. These precincts perform a primary transport interchange function, and generally include bus to rail transfer, station parking and drop off facilities. The design of Warnbro Train Station exemplifies this, it is physically separated from adjacent urban areas and has very poor pedestrian and cyclist connectivity.

### **KARNUP STATION PRECINCT**

The future Karnup Station is one of two new stations on the Mandurah Line between Warnbro and Mandurah Stations. The proposed Karnup Station should improve access to public transport for the local catchment and, with Lakelands Station, will reduce the pressure on Warnbro and Mandurah stations.

The proposed station will be located adjacent to a large parcel of vacant State Government owned land which provides significant opportunity to deliver TOD outcomes surrounding the station. Karnup is classified as a Neighbourhood Centre Station Precinct with housing, local employment, retail, services and amenities to support future growth. Further to its adjacency to a large parcel of government-owned land,

the precinct is also benefited with environmental and amenity values from surrounding mature trees, the Bush Forever reserves and dunal system.

METRONET has undergone a comprehensive analysis of all future Station Precincts with Karnup included. Due to its predominantly undeveloped status, Karnup Station Precinct scored relatively low in place indicator analysis. The following table is a summary of the analysis.

In terms of Karnup Station Precinct's development potential, the precinct would benefit from the majority of the land being owned by the State Government and high land availability which allows the State Government to release the development sites to the market. Yet, due to the site's undeveloped status, the lack of utilities and infrastructure remains as a hindrance towards future development.

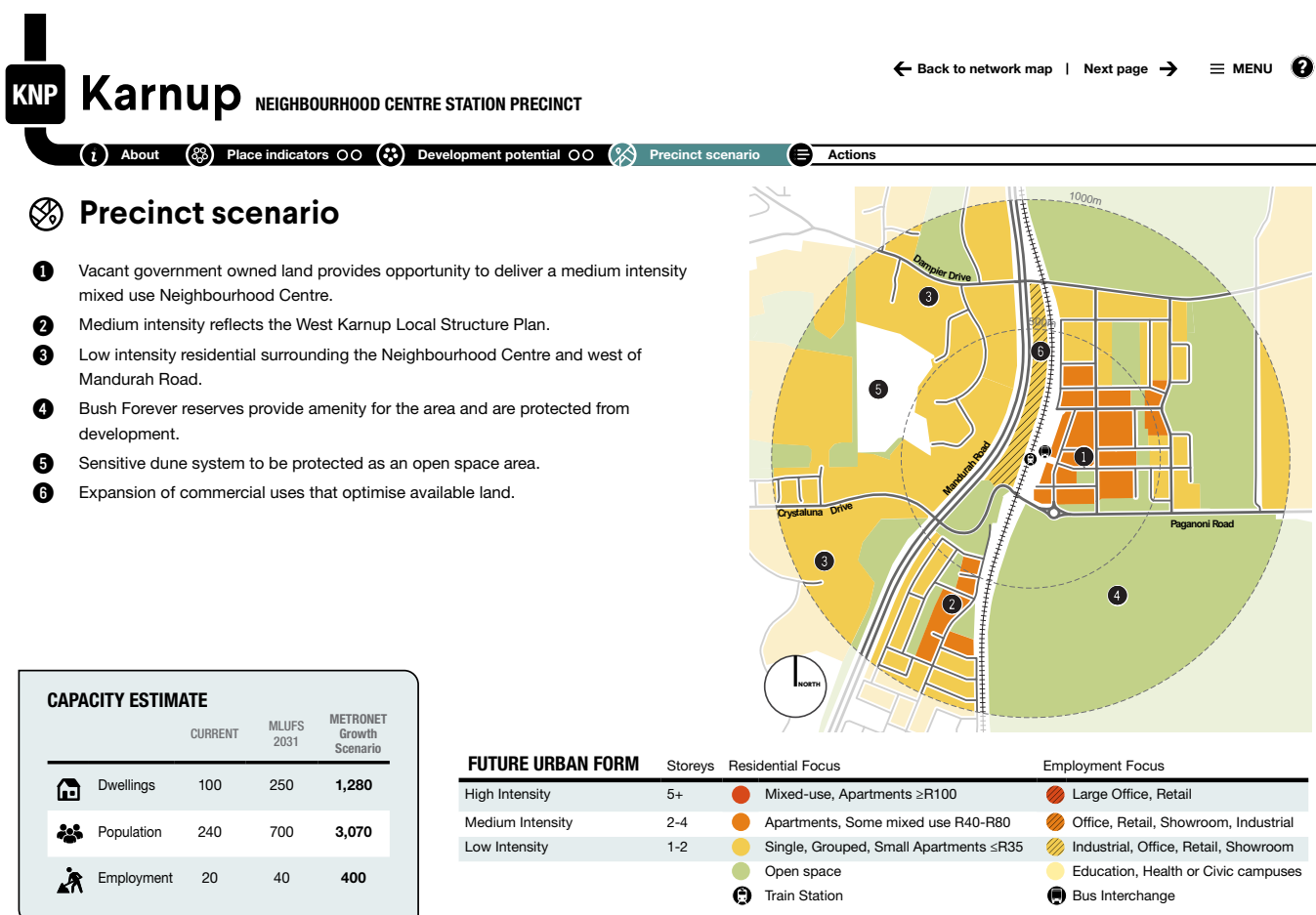


Figure 15: Karnup Station Precinct

Source: METRONET

## ACTIVITY CENTRES

The City's activity centres hierarchy includes the RSC, the Warnbro, Baldivis, and Secret Harbour District Centres, and numerous Neighbourhood Centres which are supplemented by Local Centres. Generally, activities are concentrated in centres and delivered in a compact urban form. This diversity in land uses promotes a more equitable distribution of services, facilities and employment and an overall reduction in travel demand. Commercial and residential growth should be optimised through appropriately-scaled buildings and higher density developments in walkable catchment of centres. Higher density housing should be incorporated within and immediately adjacent to activity centres to establish a sense of community and increase activity outside normal business hours.

The value of an activity centre hierarchy is that it:

- + Provides high-level guidance in terms of the location, scale, land uses intended, and nature of investment expected in activity centres;
- + Ensures policy reflects the differing roles and functions of the range of centre typologies;
- + Creates a coherent network of activity centres which meet the various needs of the community at the locations where these needs can, and should, be met; and
- + Guides the planning and provision of transport infrastructure and other aspects of urban development influenced by activity centres.

An assessment of the City's activity centres, has identified the following centres as being the priority for future infill development:

- + Rockingham Strategic Centre,
- + Baldivis District Centre;
- + Warnbro District;
- + Secret Harbour District Centre;
- + Penguin Road/Safety Bay Road Local Centre;
- + Malibu Road (East) Local Centre;
- + Waikiki Village Activity Centre; and
- + Hokin Street Local Centre.

The above centres were chosen as they were identified as having the greatest potential in the short-medium term. Future detailed planning (in the form of precinct structure plans) will be required, the following principles are to be considered.

**MOVEMENT principles** that the LPS seeks to achieve are:

- + **Strategic Centre** – RCCTS implemented to achieve an integrated movement system within and beyond the Strategic Centre, linking with the train station and key activity nodes and streets.
- + **District Centres** – Should be accessible to/located on a high frequency bus route. These routes should support connections to the Rockingham Train Station and the Strategic Centre. Movement linkages to and within District Centres should prioritise high quality, comfortable (sheltered/shaded) and safe, pedestrian and cycling environments. Local community nodes such as schools and childcare centres should also be safely connected to these centres. Ideally servicing and storage areas are located on rear laneways enabling active streets and reducing conflicts.



- + **Neighbourhood Centres/Local Centres** – Should have a bus stop adjacent to or within short walking distance of centre, ideally with a shelter. Bus stop should be linked to the centre by a safe, accessible path. Include connections to surrounding catchment population via pedestrian and cycle paths. Link with nearby bus routes where possible. Some short-term on street parking can enable visitors to undertake errands easily, though active modes are emphasised.

**URBAN FORM principles** as highlighted in Case Studies by centre type, that the LCACS seeks to achieve are:

- + **Strategic Centre** – Each of the precincts within the RSC PSP has its own defined context and character that the urban form of each area should respond to. The specific controls and guidance relating to each precinct are outlined in the PSP to enable the varied outcomes sought to be achieved.
- + **District Centres** – Ideally should be designed to an intensity that supports ground floor uses that are active, human scaled and encourage safe streets. This can then be complemented by medium to high density residential and commercial land uses on upper levels above. Where a main street or hybrid centre design is possible and parking located in areas where joint / reciprocal use with other community uses can occur, this is beneficial to the centre experience. Pocket parks, playgrounds, piazzas, squares and their relationship to centre elements such as cafés and restaurants should be well considered to enable easy access and safe observation by parents.
- + **Neighbourhood Centres** – New built form should be orientated outwards to engage with and frame the streetscape. Main street / hybrid layouts as noted above are one way this can be achieved (rather than internalised shopping mall style form). Where centres are adjacent to public open space, reinforce links and relationships through build form that overlooks playgrounds and dog exercise areas for instance, encouraging activation throughout the week and various times of the day.
- + **Local Centres** – Support and encourage fine grain, human scaled development that relates well to the local area and streets. Include Post Office boxes, public telephones/WIFI and other local services on street within the centre, encouraging services and daily needs shopping visits where people can meet and feel included in their local community.

### **ROCKINGHAM STRATEGIC CENTRE**

The RPSP is currently in draft form and will guide subdivision and development in the RSC. The vision for the RPSP is:

*“Rockingham leverages off its unique coastal atmosphere to establish a green and walkable centre that offers a diversity of uses and building types, celebrates local culture, and promotes a relaxed lifestyle. It is a regional employment destination that connects its distinct activity hubs via high-frequency public transport”*

The Needs Assessment prepared for the LPS (by Pracsys) has tested two distinct growth scenarios for the RSC based on State Government projections (WA Tomorrow) and research undertaken by the City (forecast id). Based on the forecasted growth scenarios, it was determined that the RSC would need to accommodate approximately 30,000 people to meet planned commercial floorspace and jobs targets desired by 2041. From a residential perspective, this equated to a dwelling yield of 15,000 – including 11,000 new dwellings.

The proposed land use and density approach is illustrated on **Figure 17**. The RPSP acknowledges that the majority of the RSC's density will be in the form of medium – high density development. As such, the

timing of meeting the dwelling target proposed above will be dependent on the overall uptake of high density dwellings. Dwelling targets needs to consider the challenge in delivering apartment/high density development in precincts such as the RSC as in current market conditions it is difficult for developers to achieve sufficient built form price points (for larger developments) that enable projects to be financially viable.

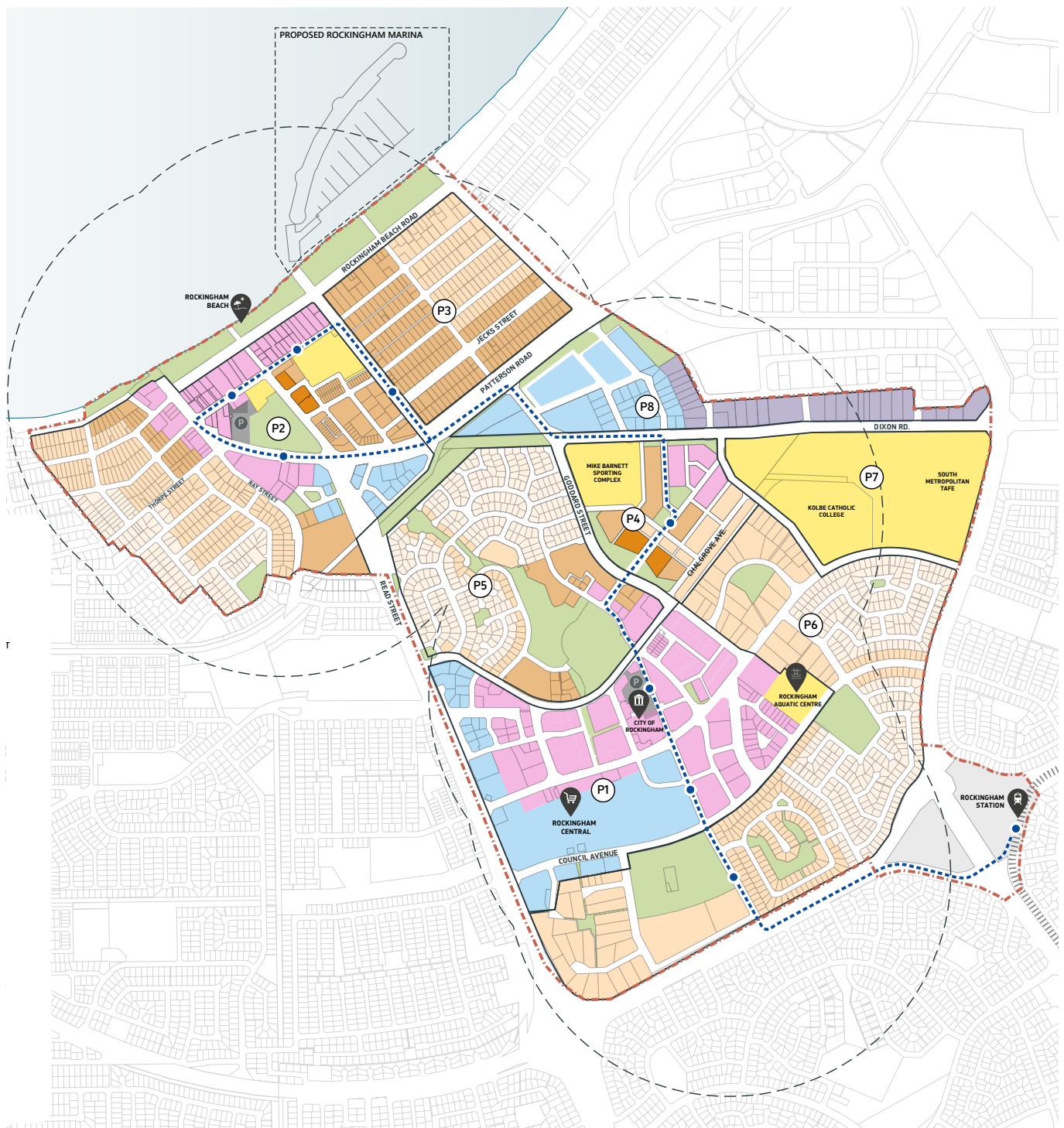


Figure 17: RPSP Land Use and Density Plan



## TRANSIT CORRIDORS

### **ROCKINGHAM – KARNUP TRANSIT CORRIDOR**

The Transit Corridor is proposed to start from the Patterson Road / Read Street intersection and end at Warnbro Sound Avenue/Mandurah Road Intersection. The intention is to explore an increase in urban infill along the activity corridor. This strategy would require developing high-density mixed-use centres linked by a corridor of medium to high density residential that will enable more people to access work and other activities without the use of a car.

Focussing redevelopment along the Transit Corridor has the potential to provide for greater housing diversity through the established suburbs of Rockingham in targeted areas, while protecting the prevailing low-density character throughout the rest of these suburbs. The infill redevelopment along the transit corridors will have the opportunity to maximise TOD principles. A light rail system is proposed as the mode of choice to link existing residential areas with the RSC, including the City Centre and Waterfront.

### **KARNUP - BALDIVIS – WARNBRO TRANSIT CORRIDOR**

This transit corridor is proposed to connect the Karnup Urban Expansion Area with the suburb of Baldivis and Warnbro Train Station / the RSC beyond, better linking housing with employment opportunities. The route for the Karnup – Baldivis – Warnbro Transit Corridor is still to be defined, and will be influenced by the Karnup District Structure Plan.

## FUTURE INFILL INVESTIGATIONS

In addition to designated activity centres, station precincts, and transit corridors it is acknowledged that the City includes many other areas which may be suitable for future infill. This LPS advocates for a need to undertake ongoing investigations to determine future infill priority areas. These investigations should have consideration for:

- + Commercial viability including infrastructure capacity;
- + Age of housing stock;
- + Likelihood of redevelopment in the short term;
- + Impact on other infill locations;
- + Proximity to amenity such as employment, public transport, public open space; and
- + What changes (if any) are required in the planning framework to assist with implementation.

## GREENFIELD DEVELOPMENT

### **EXISTING DEVELOPMENT**

Based on the current planning and policy framework and known and anticipated developer activity, it can be assumed that the majority of the City's forecast growth will comprise low density suburban development in Baldivis (north and south) and Karnup (see Section 4.1.3 Dwelling Yield Analysis). These continued patterns of development would be unlikely to address or resolve the key issues identified above, particularly from a housing diversity perspective.

There are concerns that the housing stock being delivered in greenfield areas does not adequately match the needs of the City's community. The lack of housing diversity in Rockingham is especially apparent in new urban areas where the majority of housing consists of 3 – 4 bedroom single storey dwellings on

small, narrow, front-loaded lots. This form of low-density suburban development is not sustainable as it does not provide the diversity of housing opportunities required to accommodate different income levels, lifestyle choices and household types.

Without changes to the current planning framework, a continued predominance of low-density suburban development and low infill targets will prevent any significant increase in housing diversity.

In 2015, the City undertook research into greenfield development trends in 2015 which identified the following:

- + New dwellings are predominantly single storey with double garage (over 95%) irrespective of the density code;
- + New dwellings are predominantly large family homes, with 56% (4+ bedrooms) and 40% (3 bedrooms);
- + There is little correlation between R-Code and lot size. In some cases, average lot size is 50% above the R-Code average;
- + More than one third of lots are below 350m<sup>2</sup> in area. A trend that is likely to increase; and
- + There is little housing choice being offered via Display Home product.

Critically, the research showed that diversity in R-Code density did not translate to diversity in housing types, and that often the density permitted under higher R-Coding was not being achieved on the ground. It was evident that a higher density coding was being utilised to access more favourable requirements under the R-Codes in more recent times.

Analysis of approved Structure Plans within the Baldivis East precinct suggests that current developments will also fail to provide for housing diversity, with the R Coding likely to result in 88.4% of housing as separate houses (predominantly large 3 - 4+ bedrooms) and the remaining 11.6% as medium density dwelling units.

Despite State policy aspirations to provide for diverse housing opportunities, the market response to the residential density targets in Perth and Peel @ 3.5 Million has resulted in predominantly small, narrow lots developed as single storey dwellings, with high site coverage, minimal private open space (loss of backyard), and poor streetscape outcomes.

### **DELIVERING HOUSING IN GREENFIELD AREAS**

As described in **Section 4.1.3 Dwelling Yield Analysis**, there are a number of existing areas which are already zoned and capable of further residential development.

In light of the City's view that the current market response to the provision of housing diversity does not reflect the policy aspirations intended by the State planning framework, it is recommended that the City give consideration to the formulation of a local planning policy to articulate the standards and performance criteria considered necessary to deliver credible housing diversity. The policy provisions would guide the assessment of residential structure plans.

In this regard, the City favours the policy approach adopted in the WAPC operational policy Liveable Neighbourhoods 2009 (LN 2009) wherein Element 1, Community Design seeks to achieve residential densities and diversity of dwelling types by providing a wide range of lot sizes and building forms that

provide for greater housing and lifestyle choice. LN 2009 has previously been subject to review and a draft revision was released for stakeholder consultation in 2015. The draft Liveable Neighbourhoods 2015 (LN 2015) sought to reinforce the role of strategic structure planning through improved content and structure of Element 1.

The draft LN 2015 includes a more robust approach to housing choice and residential densities, the objective of which is to “facilitate housing diversity, responsive built form, local employment and amenity within a legible and efficient urban structure of compact walkable neighbourhoods”. This objective is consistent with the intent of the recently released SPP 7.0.

The following criteria from draft LN 2015 give context to the allocation of density and in turn, provide for the delivery of housing diversity through structure planning:

- + To support activity centres and public transport use the urban structure will require higher residential densities in areas close to activity centres, high frequency public transport routes and stations and POS through a mix of housing types and lot sizes to support self-contained mixed-use centres and facilitate an increase in the use of public transport, walking and cycling.
- + Mixed use buildings, generally with residential at upper levels are expected within activity centres. Lower residential densities may be appropriate in areas on the edge of neighbourhoods or in physically constrained areas, and in regional centres.
- + Housing diversity is achieved by providing a variety of lot sizes and resultant housing types distributed throughout neighbourhoods and preferably within the same street. This facilitates housing diversity, choice and assists affordability ranging from lots for single dwellings to lots suitable for grouped and multiple dwellings.
- + Density targets facilitate housing diversity and vary depending on location. Higher densities are expected in areas within 400m of a local or neighbourhood centre and within 800m of a higher order activity centre or transit stations.
- + A local structure plan should define the broad residential density ranges that apply to specific residential and mixed-use areas. This should be in accordance with housing demand and density targets identified in the local government local planning strategy or housing strategy, sub-regional and district structure plans and in *SPP 4.2 – Activity Centres for Perth and Peel* where an activity centre is proposed.

Stage 2 of Design WA will consist of a new Medium Density Policy and Neighbourhood Design Policy (intended to replace the current LN 2009). It is likely that these new policies will inform any future local planning policy prepared by the City to articulate the standards and performance criteria considered necessary to deliver credible housing diversity and liveability.

In addition to the above challenges, one of the primary considerations of this LPS is the location of the urban expansion areas proposed in the PP3.5 Framework. These urban expansion areas would see the loss of substantial areas of high quality vegetation. **Section 4.2.3 Rural Land Use** and **Section 4.4.1 Natural Areas** provide further commentary on this topic. One of the primary concerns is that once land is zoned Urban under the MRS, the opportunity to protect ecological values is generally limited to retention of trees in POS and road reserves, and protection of wetlands if present within POS.

## HOUSING SUMMARY

- + The LPS must respond to changing demographics by anticipating evolving needs and making provision for different types of housing in terms of zone, type and location of homes. Housing markets typically fall behind modern trends, and do not reflect the State's policy aspirations and has resulted in outcomes which are not acceptable. This LPS will therefore ensure implementation of housing diversity as intended by the planning framework, ensuring that built-form outcomes, streetscape quality and residential amenity are major considerations.
- + TOD opportunities adjacent to existing train stations is limited, noting the desire to increase numbers particularly adjacent to Rockingham Station and future Karnup Station. It is acknowledged that Warnbro has major limitations.
- + LPS to promote more consolidated urban form that fosters a sustainable pattern of urban development through provision of infill development in targeted areas, namely station precincts, identified activity centres, and along transit corridors. This approach also allows the protection of the suburban character of established suburbs by confining redevelopment to activity centres and activity corridor
- + Quality of greenfield housing stock is a major hindrance to good design outcomes and housing diversity. Future planning to consider a local planning policy which better guides delivery of urban expansion areas, with a particular focus on improved housing diversity.
- + Locations of proposed urban expansion areas in PP3.5 framework could have a detrimental environmental impact. Further investigations are required.
- + Planning for a sustainable pattern of urban development requires urban growth options that provide the community with diverse housing opportunities. The resultant housing diversity will have the following benefits:
  - Provide for a variety of housing styles, types and sizes ensuring greater lifestyle choice;
  - Provide for people to remain in the local area as their housing needs change ('ageing in place');
  - Reduce travel times and costs by providing options to live near employment, education and amenities ('affordable living'); and
  - The shift towards a more sustainable form of urban development needs to apply to the planning of new urban areas, as well as to infill redevelopment within established urban areas.

## 4.2.2. CULTURE, ARTS AND HERITAGE

The City recognises that its heritage is a valuable finite resource that must be preserved for future generations due to its importance to the community's social, environmental and economic prosperity. Accordingly, the City has pro-actively sought to identify, understand, protect and promote its heritage. Building on its existing initiatives, the City has developed the Rockingham Heritage Strategy 2022-2025 to guide its ongoing commitment to heritage management to ensure that the management of its heritage assets occur in a coordinated and effective manner, and to capitalise on the many benefits that its heritage affords.

### ABORIGINAL HERITAGE

The City has a proud Aboriginal culture which can be traced back thousands of years. The Aboriginal peoples of the southwest of Western Australia are collectively known as Nyoongar peoples. The histories of Aboriginal peoples in connection to what is now known as the City of Rockingham today relates to mainly the social organisation, land relationships, events and experiences in the area, as the current boundaries of the City do not reflect the Aboriginal cultural groupings prior to the Contact and Settlement period. Lakes and wetlands are ethnographically significant for Aboriginal people as sources of abundant food throughout the year, as well as places of ceremony and trade. This strong spiritual significance still holds value today.

The City of Rockingham was one of the first local governments to prepare a Reconciliation Action Plan (RAP) in 2011. The City's third RAP 2021 – 2023 aligns with other strategic documents mentioned previously. The RAP focuses on four pillars:

- + Building relationships
- + Fostering respect
- + Developing opportunities
- + Governance

The Department of Planning, Lands and Heritage Aboriginal Heritage Inquiry System (AHIS) includes a total of 10 Registered Sites in the City of Rockingham, all of which are listed in the City of Rockingham's Municipal Heritage Inventory (MHI) 2018. These (10) sites include:

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>- Rotary Park, Rockingham</li> <li>- Wally's Camp</li> <li>- Gas pipeline 82</li> <li>- Mooribirdup Ceremonial Grounds</li> <li>- RIZ 12-01</li> </ul> | <ul style="list-style-type: none"> <li>- Golden Bay Camp</li> <li>- Serpentine River</li> <li>- Lake Richmond, Rockingham (also State heritage listed)</li> <li>- Sister Kate's Children's Home Summer Camp</li> <li>- Paganoni Swamp (Berong)</li> </ul> |
|---|---|

In addition to the 10 "Registered Sites" there are a further 37 "Other Heritage Places" listed on the online database which are not included in the MHI. These sites can include such places as lakes, swamps, burial sites, birthing places and scar trees.



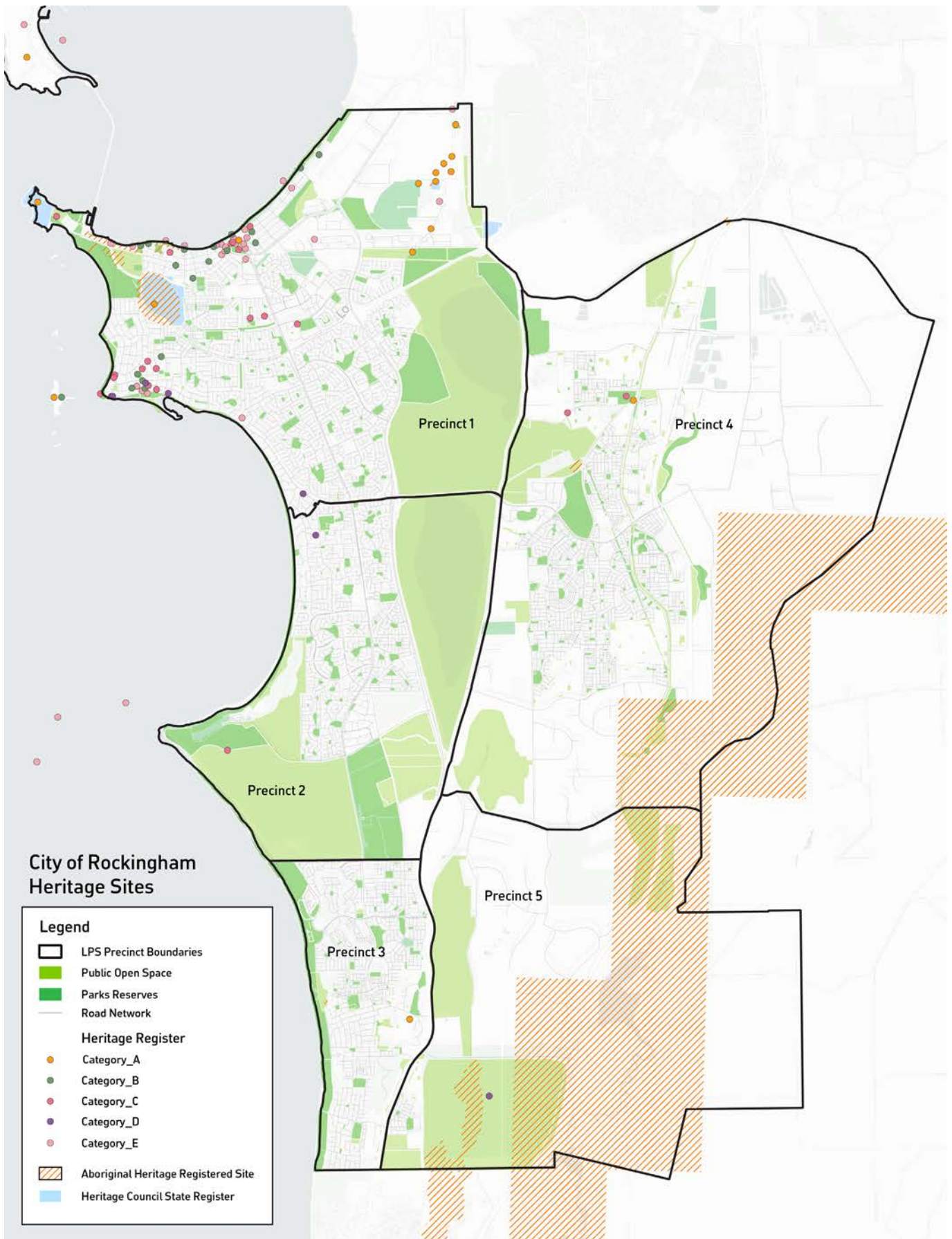


Figure 18: City of Rockingham Heritage



## OTHER HERITAGE

The European history of the region can be traced back as early as the 17th century when a Dutch explorer identified the sighting in the vicinity of Warnbro Sound. Today, the City has experienced periods of cultural significance such as the Colonial, the Gold Boom, the Inter and Post War Periods.

The majority of the heritage listings are located in Precinct 1, with clusters found in the RSC, Shoalwater, and Peron. There are a total of 95 places for local heritage significance and 6 State Registered Heritage Places.

### **MUNICIPAL HERITAGE INVENTORY**

The Heritage List is a list of places compiled under the City's planning Scheme and those places therefore have statutory protection under the provisions of the Scheme.

A Heritage List generally comprises individual buildings, structures or other places in the environment that have cultural heritage significance in terms of aesthetic, historic, research or social value. Places on the Heritage List require Development Approval for demolition, alterations or other development affecting the cultural heritage values that make it significant.

The City has 63 places on its Heritage List (**Figure 18**). Twenty-two of these heritage listed places are owned or managed by the City. The City has no Heritage Areas. The previously proposed East Rockingham precinct which includes the majority of the City's State Registered Heritage Places is recommended for inclusion in the City's Heritage Strategy.

### **CONSERVATION MANAGEMENT PLANS**

A Conservation Management Plan (CMP) is the principal guiding document for the conservation and management of a heritage place. While it is not a statutory document, it is referred to as part of the decision-making process in the management of change. The main objective of a CMP is to ensure that decisions are made with regard to the cultural heritage significance of a heritage place. A CMP describes the heritage significance of the place and provides clear policies for the sustainable future of the place. The City has eight CMPs available on its website for heritage places that are within the District:

- + The Old Abattoir Conservation Plan 1999 (and 2009 update);
- + Peelhurst Ruin Conservation Plan;
- + Baldivis Primary School Conservation Plan;
- + Point Peron Battery K Conservation Plan;
- + Chesterfield House Conservation Plan;
- + Ellendale (Day Cottage) Conservation Plan;
- + Hymus House Conservation Plan; and
- + Thorpe, Thomas and Bell Cottages Conservation.

The Heritage Strategy advocates for the need to prepare CMPs for all City owned heritage assets to guide and manage change in the future.

## ART AND CULTURE

The *Cultural Development and the Arts (CDATA) Strategy 2018-2022* provides the actions to deliver high quality arts, culture, heritage events, and programs to the Rockingham community. Connecting residents to arts and cultural opportunities is paramount, and is the means by which the City of Rockingham (the City) creates a culturally strong, diverse, and aware community for all.

The City is currently serviced by two major facilities with the capacity to host art and cultural events; one being the Rockingham Arts Centre that provides a multi-purpose room, gallery and a studio; the other one being the Gary Holland Community Centre (refer to **Section 4.2.4** for further details). The CDATA Strategy does identify that there are some gaps within the Rockingham community; under-utilisation of the Rockingham Arts Centre; lack of an Aboriginal Cultural Centre which minimises opportunities to integrate Aboriginal culture and celebrate its history; and the lack of suitable venues for performing arts.

The City has reviewed relevant literature, undertaken extensive community consultation and recommends implementation of the actions associated with the five (5) Key Elements. The Key Elements provide the direction and outcomes that will be delivered over the next five years:

1. Cultural development and the arts education and awareness
2. Place-making, activation, and cultural heritage
3. Events and programs
4. Public art and art collection
5. Rockingham Arts Centre

**CULTURE, ARTS AND HERITAGE SUMMARY**

- + There are 10 registered Aboriginal Sites under the City's Municipal Heritage Inventory, and 37 'Other Heritage Places' not formally registered but included in the online database. Increased integration of Aboriginal culture could be accomplished by incorporating Aboriginal art within major projects, as well as by including Aboriginal culture in City events. Significant Aboriginal sites will be identified, and heritage trails established at those locations. The inclusion of Aboriginal artworks within City spaces will serve to highlight Aboriginal narratives and heritage. Increased engagement with the Aboriginal Advisory Group will create firm protocols across all areas of CDATA business. The City's Reconciliation Action Plan (RAP) will make recommendations regarding the provision of an Aboriginal Cultural Centre, which may involve the allocation of CDATA resources.
- + Desire for East Rockingham to be identified as a heritage area to provide greater statutory protection, that ensures works affecting the place would have minimal impact on the cultural heritage values of the place or heritage area.
- + CMPs will be required to be reviewed and prepared for all City owned heritage assets to help effectively guide and manage change.
- + The Rockingham Beach Foreshore Revitalisation offers opportunity for raising awareness and interpreting local heritage through urban design, the installation of art pieces and plaques relating to both European and Aboriginal heritage, reinstatement of artefacts in more visible locations, and improved signage.
- + The City has a significant collection of visual art, small scale sculpture and public art. The collection numbers in excess of 280 pieces, with a value of more than \$2.5 million. A policy is needed to include a percentage provision for public art of 1% of the total project cost of civic infrastructure projects above \$1 million. This will enable the community to interact with art as part of their daily experience, with associated benefits of place activation, civic pride, and beautification.
- + Cultural facilities such as the Rockingham Arts Centre has been reported as under-utilised. Community consultation revealed concerns about the size, layout and functionality of the Centre. A strong desire to extend useable spaces and increase functionality was recurring and consistent.

### 4.2.3. RURAL LAND USE

In 1996, the City adopted a Rural Land Strategy to provide the basis for land use planning in the rural areas of the municipality and in particular, to guide the assessment of proposals to rezone, subdivide and develop rural land in the City. In 2003, a revised Rural Land Strategy (RLS) was subsequently adopted as a Statement of Planning Policy to inform the preparation of TPS2.

The RLS is a Local Planning Policy prepared and adopted in accordance with clause 4 of the Deemed Provisions of TPS2. It applies to land zoned Rural, Special Rural and Special Residential in TPS2 and the Council will also have regard to the RLS when considering rural land uses proposed in other zones.

In 2018, the release of PP3.5 and the South Metropolitan Peel Sub-Regional Framework necessitated a need for the City to undertake a comprehensive review of its RLS. The land use designations of particular relevance to the preparation of the RLS are summarised below:

- + Designating land for 'Urban Expansion' within parts of southern Baldivis (south of Sixty Eight Road) and Karnup;
- + Designating land for 'Urban Investigation' within northern Baldivis (Kerosene Lane) and Golden Bay (south of Dampier Drive).
- + Designating land for 'Planning Investigation' within north-eastern Baldivis (Mundijong Road).
- + Limiting 'Rural Residential' to the following areas:
  - The ridge along the eastern side of Mandurah Road;
  - The Doghill Road area;
  - Areas on the eastern side of Eighty Road between Sixty Eight and Stakehill Roads that are predominantly zoned Special Rural;
  - The north-east corner of the 'Amarillo' Special Rural zone;
  - The Singleton dunes Special Rural zone; and
  - Three Special Rural zoned lots in Golden Bay.
- + The remaining Rural zoned land within the City is designated as 'Rural'.

These areas are identified on **Figure 19**.

The Framework states that the proposed consolidated urban form largely avoids and minimises impacts on significant environmental values. Even so, some land classified as Urban Expansion / Investigation or Planning Investigation may contain significant environmental attributes and these classifications should not be construed as support for the development of such land.

More detailed planning for these sites will need to prioritise avoidance and/or protection of these attributes and as such, minor refinement of expansion or investigation area boundaries may be required to accommodate more detailed future planning. Given the highly fragmented ownership structure in these rural areas, coordination is very difficult. As such, the RLS and this LPS strongly advocate that these studies would need to be led by individual proponents.

Further details on the potential impacts of these urban expansion / investigation areas are provided in **Section 4.4**.

## RURAL LAND USE CATEGORIES

The Rural Planning Strategy is to ensure that the City's rural planning aligns with the State's strategic direction. As such, the planning units identified in the previous RLS have been replaced by the following four Policy Areas that generally reflect the land use designations shown on the PP3.5 Spatial Plan:

- + Policy area 1 – Rural Residential areas.
- + Policy area 2 – Rural Areas.
- + Policy area 3 – Urban Expansion Areas.
- + Policy area 4 – Planning / Urban Investigation Areas.

### **RURAL RESIDENTIAL AREAS**

Areas reviewed and classified for 'rural residential' development in the PP3.5 Framework include existing rural residential zones (i.e. Special Rural), areas identified within endorsed or draft strategies or other planning documents, and some rounding-off of existing areas. The general location of these areas can be described as follows:

- + The 'rural wedge' comprising a linear series of ridgelines, wetlands and remnant vegetation that run generally north-south along the eastern side of Mandurah Road between Kerosene Lane and Anstey Swamp
- + The Doghill area located on the eastern side of St Albans Road between Wilford Road to the north and Doghill Road to the east and south
- + Land located in Baldivis on the eastern side of Eighty Road between Sixty Eight and Stakehill Roads (predominantly zoned Special Rural).
- + The north-east corner of the 'Amarillo' Special Rural zone in the vicinity of Amarillo Drive, Mallee Drive and Hilltop Rise in Karnup

### **RURAL AREAS**

Areas classified 'rural' in the PP3.5 Framework comprise lots that are predominantly larger than four hectares and considered to have a 'rural smallholdings' character. The general location of these areas can be described as follows:

- + The Baldivis (East) area located on the eastern side of the Kwinana Freeway, generally between Mundijong Road to the north and Karnup Road to the south, extending eastward to the municipal boundary.
- + The Millar Road area located on the western side of Baldivis Road, generally between Millar Road to the north and Kulija Road to the south, with a section extending south to Kerosene Lane
- + The Larkhill area located on the western side of Mandurah Road, between Stakehill Road to the north and the Secret Harbour residential area to the south, extending westward to Forty Road.
- + Keralup (east) is also classified as 'rural', however, the Framework states that further investigation will be required to consider alternative future land uses. Such uses could include a combination of activities providing opportunities for recreation, environmental management, economic activity and/or agribusiness.



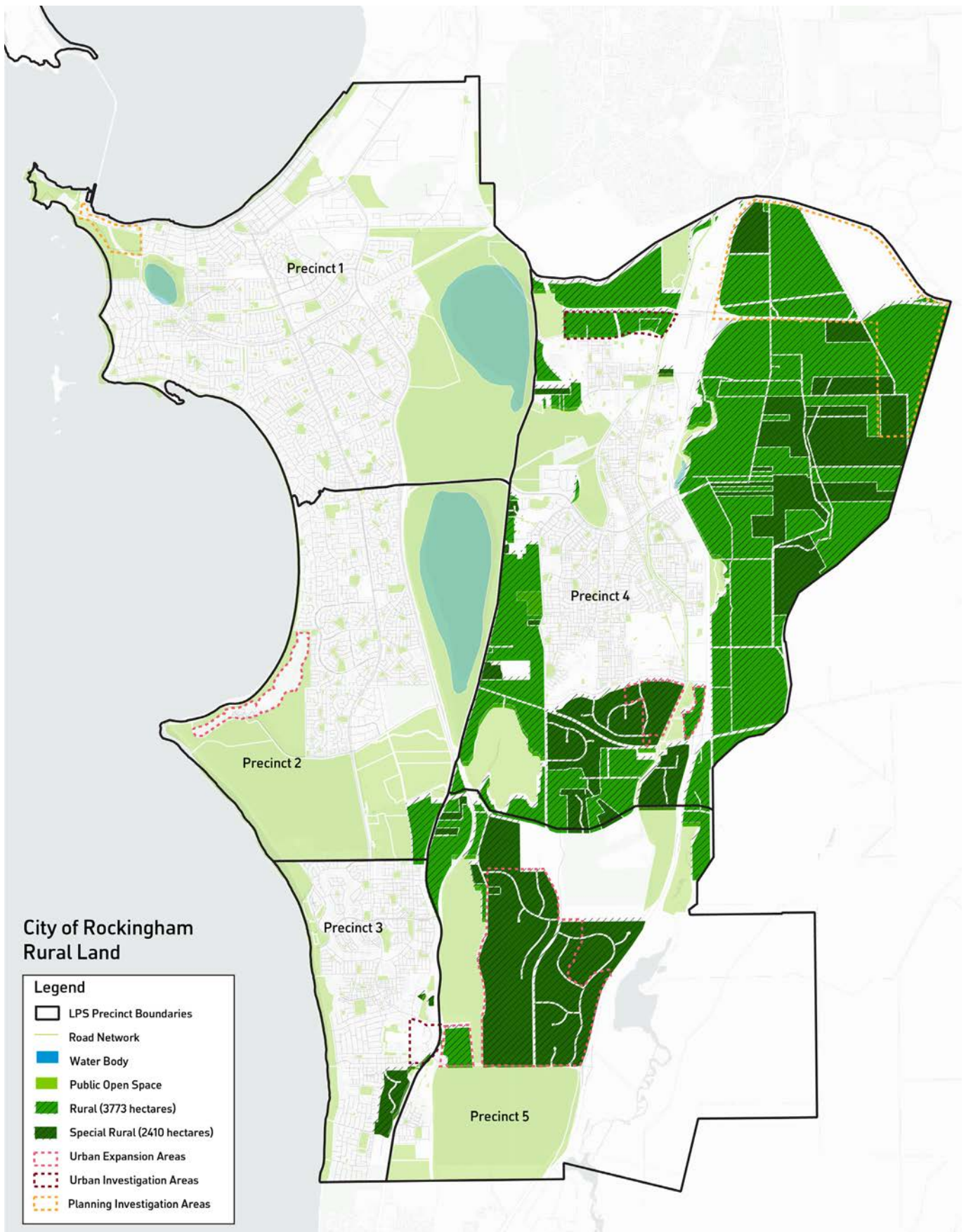


Figure 19: Rural Land Use Areas

### **URBAN EXPANSION AREAS**

The majority of land classified for Urban Expansion in the Framework is zoned either Rural or Special Rural in TPS No.2 and while State Planning Policy 2.5 – Rural Planning provides some guidance regarding the management of rural pursuits which are proposed to transition to Urban, there is no specific guidance on the management of other ‘rural’ land uses (i.e. Special Rural) which are proposed to transition to urban. Furthermore, guidance is required with respect to the treatment of the rural/urban interface where (as a consequence of urban transition) urban land uses will directly adjoin land which is to remain rural. In the interests of orderly and proper planning, the RLS will need to consider these matters

PP3.5 also identifies that land classified as Urban Expansion should not be construed as support for the further development of these areas at a higher density. The proposed consolidated urban form largely avoids and minimises impacts on significant environmental values. Even so, some land classified as Urban/Urban Deferred, Urban Expansion/Investigation or Planning Investigation may contain significant environmental attributes and these classifications should not be construed as support for the development of such land. More detailed planning for these sites will need to prioritise avoidance and/or protection of these attributes.

### **PLANNING / URBAN INVESTIGATION AREAS**

Limited areas of land have been classified for further planning investigation in the Framework as part of the strategic reconsideration of land use in the sub-region. These investigations will determine whether any change from the current zoning is possible and/or appropriate. The Framework states that the Planning Investigation classification should not be construed as WAPC support for a change from the existing land use/zoning, as this will depend upon the outcome of further investigations.

## **RURAL LAND USE CHALLENGES**

In light of the above proposed changes, the RLS has identified a series of key issues which require consideration prior to the contemplation of any zoning changes in the new local planning scheme. The challenges that have land use planning implications for the LPS are summarised below.

- + **Urban Transition Management** – To avoid or minimise potential land use conflicts, consideration needs to be given to the management of rural land that is proposed to transition to Urban and the treatment of the associated rural/urban interface.
- + **Land Use Control in Planning / Urban Investigation and Urban Expansions Areas** – As part of the strategic reconsideration of land use in the sub-region, the Framework has classified a large area of land in north-eastern Baldivis (north and south of Mundijong Road) for ‘Planning Investigation’.
- + **Identify and Protect Priority Agricultural Land** – State Planning Policy 2.5 Rural Planning Guidelines Version 3 (December 2016) gives context to the importance of planning for priority agricultural land. The guidelines state that priority agricultural land is land that is of State, regional or local significance for agricultural and/or food production purposes due to its comparative advantage in terms of soils, climate, water (rain or irrigation) and access to services.
- + **Identify and Protect Priority Ecological Values** – Urban expansion on the Swan Coastal Plain and associated clearing of native vegetation has led to significant fragmentation and habitat loss for native flora and fauna. Maintaining continuity in the form of habitat corridors or ecological linkages (the connection of these fragmented sites to one another) is particularly important so that species and genetic diversity are maintained over a wider area in the event that smaller areas are degraded or destroyed.

Refer to **Section 4.4.1** for further details.

- + **Identify and Protect Priority Landscape Values** – The State Planning Framework seeks to ensure that significant landscapes are identified and protected and that development proposals incorporate measures to retain or enhance landscape elements and vegetation. In providing a framework for future land use planning, it is necessary to identify significant landscapes, consider the capacity of these landscapes to absorb development and formulate policy measures to mitigate potential adverse impacts of development.
- + **Bushfire Risk Mitigation** – The intent of SPP 3.7 and the associated Guidelines is to ensure that bushfire risk is considered in the planning process, including local planning strategies. One of the challenges being observed in these areas is that the objectives of the City's PP3.1.1 – Rural Land Strategy are not being achieved due to bushfire requirements. On average, since the release of the latest bushfire guidelines in February 2017, 70-80% of vegetation on site is being cleared when the bushfire guidelines are applied to the minimum lot sizes stipulated in PP3.1.1.

**Section 4.4.2** provides further information for how this has been considered.

## RURAL LAND USE SUMMARY

- + Future planning in these areas will be required to consider the treatment of the rural/urban interface where (as a consequence of urban transition) urban land uses will directly adjoin land which is to remain rural. In the interests of orderly and proper planning, the LPS will need to consider these matters. More detailed planning for these sites will need to prioritise avoidance and/or protection of these attributes and as such, minor refinement of expansion or investigation area boundaries may be required to accommodate more detailed future planning. This will need to occur prior to any scheme zoning changes being contemplated.
- + Given the highly fragmented ownership structure in the City's rural areas, coordination is very difficult. As such, the RLS and this LPS strongly advocate that any future detailed planning studies would need to be led by individual proponents prior to any scheme zoning changes being contemplated.
- + The City utilised this best-practice land evaluation methodology to assess the suitability of 'Rural' zoned land for annual and perennial horticulture. The assessment area was confined to land on the eastern side of the Kwinana Freeway as the majority of the remaining rural land west of the Freeway is identified for Urban Expansion or Rural Residential in the PP3.5 Framework. The assessment concluded that the remaining 'Rural' zoned land in the municipality is not considered suitable for identification and protection as 'priority agricultural land' due mainly to the low land capability.
- + To mitigate the potential impacts of development on significant ecological values by ensuring priority Local Natural Areas are protected, integrated or enhanced through future land use planning.
- + To protect and enhance areas of significant landscape and visual amenity, particularly where these overlap with priority Local Natural Areas aimed at achieving improved environmental outcomes.
- + The subdivision of Rural land without the corresponding rezoning to Special Rural does not ensure sufficient planning provisions to protect significant environmental values.
- + To protect environmental and landscape values and provide for the desired rural character originally intended for the City's rural residential areas, the extent of on-site vegetation clearing should be restricted
- + The extent of vegetation clearing to satisfy bushfire safety requirements be minimised through strategic siting of future development in designated bushfire prone areas.

## 4.2.4. PUBLIC OPEN SPACE AND COMMUNITY INFRASTRUCTURE

Community and social infrastructure is essential and required to ensure that the City can meet the health, education, sport and recreation, and other social needs of its growing and ageing population.

Community infrastructure can be defined as:

“Public buildings and spaces to accommodate activities that help communities function effectively, contributing to their wellbeing and meeting their social needs.”

Community infrastructure has a much broader role than simply providing locations for service delivery and destinations for social activities and programs. Community infrastructure contributes significantly to the built environment, by demonstrating and influencing the specific identities and character of the community that lives within the area.

Contemporary urban planning principles provide an increased emphasis on the provision of walkable neighbourhoods that cluster compatible mixed uses and maximise access to employment, retail, and community facilities. This urban planning perspective reaffirms that neighbourhoods should be planned around community infrastructure hubs which play a vitally important role in contributing towards sense of place and place activation.

With regard to provision of community infrastructure, health and education facilities are typically delivered by the State government (or private entities) and are primarily population driven, the role of the LPS will be to ensure that current facilities are fit-for purpose and whether new facilities are required.

With regard to other social infrastructure, the City manages this through its Community Infrastructure Plan (CIP) which may include facilities such as:

- + Sports and leisure facilities, including clubrooms and change rooms, indoor and outdoor playing surfaces, and aquatic and fitness facilities;
- + Multipurpose community centres and halls;
- + Centres designed for targeted groups such as children, young people or seniors;
- + Libraries;
- + Major parks, play spaces and youth spaces;
- + Community arts centres, museums and galleries; and
- + Surf club facilities.

The CIP is a critical link in the City's Strategic Planning Framework, guiding the allocation of City resources toward the achievement of key economic, social, environmental and community aspirations.



## DELIVERING COMMUNITY INFRASTRUCTURE

Guided by the City's rapidly growing population, the demand for community infrastructure is always increasing. One of the primary challenges for the City is how to prioritise delivery of this infrastructure, which is why the CIP is so critical.

Progressive residential development over many decades, along with the large size of the City, has created a broad range of land uses. There are strong linear divisions, emphasised by large natural physical barriers which are present across the municipality. These barriers include 430 hectares of natural salt lakes which divide Baldivis and Karnup from the Rockingham Strategic Centre and more established western suburbs, along with the Port Kennedy Scientific Park that separates the City's southern suburbs of Secret Harbour, Golden Bay and Singleton from the established western suburbs north of the Scientific Park.

**Figure 21** provides a clear visual reference of these geographical barriers identified above which, from a community infrastructure planning perspective, effectively divide the City into two linear zones.

The presence of these physical barriers significantly impacts access to community infrastructure. The established areas of Rockingham are supported by infrastructure which is easy to access by all modes of transport. In contrast, access to community infrastructure in the continuing developing suburbs of Baldivis, Secret Harbour, Singleton and Golden Bay is impacted by the presence of physical barriers in the form of salt lakes and the Scientific Park, and this geographic separation requires communities to access facilities in neighbouring areas by car or public transport. The concept of City-wide equity and the geographic spread of facilities is an important consideration for community infrastructure planning. As a result, a hierarchy classification has been introduced to ensure the community is provided with equitable access to community infrastructure, summarised as follows:

- + **Regional** – Services the entire Rockingham municipality, as well as bordering Cities and Shires, the catchment area may extend beyond a 25 km radius.
- + **District** – Services more than one sub district, with a population in excess of 75,000 people, and/or the entire Rockingham area with a population in excess of 134,000 people. Catchment area defined by municipal boundaries, with a radius of over 10 km.
- + **Sub-District** – Services a distinct cluster of neighbourhoods bordered by urban or natural barriers, with a population between 25,000 and 75,000 people. Catchment area radius between 3 -10 km.
- + **Neighbourhood** – Services a cluster of localities, with a population between 10-15,000 people (in some instances within the City this number ranges up to 25,000). Catchment radius of 1-3 km, with the area generally defined by urban barriers such as major roads.
- + **Local** – Services a local area of up to 10,000 people. Catchment area generally defined by distinct residential estates of varying sizes.

The facilities provided for within this hierarchy and the relative service population ratios are provided on **Figure 20**, with regional, district, and sub-district facilities shown spatially on **Figure 21**.

Facility Type	Ratio
<b>Regional (catchment &gt; 150,000 people)</b>	
Active public open space (20+ hectares)	1:125,000 - 250,000
Aquatic centre (includes indoor and outdoor aquatic)	1:150,000 - 200,000
Performing arts centre	1:200,000 - 300,000
<b>District (catchment 75,000 – 150,000 people)</b>	
Active public open space (11 - 20 hectares)	1:75,000 - 125,000
Aquatic centre (indoor)	1:75,000 - 150,000
Community and civic centre	1:75,000 - 125,000
Community arts centre	1:75,000 - 100,000
Indoor recreation centre (four to eight courts)	1:75,000 - 100,000
Library	1:125,000 - 150,000
Multipurpose hard courts (12 to 18 courts)	1: 75,000 - 125,000
Outdoor recreation space (including wheeled sports)	1:75,000 - 150,000
Performing Arts Centre	1:75,000 - 200,000
Surf lifesaving club (with outpost capacity)	1:75,000 - 150,000
Older persons centre	1:125,000-150,000
Youth centre	1:75,000 - 100,000
BMX facility	1:130,000+
<b>Sub District (catchment 25,000 – 75,000 people)</b>	
Active public open space (six to ten hectares)	1:25,000 - 75,000
Indoor recreation centre (two to four courts)	1:25,000 - 75,000
Lawn bowling club (two to four greens)	1:25,000 - 75,000
Library	1:25,000 - 75,000
Multipurpose community centre	1:25,000 - 75,000
Multipurpose hard courts (six to 12)	1:25,000 - 75,000
Outdoor recreation space (including wheeled sports)	1:25,000 - 75,000
<b>Neighbourhood (catchment 10,000 – 25,000 people)</b>	
Active public open space (one to five hectares)	1:15,000 - 25,000
Multipurpose community centre	1:15,000 - 25,000
Multipurpose hard courts (two to four courts)	1:15,000 - 25,000
Outdoor recreation space (may include wheeled sports)	1:15,000 - 25,000
<b>Local (catchment &lt;10,000 people)</b>	
Active public open space (approximately one hectare)	1:5,000 - 15,000
Multipurpose hard courts (one court)	1:7,500 - 15,000
Youth recreation space (excluding wheeled sports)	1:7,500 - 15,000

Figure 20: Community Infrastructure Hierarchy

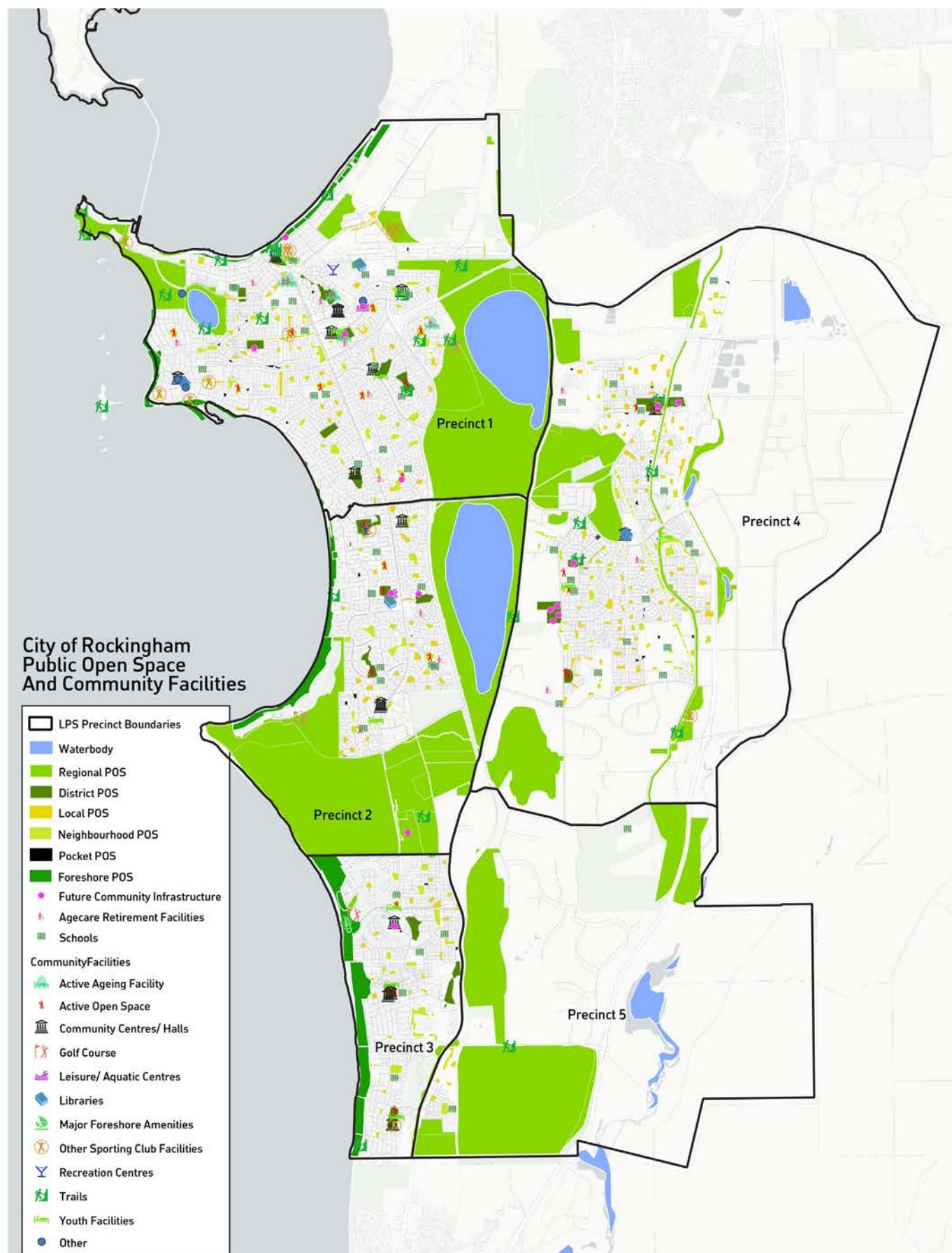


Figure 21: POS and Community Infrastructure

## PUBLIC OPEN SPACE

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

How POS is distributed across the City is illustrated on **Figure 21**. It is generally well distributed with a balance of spaces across the POS hierarchy. This is evidenced further by the below extract from the pre-lodgement engagement report (refer **Appendix 1**) which found that the majority of survey respondents were satisfied with their ability to access high-quality public spaces.

Despite the above, the City has undertaken an extensive review of the planning and management of the City's POS assets through its Public Open Space Strategy. Identifying the following challenges:

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

The following strategic objectives have been established to guide the planning, development and management of POS throughout the City:

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

To address these challenges and the strategic objectives, the City examined its current practices for the design, planning and management of POS with respect to intent of the planning framework. Through this process, a series of actions were identified. Those related to land use planning related primarily to a review and update of the City's existing Planning Policy 3.4.1 – Public Open Space.

### **Finding – There are High Quality Public Spaces in Close Proximity:**

The vast majority of respondents indicated there were high quality public spaces in close proximity of their local area, with only Hillman providing a negative response. This reflects the vast quantity of land within the City of Rockingham that is currently natural land or public open space, and the high value placed on these spaces by the community.

Local areas in close proximity to the coast generally indicated a slightly more positive response than other areas, which may reflect the strong connection respondents have to coastal areas, and the perceived quality of these spaces.

For this LPS, the primary action is therefore to ensure that the recommended updates to Planning Policy 3.4.1 – Public Open Space are implemented in accordance with the City's review.



Table 19: POS Strategy Objectives

ELEMENT	KEY OBJECTIVES
<b>1. Classification of POS</b> Defining the hierarchy and network of POS reserves to guide the intended function, distribution, infrastructure and design requirements for different types of reserves.	1.1 Adopt a classification system to be consistently applied to planning for the development and management of POS.
<b>2. Size and Distribution</b> Establishing guidance for the size and distribution of reserves to meet varying recreational requirements.	2.1 Future planning must ensure adequate POS is provided to accommodate organised sport. 2.2 Consider POS requirements in established urban areas. 2.3 Ensure new development provides for an appropriate range of POS types to accommodate future recreation.
<b>3. Function</b> Establishing the purpose of POS reserves to meet the recreational needs of the community.	3.1 Define the preferred function of POS 3.2 Ensure competing land uses do not adversely impact on the recreational function of POS. 3.3 Future planning must effectively implement Water Sensitive Urban Design (WSUD) principles and best management practices.
<b>4. Environment</b> The integration of natural landform and features into recreation areas and planning to adapt to potential changes to the environment.	4.1 Future planning must consider measures to adapt to a drying climate. 4.2 Improve the City's tree canopy cover within POS. 4.3 Utilise the City's 'natural capital' for recreation purposes. 4.4 Integrate significant environmental attributes into POS in new Structure Plan areas. 4.4 Plan for future coastal hazards that may impact the recreational value of coastal POS reserves.
<b>5. Design</b> The components of a POS reserve that must be considered to ensure POS is developed to meet its intended function.	5.1 Bushfire planning and management requirements must be considered in design and delivery of POS. 5.2 Establish guidance for an appropriate level of improvement and infrastructure in POS Reserves. 5.3 Design POS to provide for the recreational requirements of a variety of users and experiences. 5.4 POS should provide for a safe and functional environment. 5.5 Strategic consideration of the City's open space reserves to ensure that they have the capacity to accommodate events and tourism opportunities.
<b>6. Management</b> Ensuring POS is designed with consideration of the City's ability to manage POS.	5.6 To efficiently and effectively manage POS for the benefit of the community.



## **POS CLASSIFICATION**

One of the primary outcomes of the POS Strategy was to develop a POS Classification system, which sets out the size and catchment (both population and distance) for each type. Further details are provided in **Table 20**.

**Table 20: Rockingham POS Classification**

ROCKINGHAM CLASSIFICATION TABLE				
CATCHMENT HIERARCHY	SIZE	ACCESSIBILITY	CATCHMENT (POPULATION)	FUNCTION
<b>Pocket</b>	<0.4ha	300m	Up to 1500	Passive recreation
<b>Local</b>	0.4-1ha	400m	Up to 4,000	Passive recreation
<b>Neighbourhood</b>	1-5ha	800m	4,000 - 10,000	Active Sport and Passive Recreation
<b>District</b>	5-20ha	2km	10,000 -50,000	Active Sport and Passive Recreation
<b>Regional</b>	20ha+	N/A	50,000+	Active Sport and Passive Recreation

*Note:*

- + Accessibility refers to the desired distribution of POS reserves through a community, ensuring convenient access to POS for the community.
- + Catchments identify the number of dwellings (population) served by each specific POS reserve type. For example, a district sporting complex may accommodate a number of sporting clubs serving a population of 25,000-75,000 people.
- + Mindful that the function of POS reserves may vary, accessibility to POS does not suggest that all needs will be met within those distances, rather each dwelling is located within reasonable distance of a variety of types of POS.

## **CURRENT POS PROVISION**

Various standards for the provision of POS through subdivision have been applied over time. The current version of Liveable Neighbourhoods has resulted in POS generally being provided between 8% and 10% of subdivisible land. For much of the City's development, Liveable Neighbourhoods allowed for a minimum POS provision of 8% where the POS was suitably developed, which was commonly undertaken by developers.

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

Table 21: Provision of POS within the City

LOCALITY	AREA (HA)	PROPORTION OF SUBURBS URBAN AREA
Baldivis	217	12%
Cooloongup	37	12%
Hillman	11	6%
Golden Bay	42	15%
Karnup	10	19%
Port Kennedy	52	9%
Rockingham	54	13%
Safety Bay	39	10%
Shoalwater	11	5%
Singleton	16	8%
Secret Harbour	41	8%
Waikiki	41	8%
Warnbro	45	9%

## SPORT AND RECREATION FACILITIES

With regard to sport and recreation facilities, the City generally caters for the following types of facilities in the CIP. The overall size, function, and location of the facilities provided by the City are delivered relative to a facility's position in the hierarchy with set standards in place to ensure equity.

A summary of their purpose and any future gaps in provision that will have implications for the LPS is provided below.

### **ACTIVE OPEN SPACE**

Active open spaces are public open spaces with the main purpose of providing places for formal sporting activities. The spaces are designed to accommodate playing zones, buffers and infrastructure requirements for either a specific or general sporting activity and will differ depending on the hierarchy.

The City is currently serviced by: 1 Regional Facility (Lark Hill Sporting Complex); 7 Sub-District Facilities; 9 Neighbourhood Facilities (two of which are subject to shared use agreements); and 11 Local Facilities (nine of which are subject to shared use agreements).

The CIP identifies that residents in the western half of the City are generally well-served by active open spaces. While a number of facilities require upgrades, the overall provision satisfies forecast community need.

In the eastern suburbs of the City, primarily Baldivis and Karnup, the geographical barriers which influence the ability of Baldivis residents to access sport spaces in other suburbs, the lack of availability

of large areas of open space which would be suitable for active sports, forecast population growth, and local participation data for the area, all suggest that greater provision of facilities is required. As such the following is planned:

1. Delivery of a District Level facility at the Baldivis Sports Complex which opened in 2023;
2. One sub-district active reserve / sport space (proposed as 'East Baldivis Recreation Reserve in the CIP); and
3. Four neighbourhood active reserves / sport spaces.

### **AQUATIC AND LEISURE CENTRE**

An aquatic or leisure centre provides the community with the opportunity to participate in structured and unstructured water based activities in a controlled and safe environment. Often referred to as a leisure centre, aquatic activities may include swim school, squad swimming, aqua aerobics, hydrotherapy, water sports and informal swimming.

The Rockingham municipality is currently serviced by two district level aquatic facilities. Given the forecast population growth of the municipality, it is not deemed necessary for a new aquatic centre to be provided within the life of this plan. It is considered that the two centres will sufficiently cater for any increase in demand during this period.

An additional district level aquatic facility may be required to service the future populations of the Baldivis and Karnup sub-districts. The potential for provision of an aquatic facility to service these areas should be considered in future forward planning.

### **INDOOR RECREATION CENTRE**

An indoor recreation centre is a multipurpose facility capable of accommodating a wide range of sport, recreation, fitness and health and wellbeing activities. The specific design, functionality and infrastructure components of recreation centres must reflect the demands of the population catchment and surrounding urban environment. This may comprise indoor courts, outdoor courts, and group fitness rooms, activity spaces, meeting rooms, café and crèche.

In addition to the provision of three indoor recreation centres (Aqua Jetty, Mike Barnett Sporting Complex, Warnbro Recreation Centre), the City also has smaller single court facilities in the suburbs of Baldivis and Golden Bay. These facilities have limited capacity to hold training and competition sessions for sporting clubs and have been accounted for in the community centre needs assessment.

Given the projected population growth within the Baldivis and Karnup sub-districts, along with the current geographical barriers to accessing an indoor recreation centre for people living in the eastern corridor, an additional recreation centre is best located within this area. Subsequently, the Baldivis Indoor Sports Complex has been delivered at the Baldivis Sports Complex, meaning there are no current pressures or need for any additional facilities.

### **OUTDOOR HARD COURTS**

Outdoor hard courts provide for formal and informal recreation opportunities such as tennis, netball and basketball.

The City is currently serviced by: 1 District Facility (12-18 courts); 4 Sub-District Facilities (6-12 courts); 1

Neighbourhood Facility (2-4 courts); and 2 Local Facilities (1-2 courts).

The CIP identifies that the majority of the City is adequately serviced, though a number of existing assets have been recently upgraded or are planned to be upgraded. The primary gap exists in the Baldivis / Karnup area, where it has been identified that 8 multipurpose courts are required (these will be provided at the Baldivis Sports Complex) with potential to expand as the population grows.

As the Karnup area will not realise significant urban development for quite some time, it is anticipated that the community need will be met by facilities either within the Baldivis area or by the courts located in Singleton. Hard court provision specific to Karnup will be investigated as part of future plans.

## **COMMUNITY AND SOCIAL INFRASTRUCTURE**

### **COMMUNITY CENTRES**

A community centre provides an integrated mix of spaces to accommodate a wide range of services and activities, forming the basis of a community hub for the surrounding area. Generally, community centres are located within a city or district centre.

The City is currently serviced by one district level community centre, the Gary Holland Community Centre. There is an identified lack of available space for not-for-profit organisations to deliver community support services, not only in the Rockingham City Centre but throughout the municipality. An additional district facility has not been included in the CIP, as there are opportunities to accommodate the forecast needs within the Baldivis South Community Centre and Youth Centre which have both been completed.

In addition to the above, the City is serviced by the following sub-district facilities:

- + Mary Davies Library and Community Centre
- + Secret Harbour Community Centre
- + Baldivis Recreation Centre
- + Baldivis South Community Centre
- + Coastal Community Centre
- + Hillman Hall
- + Port Kennedy Community Centre
- + McLarty Hall
- + Singleton Sports and Community Centre
- + Warnbro Community and Family Centre
- + Waikiki Community Centre
- + Westerly Family Centre

Although a need for additional facilities has not been identified in the CIP, it does determine that the replacement and upgrade of existing facilities as they age will need to be considered as part of future asset management plans.

### **YOUTH FACILITIES**

There is a total of 11 youth facilities distributed across the city; all 3 facilities at district scale are in the suburb of Rockingham; 2 sub-district facilities are located in Port Kennedy and Golden Bay; and the rest

of the facilities are located in the remaining precincts of the city except for Precinct 5. Some youth facilities are built into the community centres.

### **LIBRARIES**

A library provides a wide range of amenities and services to meet the lifelong learning aspirations of a community. The design, while guided by industry best practice and guidelines, is also dependent on the hierarchy and facility catchment. Spaces within a library may include children's activity area, maker-space, information technology area, meeting rooms, as well as floor space for book displays and loans.

Libraries are generally provided on a Sub-District or District level, with the City's guidelines for provision not supporting library provision at a neighbourhood level:

- + Rockingham (**Precinct 1**) is currently serviced by one district library, Rockingham Library, located at Murdoch University on Dixon Road. This level of provision is deemed appropriate for the foreseeable future.
- + **Precinct 2** is currently serviced by Safety Bay Library. The current facility can effectively cater for the increase in population forecast for this area, therefore additional facility provision is not required at this time.
- + **Precinct 3** is currently serviced by Warnbro Community Library. This service is a partnership between the Department of Education and the City, and operates from Warnbro Community High School. The current facility can effectively cater for the current and forecast population, therefore additional facility provision in this area is not required at this time.
- + The Baldivis area (**Precinct 4**) is currently serviced by the Mary Davies Library and Community Centre, which opened in 2014. Current facility provision will effectively cater for increased demand for lifelong learning opportunities during this time, therefore additional facilities are not required during the life of this plan.
- + Karnup (**Precinct 5**) is not directly serviced by a library; however the small existing population in this area is effectively serviced by the Mary Davies Library and Community Centre. It is expected that this provision will be sufficient to meet the need of the forecast population growth, however as development in the area continues, the need for additional community facilities will be re-assessed in future versions of the CIP.

### **ARTS AND CULTURE**

An arts centre supports the development of local arts and artists, and may provide facilities for performing arts, visual arts and art development programs.

The community is served by two commercial cinema complexes, a community theatre company, an exhibition gallery at the Rockingham Arts Centre and one museum. A number of local bars and taverns provide performance opportunities for local musicians.

Challenger TAFE and Murdoch University offered arts units for study at Rockingham campuses until 2015, when both institutions withdrew these faculties from their Rockingham locations. Currently, there are no formal study opportunities for community members wishing to study arts within the Rockingham region.

The 2016 census indicates 573 Rockingham residents (1.2% of employment-age respondents) were directly employed in the Arts. This represents a significant increase from the 2006 census figure of 393 residents. However, it remains lower than the State average of 1.3%.



The City currently operates two facilities with the capacity to host arts and culture events:

- 1.** The Rockingham Arts Centre (RAC) offers a 40-person capacity multi-purpose room, 83m<sup>2</sup> gallery and a 12-person capacity studio. The Centre also features a ceramics workshop and meeting room, which are currently the subject of a leasing arrangement with Friends of Rockingham Arts Centre, h is a membership organisation based at RAC. It operates the Centre's ceramics studio as well as the Rockingham Writers Centre, based in the Centre's meeting room.
- 2.** The Gary Holland Community Centre (GHCC) offers a main hall with a capacity of 300, as well as a 120-person capacity multi-purpose room, and hanging space within the foyer and mezzanine levels.

Two art groups operate from these facilities:

- 3.** Rockingham Regional Arts Inc. (RRA) is a membership organisation based at GHCC, offering ongoing classes in a variety of painting disciplines, and includes writing, sculptural and ceramics activities.
- 4.** Despite being categorised as a strategic metropolitan centre, Rockingham is the only urban centre in Australia (of comparable population) without a performing arts centre. The Koorliny Arts Centre in the City of Kwinana serves a district function and the Mandurah Performing Arts Centre in the City of Mandurah serves a sub-regional function for the Peel area.

To determine the feasibility of providing a performing arts centre, the City commissioned the Rockingham Contemporary and Performing Arts Centre Feasibility Study (Walne, Alexander and Wish-Wilson, October 2010). This study confirms the need for a performing arts centre in Rockingham and identifies that three venues, being the current Mandurah and Kwinana facilities as well as the future Rockingham centre, are necessary to meet population growth demands, service varying population catchments and establish a network of contemporary arts venues for the broader region. This was also highlighted during pre-lodgement engagement.

Although the study confirms the need for a performing arts centre in Rockingham, given the regional service catchment for this facility further planning and development will be the responsibility of the State Government, in collaboration with the City of Rockingham.

## EDUCATION FACILITIES

This section discusses whether a gap exists in the supply of education facilities in the City. The analysis undertaken has had consideration for the provisions of the Draft Operational Policy 2.4 Planning for School Sites.

In previous demographic analysis, a low general education level (year 12 completion) has been indicated for the City. There is a strong correlation between the number of residential lots created by subdivision and the need for school sites. It is also necessary in each case to assess the needs against existing/established school sites in the broader locality, the rate and type of development, and the demand and opportunities for co-location of other community services. It is important that the planning and design of greenfield land is done in consultation with both government and non-government education providers.

The general provision of public-school sites are:

- + Primary schools – one site for ever 1,500 dwellings for government schools.
- + Secondary schools – one site for every four to five primary schools for government schools.

For **primary schools**, the selected sites should be located centrally to the neighbourhood they are intended to serve, have a minimum of three

road frontages and be located on at least one local distributor road, and be serviced by cycle and pedestrian networks.

For **secondary schools**, the selected sites should be located within their sub-regional or district catchment; they could also be located at the edge of a suburb, provided they meet the frontage requirements: they should be located on the edge of a walkable catchment of an activity centre; or an existing or planned train station; or high-frequency public transport service; and be serviced by cycle and pedestrian networks.

### **PRIMARY SCHOOLS**

There are 38 primary schools in the City, with five in construction and two being proposed. Currently, Precincts 1,3,4 and 5 are experiencing a lower ratio of dwelling numbers to primary schools. Precinct 3 (suburbs of Port Kennedy and Warnbro) have a higher ratio.

From a City-wide perspective, 36 primary schools would be required to meet Department of Education requirements. While this number is currently achieved, it is the uneven distribution of primary schools that may need to be addressed in the future.

By 2036, the gap between primary school numbers and dwelling numbers is forecast to widen with Precinct 3 and Precinct 5 expected to have the greatest shortfall, as provision of education facilities will need to match planned urban growth.

The City will require 42 primary schools for its 62,817 dwellings; however, without provision of any further facilities in Precinct 1,2 and 3, there could be challenges associated with any planned density increases in these areas.

Table 22: Primary Schools Provision

SUBURBS	CURRENT DWELLINGS	CURRENT PRIMARY SCHOOLS	RATIO (PRIMARY SCHOOLS TO DWELLING)	FUTURE TOTAL DWELLINGS 2036	FUTURE PRIMARY SCHOOLS	RATIO (PRIMARY SCHOOLS TO DWELLINGS)
<b>Precinct 1</b>	23,225	11	1:2,111	27,355	11	1:2,486
<b>Cooloongup</b>	2,904	2	1:1,452	2,951	2	1:1,475
<b>Hillman – East Rockingham</b>	1,021	1	1:1,021	1,043	1	1:1,043
<b>Rockingham – Peron</b>	8,436	4	1:2,109	11,513	4	1:2,878
<b>Safety Bay</b>	3,479	1	1:3,479	3,893	1	1:3,893
<b>Shoalwater</b>	2,341	0		2,399	0	
<b>Waikiki</b>	5,044	3	1:1,681	5,556	3	1:1,852
<b>Precinct 2</b>	9,343	7	1:1,334	10,330	7	1:1,476
<b>Port Kennedy</b>	4,930	4	1:1,232	5,817	4	1:1,454
<b>Warnbro</b>	4,413	3	1:1,471	4,513	3	1:1,504
<b>Precinct 3</b>	7,941	4	1:1,985	10,094	4	1:2,524
<b>Golden Bay</b>	2,216	1	1:2,216	3,362	1	1:3,362
<b>Secret Harbour</b>	4,200	2	1:2,100	4,689	2	1:2,345
<b>Singleton</b>	1,525	1	1:1,525	2,043	1	1:2,043
<b>Precinct 4</b>	13,657	8	1:1,707	27,469	13	1:1,905
<b>Baldivis North</b>	4,285	3	1:1,428	10,945	6	1:1,824
<b>Baldivis South</b>	9,372	5	1:1,874	13,824	7	1:1,975
<b>Precinct 5</b>	740	0:	740:0	7,532	2	1:3,766
<b>Karnup - Keralup</b>	740	0	740:0	7,532	2	1:3,766

## **SECONDARY SCHOOLS**

There are 10 secondary schools in service across the City, and one future school currently planned in East Baldivis.

By 2036, the City will have 42 primary schools, and that would require between 12 and nine secondary schools. Although satisfying the provision requirement overall, there are no secondary schools proposed except for in Precinct 4 (Baldivis). The above analysis has shown a shortage on the provision of existing and future primary schools, similar shortages may also eventuate for secondary schools.

### **TERTIARY FACILITIES**

The City of Rockingham is currently accommodating two major tertiary education facilities; South Metropolitan TAFE and Murdoch University which are both located on Dixon Road in the RSC.

The South Metropolitan TAFE is the largest campus south of Fremantle. It accommodates activities of childcare, education support, community services, nursing, information technology, business and finance training and Aboriginal cultural space. The Rockingham campus currently has a student population of 3,916 in 2021 and is one of the largest TAFE campuses.

The Murdoch Rockingham campus opened in 1998. It aims to improve educational, employment and research opportunities in the Rockingham, Kwinana and Peel districts. In 2014, the campus discontinued offering undergraduate classes due to not enough students attending the campus.

The two campuses are included in P7 Education Sub-precinct of the RSCPSP. The precinct aims to link residents to trade, research and recreational opportunities. Sufficient capacity for new development would ensure spaces between buildings supporting the establishment of playing fields for sports. It determined that future preparation of a Precinct Local Development Plan will be required to facilitate future development.

### **HEALTH FACILITIES**

Residents in the City are currently serviced by two existing regional health facilities with Rockingham Hospital located in the suburb of Cooloongup (just outside the Rockingham Strategic Centre), and Peel Health Campus located in Mandurah.

#### **ROCKINGHAM GENERAL HOSPITAL**

Rockingham General Hospital is a public hospital managed by the State Government's South Metropolitan Health Service. It is part of the Rockingham Peel Group which includes a range of other smaller facilities in the sub-region. Population growth following the opening of the Kwinana Refinery in 1955 led to the proposal to open a 64-bed hospital for the Kwinana and Rockingham areas. The 71-bed Rockingham Kwinana District Hospital was established in 1975. Set on 18-hectares and renamed in 2008 following a \$116 million redevelopment, Rockingham General Hospital now has more than 200-beds and provides the following inpatient services:

- + emergency department; acute and general medicine; geriatric medicine; palliative care; paediatrics; obstetric and neonatal services; surgical including ear, nose and throat (ENT), gastroenterology, general, gynaecology, orthopaedic, plastics and paediatric (general); intensive care; and psychiatry (adult and older adult), including electroconvulsive therapy.

#### **PEEL HEALTH CAMPUS**

Whilst not located within the City's boundary, Peel Health Campus is geographically closer to the City's southern suburbs. It is a general hospital with some 206 licensed beds, bays and treatment spaces. Peel Health Campus provides a wide range of healthcare services with a 24 hour emergency care centre and comprehensive medical, surgical, maternity and rehabilitation services. The hospital accommodates a specialist medical centre as well as pharmacy and diagnostic services. Peel Health Campus is managed by Ramsay Health Care under a service agreement with the State Government of Western Australia. Under this agreement, it offers an alternative to Rockingham General Hospital in that it treats public and private patients.

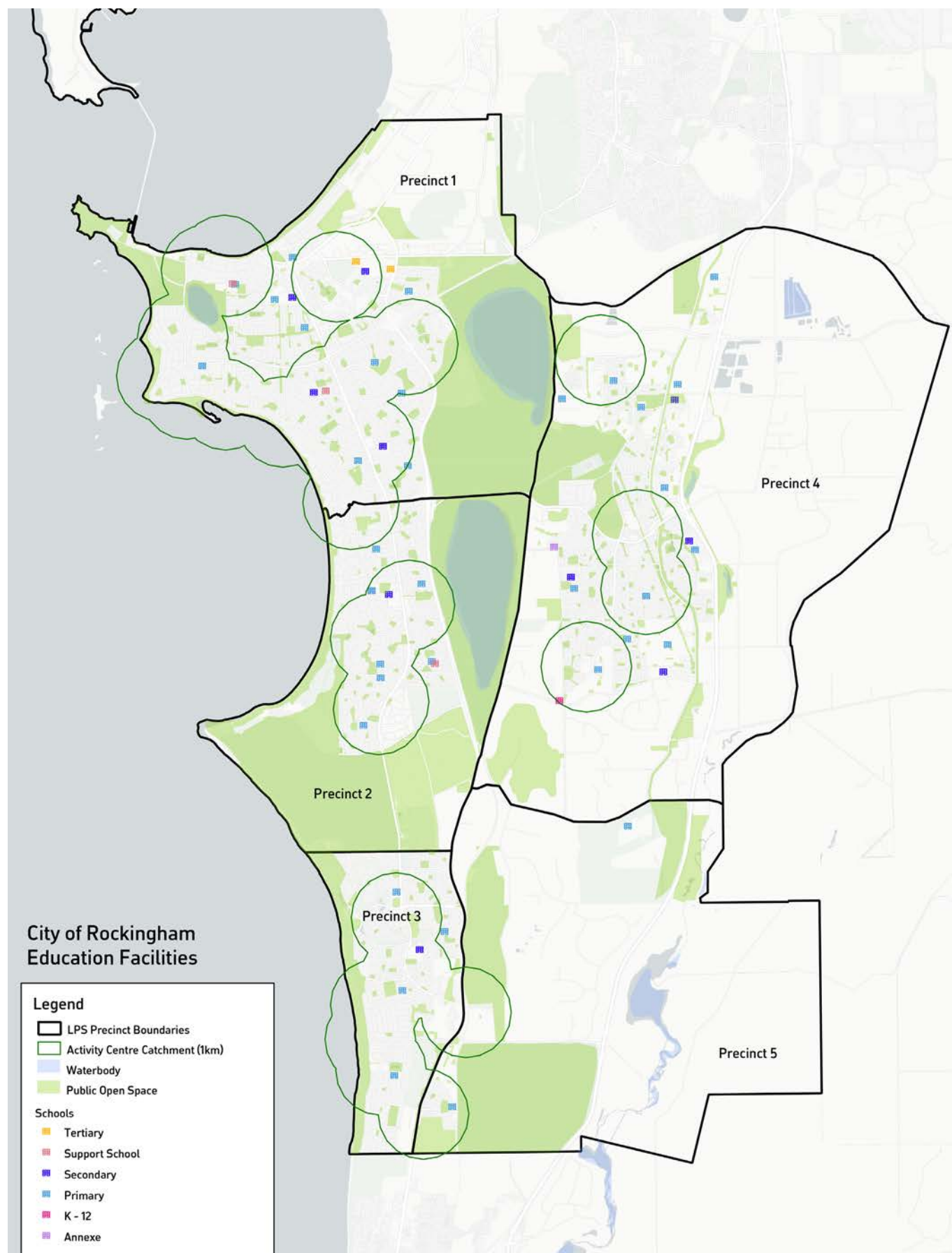


Figure 22: Education Facilities



## PUBLIC OPEN SPACE AND COMMUNITY INFRASTRUCTURE SUMMARY

- + City's POS Strategy advocates for a comprehensive review and update of City's Planning Policy 3.4.1 – Public Open Space to ensure identified actions can be readily implemented in the local planning framework.
- + Community perception from pre-lodgement engagement was that access to high-quality public open space was primarily positive demonstrating that current delivery is meeting expectations.
- + POS provision throughout the City generally ranges between 8-10% which is deemed acceptable against current planning standards. However, it is recommended that POS investigations be undertaken for the suburbs of Hillman (6%) and Shoalwater (5%), where POS provision is at its lowest. The City should investigate POS for these suburbs. Investigations should also be undertaken in areas where large increases in density are proposed.
- + Provision of future POS and Community Infrastructures will need to be delivered in accordance with the City's hierarchy classifications to ensure that the community is provided with equitable access to necessary facilities. This will apply particularly to areas such as Karnup / Baldivis where substantial urban expansion is proposed.
- + Delivery of 1 x sub-district and 4 x neighbourhood active open space areas required to service Baldivis community. Only the sub-district facility at East Baldivis Recreation Reserve is committed to.
- + Rockingham Contemporary and Performing Arts Centre Feasibility Study undertaken in 2010 identified a definite need to provide a Rockingham Arts Centre (ideally within the RSC). This study confirmed that this facility would be needed in addition to existing facilities in Kwinana and Mandurah to adequately meet the needs of the sub-region.
- + There are likely to be increased demands placed on the schooling system due to increased dwelling numbers due to both urban expansion and urban infill. The planning for school sites needs to be addressed early at the Structure Planning Phase. The strategy needs to consider the correlation of dwelling numbers and resulting demand on the schooling system and the implications that this will cause.
- + The Murdoch University Campus is one of the two tertiary education facilities in the City. Substantial capacity exists to develop around this facility, and South Metropolitan TAFE. Future planning should be guided by preparation of a Precinct Local Development Plan, as advocated for in the RPSP.

## 4.3 ECONOMY AND EMPLOYMENT

### 4.3.1. DEMAND PROFILE: DRIVERS AND TRENDS

This section summarises the key findings from the City of Rockingham *Local Commercial and Activity Centres Strategy (LCACS)* (Franklin Planning and Hames Sharley draft 2022) and *Needs Assessment* (Pracsys 2022) which have informed preparation of this LPS. In general, the City's commercial floorspace demand profile, employment quantum, and type are influenced by several key drivers:

- + Socio-economic characteristics (demographics);
- + Residential property market;
- + Retailing patterns and consumer behaviours; and
- + Business and employment profile.

The combination of these factors has shaped the centres hierarchy that exists today and will affect the direction of future commercial provision in the City. An overview of the findings for each factor, as presented in the *LCACS*, *Needs Assessment* and other sources such as the *City's Rockingham Employment Planning Study* (Syme Marmion and Co, 2020), is provided below.

#### DEMOGRAPHIC AND RESIDENTIAL PROPERTY TRENDS

With a noticeably ageing population, the City is also a popular destination for young couples (aged 20-40 years) with young children (aged 0-9 years). Correspondingly, there will be new dwellings delivered in emerging neighbourhoods that demand adjacent activity centres to be well integrated with public open space, schools and childcare centres. The presence of relatively high proportion of people with Certificate III and IV in the City suggests a large workforce employed as tradespeople and related roles. Opportunities exist for wholesale and retail businesses that support these types of positions.

The City has a lower proportion of households earning in the highest income quintile than Greater Perth and most benchmark Strategic Centres. This means the residents of the City spend more of their income on essential expenses such as groceries, housing, and bills; and spend less on comparison goods such as fashion, leisure, gifts or books. To broaden the income mix to include higher earning households would require development of a strategy to enable knowledge-based businesses and related employment opportunities (providing higher incomes) to be attracted to the City.

#### BUSINESS AND EMPLOYMENT TRENDS

The majority of business sectors in the City have grown strongly between 2018 – 2020 with the exception of the construction industry. The high population growth anticipated in the City will continuously require the development of retail, accommodation and food services. The associated housing development trajectory in the City provides opportunity for Other Retail (bulky goods) centres and tenants can capitalise this growth in construction. For transport, logistics, professional, scientific, and technical services related to developing strategic industrial areas such as Westport, the Rockingham Strategic Centre is ideally positioned to provide supporting administration and office-based uses.

Due to the low dwelling density distributed across the City of Rockingham, there is low ridership of public transport and high car dependence as methods of travel to work. Key business and employment sectors such as defence and education are unreachable for most residents and workers by walking, cycling or public transport. The demand for secondary education and aged care services is also expected to outgrow the population proportionally as discussed earlier.

In response to the high unemployment issues, particularly with youth unemployment, the City has evaluated potential employment scenarios going forward until 2050. Several major employment centres have been provided in the analysis of employment self-sufficiency scenarios:

**Table 23: Employment Self-Sufficiency**

SCENARIO	1	2	3	4	5	6
<b>Population Growth</b>	Low	Low	Medium	Medium	High	High
<b>Employment Growth</b>	Low	Medium	Low	Medium	Medium	High
<b>RSC Population*</b>	26,030	26,030	32,321	32,321	48,580	48,580
<b>Jobs: Town Centre</b>	11,193	13,693	13,898	19,307	25,262	34,422
<b>Jobs: Rest of City</b>	30,721	33,221	34,426	39,926	38,980	43,480
<b>Total Jobs - Base</b>	41,914	46,914	48,324	59,233	64,241	77,901
<b>Additions</b>						
<b>North East Baldivis</b>	8,300	8,300	8,300	8,300	8,300	8,300
<b>Karnup (Core)</b>	12,500	12,500	12,500	12,500	12,500	12,500
<b>Karnup (South)</b>	12,400	12,400	12,400	12,400	12,400	12,400
<b>Employment Self-Sufficiency</b>	(Jobs/Workers Ratio)					
<b>Base</b>	0.45	0.50	0.44	0.53	0.49	0.59
<b>With North East Baldivis</b>	0.53	0.59	0.52	0.61	0.55	0.66
<b>Plus Karnup (Core)</b>	0.67	0.72	0.63	0.72	0.65	0.75
<b>Plus Karnup (South)</b>	0.80	0.85	0.75	0.84	0.74	0.85

Source: Syme, Marmion and Co 2020

The City's employment growth benefits from many advantages and strengths including the major defence establishment at Garden Island, an international heavy industry zone, naval and maritime industries in the Western Trade Coast and a Strategic Centre servicing a large region. The City also suffers multiple weaknesses, including a homogenised employment sector such as the concentration in construction and defence; current employment land is also under the threat from competing non-industrial uses such as residential, demand for additional employment land is identified within this LPS. The key to resolving the relatively low level of ESS is to capitalise on employment opportunities in industrial areas and the diversification of economic activities should also be sought in the RSC.

## RETAIL AND CONSUMER TRENDS

Retail and consumer trends are constantly evolving due to macro-scaled factors such as technological advancement and market conditions. Key trends include e-commerce which surged further during Covid. If this growth continues, future planning should consider the provision for neighbourhood/community distribution centres and other accompanying means such micro-logistics.

To activate the development opportunities arising with the City's activity centre network, relevant retail and consumer behaviour trends should be considered. For instance, businesses in activity centres should emphasise on locally authentic and relevant tenants with highly walkable/cyclable and outdoor retail experiences; a sense of community and place should be fostered by acknowledging and responding to priorities of communities such as pop-up stores/markets, ethical consumerism and sustainable retail.

Responsive and relevant goods and services provision in activity centres is essential to maximise demand and expenditure leading to successful and vibrant centres that suit the needs of the community, providing local employment and activation to neighbourhoods. The City's planning framework should recognise the trends in retail and consumer behaviour and adopt mechanisms to encourage the flexibility to respond to these in the development of activity centres. Further, the City's Employment Planning Strategy (Syme Marmion and Co, 2020) report highlighted that it is critical every opportunity to increase the amount of diversity of economic activity in the Rockingham City Centre is taken. The review and preparation of the RPSP (draft, 2022) is a key means of addressing this issue, together with this LPS.

## DEMAND PROFILE SUMMARY

- + The City's economy and employment demand is driven by multiple factors such as demographics, business, retail and consumer trends. These factors will influence floorspace, commercial provision and the activity centres hierarchy in the City.
- + The increases in young family households and the ageing population are the major factors underpinning retail and commercial demand. Provisions for supplementary facilities and infrastructure will need to be delivered with strong linkages to activity centres and public transportation.
- + The new housing developments occurring in the City will likely drive the construction, wholesale and retail sectors that support trades persons and skilled professionals.
- + The amount of employment land is under the threat of competing land uses, such as residential, therefore protection and provision for such land needs to be allocated for the City in the planning framework.
- + The City has several strengths to aid the growth of employment; there are many established industries and organisations such as defence, industrial complexes, and the Western Trade Coast.
- + Retail and consumer trends are more elusive and fast changing due to technological advancements and market conditions. Noticeable trends are e-commerce, local authenticity, and ethical consumerism. Potential implications include the provision of neighbourhood distribution centres and authentic-to-catchment themed tenants and pop-up stores.

The following section describes the current situation and future projections for floorspace, and employment based in the Needs Assessment findings and analysis undertaken. The analysis models the demand over time generated by the population living within the City's centre catchments and the supply of activity centre floorspace existing and projected to meet these needs.

### 4.3.2. ACTIVITY CENTRES

Activity centres are considered essential drivers of development and investment for the City and the Sub-region and their important role is recognised in SPP 4.2 (draft) and the PP3.5 suite of planning documents.

*“**Activity Centres** are multi-functional community focal points that vary in size and function. They are generally well-serviced by transport networks with a focus on integrated pedestrian access and walkability, and may include land uses such as commercial, retail, food and hospitality, higher-density housing, entertainment, tourism, civic/community, higher education, and medical services.”(4)*

In 2021-2022 the City prepared the LCACS to replace its LPP 3.1.2 (endorsed 2004 and amended 2018), which sets out the City’s strategic planning priorities for activity centres and commercial areas for the next 15-20 years. The LCACS was advertised for public comment between October – November 2022. The LCACS is the primary informing document regarding activity centre planning in the City.

RSC is identified by the State Government as a Strategic Centre under SPP 4.2 and the PP3.5 suite of planning documents. The RSC is supported by a hierarchy of 42 existing and emerging activity centres servicing distinct catchments. The LCACS provides a comprehensive review, evaluation and analysis of the State and the local planning frameworks which support the current planning and future development of activity centres within the City. The City of Rockingham Needs Assessment (Pracsys, 2022), hereafter referred to as the Needs Assessment, forms a key source of data and analysis upon which this Strategy (the LCACS) is based.

The LCACS together with the Needs Assessment provides the analysis and evidence to prepare the LPS and guide the use and development of activity centres across the City. The objectives and related principles provided in **Table 24** identify the retail hierarchy, land use approach and built form principles that are the foundation of the activity centres planning direction for the City.

#### CURRENT ACTIVITY CENTRE PROVISION

To facilitate the delivery of housing in and adjacent to activity centres, providing a diversity of typologies and efficient use of existing infrastructure especially reducing travel times to access goods, services, employment and education requires centres to function in a hierarchical network. The hierarchy of activity centres:

- + Provides high-level guidance in terms of the location, scale, land uses intended, and nature of investment expected in activity centres.
- + Ensures policy reflects the differing roles and functions of the range of centre typologies.
- + Creates a coherent network of activity centres which meet the various needs of the community at the locations where these needs can, and should, be met; and
- + Guides the planning and provision of transport infrastructure and other aspects of urban development influenced by activity centres.

In most settings, the variety and type of facilities and services located within activity centres, are able to be used as an indicator for identifying the functional role of a particular centre. When assessing development/ planning applications with reference to the City’s activity centre hierarchy, greater emphasis should be placed on whether the application changes the functional role of that centre rather than simply the amount of floorspace proposed. The Needs Assessment provides appropriate future floorspace guidance relative to the anticipated growth in catchment needs.



**Table 24: LCACS Objectives**

Source: Franklin Planning and Hames Sharley

OBJECTIVE	PRINCIPLES
<b>CENTRES HIERARCHY</b> <i>Provide a robust hierarchy and network of activity centres that meets community need and provides social, economic and environmental benefits to the City and its sub-region. ("State Planning Policy 4.2 Activity Centres")</i>	<ul style="list-style-type: none"> <li>+ Distribute activity centres to meet differing levels of community need and enable employment, goods, and services to be accessed efficiently and equitably by the community.</li> <li>+ Apply the activity centre hierarchy as part of a long-term and integrated approach by government and private stakeholders to the development of economic and social infrastructure.</li> <li>+ Plan activity centres to enable them to support a variety of retail and commercial businesses and promote a sustainable retail and commercial market.</li> </ul>
<b>ACTIVITY</b> <i>Support activity centres in transitioning from places of commerce only to including a range of experiences and community benefit.</i>	<ul style="list-style-type: none"> <li>+ Increase the range and quantum of employment in activity centres and contribute to the achievement of sub-regional employment self-sufficiency targets.</li> <li>+ Increase the density and diversity of housing in and around activity centres to improve land efficiency, housing variety and to support centre facilities.</li> <li>+ Ensure activity centres are compact and provide sufficient development intensity and land use mix to support high-frequency public transport infrastructure.</li> </ul>
<b>MOVEMENT</b> <i>Ensure activity centres are compact and provide sufficient development intensity and land use mix to support high-frequency public transport and active travel modes.</i>	<ul style="list-style-type: none"> <li>+ Maximise access to activity centres by walking, cycling and public transport to help reduce private car trips and parking demand.</li> <li>+ Advocate for high frequency buses to service activity centres linking them with residential catchments.</li> <li>+ Concentrate activities, particularly those that generate high numbers of trips, within activity centres contributing to footfall intensity and floorspace productivity.</li> </ul>
<b>URBAN FORM</b> <i>Ensure activity centres accommodate growth in a coordinated manner and deliver good quality-built environment outcomes that provide social, economic and environmental benefits.</i>	<ul style="list-style-type: none"> <li>+ Plan activity centre development around a legible, permeable street network and quality public spaces with a preference for a main street-based format.</li> <li>+ Provide for a compact urban form that prioritises pedestrian movement and safety.</li> <li>+ Identify appropriate to local character and context fine grain development within centres.</li> <li>+ Maximise residential density within walking distance to centres.</li> <li>+ Buildings should address primary streets and provide for active street frontages.</li> </ul>
<b>GOVERNANCE</b> <i>Ensure consistency and rigour in the planning and development of activity centres supported by State and local policy frameworks.</i>	<ul style="list-style-type: none"> <li>+ Support the vision set by the City of Rockingham in its Local Planning Strategy (currently under development).</li> <li>+ Align with the planning principles within the State Planning Policy 4.2 - Activity centres for Perth and Peel and State Planning Policy 7.2 - Precinct Design Guidelines.</li> </ul>

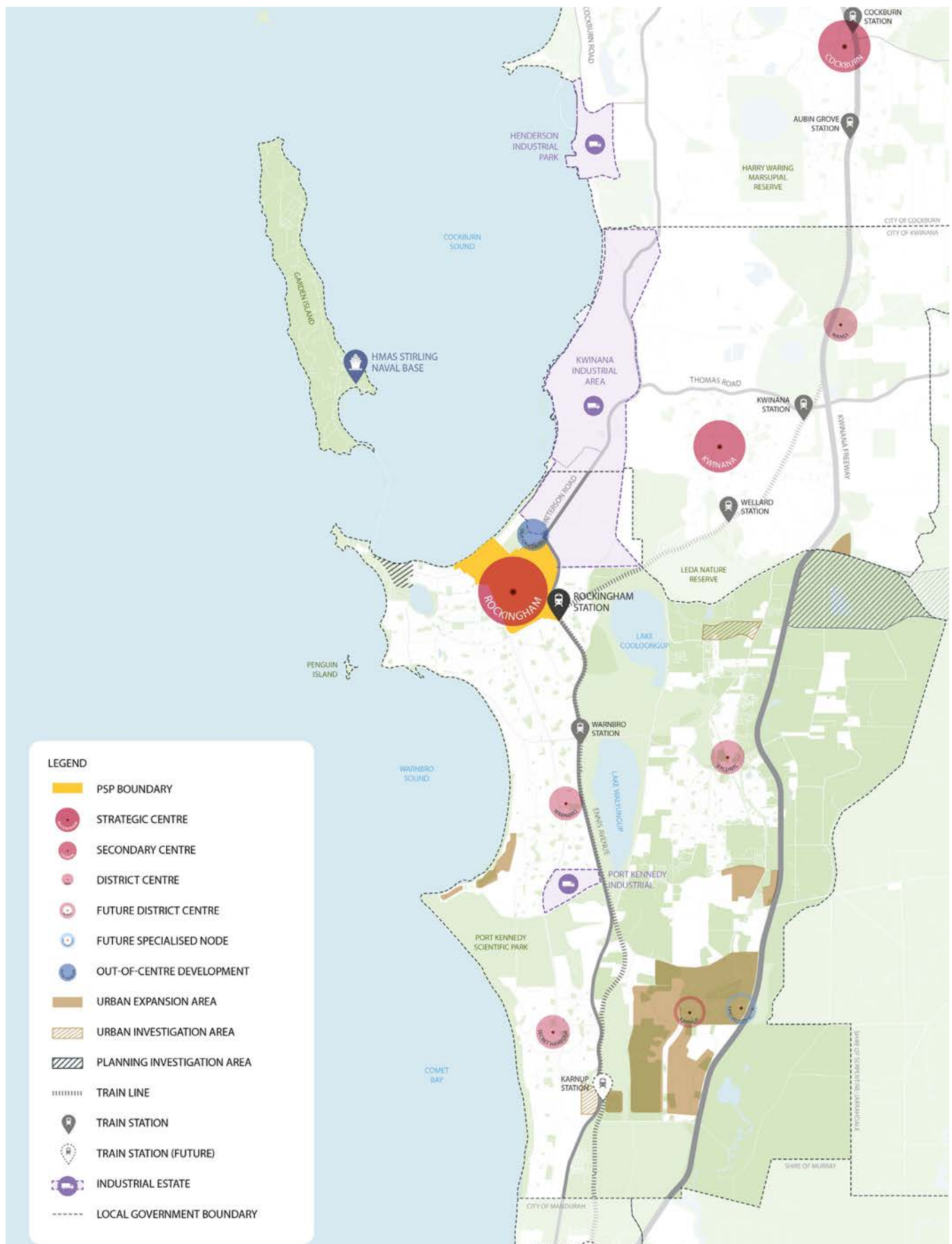


Figure 23: LCACS Study Area

Source: Hames Sharley, 2022

The City is currently functioning under the activity centres hierarchy in the order of strategic centres, district centres, neighbourhood centres and local centres as outlined in SPP 4.2. No secondary nor specialised centres currently exist in the City, though may be developed in future. For instance Karnup is designated as an emerging Specialised Node in the Sub-Regional Framework. The characteristics of the City of Rockingham's hierarchy of centres are as follows:

- + Strategic Centres typically comprise a large amount of floorspace allocated to health, community, education, and business services and in this case floorspace and activity related to tourism, entertainment and hospitality is offered at the foreshore within the Rockingham Strategic City Centre.
- + District Centres accommodate households who generally shop for food and groceries weekly or bi-weekly in relatively large quantities, usually with a car. The City of Rockingham has three established District Centres: Baldivis, Secret Harbour, and Warnbro; and a future centre identified for Karnup.
- + Neighbourhood and Local Centres are the most often visited for daily and weekly needs such as grocery shopping, coffee and buying the newspaper. These smaller centres are also the community focal points which can often be accessed by walking and cycling as part of a daily routine, for example children and seniors should be able to visit these centres independently and gain social benefits alongside transactional activities.

## CURRENT FLOORSPACE SUPPLY OF ACTIVITY CENTRES

Activity centres in the City have been divided into the five policy precincts as spatial parameters; the level of supportable floorspace at each major activity centre is guided by the analysis and result of population levels.

Retail floorspace provision of each precinct and centres are based on the City of Rockingham population projections and the modelling detailed in the Needs Assessment. Karnup is still in its early stage of planning, therefore provision of retail floorspace has not been given. It should be noted that in the overall City projections, the population forecasts for Karnup precinct are based on the existing population and planning framework.

The Needs Assessment outlines that in circumstances where one centre in a fully developed area has not expanded to the level identified in forecasts at a given timepoint, another centre within the catchment should not be allowed to justify an expansion on this basis alone. This approach may be reconsidered in developing areas based on robust supporting evidence where another centre is constrained and there has been population growth within the catchment.

When assessing the potential expansion of a current centre, the following factors should be considered in strong evidence that: there is a need driven by high growth, a demonstrated alignment with Draft SPP 4.2 objectives, a wide range of community benefits, a flexibility to allow for a variety of uses across all centre types in the demonstration of viable uses and demand.

The existing floorspace supply within the City of Rockingham totals approximately 240,000m<sup>2</sup> and the activity centres and their place within the hierarchy is shown and outlined in **Table 25**.

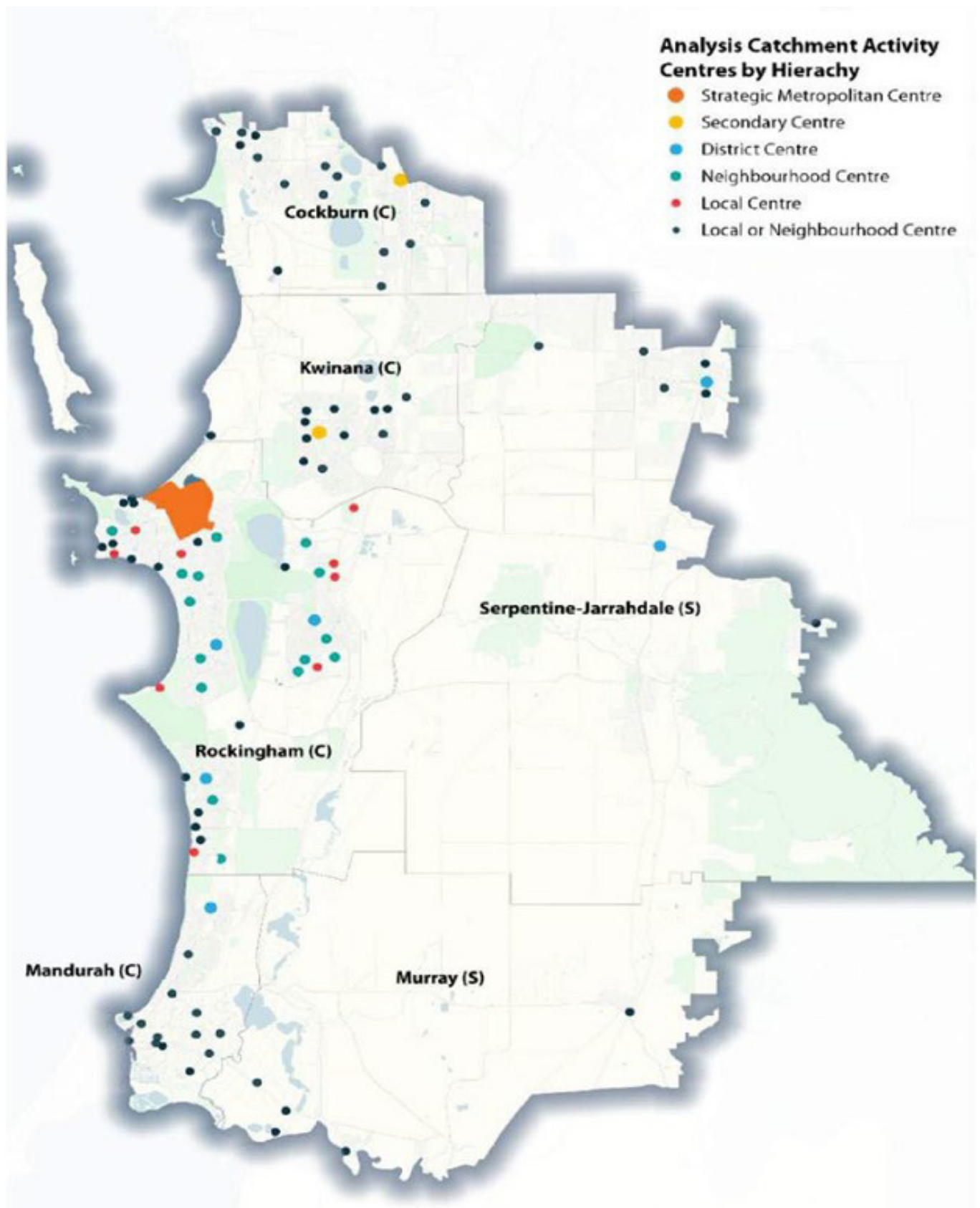


Figure 24: 2031 Proposed Commercial Centres (LCS 2017)  
Source: Geografia

Table 25: Existing Activity Centres by Precinct and Hierarchy

PRECINCT 1 ROCKINGHAM				
Centre Name	SHP Floorspace	RET Floorspace	Non-Retail Floorspace	Centre Type
Rockingham	63,978	7,526	128,912	Strategic Metropolitan Centre
Rockingham Beach	13,848	306	35,661	Strategic Metropolitan Centre
Charthouse	1,166	-	-	Neighbourhood Centre
Elanora Drive	1,359	-	-	Neighbourhood Centre
Grange Drive	1,702	-	1,394	Neighbourhood Centre
Shoalwater	3,260	219	1,254	Neighbourhood Centre
Waikiki Village	11,206	330	1,310	Neighbourhood Centre
Arcadia Drive	382	218	274	Local Centre
Belgravia Terrace	2,000	-	913	Local Centre
Bell Street	98,611	-	489	Local Centre
Bent Street	570	-	-	Local Centre
Fisher street	200	-	-	Local Centre
Malibu	1,090	-	912	Local Centre
McLarty Street	482	-	-	Local Centre
Parkin Street	246	-	130	Local Centre
Safety Bay	2,033	-	961	Local Centre
Safety Bay Road	548	-	192	Local Centre
Soyara Place	70	-	150	Local Centre
Waikiki Hotel	-	138	40	Local Centre
East Rockingham	-	22,049	-	Other Retail Centre
Enterprise	7,298	17,368	2,787	Service Commercial
<b>Total</b>	<b>112,049</b>	<b>48,154</b>	<b>175,378</b>	



PRECINCT 2 WARNBRO				
Centre Name	SHP Floorspace	RET Floorspace	Non-Retail Floorspace	Centre Type
Warnbro	21,029	685	2,079	District Centre
Palm Meadows	3,555	-	6,280	Neighbourhood Centre
St Clair	4,625	-	560	Neighbourhood Centre
Hokin Street	1,489	460	2,762	Local Centre
Kennedy Bay	1,500	-	684	Local Centre
Port Kennedy Enterprise Park	-	17,139	-	Other Retail Centre
<b>Total</b>	<b>32,198</b>	<b>18,284</b>	<b>12,365</b>	

PRECINCT 3 BALDIVIS				
Centre Name	SHP Floorspace	RET Floorspace	Non-Retail Floorspace	Centre Type
Baldivis	29,435	16,795	13,411	District Centre
Settlers Hills	2,061	1,179	7,384	Neighbourhood Centre
Spud Shed	5,500	-	2,510	Neighbourhood Centre
Tuart Ridge	3,015	-	1,376	Neighbourhood Centre
Lakeside Caravan Park	360	-	-	Local Centre
The Ridge	583	333	418	Local Centre
<b>Total</b>	<b>40,954</b>	<b>18,307</b>	<b>25,099</b>	

Source: DPLH 2016, City of Rockingham 2021, Pracys 2021

## FUTURE FLOORSPACE SUPPLY OF ACTIVITY CENTRES

**Table 26** outlines that there is a total of approximately 32,000m<sup>2</sup> of additional retail floorspace planned for the City of Rockingham in new or emerging activity centres on the horizon. It should be noted that **Table 26** sets out the initial planned floorspace for these centres, although it is envisaged that all these centres will expand beyond these initial stages of development within the lifetime of LPS. Detail on the projected growth of these centres is provided within the *Needs Assessment*.

**Table 26: Planned Future Activity Centres within the City of Rockingham by Hierarchy**

ACTIVITY CENTRE NAME	INITIAL PLANNED RETAIL FLOORSPACE (M2)	ACTIVITY CENTRE HIERARCHY
Baldivis North	5,200	Neighbourhood Centre
Golden Bay Neighbourhood	3,240	Neighbourhood Centre
Paramount Estate	4,500	Neighbourhood Centre
Parkland Heights	10,000	Neighbourhood Centre
Avalon	1,500	Local Centre
Baldivis Parks	1,515	Local Centre
Fifty Road	1,300	Local Centre
Kennedy Bay	1,500	Local Centre
Millars Landing	2,500	Local Centre
Singleton	1,000	Local Centre
<b>Total</b>	<b>32,255</b>	

Source: DPLH 2016, City of Rockingham 2021, Pracsys 2021

Note \* A District Centre and Specialised Centre in Karnup is also planned, however, this analysis does not assess Karnup and has excluded these activity centres from the analysis as explained earlier.

Floorspace from these yet to be developed activity centres is included in the Retail Gravity Modelling after their expected date of completion. Additionally, if the analysis identifies the potential to expand or develop additional centres to what is currently planned, these centres will need to be included in the review and monitored over time.

## POTENTIAL ACTIVITY CENTRE HIERARCHY CHANGES

The Needs Assessment and LCACS evaluated the current hierarchy and assessed that there are several centres that could potentially change centre classification based on projected growth (summarised in **Table 27**).

**Table 27: Potential Future Hierarchy Changes**

CENTRE AND CURRENT CLASSIFICATION	FLOORSPACE CHANGE TO 2036 (M2)	HIERARCHY CHANGES	GUIDANCE
Baldivis Town Centre District Centre	7,000m <sup>2</sup> Shop Retail 8,032m <sup>2</sup> Other Retail 12,629m <sup>2</sup> Non-Retail	Secondary Centre	Classification to be confirmed through the preparation of the Karnup District Structure Plan and review of the <i>Needs Assessment</i> at this time.
Parkland Heights Neighbourhood Centre	6,500m <sup>2</sup> Shop Retail 5,000m <sup>2</sup> Non-Retail	District Centre	Classification to be confirmed through the preparation of the Karnup District Structure Plan and review of the Needs Assessment.
Millars Landing Local Centre	Millars Landing is expanding from 2,500m <sup>2</sup> to over 5,000m <sup>2</sup> Shop Retail floorspace.	Neighbourhood Centre	Reclassification subject to preparation of an Impact Test addressing Draft SPP 4.2 and Section 5.  Any major development would expand the catchment of the centre with a selection of goods and services that could cater more for the weekly shopping requirements of the surrounding population.
Local Centres	See floorspace expansion projections within the Needs Assessment. Appendices.	No changes	A number of local centres could expand beyond the notional Shop Retail provision of 1,500m <sup>2</sup> for a local centre. Expansions are to be supported by an Impact Test.  Proposals to change the centres hierarchy level to Neighbourhood are unlikely to be supported.

## EQUITY OF ACCESS TO ACTIVITY CENTRES

An analysis has been undertaken for the accessibility to activity centres using the parameters of minimum access, daily/weekly access and walkable access. The distance to access centres from where residents live provides guidance on the provision of future activity centres to the extent of the centre's hierarchy, role, and function. Any ABS SA1 areas that were over 1km from an activity centre were identified as having an under-provision.

The analysis suggests an estimated 35,000 residents in the City are currently outside the walkable catchment of a designated activity centre providing for their daily/weekly shopping needs and this number is expected to grow to 60,000 by 2041 if no changes are proposed to activity centre provision. The analysis highlights a potential gap in the Warnbro/Port Kennedy (Precinct 2), Secret Harbour area (Precinct 3) and, to a limited extent, eastern Baldivis (Precinct 4).

The implication is, where new residential developments occur (i.e. Karnup), planning must ensure that the location of new centres provides for the daily/weekly shopping needs of residents within a walkable/cyclable distance through an appropriate distribution and hierarchy of high and lower order centres.

## ACCESS TO OTHER RETAIL CENTRES (BULKY GOODS)

Other Retail Centres are categorised in 'large' and 'medium' based on capacity of employment provision and the sizes of bulky goods retail. Currently, there is one large Other Retail Centre located along Dixon and Patterson Road, and two medium centres in Baldivis and Port Kennedy.

The majority of existing households in Precincts 1 and 2 have adequate access to Other Retail Centres; future development of this type (within existing areas) should be focused within existing Bulky Goods Retail Centres; 'out of centre' developments such as highway 'ribbon' development should be discouraged.

The Needs Assessment indicates a significant amount of bulky goods retail floorspace will be needed in Precinct 4 to accommodate the growing requirements for Baldivis from 18,307m<sup>2</sup> to 31,621m<sup>2</sup> in 2041. This increase cannot be accommodated in the District Centre due to the availability of suitable land. This LPS has identified land in alternative locations, such as land north of Kerosene Lane. Further gaps in the provision of other retail space have also been identified in Secret Harbour area (Precinct 3). Future planning for Karnup will need to address the provision of additional Other Retail floorspace, to address this gap. District Structure planning for Karnup should ensure that all types of floorspace (including bulky goods/showroom) are assessed and appropriate access provided (dependent on centre hierarchy) for existing and future residents within the precinct catchment area.

## RESIDENTIAL DENSITY TARGETS

The operation of activity centres rely greatly on dwelling density in adjacent areas; for vibrancy, activation, footfall and liveability, it is critical to have higher residential density development and diversity of housing types in proximity to/within activity centres. Extending these principles and achieving greater walkable catchment residential intensity within District Centres and through future precinct structure planning of lower order centres is essential to deliver on the City's residential targets.

This is discussed further in **Section 4.2.1 Housing**.

## ACTIVITY CENTRES OVERVIEW SUMMARY

- + The successful adoption of activity centre hierarchy ensures corresponding services, goods and activities can be provided to surrounding catchments and in the future, facilitate the delivery of new housing in or adjacent to centres.
- + The 1km catchment analysis indicated that an estimated 35,000 residents are inadequately serviced by existing activity centres for their daily/weekly needs, and this number will grow to 60,000 in 2041 if no changes are proposed to activity centres provision. Gaps exist in Precinct 2, 3 and 4.
- + Planning must ensure that the location of new centres is provided through an appropriate distribution and hierarchy of centres, especially in Karnup.
- + Most precincts in the City are sufficiently supported by Other Retail centres currently.
- + Baldivis (Precinct 4) will require a significant amount of bulky goods retail floorspace from 18,307m<sup>2</sup> to 31,621 m<sup>2</sup> in 2041 to accommodate the future growth. However, such increase cannot be accommodated due to the availability of land in the District Centre, as such opportunities have been identified in alternative locations such as the land north of Kerosene Lane.
- + The City has an existing floorspace supply of approximately 240,000m<sup>2</sup>; and further 31,000m<sup>2</sup> of retail floorspace planned for new and emerging activity centres.
- + Existing activity centres could experience changes to higher spatial/policy hierarchy, namely Baldivis District Centre, Parkland Heights Neighbourhood Centre, and Millars Landing Local Centre.

### 4.3.3. FUTURE FLOORSPACE PROVISION

This section is informed by the analysis and findings of the *Needs Assessment* and LCACS. The approach for the delivery of floorspace does not necessarily occur at the timeframes indicated, rather it is recommended to assess and deliver floorspace in a stage gate approach (i.e. once the population milestone has been reached to justify it rather than at a particular date/year).

#### POPULATION AND FLOORSPACE FORECAST BY PRECINCTS

The analysis has been prepared for four of the five precincts within the City of Rockingham. Excluded from the *Needs Assessment* is Precinct 5 – Karnup due to the early stage of planning. Implementation of the LPS incorporates advice for inclusion of the District Structure Plan for Karnup into a revised *Needs Assessment*. It is recommended that the DSP should be prepared to refine medium to long term floorspace considerations for the activity centre hierarchy. This will assist in the consideration of any potential changes to activity centre classifications in Precinct 3 (Secret Harbour) and Precinct 4 (Baldivis).

The Needs Assessment projects additional floorspace and employment for each precinct up to 2041. **Table 28** references 2036 to reflect the anticipated timeframe of the Local Planning Strategy. Maps for these precincts showing the existing centres in the hierarchy within each catchment precinct, plus the employment and floorspace projections to 2036, are shown in the Appendices of the *Needs Assessment*.



Table 28: Viable Retail and Non-Retail Floorspace Increases in 2036 by catchment Precinct

PRECINCT 1 (ROCKINGHAM)		
Floorspace Type	Shop Retail	Other Retail + Non-Retail
Population Projection Scenario	Floorspace	Floorspace
City of Rockingham (high)	48,308	227,366
WA Tomorrow (low)	8,327	175,298
PRECINCT 2 (WARNBRO)		
Floorspace Type	Shop Retail	Other Retail + Non-Retail
Population Projection Scenario	Floorspace	Floorspace
City of Rockingham (high)	4,659	23,638
WA Tomorrow (low)	1,990	20,627
PRECINCT 3 (SECRET HARBOUR)		
Floorspace Type	Shop Retail	Other Retail + Non-Retail
Population Projection Scenario	Floorspace	Floorspace
City of Rockingham (high)	21,442	10,497
WA Tomorrow (low)	12,336	8,090
PRECINCT 4 (BALDIVIS)		
Floorspace Type	Shop Retail	Other Retail + Non-Retail
Population Projection Scenario	Floorspace	Floorspace
City of Rockingham (high)	29,350	53,116
WA Tomorrow (low)	13,603	40,828

Source: Pracys 2021

## VIALE FUTURE FLOOR SPACE

The current and future household demand for retail within the Analysis Catchment has been mapped at detailed spatial areas by applying the Pracsys Retail Gravity Model. Based on this analysis, the total supportable increase in Shop Retail and Other Retail floorspace over time has been estimated for the City (**Table 29**) according to both population scenarios.

**Table 29: Total Supportable Increase in Shop Retail and Other Retail Floorspace Over Time**

CITY OF ROCKINGHAM POPULATION PROJECTIONS SCENARIO				
Year	Shop Retail	Other Retail	Total	Estimated Population
2021	20,889	6,380	27,270	142,002
2026	26,954	18,634	45,588	163,062
2031	58,976	33,720	92,696	185,190
2036	102,759	52,051	154,810	212,302
2041	157,438	74,398	231,836	245,632
WA TOMORROW POPULATION PROJECTIONS SCENARIO				
Year	Shop Retail	Other Retail	Total	Estimated Population
2021	26,647	6,380	33,027	142,002
2026	20,628	14,602	35,231	153,946
2031	36,692	25,352	62,044	166,233
2036	58,759	38,022	96,780	180,497
2041	84,844	52,975	137,819	197,060

Source: Pracsys 2021

The City of Rockingham can viably increase floorspace by the amounts stated in **Table 29** under the premise that the population estimates detailed are met within the City of Rockingham and wider *Needs Assessment* analysis precincts. As noted previously, if a particular population target is not met, the level of additional supportable Shop Retail and Other Retail floorspace can be estimated based on the population target that is closest to the actual achieved at the time.

## MAJOR CENTRES FLOOR SPACE

The three existing District Centres and the RSC provide for the retail needs of a significant proportion of the City's residents. The *Needs Assessment* findings reveal substantial expansions in both retail and non-retail floorspace for these major centres under both the low and high population growth scenario projections (refer **Table 30**). These centres will accommodate a significant amount of the overall increase in retail and non-retail floorspace, therefore the City should closely monitor their performance over time.

The implications of the floorspace forecasts on this LPS are that it provides a consistent evidence base when the City approves centre expansions or new centres by assessing the performance of the activity centre hierarchy and individual centres to ensure the ongoing health of the major centres is not negatively impacted by changes to other activity centres in the hierarchy. For instance, by 2036, the RSC is expected to experience an increase of between (low and high population forecasts):

- + 6,200–39,100m<sup>2</sup> retail floorspace.
- + 4,500–8,000m<sup>2</sup> in bulky goods retail floorspace; and
- + 147,000–186,000m<sup>2</sup> non-retail floorspace

## NON-RETAIL FLOORSPEACE PROJECTIONS

Retail Floorspace gaps were calculated by identifying a suitable floorspace per person ratio by PLUC (Planning Land Use Category) code based on several benchmarked areas including 25km catchments from the Mandurah, Armadale and Joondalup Strategic Activity Centres. Based on these benchmarks, provision ratios were identified for Entertainment (ENT), Health/Welfare/Community (HEL), Manufacturing (MAN), Office (OFF), Service (SER) and Storage (STO).

The identified Floorspace Provision Gap was then multiplied by the population in the City at each time interval assessed to determine the current gap in Non-Retail Floorspace for Rockingham. Using this approach, the *Needs Assessment* revealed that the City can significantly increase non-Retail floorspace in both the City of Rockingham Population Projection and the WA Tomorrow Population Projection scenarios (**Table 30**).

**Table 30: Total Supportable Increase in Non-Retail Floorspace Over Time**

CITY OF ROCKINGHAM POPULATION PROJECTIONS SCENARIO								
Year	ENT	HEL	MAN	OFF	SER	STO	Total	Estimated Population
2021	9,944	47,510	7,641	22,221	13,189	15,207	115,712	142,002
2026	16,997	63,321	9,092	33,493	16,347	20,674	159,923	163,062
2031	24,407	79,663	10,617	45,337	19,665	26,418	206,106	185,190
2036	33,486	99,563	12,485	59,847	23,730	33,456	262,566	212,302
2041	44,647	123,873	14,781	77,687	28,728	42,108	331,824	245,632
WA TOMORROW POPULATION PROJECTIONS SCENARIO								
Year	ENT	HEL	MAN	OFF	SER	STO	Total	Estimated Population
2021	9,944	47,510	7,641	22,221	13,189	15,207	115,712	142,002
2026	13,944	59,505	8,464	28,614	14,980	18,307	143,814	153,946
2031	18,058	71,728	9,310	35,190	16,822	21,497	172,607	166,233
2036	22,835	86,250	10,293	42,825	18,961	25,200	206,365	180,497
2041	28,382	103,534	11,434	51,690	21,445	29,499	245,984	197,060

Source: Pracys 2021

Note: ENT = Entertainment/Recreation/Cultural, HEL = Health/Welfare/Community Services, MAN = Manufacturing/Processing/Fabrication, OFF = Office/Business, SER = Service Industrial, STO = Storage/Distribution

## OTHER RETAIL (BULKY GOODS/SHOWROOM)

In terms of Other Retail, the City has three existing bulky goods retailing precincts; one at the periphery of the RSC, north of Dixon Road and over Ennis Avenue; one to the east of the Baldivis District Centre along Safety Bay and Baldivis Roads; and one opposite the Port Kennedy Neighbourhood Centre, addressing Warnbro Sound Avenue (and bounded by Bakewell Drive and Port Kennedy Drive)

The separation of showrooms from retail and other activity centre functions in each centre is well defined and they are well located on major roads providing servicing access for truck/heavy vehicle-based deliveries. The RSC and Baldivis District Centre have limited land to expand their bulky goods floorspace, whereas the Port Kennedy precinct could potentially extend if required, to the east. The LPS should carefully consider the potential extension east of the Port Kennedy precinct. A key consideration of any expansions being the effect on pedestrian safety and amenity and the relationship between the bulky goods retailing precinct and surrounding residential areas.

Draft SPP 4.2 outlines that the preferred location for these types of uses is on major transport routes and at the periphery not the core of activity centres, due to their large format and vehicle dominated access requirements. The LPS supports the containment of this type of retailing to such locations and avoiding its encroachment into adjacent industrial or residential areas.

In terms of allocating this floorspace spatially, it is recommended that non-retail floorspace is located in the Port Kennedy Business Enterprise Park, Dixon Road area and at the northern end of Baldivis District Centre and potentially in the future as part of the Karnup Specialised node. It is recommended that to ensure such land is available to meet these important employment generating uses shop retail floorspace should not be encouraged in these areas and in particular, for example, in the Port Kennedy Business Park.

### NEEDS ASSESSMENT FLOORSPEC PROVISION SUMMARY

- + Precinct 5 (Karnup) requires the inclusion of a District Structure Plan to guide its future growth and floorspace considerations for the activity centre hierarchy. This will assist in the consideration of any potential changes to activity centre classifications in Precinct 3 and 4.
- + A revised Needs Assessment will be required in the long term development of Karnup Precinct.
- + Substantial expansion in both retail and non-retail floorspace is required for the Strategic Centre and three other District Centres under either the low or high population growth scenarios.
- + Specifically, the RSC is expected to have an increase of between 6,200 – 39,100m<sup>2</sup> retail floorspace; 4,500–8,000m<sup>2</sup> in bulky goods retail floorspace; and 147,000–186,000m<sup>2</sup> non-retail floorspace.
- + Significant increase in non-retail floorspace for the city is supported by both the City of Rockingham and the WA Tomorrow Population Projection scenarios.
- + Non-retail floorspace should be distributed in Port Kennedy Business Enterprise Park, Dixon Road area and at the northern end of Baldivis District Centre, and possibly in the future as part of the Karnup Specialised node.
- + The RSC and Baldivis District Centre have limited land to expand their Other Retail Floorspace, whereas the Port Kennedy could potentially extend, if required, to the east.

### 4.3.4. EMPLOYMENT

**Activity Centre Employment** is population driven and found in businesses and uses within the hierarchy of centres. Whereas **Strategic Employment** comes from industries which mainly rely on the competitive advantages of an area (i.e. access to resources, location) and individual decisions of businesses. Growth in Strategic Employment can be achieved through promoting the unique advantages of the area to businesses, encouraging business collaboration and other business-friendly policies. The primary locations that can accommodate strategic employment with the City are the RSC and Rockingham Industrial Area.

The rationale for including this information is that the land use and activities and employment occupying them are closely linked and the RSC has a critical role to improving the ESS of the City as a whole, due to the variety and quantum of employment generating land uses it currently and intends to provide. Recommendations to achieve this target are as follows:

- + The *Needs Assessment* estimates the employment supportable at the City's Activity Centres based on population growth; and
- + The City's *Employment Planning Study* considered the potential employment requirements of the City with projections based on population growth and other development opportunities.

The results of these analyses are outlined in this summary and tables that follow.

Jobs/employment data referred to in this LPS and the *Needs Assessment* results, capture total employment (both full-time and part-time). To reach the City's ESS target of 74%, the employment estimates from the Rockingham *Employment Planning Study* for non-activity centre employment have been combined with activity centre estimates to approximate the additional employment required (the gap). The additional employment will need to be strategic in nature and suitable to the RSC and other employment lands such as industrial areas. Without considering future employment land (not activity centre based) and catalyst projects in the RSC, there is an identified employment gap between 31,000 and 40,000 jobs as shown in **Table 32** (the range depends on the population projection used).

**Table 31: Employment Gap Without Future Employment Land**

EMPLOYMENT CATEGORY	WA TOMORROW EMPLOYMENT	COR EMPLOYMENT
Employment Target 2041 (74% ESS)	70,833	88,292
Needs Assessment 2041 - RSC	10,697	14,252
Needs Assessment 2041 - Other Centres	13,139	15,442
Jobs Rest of City	15,572	18,984
Gap to Target ESS	31,425	39,614

Source: Syme Marmion and Co 2020, Pracsys 2021

The City's Employment Planning Study identified North-East Baldivis, Baldivis - Kerosene Lane and Karnup (core) as Future Employment Land. Although employment in the Study was projected to 2050 for the purpose of understanding implications for the *Needs Assessment*, these jobs have been estimated to 2041. These employment estimates have been used to refine the gap estimate for both scenarios (**Table 32**). It is estimated that the employment gap to reach a target ESS of 74% would require an additional

2,100 to 5,100 jobs in the RSC and 6,400 and 11,700 jobs on other employment lands. This highlights the importance of the RSC in providing employment opportunities to meet sub-regional employment targets.

**Table 32: Employment Gap with Future Employment Land**

EMPLOYMENT AREA	WAT (JOBS)	COR (JOBS)
Gap to Target ESS	31,425	39,614
Future Employment Land	22,897	22,897
Additional RSCM Employment (based on the City's Employment Planning Study)	2,101	5,055
Remaining Gap	6,428	11,662

Source: Syme Marmion and Co 2020, Pracsys 2021

The South Metropolitan Peel Sub-regional Planning Framework currently provides a target of only 12,290 jobs in the RSC. Under the CoR scenario the Strategic Centre will need at least 14,252 jobs to meet the goods and services needs of the surrounding population, with a total of 19,307 jobs by 2041 to contribute to an ESS of 74%. The combination of both types of employment (Activity Centre/population driven and Strategic) is required to grow over time to reach the ESS targets for the City.

The findings of the *Rockingham Employment Planning Study* and the *Needs Assessment* indicate that regional ESS targets would not be achievable unless a greater concentration of employment is planned for in the RSC. Importantly, this additional employment would be in keeping with its role in the activity centres hierarchy and the Sub-regional Framework. Several employment activities that if targeted and attracted to the RSC are expected to stimulate increased quantum and diversity of employment profile, identified in the *Employment Planning Study* include:

- + Primary regional institutions including a full-service university, major health campus with teaching capabilities, State Government administration, and high-level arts and entertainment.
- + Business services for nearby industrial areas, the naval base and Westport; and
- + Tourist activities including business travel and visitation for the surrounding area.

To allocate these employment floorspace targets spatially, it is noted that out-of-centre development will be driven by strategic employment opportunities, particularly associated with the Western Trade Coast (WTC) and Westport; and population-driven light industrial services for the wider sub-region. The Port Kennedy Business Enterprise Park and its expansion and the exploration of Kerosene Lane Urban Expansion Area to complement the WTC for out-of-centre development is recommended. Thirdly, the Karnup DSP will need to investigate the provision of employment land to meet ESS targets.

The Needs Assessment estimated that the RSC would need an additional 126,000m<sup>2</sup> to 273,000m<sup>2</sup> in commercial floorspace to support the additional employment estimates (**Table 33**). Further, an additional 733,000m<sup>2</sup> to 1,330,000m<sup>2</sup> in light Industrial floorspace uses would be required on other employment lands.



**Table 33: Additional Floorspace Estimates to Meet ESS Target**

FLOORSPACE USES	WAT FLOORSPACE (M2)	COR FLOORSPACE (M2)
RSC		
Education	45,600	91,200
Accommodation	48,200	96,800
Office	32,317	85,098
Other Employment Land		
Light Industrial	732,990	1,329,878

Source: Pracsys 2022, DPLH 2016

In terms of spatial allocation, the preferred location for the additional floorspace forecast for office, accommodation and education uses in the *Needs Assessment* is in the first instance in Precinct 1 within the Strategic Centre. As the highest order centre within the City and the South-West sub region, it is the priority place for strategic employment generating uses and the City's local planning framework should support this.

## EMPLOYMENT FORECAST BY PRECINCT

Like floorspace forecasts provided earlier, the *Needs Assessment* has prepared the expected increases to employment by both Shop Retail and Other Retail (bulky goods) and Non-Retail. These are founded on high and low population growth scenarios and **Table 34** shows the results by precinct.

**Table 34: Viable Retail and Non-Retail Employment Increases in 2036 by Precinct**

PRECINCT 1 (ROCKINGHAM)		
Floorspace Type	Shop Retail	Other Retail + Non-Retail
Population Projection Scenario	Employment	Employment
City of Rockingham (high)	1,862	4,477
WA Tomorrow (low)	330	3,433
PRECINCT 2 (WARNBRO)		
Floorspace Type	Shop Retail	Other Retail + Non-Retail
Population Projection Scenario	Employment	Employment
City of Rockingham (high)	189	501
WA Tomorrow (low)	95	433
PRECINCT 3 (SECRET HARBOUR)		
Floorspace Type	Shop Retail	Other Retail + Non-Retail
Population Projection Scenario	Employment	Employment
City of Rockingham (high)	799	279
WA Tomorrow (low)	535	203

PRECINCT 4 (BALDIVIS)		
Floorspace Type	Shop Retail	Other Retail + Non-Retail
Population Projection Scenario	Floorspace	Floorspace
City of Rockingham (high)	1,230	1,521
WA Tomorrow (low)	902	1,176

Source: Pracsys 2021

**Table 35: RSC Activity Centre Employment to 2041**

ROCKINGHAM STRATEGIC CENTRE	ACTIVITY CENTRE JOBS			
	2026	2031	2036	2041
Scenario 1 WA Tomorrow	8,851	9,365	9,974	10,697
Scenario 2 CoR	9,199	10,367	11,917	14,252

Source: Pracsys 2022

Assumptions:

- + The Department of Planning, Lands and Heritage Land Use and Employment Survey was used to develop floorspace to employment ratios by centre type (i.e., SMC, Secondary, etc.)
- + Employment will increase based on additional commercial floorspace
- + Floorspace to employment ratios are constant
- + Full-time and part-time employment split remains constant

**Table 36: RSC Strategic Employment to 2041**

ROCKINGHAM STRATEGIC CENTRE	STRATEGIC EMPLOYMENT JOBS			
	2026	2031	2036	2041
Strategic Employment WAT	1,738	1,839	1,959	2,101
Strategic Employment CoR	3,263	3,677	4,227	5,055

Source: Pracsys 2022

Assumptions:

- + Strategic employment figures are a goal seek based on the City's Employment Planning Study.
- + Strategic employment has been annualised based on the RSC employment growth in the relevant scenario.
- + Strategic employment is needed to reach the defined ESS target (74%), there is no measured demand for the employment (unlike activity centre employment which is based on population growth).

The following major employment centres should be key locations for (strategic) employment growth over the longer term and these include:

- + RSC;
- + HMAS Stirling (Defence);
- + East Rockingham Industrial Area;
- + Port Kennedy Industrial Area;
- + North East Baldivis / North East Baldivis Industrial Area; and
- + Baldivis – Kerosene Lane.

It is worth noting that the State Government announced in 2022 that the Planning Investigation areas in North East Baldivis were suitable for future urban growth. More detailed planning is required, however, the City's focus is to prioritise these areas for employment generating land.

## EMPLOYMENT SUMMARY

- + The City's employment is generally organised in Activity Centres and Strategic Employment Areas, the former relies on local population and businesses within the hierarchy of centres, and the latter relies on the competitive advantages of an area (i.e. resources and location). The RSC and Rockingham Industrial Areas are the primary locations to accommodate strategic employment.
- + To reach the City's ESS target of 74%, an employment gap of between 31,000 and 40,000 jobs exists in the City without considering future employment land (not activity centre based) and catalyst projects in the RSC.
- + The RSC will require an additional 2,100 to 5,100 jobs in the RSC and 6,400 and 11,700 jobs on other employment lands.
- + Greater concentration of employment is needed for the RSC to achieve the regional ESS target; previous *Employment Planning Study* indicates the significance of integrating and activating the existing primary regional institutions; business services for nearby industrial areas, and tourist activities.
- + To support the additional employment estimates, the RSC would need an additional 126,000m<sup>2</sup> to 273,000m<sup>2</sup> in commercial floorspace; an additional 733,000m<sup>2</sup> to 1,330,000m<sup>2</sup> in light industrial floorspace uses would be required on other employment lands.
- + The provision for office, accommodation, and education floorspace should be located in Precinct 1 as suggested by the *Needs Assessment*.
- + The following areas are identified as priorities for employment growth: RSC, HMAS Stirling, East Rockingham Industrial Area, Port Kennedy Industrial Area, and Kerosene Lane (Baldivis).
- + The City strongly advocates for the need to ensure future planning in the North East Baldivis Area is focussed on employment generating lands.

## 4.3.5. INDUSTRIAL ACTIVITY

### WESTERN TRADE COAST

Historically, most strategic industrial land in the Perth and Peel regions has been used by large-scale industries, often associated with the State's resources, such as oil refining and processing. The Western Trade Coast was created for strategic industry and comprises an agglomeration of activities including the Kwinana Industrial Area, Rockingham Industrial Zone, Australian Marine Complex and Latitude 32 industrial area.

The Kwinana Industrial Area and Rockingham Industrial Zone (RIZ) accommodate a cross-section of industries ranging from fabrication and construction facilities through to large-scale processing operations such as alumina, nickel, titanium and oil refineries. The area is served by deep-water port facilities and has access to regional road and rail networks.

It is projected that within the Kwinana Industrial Area and RIZ, 775 hectares of land will be required by the time the population in the Perth and Peel regions reaches 3.5 million. The economic profile of the area is not proposed to change, with manufacturing remaining a dominant sector for employment.

The RIZ is prime industrial land at the centre of the Western Trade Coast and has been designed to play a key role in the economic growth of Perth's south-west corridor. Covering 1,150 hectares, the estate includes precincts developed for commercial, light industrial, port-related and general/heavy industry.

The RIZ is ideal for warehousing, logistics, maritime, automotive, chemical, gas, petroleum, fabrication, defence industries and heavy engineering.

Major projects underway or recently announced in the RIZ include:

- + East Rockingham Waste to Energy facility (under construction);
- + Woodside's proposed H2Perth hydrogen and ammonia production and export hub;
- + EcoGraf's proposed graphite processing facility; and
- + FYI Resources' proposed High Purity Alumina processing facility.

East Rockingham has a total of 401.94 ha of undeveloped land (net of environmentally constrained land) zoned General Industry and Special Industry and 109.63 ha of vacant developed land in Light Industry, General Industry and Special Commercial zones. Applying current employment density estimates provides capacity for a further 5,880 employees. The breakdown is shown in **Figure 26**. It shows a total capacity for additional employment in existing industrial estates (East Rockingham and Port Kennedy) of around 7,600.

	Area (ha)	Zone	Multiplier	Employment Capacity
<b>EAST ROCKINGHAM</b>				
Patterson Rd	121.30	General Industry	0.1021	1,188
Mandurah Rd	73.14	General Industry & Special Industry	0.1021	716
East Rockingham (North)	207.50	General Industry & Special Industry	0.1021	2,032
Dixon / Day Rd (net)	5.15	Light Industry	0.0503	103
Dixon Rd West (net)	58.43	Light Industry	0.0503	1,163
Patterson Rd / Ennis Ave (net)	40.95	General Industry	0.0766	535
Enterprise Way (net)	5.10	Special Commercial	0.0343	149
				<b>5,884</b>
<b>PORT KENNEDY</b>				
Port Kennedy (Net existing)	9.52	Port Kennedy Business Zone	0.0343	277
Port Kennedy (Undeveloped)	66.42	Port Kennedy Business Zone	0.0457	1,452
				<b>1,729</b>

**Figure 26: Industrial Zone Employment Capacity**

Source: Syme Marmion and Co 2020

### **AIR QUALITY BUFFER**

A revision of the Kwinana Air Quality Buffer (illustrated on **Figure 25**) will allow investment in industrial land, and development of new or established industries. The current buffer is in need of scientific review as it limits the development of job creation opportunities. There is an opportunity to define the buffer based on logical and credible scientific analysis, which would give credibility to the boundary, and provide a justifiable defence against competing land-uses into the future. The delineation of the buffer would allow the City to implement the approved planning framework that has evolved over many years for the RIZ and RSC. The rezoning of land adjacent to the existing buffer would unlock the potential of land that is currently vacant and support a planning framework that allows for a mix of transitional land uses such as service commercial, mixed business and 'bulky goods'.

The review could see the delivery of much needed development land for employment, and provide certainty for new development north of Dixon Road in the RSC. The City would be seeking a formal commitment from the State Government to undertake a scientific review to update the Kwinana Air Quality Buffer boundary which was originally set in 1988 (D20/139724).



*Figure 25: Existing Kwinana Air Quality Buffer*



## PORT KENNEDY INDUSTRIAL

Located next to the existing Port Kennedy Business Park, this proposed development will span over 49 ha, and will feature an additional 18 ha in wetland reserve and conservation space.

Expected to commence in 2022/ 2023, this staged development will create over 110 parcels, with lots ranging in size between 1,000m<sup>2</sup> and 9,000m<sup>2</sup> (larger lot sizes to suit individual business needs and size requirements can also be considered).

Zoned 'Port Kennedy Business Enterprise' (similar to service commercial with some light industry uses permissible), it will appeal to a range of businesses including showrooms, consulting rooms, offices, health studios, medical and veterinary services, warehousing, trades and service industries.

Port Kennedy has an employment density of around 21.9 employees per net developed hectare of land. This is a much higher employment density than East Rockingham, which has around 9.8 employees per hectare. This compares with a Perth metro average for all industrial estates of 17.8 employees per hectare.

It is estimated that the Port Kennedy Business Enterprise Zone has 66.42 ha of undeveloped zoned land. At prevailing density rates and allowing for a 25% net to gross adjustment, when fully developed this has capacity for around 1,450 employees. There is a further 9.52 ha of vacant land in the developed portion of Port Kennedy estate, with capacity for a further 270 - 280 employees. This gives a total additional employment capacity of around 1,730.

## FUTURE INDUSTRIAL

To allocate the City's employment floorspace targets spatially, it is noted that out of centre development will be driven by strategic employment opportunities, particularly associated with the Western Trade Coast and Westport; and population-driven light industrial services for the wider sub-region. The LCACS recommends the following major employment centres should be the locations for (strategic) employment growth over the longer term these include existing industrial areas such as East Rockingham Industrial Area and Port Kennedy, and potential industrial areas in North East Baldivis and Karnup.

### INDUSTRIAL SUMMARY

- + The Rockingham Industrial Zone (RIZ) plays a critical role in the economic growth of Perth's south-west corridor including developed precincts for commercial, light industrial, port related and general/ heavy industrial businesses. There are 775 hectares of land that will be required within the Kwinana Industrial Area and RIZ by the time the population in the Perth and Peel regions reaches 3.5 million.
- + East Rockingham has a total of 401.9 hectares of undeveloped land (net of environmentally constrained land) zoned as General Industry and Special Commercial; and 109.63 hectares of vacant developed land in Light Industry, General Industry and Special Commercial Zones.
- + The Port Kennedy Business Enterprise Zone has 66.42 hectares of undeveloped land and 9.52 hectares of developed land. East Rockingham and Port Kennedy have an additional employment capacity of around 7,600.
- + The LPS consider need and provision of future industrial land in the Karnup Urban Expansion Area and North East Baldivis Planning Investigation Area.



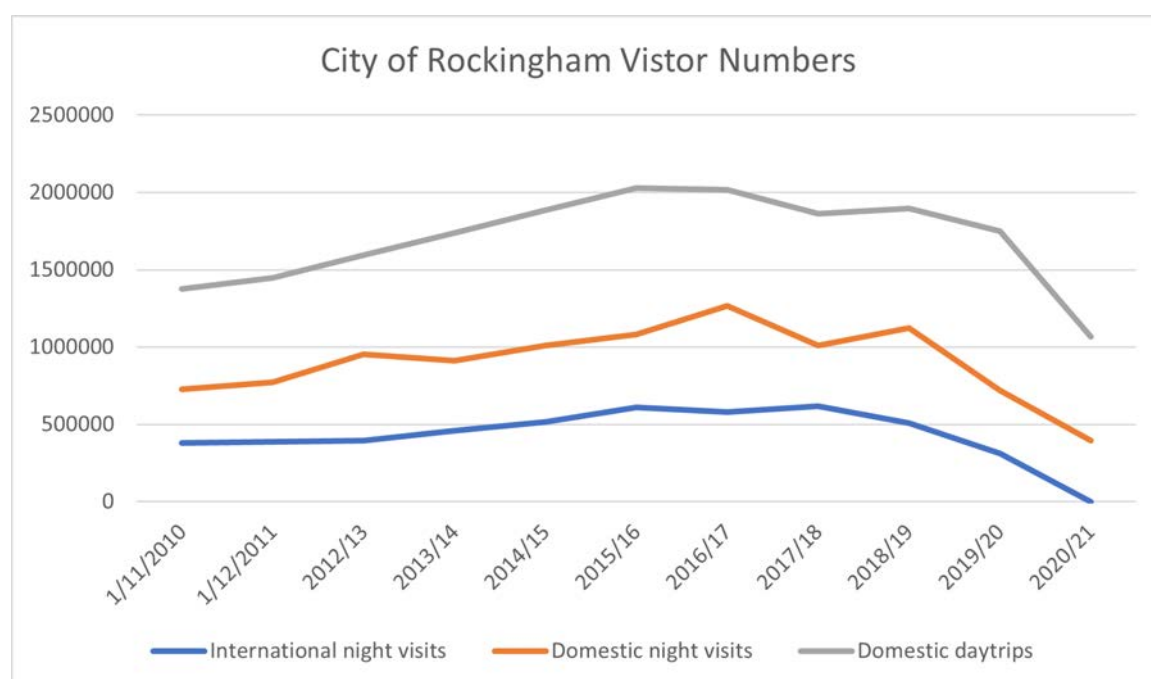
## 4.3.6. TOURISM

The tourism industry has the potential to complement strategic development and redevelopment in the City, provide employment opportunities, activate centres and enhance public transport system usage. While the needs and desires of tourists vary according to their origin and reason for visiting it is important to recognise that local residents and tourists are often seeking similar levels of attraction and amenity which provide reasons to reside and enjoy the natural and unique features of an area.

### VISITOR PROFILE

The total number of visitors to Rockingham has increased from 898,000 in 2016 to 1,122,000 in 2017. This is mainly due to a 28% increase in day trips from 2016 to 2017.

Breaking it down to international, domestic nights visits and domestic day trips; the City reached the peak of total visitor numbers around 2016/2017, then a declining trend occurred for domestic night stays and daytrips (worth noting this trend happened before the global pandemic as shown on **Figure 27**).



**Figure 27: City of Rockingham Visitor Numbers**

Source: id. Economic Profile 2021

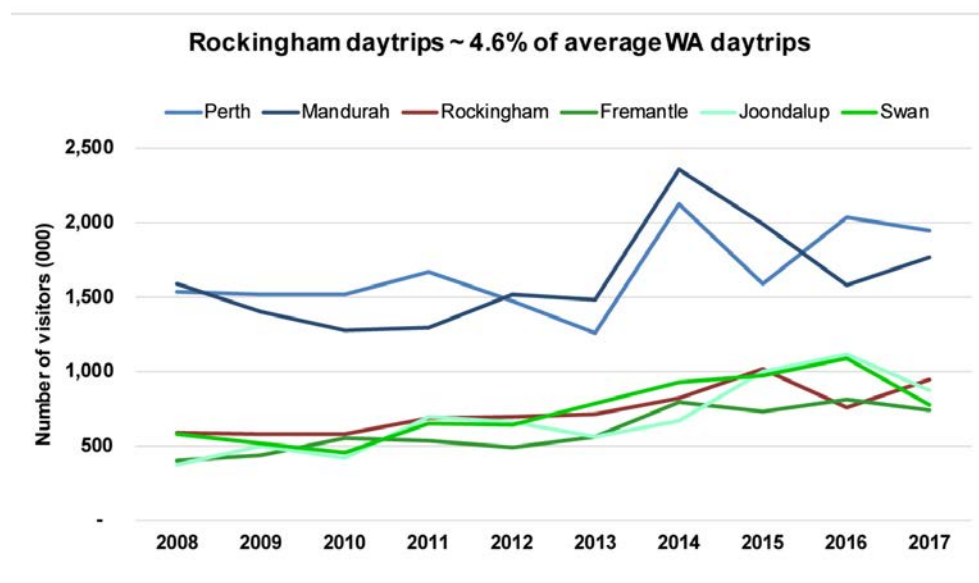
	Day visitors	Day visitors average spend	Domestic overnight visitors	Domestic overnight visitors average spend	International overnight visitors	International overnight visitors average spend
<b>2016 total</b>	736,000	\$100 per day	140,000	\$123 per night	22,000 (~ 592,000 nights)	\$81 per night
<b>2017 total</b>	945,000	\$100 per day	154,000	\$123 per night	23,000 (~ 624,000 nights)	\$81 per night

**Figure 28: Visitor Profile**

Source: The City of Rockingham 2019

It should be noted that a total of 1,016,000 day trips were completed in 2015, a visitation number which has not been achieved since. Though the spike in 2015 is believed to be as a result of the ANZAC centenary celebrations combined with the Pacific Masters one-day darts competition and the week-long Australian Darts Championships.

Day trips to Rockingham have steadily increased over time though are not nearly on the same level as the number of visits to Perth and Mandurah as denoted in the graph below (**Figure 29**).

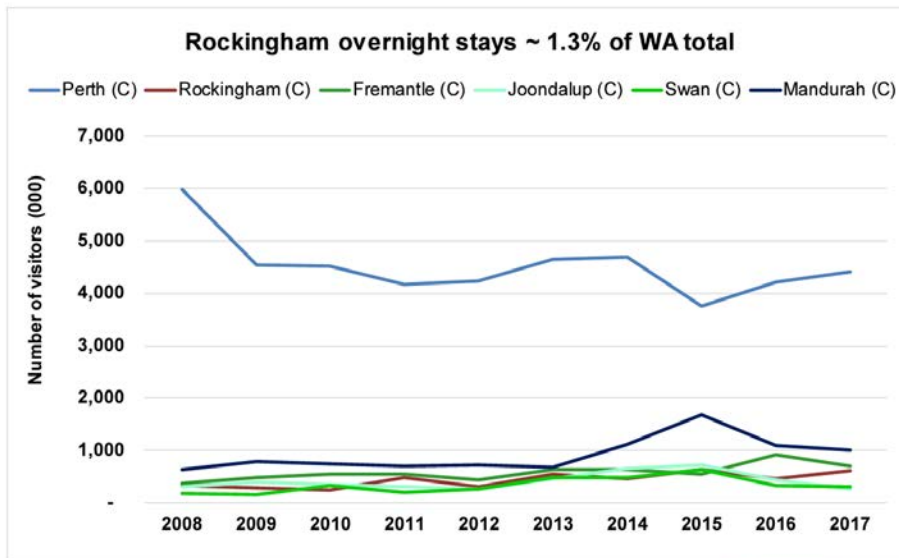


**Figure 29: Tourism Demand in WA by Area**

Source: The City of Rockingham 2019

An average of 169,600 visitors per year have stayed overnight in Rockingham for the past three years, with a variation in the length of their stay. In 2017 this was only 1.3% of the total overnight bookings in WA (**Figure 30**).

- + On average (2015, 2016 and 2017) 62% of total overnight visitors are intrastate, with an average of 2.3 nights stay per visit.
- + The balance of overnight stays comprises interstate (25%) and international (13%) with the average length of stay 7.5 and 27 respectively.
- + The majority (59%) of overnight visitors mainly come to Rockingham to visit friends and relatives (VFR) with 25% and 11% coming for holiday and business purposes respectively. This is the opposite to the WA data where visitors come to WA mainly for holiday purposes (45%) and only 28% come to WA with the purpose of visiting friends and family (VFR).
- + The most active age segment for overnight visits to Rockingham is the age group of 20 to 34 years.
- + The composition of travellers to Rockingham in 2017 is predominantly that of lone travellers or travelling with friends or relatives.
- + Families with children do not seem to spend many overnight visits in Rockingham, representing only 12% of the total.



**Figure 30: Rockingham Overnight Stays**

Source: The City of Rockingham 2019

## ROCKINGHAM AS A TOURIST DESTINATION

Rockingham's current competitive advantage as a Tourist Destination is identified by four pillars under the tag-line of: Where the coast comes to life

- + Eco – connection with nature – ocean, bushland and wildlife.
- + Adventure – active outdoor experience to suit all.
- + "Close but Away" – Easy and close access from CBD, airport, surrounding regions.
- + Day trip – family friendly, safe beaches, facilities, events and activities.

Current risks for the Rockingham region as a tourism destination include:

- + Lack of tourism service supplies
- + Further reduction in day and overnight visits to Rockingham
- + MICE Market does not penetrate Rockingham
- + Tourism Rockingham ceases to function

Further information is provided in **Table 37**.

Table 37: Tourism SWOT Analysis:

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> <li>+ Variety and quality of beaches               <ul style="list-style-type: none"> <li>- Water safety</li> <li>- North facing beach and foreshore area for calm relaxation, Secret Harbour and Safety Bay for surfing, windsurfing, kite surfing</li> </ul> </li> <li>+ Proximity to Perth, easy access by car or train</li> <li>+ Well presented and maintained city centre, parks, gardens</li> <li>+ Unique nature-based experiences and assets               <ul style="list-style-type: none"> <li>- Shoalwater Islands Marine Park, Saxon Ranger Dive Trail, Cape Peron, Children's Forest, Lake Richmond, walking and cycling paths, playground equipment, Naragebup Environmental Centre, Tuart forest etc</li> <li>- Penguins, Sea lions, Dolphins, Carnaby's cockatoos, Migratory birds</li> </ul> </li> <li>+ Active / outdoor lifestyle activities               <ul style="list-style-type: none"> <li>- Snorkelling, sailing, surfing, boating, fishing, skydiving, scuba diving, cycling, walking, golf courses</li> </ul> </li> <li>+ Baldivis Karnup wine trail</li> <li>+ Rockingham Historical Museum</li> </ul>	<ul style="list-style-type: none"> <li>+ Not enough events / attractions / things to do</li> <li>+ Atmosphere (activation)               <ul style="list-style-type: none"> <li>- Family friendly restaurant options, retail/food and beverage mix, retail hours</li> </ul> </li> <li>+ Accessibility               <ul style="list-style-type: none"> <li>- Parking and public transport</li> </ul> </li> <li>+ MICE (meetings, incentives, conferences and events) hospitality options and standards: No integrated conference and accommodation centre for MICE events</li> <li>+ Limited short stay accommodation to support overnight market</li> <li>+ Lack of identifiable destination and directional signage for visitors</li> <li>+ Lack of night time access to Penguin Island</li> </ul>
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> <li>+ Redevelopment of Rockingham foreshore area and Wanliss Street               <ul style="list-style-type: none"> <li>- In season and off-season activation</li> <li>- Target and grow day visitor market through events</li> </ul> </li> <li>+ Develop MICE opportunities – mid-tier conference supply chain, complemented by additional overnight options.</li> <li>+ Development of a streamlined experience for event organisers and delegates through industry collaboration and packages</li> <li>+ Industry to fund a dedicated platform to promote Rockingham – levy used for destination marketing</li> <li>+ Better transport within the city, hop-on/hop-off bus</li> <li>+ Walk trail development and collateral</li> <li>+ Rockingham Renaissance project</li> <li>+ Expand on history and cultural elements</li> <li>+ Collaborative marketing with Destination Perth, Tourism WA, Perth Convention Bureau and other local governments</li> </ul>	<ul style="list-style-type: none"> <li>+ Accommodation development and investment takes time</li> <li>+ Negative media coverage</li> <li>+ Competition with other coastal visitor destinations and with shopping/dining destinations</li> <li>+ Natural occurrences e.g. shark attack, industry spillage</li> <li>+ Misconceptions about reputation (perception)</li> <li>+ Winter tourists remain underwhelmed</li> <li>+ Decline in penguin population on Penguin Island</li> </ul>

Source: City of Rockingham, 2019.

## TOURISM SUMMARY

- + The tourism industry can be seen as an important driver underpinning the development of employment opportunities, centre activation, and public transport system patronage.
- + The total number of visitors to Rockingham reached its peak in 2016/17, followed by a declining trend (noting that this decline started to occur before the COVID-19 pandemic).
- + The City has weaknesses including there being insufficient events, attractions, and things to do. Furthermore, there are limited short term accommodation options to support the overnight tourism market.
- + The City has a long, unique coastline which can be capitalised to promote Rockingham as a coastal and adventure destination. Secondly, exploring better activation of the City's entertainment sector would assist through creation and marketing of iconic attractions and events ranging from small to larger scale.
- + Future improvements and provisions should be considered for coastal facilities and infrastructure such as pedestrian and cyclist movement, parking and public open space.
- + Targeting families as one of the demographics for the City's tourism industry is a priority, therefore, family friendly activities (such as Penguin Island) should be emphasised with accompanying support such as overnight stays and transport accessibility improvements.

## 4.3.7. RESOURCE MANAGEMENT

### BASIC RAW MATERIALS

Basic raw materials are a finite resource and access to basic raw materials with cost-effective proximity to future growth areas is important to housing affordability and moderating the cost of future infrastructure projects. During the preparation of PP3.5, efforts were made by the State Government to achieve a suitable outcome between development and areas identified for basic raw material extraction.

In the City, high-grade building sand and limestone are extracted to support the local construction industry, previously in the suburbs of Karnup and Baldivis. PP3.5 also identifies that the Baldivis – Kerosene Lane Urban Investigation Area PP3.5 should have consideration for sequential land use, allowing for extraction of limestone.

It will be important for this LPS to consider the potential sources of basic raw materials within the City, and where necessary establish appropriate protection mechanisms in LPS4 in accordance with SPP 2.4 requirements.

### AGRICULTURAL LAND

State Planning Policy 2.5 Rural Planning gives context to the importance of planning for priority agricultural land. The guidelines state that priority agricultural land is land that is of State, regional or local significance for agricultural and/or food production purposes due to its comparative advantage in terms of soils, climate, water (rain or irrigation) and access to services.

The identification of priority agricultural land is based on land evaluation standards utilising high-quality agricultural land data, removing land required for existing and future urban/development areas, public use areas and land required for environmental purposes. The land capability assessment considers the ability of land to support the land use without causing damage. It thus considers both the specific requirements of the land use, e.g. rooting depth or soil water availability, plus the risks of degradation associated with the land use, e.g. phosphorus export hazard or wind erosion.

The City's assessment has identified the following:

- + The majority of existing agricultural pursuits in the City are located on land classified for Urban Expansion and Rural Residential in the Framework, which would indicate that the continued use of the land for agriculture is likely to transition in the medium to long-term.
- + Land classified for Rural land use in the Framework is generally limited to the eastern side of the Kwinana Freeway, generally between Mundijong Road (to the north) and Karnup Road (to the south). The City has undertaken an assessment and concluded that this land is not suitable for identification and protection as 'priority agricultural land'.
- + The Rural land on the eastern side of the Kwinana Freeway is located entirely within the Peel-Harvey Coastal Plain Catchment and the encouragement of new agricultural uses in the area may be inconsistent with the objectives of State Planning Policy No. 2.1 – Peel-Harvey Coastal Plain Catchment which are intended to avoid and minimise environmental damage by preventing land uses likely to result in excessive nutrient export into the drainage system.
- + In 2016, agriculture, forestry, and fishing industries contributed the lowest proportion to Rockingham's employment at 0.7%.



While the protection of current agricultural pursuits and encouragement of new agricultural uses is no longer considered to be a strategic objective, this will not prevent the continued operation of existing agricultural pursuits or the consideration of applications to expand existing operations or for new proposals. Such applications would be assessed against the relevant State and local legislative and policy frameworks.

## RENEWABLE ENERGY

Urban form and density are highly correlated to energy consumption and emissions. In the previous analysis within this LPS, the City's low dwelling density settlement pattern is highlighted as a factor discouraging the use and viability of public and active transportation. This predominant urban form necessitates and encourages the use of private vehicle travel (as evidenced in Census data) which produces more greenhouse gas emissions. Potential for improvement through land use planning lies in encouraging a more consolidated urban form; introducing higher density around activity centres and public transportation nodes; active transport modes such as cycling, and walking should be also integrated to the wider network of public transport.

Since the beginning of the Energy Efficiency Program in 2012, has been successful in rolling out fundamental renewable energy technologies. To date, energy efficiency upgrades have been largely focused on initiatives such as solar PV panels and LED lighting upgrades, however, the City has reached a stage where these works have largely been implemented. With this strong foundation, long term planning is now required to guide future improvements in the City's energy performance and continued delivery of a sustainable energy future.

The City's Sustainability Strategy aims to improve energy efficiency through preparation of an Energy Management Plan and advocacy work with the development industry to encourage uptake of renewable energy systems to help reduce energy use.

### RESOURCE MANAGEMENT SUMMARY

- + Existing basic raw materials extraction sites in Baldivis and Karnup to be protected
- + Baldivis – Kerosene Lane Urban Investigation Area to ensure consideration for sequencing of land to allow for valuable limestone extraction.
- + The majority of the agricultural land in the City is classified as Urban Expansion and Rural Residential in the PP3.5 Framework which indicates that such land use will possibly transition and change in the medium to long term.
- + The large areas of rural land along Kwinana Freeway, Mundijong Road and Karnup Road have been identified as not suitable for priority agricultural land.
- + The City has installed solar panels across several of its facilities to reduce energy consumption; though a central energy monitoring system is needed for long term management.
- + The City's Sustainability Strategy advocates for the need to provide greater strategic direction to minimise energy use.

## 4.4 ENVIRONMENT

The City is situated in the unique bio-geographic region of Southwest Australia, which is classified as one of the 35 global biodiversity hotspots. These hotspots are identified on the basis of containing large numbers of endemic species, while also being vulnerable to significant threats. Habitat loss, invasive flora and fauna, pathogens, climate change and a host of other factors are putting the unique diversity of plant and animal life in south-western Australia under increasing threat.

In order to conserve the region's biodiversity and prevent further losses, it is critical that areas of high environmental value are appropriately protected as part of the LPS. In doing so, the LPS must be cognisant of the State Government's draft Perth and Peel Green Growth Plan for 3.5 million, which was developed in collaboration with the WAPC's PP3.5 framework to identify areas for conservation relative to future development. Additionally, the City prepared its Environmental Protection Planning Strategy (2022) to inform and guide planning for the natural environment.

The intent of the Environmental Analysis is to inform the preparation of the LPS by identifying significant local ecological and landscape values that require protection and integration into future planning for the City. The analysis was undertaken by City Officers, together with GIS mapping and analysis inputs from environmental consultancy Eco Logical Australia Pty Ltd.

The Environmental Analysis involved detailed analysis of four key elements requiring consideration through the LPS:

- + Element 1 - Ecological values
- + Element 2 - Landscape values
- + Element 3 - Coastal hazards
- + Element 4 - Bushfire risk

Each of these elements is explored in greater detail throughout this section.

### 4.4.1. NATURAL AREAS

As discussed in **Section 4.2.4** urban expansion on the Swan Coastal Plain and associated clearing of native vegetation has led to significant fragmentation and habitat loss for native flora and fauna. This is linked to the urban sprawl experienced in Perth in the early to mid-2000s and similar planning approaches experienced at a micro level within local government areas.

To inform the LPS, a technical assessment was undertaken of the ecological values contained within all natural areas across different zonings, land tenure and management arrangements. The following ecological values were considered in this assessment:

- + Threatened and Priority flora, fauna and ecological communities;
- + Carnaby's Cockatoo feeding, breeding and roosting habitat;
- + Resource Enhancement Wetlands (REWs), Conservation Category Wetlands (CCWs) and watercourses and their buffers;
- + Bush Forever sites;
- + Low represented vegetation complexes such as shrubs and bushes in the Swan Coastal Plain region and the City;
- + Patch sizes of remnant vegetation; and
- + The presence of ecological linkages.

For the purpose of this assessment, the City defines natural areas as all remnant vegetation, wetlands and watercourses, irrespective of ownership or management responsibility. Where these natural areas are located on private land, they are referred to as Local Natural Areas (LNAs).

A summary of the findings from the assessment is provided below.

### OWNERSHIP AND MANAGEMENT

The responsibility for the management of natural areas varies according to their local or regional significance. Areas of regional significance are subject to formal national or state protection mechanisms, including: State Conservation Estate, Bush Forever sites and Metropolitan Region Scheme (MRS) Parks and Reserves.

A total of 11,516 ha of natural areas were identified within the City, with 8,265 ha (72%) on public land and 3,250 ha (28%) on private freehold land (**Figure 32**). Of those on public land, an estimated 1,230 ha (11%) of natural areas are managed directly by the City. A further 3,890 ha (34%) of the City's natural areas are managed under State protection mechanisms. A large proportion of the City's natural capital forms part of the Rockingham Lakes Regional Park, managed primarily by the Parks and Wildlife Service of the Department of Biodiversity, Conservation and Attractions (DBCA).

These reserves are a vital component of the City's natural capital, underpinning its identity, prosperity, and lifestyle. They encompass a variety of landforms and ecosystems throughout the City's coastal, wetland and bushland environments and support a diverse assemblage of native flora and fauna. Many of these areas are recognised by the State and Commonwealth governments for their conservation significance for containing Threatened Ecological Communities, priority flora and fauna species or Conservation Category Wetlands.



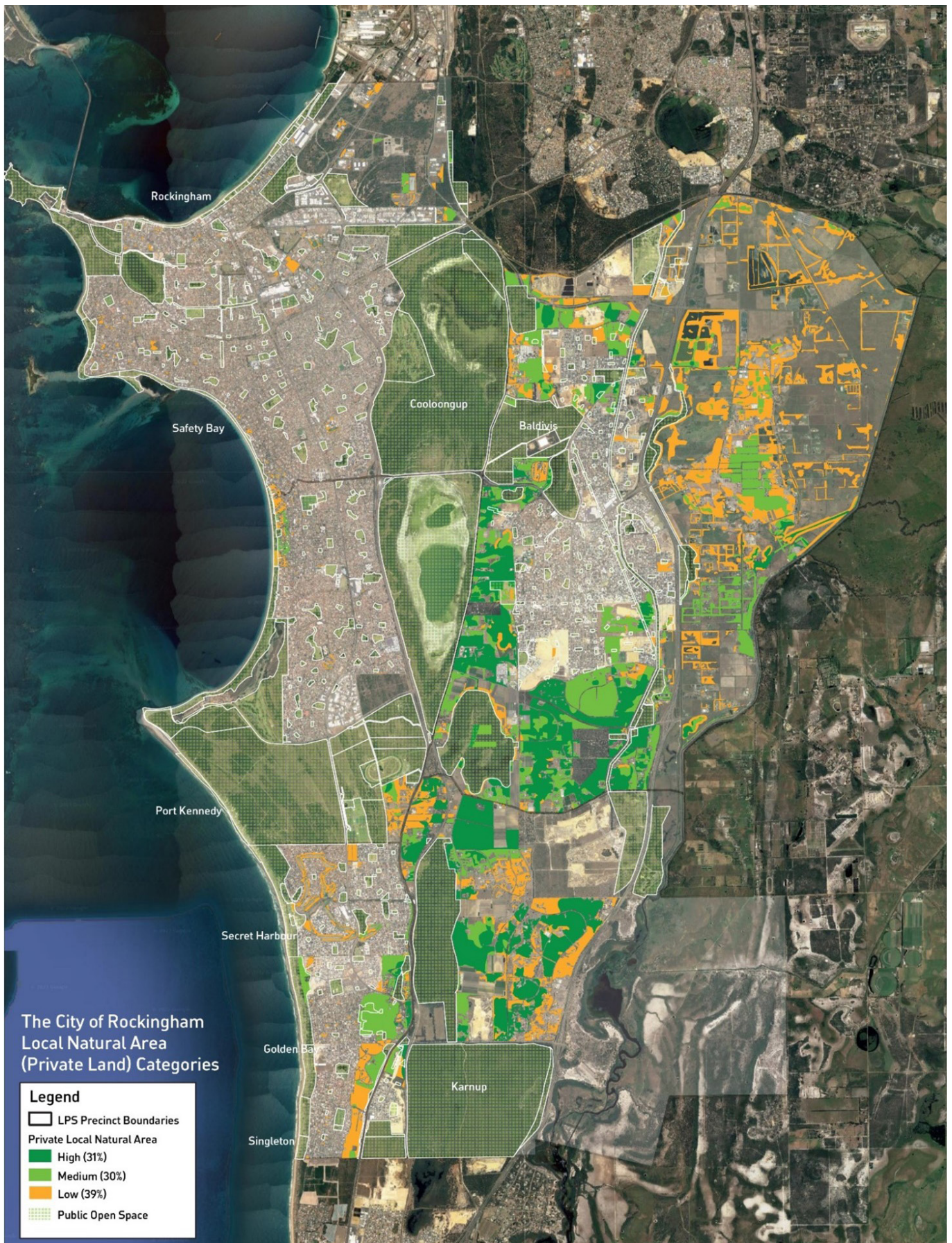


Figure 32: Natural Areas on Private Land



Given the variety, significance and scale of natural environments managed directly by the City, strategic direction is required to ensure conservation resources are managed in an effective and sustainable manner.

With regard to Scheme zoning, almost half of the City's natural areas are designated as 'Parks and Recreation' under the Metropolitan Region Scheme (46%), while 24% are zoned 'Rural' and 13% are zoned either 'Special Rural' or 'Special Residential' under the City's TPS2. The majority of all LNAs occur on land zoned as 'Special Rural/Special Residential' and 'Rural'.

## VEGETATION COMPLEXES

The dataset for vegetation complexes of the Swan Coastal Plain, as defined by Heddle et al. (1980), shows the pre-1750 distribution of vegetation complexes associated with various combinations of landform, soil, and rainfall along the Swan Coastal Plain south of Lancelin.

A total of nine vegetation complexes exist within the City, five of which are priority for conservation as they have less than 30% of their pre-European extent remaining on the Swan Coastal Plain, as shown in **Table 38**. Notably the Dardanup Complex and Guildford Complex have less than 10% of their pre-European extent remaining (shaded red).

The Guildford Complex is also at threat locally with only 14% of its pre-European extent remaining across the City (shaded yellow in **Table 38**). Most importantly, the majority of the Dardanup Complex and Guildford Complex in the City, occur on private freehold land (shaded purple). Future development proposed as part of the LPS must therefore have careful consideration for the potential impacts, such as land clearing.

**Table 38: Priority Vegetation Complexes**

VEGETATION COMPLEX	PERCENTAGE OF PRE-EUROPEAN EXTENT REMAINING			
	SWAN COASTAL PLAIN (2015)	Overall	CITY OF ROCKINGHAM (2016)	
			Private Land	Public Land
Dardanup Complex	7	42	91	9
Guildford Complex	5	14	86	14
Karrakatta Complex Central and South	14	47	57	43
Serpentine River Complex	10	33	53	47
Bassendean Complex Central and South	26	49	4	96

## ECOLOGICAL LINKAGES

Maintaining continuity in the form of habitat corridors or ecological linkages is particularly important so that species and genetic diversity are maintained over a wider area in the event that smaller areas are degraded or destroyed. Collectively, these natural areas form stepping stones of habitat which enables the movement and dispersal of native flora and fauna across the urban environment.

Several ecological linkages have been identified across the City, with the Rockingham Lakes Regional Park acting as the primary corridor. The ecological linkages considered in this assessment are 500 m wide and cover a total of 2,030 ha of LNAs and 6,834 ha of natural areas on public land.

The condition and value of LNAs within the City is threatened by direct impacts such as clearing for development and bushfire control, and indirect impacts from invasive flora and fauna, pathogens (i.e. dieback), uncontrolled access and changes to hydrological and fire regimes. Many of these impacts are already being realised across the Swan Coastal Plain and need to be managed relative to population growth and development in the future.

Due to the varying and numerous ecological values which exist across the City, it was necessary to capture these in a way which was meaningful and allowed them to be appropriately considered in preparing this LPS. As such, LNAs have been prioritised for protection based on the presence of the multiple overlapping ecological values. The priorities were determined by assigning each ecological value a unique score relative to its conservation significance. Each LNA was then given a total score according to the different values it contained and a subsequent priority of Low (score of 0-20), Medium (score of 21-30) or High (score of 31-60).

The values and scores are provided in **Table 40**.

A breakdown of the LNA priority categories is shown in **Table 39** and spatially on **Figure 32**. High Priority LNAs predominantly exist within Karnup and Baldivis and are typically associated with large patches of vegetation (>4 ha) that contain poorly represented vegetation complexes, are potential Carnaby's Black Cockatoo habitat and exist in close proximity to DBCA managed lands. Low priority LNAs mainly occur on 'Rural' and 'Special Rural/Special Residential' land as fragmented patches with lesser conservation value.

**Table 39: Representation of LNAs Across City**

LNA PRIORITY CATEGORY	TOTAL NO. OF LNAs	AREA (HA)	% OF NATURAL AREAS
Low	1,458	1,269	39
Medium	954	977	30
High	312	1014	31
Total	100	100	100



Table 40: Ecological Values and Scores

ECOLOGICAL VALUE SCORE	ECOLOGICAL VALUES
8 (higher significance)	Vegetation patch size > 4 ha
	Threatened flora, fauna and ecological communities
	Carnaby's Cockatoo habitat
	Conservation Category Wetlands (CCWs)
	Vegetation complexes with <10% remaining
	Vegetation within ecological linkage and adjoining Natural Area
5 (moderate significance)	Vegetation patch size 1 – 4 ha
	Priority flora, fauna and ecological communities
	Resource Enhancement Wetlands (REWs)
	Vegetation complexes with >10% but <30% remaining
	Bush Forever site
	Vegetation within ecological linkage and within 100 m of Natural Area Reserve
3 (lower significance)	Threatened Ecological Community (TEC) buffer
	Vegetation patches <1 ha
	Vegetation within ecological linkage and greater than 100 m from a Natural Area Reserve
	Watercourses and their buffers
	Priority Ecological Community (TEC) buffer

## BIODIVERSITY

The City is located within the Southwest Australia Biodiversity Hotspot. For millions of years, Southwest Australia was isolated from the rest of the continent by vast central deserts, resulting in astounding plant endemism. The hotspot's forests, woodlands, shrublands and heaths are also home to a wide variety of reptile species. Today, only 30 percent of Southwest Australia's original vegetation remains in pristine condition due, in part, to agricultural expansion. The City's reserves are home to a number of Threatened Species and Ecological Communities that are defined as Matters of National Environmental Significance (MNES) under the *EPBC Act* and as such, appropriate management and preservation of these areas is a legislative requirement. Previous desktop searches indicate that four Threatened Ecological Communities and four Priority Ecological Communities have previously been recorded within the City of Rockingham as shown on **Figure 31**.

Threatened or Priority Ecological Communities	Status - Federal	Status - State	Location (based on mapping from DPAW databases)
<b>Threatened Ecological Communities</b>			
Sedgeland in Holocene dune swales of the southern Swan Coastal Plain (FCT SCP19a)	Endangered	Critically Endangered	Numerous locations throughout the Quindalup dune system, in the west of the area
Woodlands over sedgeland in Holocene dune swales of the southern Swan Coastal Plain (FCT SCP19b)	Endangered	Critically Endangered	Numerous locations throughout the Quindalup dune system, in the west of the area
Stromatolite like microbialite community of coastal freshwater lakes	Endangered	Critically Endangered	Lake Richmond
Callitris preissii (or Melaleuca lanceolata forests and woodland, Swan Coastal Plain (FCT SCP30a)	N/A	Vulnerable	Garden Island, Point Peron
<b>Priority Ecological Communities</b>			
Microbial community of a coastal saline lake		Priority 1	Lake Walyungup
Southern Eucalyptus gomphocephala - Agonis flexuosa woodlands (FCT SCP 25)		Priority 3	One occurrence on the southern boundary of Rockingham
Northern Spearwood shrublands and woodlands (FCT SCP24)		Priority 3	Within Lake Cooloongup adjacent to Dixon Road Conservation Precinct and occurrences south of Mandurah Hill
Coastal shrublands on shallow soils (FCT SCP29a)		Priority 3	Occurrences south of Mandurah Hill

Figure 31: Ecological Communities

## NATURAL AREAS SUMMARY

- + The City is located within one of the Global Biodiversity Hotspots, yet, only 30% of the hotspots' original vegetation remains in pristine condition, due to agricultural expansion and urbanisation.
- + Environmentally significant LNAs (Medium to High Priority) currently lack protection through future rezoning and there is no guidance for integration of these areas into urban development through structure planning. The potential impacts of urban development on significant ecological values can be mitigated by ensuring priority LNAs are protected, integrated or enhanced through future land use planning (using a combination of structure planning and zoning mechanisms).
- + The policy framework for environmental planning and protection, particularly in relation to expansion of urban development in areas of high ecological value requires new approaches to ensure new development is balanced against optimal environmental outcomes.
- + Areas of significant landform and visual amenity should be protected, particularly where these overlap with high priority LNAs. Investigations to be undertaken to help determine future conservation areas.

## 4.4.2. LANDSCAPE VALUES

The State Planning Framework seeks to ensure that significant landscapes are identified and protected and that development proposals incorporate measures to retain or enhance landscape elements and vegetation. State Planning Policy 2: Environment and Natural Resources Policy elaborates on the importance of protecting and enhancing landscapes by stating that planning strategies, schemes and decision making should:

- + Identify and protect landscapes with high natural resource values (such as ecological, aesthetic or geological) and encourage the restoration of degraded landscapes;
- + Consider the capacity of landscapes to absorb development and the need for careful planning, siting and design of new development in a way which is sensitive to the character of the landscape; and
- + Consider the need for a landscape or visual impact assessment for development proposals that may impact upon sensitive landscapes.

There are a number of significant landscapes within the City that require protection from development. In terms of private land, examples of key landscapes include the ridge line and wetlands that run generally north-south along the eastern side of Mandurah Road, the natural dune system located on the western side of Mandurah Road in Golden Bay and Singleton and the elevated Bush Forever site along Doghill Road.

Many significant landscapes within the City are reserved for Parks and Recreation or Public Open Space. Examples include the Rockingham Lakes Regional Park, Port Kennedy Scientific Park, the City's coastal foreshore and numerous wetlands and Bush Forever sites. The protection of these landscapes is secured as they are reserved in the MRS/TPS, under the vesting/ management of public authorities and/or the subject of endorsed management plans.

In 2011 the City undertook a Visual Landscape Evaluation (VLE) of the natural dune system in Golden Bay and Singleton, to assess the area's natural landscape features and visual amenity. The VLE established that the landscape of the area has considerable visual character and contains important natural elements, valued by the local community, which were desirable to maintain. This includes the vista obtained from Mandurah Road that provides a positive natural/rural outlook across much of the VLE study area and the natural dune system that is a highly valued and significant natural asset that is worthy of ongoing preservation.

As part of the recent review of its Local Planning Policy 3.1.1 - Rural Land Strategy (RLS), landscape character assessments were undertaken of the remaining rural areas to identify the key landscapes and evaluate the extent to which these areas could absorb development without a detrimental impact upon the landscape and a loss of visual character and amenity. The majority of the land is elevated and well vegetated, providing little opportunity to accommodate a more intensive form of development without a detrimental impact upon the areas of environmental and landscape significance.

### LANDSCAPE VALUES SUMMARY

- + In providing a framework for future land use planning, the LPS aims to protect landscape values identified in the RLS, particularly where these values occur within Medium to High priority LNAs (which are illustrated on **Figure 32**). Further investigations to areas which should be protected from urban development will be required.

### 4.4.3. COASTAL PROTECTION

The City of Rockingham has over 37 km of coastline. The adjacent land, known as the coastal zone, supports a variety of recreation, conservation, and residential and commercial land uses. The coastal zone is highly valued by the community and underpins the City's identity, prosperity and lifestyle. The City's coastal zone is already subject to the impacts of coastal hazards, such as erosion and inundation, and it is expected that the vulnerability of these areas may increase in the future due to the predicted effects of climate change and sea level rise.

This Coastal Hazard Risk Management and Adaptation Plan (CHRMAP) provides a long term view of the potential future coastal hazards for the City, and highlights pathways to adapt to the changing future oceanic and coastal conditions. The CHRMAP aims to ensure the City is well placed to deal with impacts to the coastal zone, if and when those hazards arise. Development of the City's CHRMAP has followed the requirements of Western Australian State Planning Policy No. 2.6: State Coastal Planning Policy (SPP2.6) and supporting guideline documents.

A coastal hazard assessment was undertaken to determine potential extents of coastal erosion and inundation hazards over future planning timeframes to 2110. A risk and vulnerability assessment was then applied according to different sectors, with results highlighting the most vulnerable assets and areas along the City's coastline, for which a more detailed investigation of adaptation options was undertaken. The eight sectors evaluated are shown on **Figure 33**.

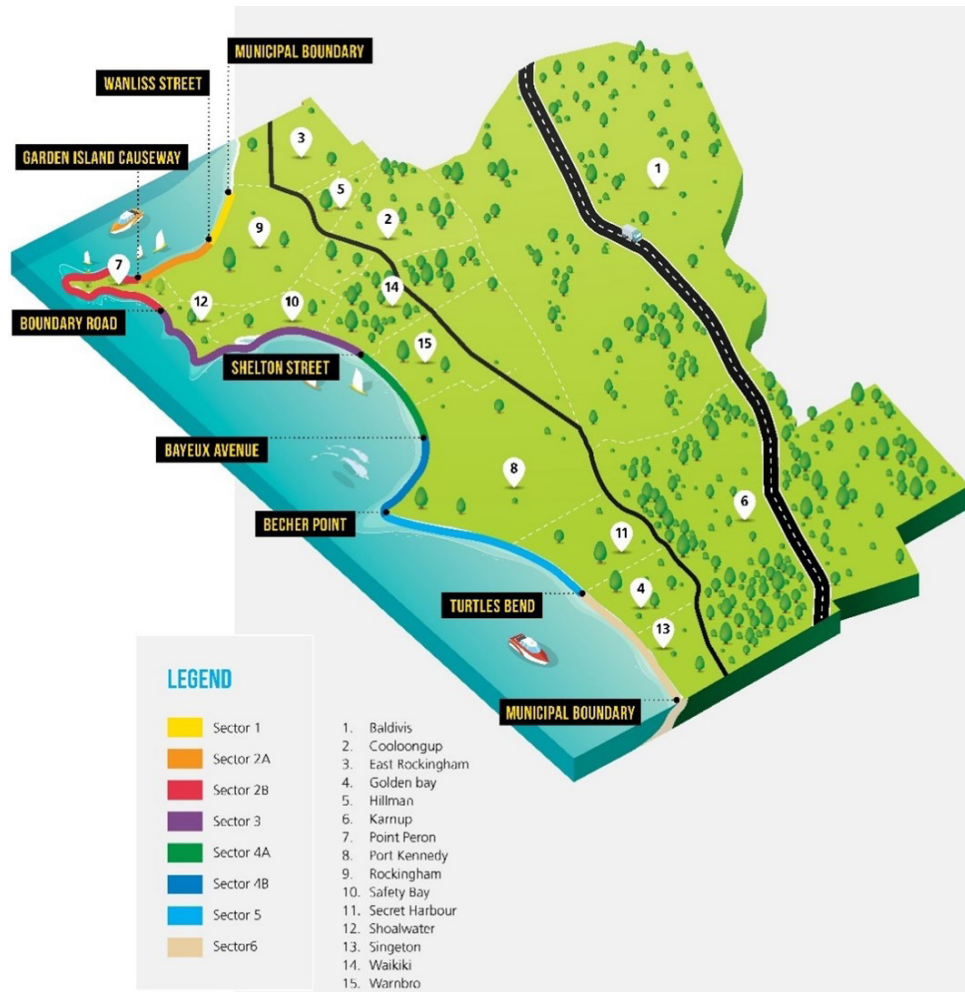


Figure 33: CHRMAP Sectors

## POTENTIAL IMPACTS

The two primary elements assessed in the CHRMAP are risks associated with:

- + **Erosion** – when sediment is transported away by waves, wind and currents, reducing the size of sandy beach; and
- + **Inundation** – the temporary flooding of a portion of land with ocean water, particularly during storm events or high tides

The impacts from coastal erosion are typically much more damaging than the impacts of inundation. For example, if a car park is temporarily inundated with salt water during a storm event, the water will subside and may not result in structural damage. If a car park is eroded during a storm event it is likely to require significant repair or complete replacement. As such, the potential impacts of erosion and inundation have been considered separately.

In terms of risk, coastal erosion hazards generally lead to the highest vulnerability in the short-term, as it has a greater capacity to cause damage to assets. The risk of coastal inundation, however, increases substantially over future planning timeframes and extends across large areas of low-lying land along the City's coastline.

Collectively, the total value of assets potentially impacted by coastal hazards, both erosion and inundation, to 2110 is over \$1.9 billion and includes:

- + Residential properties: 847 potentially at risk from erosion, 4,591 potentially at risk from inundation;
- + Coastal dune vegetation and usable sandy beaches;
- + Parks and lakes (including Lake Richmond);
- + Transport infrastructure such as car parks, dual use paths, and roads;
- + Stormwater pits, pipes, underground storage, drainage channels, and groundwater bores;
- + Commercial areas; and
- + Boat launching facilities, and jetty abutments.

## MANAGEMENT OPTIONS

SPP 2.6 provides the following hierarchy for consideration of risk management and adaptation options:

- + **Avoid** – identify future 'no build areas' and use planning tools to prevent new development in areas at risk now or in the future.
- + **Managed Retreat** – Withdraw, relocate, or abandon assets at risk; ecosystems are allowed to retreat landward as sea levels rise.
- + **Accommodate** – Continue to use land in developed areas and accommodate risk through raised floor levels, raised roads etc.
- + **Protect** – Use hard structures (e.g. sea walls) or soft solutions (e.g. dunes and vegetation) to protect land from the sea.

With consideration for the above management options, the CHRMAP includes an assessment of the pros and cons associated with each option. It also provides triggers and recommendations on a short-term (requires action before 2030) and long-term (potential pathways identified, with decision points occurring beyond 2030) basis.



## LONG-TERM PATHWAYS

### **SECTOR 1 MUNICIPAL BOUNDARY TO WANLISS STREET**

The assets in the sector are not predicted to be highly vulnerable in the short term. When affected by coastal hazards and no longer safe or serviceable, minor infrastructure should be removed and relocated or replaced (if necessary) in a less vulnerable area. Significant public infrastructure and residential and commercial property is likely to be highly vulnerable at some stage across the future planning timeframes, hence there may be overall benefit in using an interim protection measure for the sector, to delay the timing of this managed retreat.

### **SECTOR 2A: WANLISS STREET TO GARDEN ISLAND CAUSEWAY**

Significant public infrastructure and residential and commercial property is predicted to be highly vulnerable in the short term, requiring interim protection. Palm Beach and the area near Hymus Street are identified as potentially vulnerable in the short term and are therefore hotspots for a detailed options assessment of protection structures before 2030.

Long term protection is likely to be triggered when Esplanade and/or Rockingham Beach Road is subject to intolerable risk as the interim protection is no longer sufficient. Long term protection is identified in this sector, as opposed to managed retreat, given:

- + The importance of the commercial area at Railway Terrace to the community;
- + The social value of Bell and Churchill Parks to the community; and
- + The dual function of addressing coastal erosion and inundation hazards in this area, protecting a significant portion of private and public assets.

### **SECTOR 2B: GARDEN ISLAND CAUSEWAY TO BOUNDARY ROAD**

Some assets in the sector have been assessed as highly vulnerable in the short term, which could require a significant change in the management



Figure 34: Long-term CHRMAP Recommendations



approach for the area. The management pathway for the sector should look to avoid further permanent development in the coastal foreshore reserve.

When affected by coastal hazards and no longer safe or serviceable, minor infrastructure should be removed and relocated (or replaced if necessary) to a less vulnerable area. Due to the low concentration of vulnerable assets in the sector along Cape Peron and their lower economic value compared to other key vulnerable assets in the City, a managed retreat approach would be applicable for all built assets in this sector.

### **SECTOR 3: BOUNDARY ROAD TO SHELTON STREET**

The assets in the sector have been assessed as highly vulnerable in the short term, which could require a significant change in the management approach for the area. The southern side of Mersey Point has been identified as a hotspot for further detailed assessment of interim protection options in the short term, before 2030.

### **SECTOR 4A: SHELTON STREET TO BAYEUX AVENUE**

The assets in the sector are not predicted to be highly vulnerable until later in the century.

### **SECTOR 4B: BAYEUX AVENUE TO BECHER POINT**

The assets in the sector are not predicted to be highly vulnerable in the short term. The management pathway for the sector should look to avoid further permanent development in the coastal foreshore reserve.

### **SECTOR 5 SECRET HARBOUR FORESHORE PARK TO TURTLES BEND**

Some assets in the sector are predicted to be highly vulnerable in the second half of the century.

### **SECTOR 6 TURTLES BEND TO MUNICIPAL BOUNDARY (SOUTH)**

There are very few built assets predicted to become vulnerable before 2110.

**With a lifetime of 15 years, the primary focus of the LPS is on the areas that will have land use planning implications within this timeframe. In reviewing the long-term pathways it is evident that Sector 2A and Sector 3 require priority investigations to be undertaken to manage short-term coastal vulnerability.**

## **LAND USE PLANNING CONSIDERATIONS**

Western Australia's preference for addressing coastal hazards by way of a State Planning Policy is a less stringent framework than the legislative approach by other states. It requires that local authorities have due regard to the policy when preparing or modifying schemes and assessing development proposals.

The following planning instruments are generally consistent with those outlined in CHRMAP Guidelines (WAPC, 2019) and have varying applicability in the context of the City.

### **STRUCTURE PLANNING**

In areas where development or redevelopment of coastal land is proposed, all local structure plans should properly incorporate the requirements of the City's CHRMAP, to account for coastal hazard risks and ensure an appropriate coastal foreshore reserve is included. This instrument will have limited effect in the context of the City, given much of the land identified as vulnerable is already developed.

### **SPECIAL CONTROL AREAS (SCA)**

To ensure discretion over any further development proposed in coastal hazard areas and to identify areas likely to require eventual managed retreat. The SCA would be based on the coastal hazard mapping (a SCA for inundation and a SCA for erosion) in this CHRMAP and be reflected in the new Scheme, as required by the Planning and Development Regulations, Schedule 1, Part 5. The SCA would require planning approval for normally exempt development to ensure coastal hazards are considered in the decision-making process and enable the application of notifications on titles.

It is noted that some forms of development cannot be controlled by a SCA, such as works carried out by the State Government under the Public Works Act 1902. In-built flexibility would be required to permit certain public infrastructure on land prone to coastal processes, where deemed necessary and appropriate.

The purpose of the SCAs could be to:

- + Ensure land in the coastal zone is continuously provided for coastal foreshore management, public access, recreation and conservation;
- + Ensure public safety and reduce risk associated with coastal erosion and inundation;
- + Avoid inappropriate land use and development of land at risk from coastal erosion and inundation;
- + Ensure land use and development does not accelerate coastal erosion or inundation risks; or have a detrimental impact on the functions of public reserves;
- + Ensure that development addresses the *City of Rockingham Coastal Hazard Risk Management and Adaptation Plan* prepared in accordance with State Planning Policy No. 2.6 State Coastal Planning Policy (as amended) .

### **LOCAL PLANNING POLICY (LPP)**

If required, a new LPP would be linked to the SCA under the new Scheme and provide guidance for applicants and decision makers in relation to assessment procedures and development standards on land prone to coastal hazards. The LPP could outline coastal adaptation options from the CHRMAP, include 'as-of-right' criteria and performance-based criteria for achieving compliance with Scheme provisions, refer to design guidelines where applicable and establish procedures to manage risk when approving development in coastal hazards areas.

### **DESIGN GUIDELINES**

Design Guidelines would be referenced in the LPP and might specify appropriate design responses for individual development proposals (e.g. relocatable dwellings, prescribed setbacks, finished floor levels) and outline preferred options in an 'as-of-right' approval arrangement in compliance with the accompanying Local Planning Policy.

### **NOTIFICATIONS ON TITLE**

Require the provision of a Section 70A notification on the Title as a condition of any planning approval to alert prospective purchasers of the potential coastal hazard impacts on the lot, as required by SPP2.6. These notifications can only be applied where triggered by a Subdivision or Development Application.

### **TIME LIMITED PLANNING CONSENT CONDITIONS**

To allow, where appropriate, the temporary use of land in hazard areas until hazards materialise, while

ensuring that the City maintains a level of discretion over development in these areas. Time limits on development approvals could be set using coastal hazard mapping projections. If the approval expires before hazards materialise, the proponent may apply for an extension to the approval. If hazards materialise before the time limit expires, the City would consider requiring the demolition or removal of compromised structures under relevant legislative provisions.

### **DEVELOPMENT APPLICATIONS FOR SUBDIVISION AND ZONING**

Beyond existing scheme allowances, application for further subdivision should not be permitted within coastal hazard areas, except where a strategy for long term protection is adopted in key locations. If long term strategy for protection is in place then further development can be supported, provided developer contribution requirements or specialised area rates are in place to enable collection of funds for the construction, maintenance and upkeep of the seawall in the future.

### **OTHER INSTRUMENTS**

There are a range of other instruments, including 'transferable development rights', 'leaseback of land', 'land swaps' and 'rolling easements'. These instruments remain conceptual in the WA planning context and are not provided for under the State's planning framework at present. These concepts require further research to determine how they would be practically implemented, but may be considered by the City in future.

## **COASTAL PROTECTION SUMMARY**

- + CHRMAP identifies that Sector 2A: Wanliss Street to Garden Island Causeway; and Sector 3: Boundary Road to Shelton Street contain assets that are likely to be highly vulnerable in the short-term. Detailed options assessments would be required for both Sectors to ensure adequate management of coastal vulnerability.
- + All structure planning should account for the hazards identified in this CHRMAP and the requirements of SPP2.6. Existing and proposed structure plans should be reviewed to ensure they adhere to SPP2.6 and account for the risks identified in the CHRMAP. The primary mechanism for achieving this through structure planning will be the allocation of a suitable portion of land as coastal foreshore reserve. This foreshore reserve should be of adequate width to account for the 2110 coastal erosion hazard line, and also ensure a functional foreshore area will remain should this hazard extent be realised in the future.
- + The new Scheme should incorporate SPP2.6 and include vulnerable areas as SCAs. Two SCAs will be required, as different controls will be required in areas prone to erosion, compared to areas prone to inundation. The SCA for erosion is likely to exhibit a greater level of control and should, therefore, prevail in areas of both erosion and inundation hazard. The SCA classification should be used to facilitate land use changes and ensure development control over the identified areas.
- + Landholders that may be affected by coastal hazards by 2110 should be notified directly and by the application of notification on Certificates of Title where possible. It is important that the City notify the community and potentially affected landholders and stakeholders of the results of the CHRMAP and the extents of potential coastal hazards.

## 4.4.4. WATER RESOURCES

### WATER

Groundwater is an extremely valuable resource in the City of Rockingham. The City relies heavily on groundwater resources to irrigate over 600 hectares of parks, reserves and streetscapes which provide liveable communities for residents. The City is also home to numerous groundwater dependent ecosystems, including Conservation Category Wetlands and Threatened Ecological Communities. It is widely acknowledged that groundwater resources are coming under increasing pressure due to the compounding effects of ongoing use, a drying climate and population growth. Additionally, there are locations such as Lake Richmond and surrounds with high water tables meaning they are at risk of flooding from inundation as identified in the City's CHRMAP.

To explore alternative sustainable groundwater supply options for future irrigation purposes, the City commissioned an extensive desktop assessment into the viability of Managed Aquifer Recharge (MAR) to maintain water balance at the source. MAR typically involves collecting water above ground (such as stormwater runoff) and then injecting or infiltrating it back into groundwater aquifers under controlled conditions. This water can be stored in the aquifer for added abstraction, while also providing a range of environmental, social and economic benefits and efficiencies. The feasibility study identified a number of options for MAR, which should be further explored as a means of improving diversity of water sourcing and reducing groundwater dependency.

In accordance with the Department of Water and Environmental Regulation's (DWER) groundwater licensing requirements, the City measures standing water level and other key parameters at several monitoring bores across the municipality. At present, this information is not specifically analysed to detect the impacts of climate change, nor are the monitoring bores located strategically for that purpose. The City's Groundwater Operating Strategy accompanies the water licenses granted by the DWER and describes how groundwater resources will be used to provide sustainable irrigation supply. It is noted that this Strategy is currently under review and will assist in assessing regional impact.

To help manage water in the City, a planning policy (PP3.4.3 Urban Water Management) was prepared, with the aim to:

- + Ensure the application of Better Urban Water Management (WAPC, 2008), and any future versions of BUWM, as part of the planning approvals process;
- + Provide guidance on the City's urban water management requirements to ensure that planning and development proposals are dealt with in a consistent manner;
- + Ensure that appropriate measures are taken to manage catchments in order to maintain, or improve surface and groundwater resources; and
- + Promote alternative water conservation and sustainability practices that reduce reliance on traditional supplies.

## WETLANDS

A total of 429 ha of Resource Enhancement Wetlands (REWs) and Conservation Category Wetlands (CCWs) exist on private land within the City (refer **Figure 35**).

No state or local policies currently exist to protect wetlands and their buffers, particularly as part of urban development. TPS2 includes a number of provisions that seek to protect locally significant wetlands on Special Rural and Special Residential zoned land, including: buffers; land use restrictions; and development restrictions at Beenyup Pool (REW); Churcher Swamp (CCW); and Anstey Swamp (CCW).

These examples aside, majority of the CCWs and REWs across the City currently lack special planning controls and therefore protection, including their vegetated buffers which are needed to protect ecological attributes and functions. For example, Outridge Swamp (High Priority LNA) is a large CCW within Baldivis that exists predominantly within Rural zoned land and therefore has no protection under the existing TPS2.

### WATER RESOURCES SUMMARY

- + Groundwater is a valuable resource in the City and is heavily relied on, though is under threat from a changing climate, urbanisation, and the risk of flooding from inundation.
- + The City has adopted an Urban Water Management policy to introduce the opportunity of implementing Water Sensitive Urban Design Principles.
- + The City has commenced investigations into managed aquifer recharge as an alternative water source for irrigation (Managed Aquifer Recharge Feasibility Study 2018).
- + There is a limited ability to protect wetlands (REWs and CCWs) and their buffers. There is potential to prepare a Wetland Protection Policy to provide for better protection of wetlands and their buffers across private land within the City. This would require consideration for:
  - Identifying and ground truthing REWs and CCWs on private property.
  - Potential for SCAs or Memorials on Title.
  - Require development of Wetland Management Plans for new development in proximity to wetlands.
  - Stipulate minimum requirements for vegetated buffers.
  - Identify land use restrictions.
  - Investigate Landowner Conservation Grants, to assist with wetland conservation on private property.



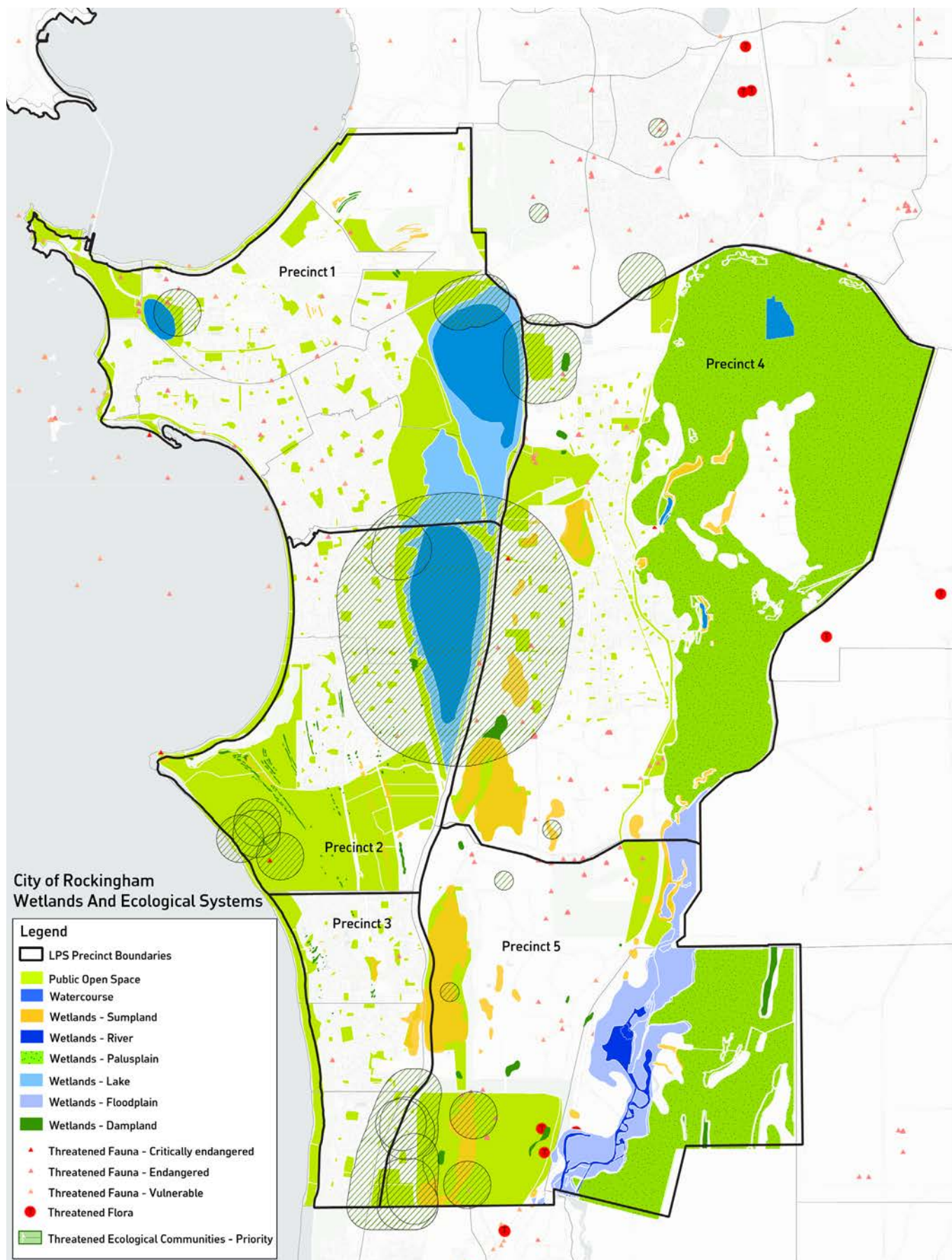


Figure 35: Wetlands and Ecological Systems

## 4.4.5. NATURAL HAZARDS

There are a number of natural hazards which may influence the future planning and development of the City. These primarily include coastal vulnerability, flooding, heatwaves and bushfire risk. Coastal vulnerability is addressed in **Section 4.4.3** Coastal Protection, this section focusses on hazards associated with bushfire and flooding.

### BUSHFIRE

Bushfire can be devastating for human settlements, and native flora and fauna. It can occur as a result of careless land management or through natural causes such as lightning strike. The hot, dry conditions within the City during summer make the risk of bushfire a real possibility. The City contains approximately 15,860 ha of bushfire prone vegetation (representing 64.6% of all vegetation). Bushfire prone vegetation consists of remnant native vegetation, unmanaged grasslands, native and non-native regrowth and revegetated areas. Bushfire prone vegetation is captured by the Department of Fire and Emergency Services (DFES) in the state-wide Map of Bushfire Prone Areas.

Under the State Hazard Plan – Fire an integrated Bushfire Risk Management (BRM) Plan is to be developed for local government areas with significant bushfire risk. This BRM Plan has been prepared for the COR in accordance with the requirements of the Guidelines for Preparing a Bushfire Risk Management Plan (the Guidelines) from the Office of Bushfire Risk Management (OBRM) within the Department of Fire and Emergency Services (DFES). The risk management processes used to develop this BRM Plan are aligned to the key principles of AS/NZ ISO 31000:2018 Risk Management Principles and Guidelines and those described in the National Emergency Risk Assessment Guidelines. This approach is consistent with State Emergency Management (SEM) Policy and SEM Prevention and Mitigation Procedure 1.

This BRM Plan is a strategic document that facilitates a coordinated approach towards the identification, assessment and treatment of assets exposed to bushfire risk. The Treatment Schedule sets out a broad program of coordinated multi-agency treatments to address risks identified in the BRM Plan. Government agencies and other land managers responsible for implementing treatments participate in developing the BRM Plan and Treatment Schedule to ensure treatment strategies are collaborative and efficient, regardless of land tenure.

Many bushfire prone areas are likely to contain important ecological values and the implementation of risk reduction treatment strategies may result in adverse environmental impacts. Suitable treatments will be determined on a site specific basis to achieve the best possible outcome relative to both bushfire safety and conservation objectives.

Bushfire prone areas strongly influence planning controls within the City with areas consisting of remnant native vegetation, unmanaged grasslands, native and non-native regrowth and revegetated areas. One of the primary challenges being experienced, is that in meeting bushfire requirements significant amounts of vegetation are being cleared in LNAs (see **Section 4.2.3** Rural Land Use). Therefore, under the current legislative and policy framework there is limited ability to control the extent of vegetation being cleared for development and bushfire purposes on Rural, Special Rural and Special Residential properties.



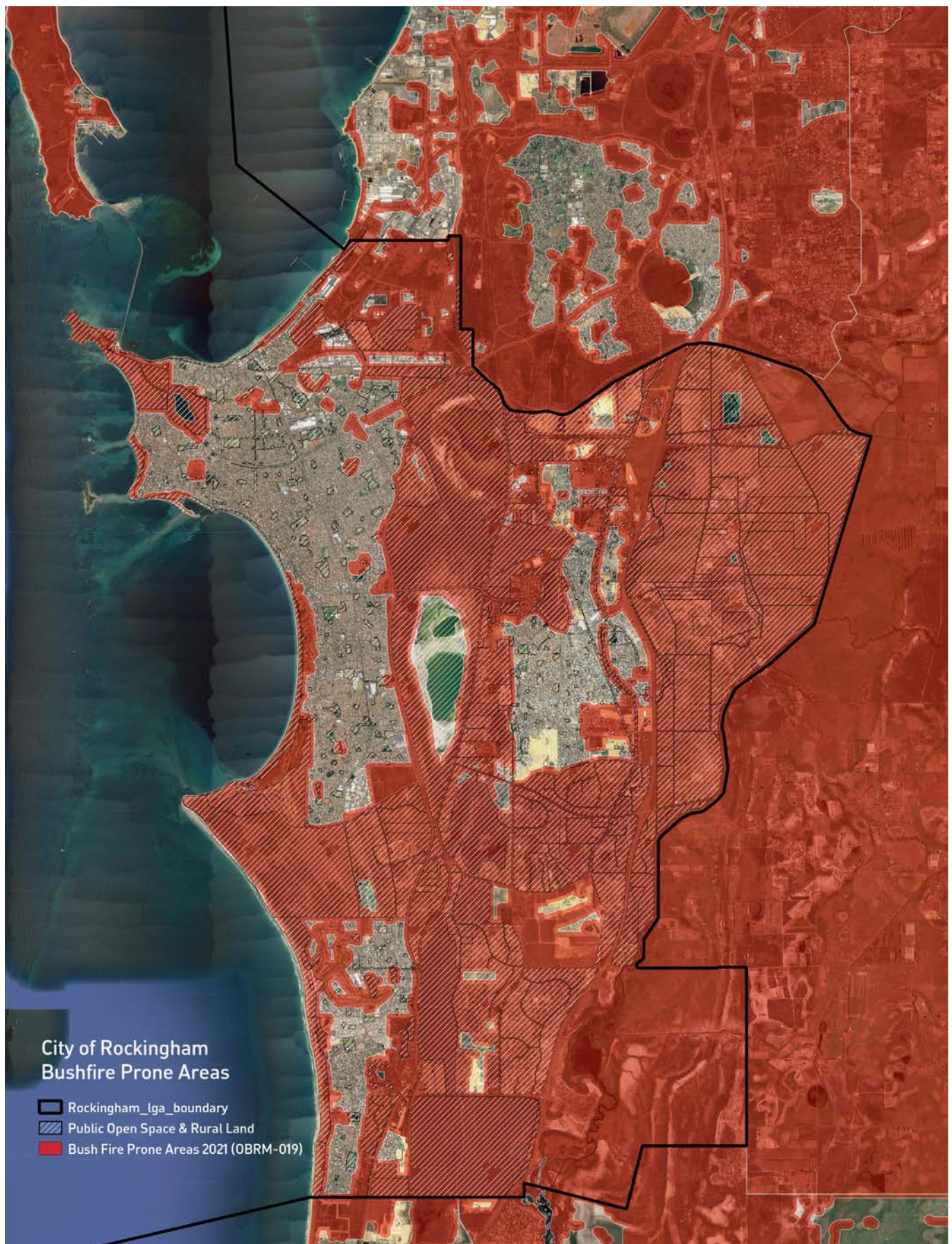


Figure 36: Bushfire Prone Areas



## HEATWAVES

Heatwave scenario is expected across the whole of WA and has approximately a 1% change of occurrence in any given year (Government of Western Australia 2017). Extreme temperature (over 38 °C) is expected after December. Heatwaves kill more people than any other natural hazard in Australia, and causes increased sickness and death, increase bushfire risk and disrupt electricity supply and train services.

As the City continues to urbanise, it is important that there is careful consideration for how housing design and urban greening can be implemented to limit impacts of 'urban heat island effect'. A practical way of achieving this is to increase tree canopy cover areas in public spaces, pedestrians and corridors; built form design can also play a role (for example by limiting dark surfaces such as roofs on new developments).

## FLOODING

The City has been experiencing flooding issues during the winter months in a number of locations across Port Kennedy. The volume of rainfall during the winter period has exceeded the capacity of many of the city's detention and retention basins, creating additional ponding outside of the basins with some areas retaining water for up to two months.

A study was undertaken in 2020 to investigate the determining factors which contribute to the basin inundation issues which have been experienced in the City.

The following areas have significant inundation hazards:

- + The low-lying southern coastline of Cockburn Sound between Wanliss Street and Cape Peron.
- + The low-lying, west and south-facing sections of Shoalwater and Safety Bay.
- + The low-lying areas of Safety Bay, Shoalwater, Peron and Rockingham.
- + The low-lying areas around Becher Point in Port Kennedy.

It was recommended that the City implement the following recommendations to their existing policies where appropriate:

- + Mandatory use of bore water from superficial aquifer for all City controlled assets (verge, POS, Landscaping);
- + Promote bore water use in private properties;
- + Mandate minimum requirements for at source infiltration in properties, roads and commercial developments;
- + Implementation of street tree program to increase evapotranspiration. This can be undertaken alongside retrofitting of tree pits and roadside rain gardens;
- + Planning documentation to clearly distinguish POS area for stormwater retention/detention versus active use area;
- + Implementation of silt and erosion management plans as part of development and building approvals to reduce potential pollutants entering and subsequently clogging stormwater infrastructure;
- + Routine and ongoing maintenance program for stormwater infrastructure to be implemented; and
- + Mandate permeable verge treatments and minimum permeable open areas in lots.

## NATURAL HAZARDS SUMMARY

- + LPS to ensure implementation of Bushfire Risk Management Plan.
- + There is limited ability to control the extent of vegetation being cleared for development and bushfire purposes on Rural, Special Rural and Special Residential property in the current legislative and policy framework.
- + Parts of the City, particularly around Port Kennedy, have been experiencing flooding issues. Potential solutions such as groundwater management and the incorporation of WSUD principles may be required.
- + The ongoing urbanisation and the sequential clearing of vegetation will worsen the effect of heatwaves. Potential improvements could be achieved through urban greening and building alterations such as the ban on dark roof son buildings.

## 4.5 TRANSPORT AND INFRASTRUCTURE

Transport planning is primarily the function of three State Government agencies, the Department of Planning, Lands and Heritage, the Department of Transport and Main Roads WA with the City providing input as a key stakeholder when required. The City is mainly responsible for local transport planning through preparation of structure plans within the City which 'fills-in' the local road network within the broad regional road network, providing local distribution and access roads, generally in accordance with the WAPC Residential Roads Policy DC 2.6.

In March of 2018, the State Government released PP3.5 Framework identifying that the City of Rockingham forms a key component of the south-west transport network, providing valuable links to the Greater Perth and Peel regions.

In recent decades, as cities and suburbs throughout Australia continue to grow and expand, they grapple with the challenges of meeting net zero goals and greater emphasis has been on improving transport through alternative modes not just adding additional rail and bus capacity. Focus should increasingly be on measures that will encourage both public transport and expand the popularity of 'active travel', which include cycling, walking, jogging and personal electric vehicles (e-scooters and e-bikes). In this way, improving sustainable transport options is an issue that addresses multiple priorities, including health and wellbeing, economic opportunity, public safety, traffic congestion, air quality and social inclusion.

### 4.5.1. PUBLIC TRANSPORT

Public transport options within suburbs are often fragmented and often do not align with people's schedules, reducing the practicality and propensity for usage in contrast to the ease of private car travel. Responsibility for public transport generally rests with the State Government and the Public Transport Authority (PTA). The City is served by a series of public transport nodes centred primarily around Rockingham but extend well beyond the boundaries of the City.

Improvements to the public transport network and services within the City are controlled by the State Government. The City's primary role is to work co-operatively with the State Government to ensure that existing services are improved, and new services are provided for its urban growth areas. Through TOD opportunities, public transport patronage may be increased at the local level, with further investment into the existing transit system, including establishment of a mid-tier transit system which facilitates enhanced local connections through modes such as light rail or trackless tram.

The City is actively seeking to encourage alternative transportation modes to reduce the negative impact resulting from heavy dependence on private car usage. Linking employment, mixed-use activity centres (incorporating infill housing) to allow and encourage more people to use public transport is part of the solution. Micro-mobility and active transport such as walking, cycling and e-vehicles are also critical and considered in enhancing the overall integrated transport and mobility network.

### RAIL NETWORK

#### **EXISTING INFRASTRUCTURE**

Rockingham is primarily serviced by the Perth-Mandurah train line which provides an efficient high frequency transport route for the City's residents. The Mandurah train line was opened in 2007 and accommodated approximately 15 million boardings in the 2020-2021 financial year, proving how vital the infrastructure has become to the south-west corridor of the Perth metropolitan area. The City contains two train stations, Rockingham and Warnbro. Rockingham Station is closest to the Perth CBD with a travel distance of 43.2km. It is the 14th busiest station in Perth (out of 73).



One of the primary challenges with the City's existing stations is the reliance on Park and Ride patronage, which contributes to higher than desired private vehicle movements for localised trips. It has also impacted on development opportunities with these challenges discussed in **Section 4.2.1**. Rockingham Train Station has been analysed in the case study below:

### **ROCKINGHAM STATION ACCESS STRATEGY**

The PTA's Route Utilisation Strategy (RUS) forecasts that patronage on the existing metropolitan rail lines should approximately double by 2031. As an outcome of the RUS, the PTA has initiated a Station Access Improvement Program to define future interventions and investment required to meet access demands and allow patrons to access stations in a safe and efficient manner.

If the current mode share of arrivals is maintained, there will be a requirement for additional parking at Rockingham Station. Land constraints adjacent to train stations makes providing more parking difficult and expensive, highlighting the importance of encouraging access using other modes such as walking and cycling. The aim of the Station Access Improvement Program is to accommodate the expected overall increase in patronage access to the stations, preferably using modes other than Park and Ride. It also provides an opportunity to integrate the stations with surrounding land uses and future planning initiatives, and therefore requires consultation with state and local government agencies.

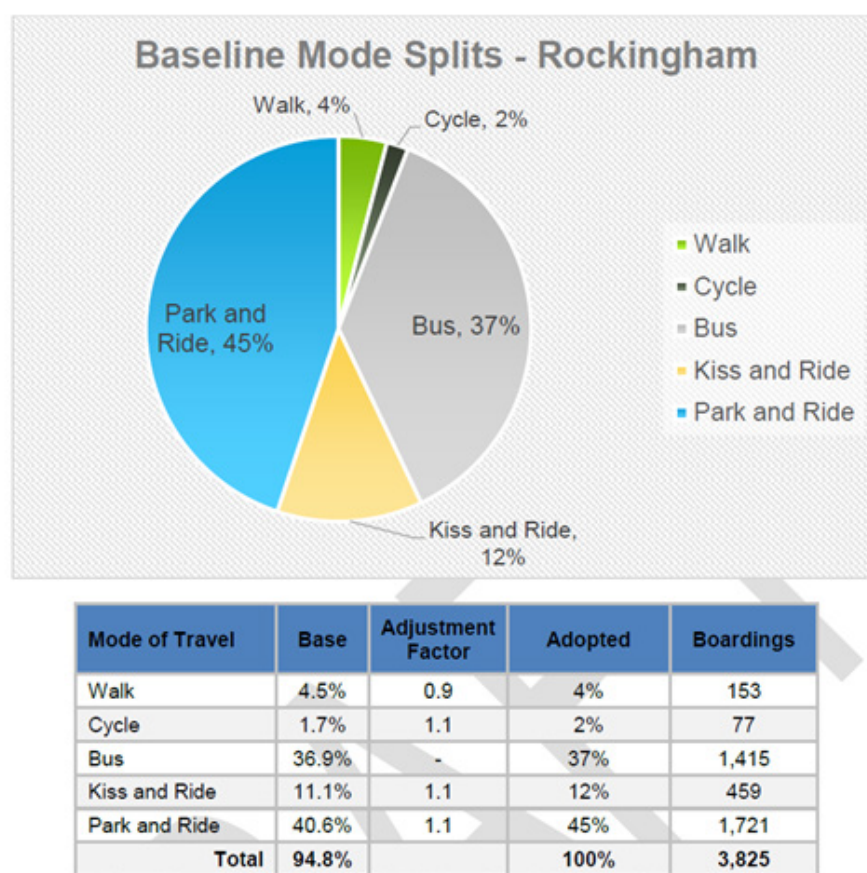
The Rockingham Station Access Strategy establishes the current catchments and access patterns to Rockingham Station and identifies future access improvement opportunities for each mode. Recommendations have been developed to support access needs to forecast 2031 passenger demands and align them with the planning policies and vision for the area. It provides a consistent, although station specific, approach to guide access planning and infrastructure improvements to 2031.

### **MODE SPLIT**

The existing mode split for access to Rockingham Station has been estimated based on a variety of data sources including 2018 Smart Rider tag on/off data, single day intercept surveys, and parking utilisation surveys undertaken by PTA. The existing mode split is summarised in **Figure 37**. It demonstrates that 57% of users (45% park and ride, 12% kiss and ride) access the station via car. Based on this mode split, the station typology is best categorised as a Park and Ride Station.

Given its strategic location in the RSC, the analysis result suggests the station is not functioning as it is intended, and thus represents a challenge as well as an opportunity for the City. A range of scenarios for mode split were presented to key stakeholders for discussion to arrive at a preferred target mode split for station access. These mode splits are based on capping the current parking supply and will therefore require a significant mode-shift to walking, cycling and bus. The improvement was a reduction to 47% of trips by car, meaning the station typology would remain a Park and Ride typology.

Extensive investigation into existing and future catchments for each access mode has been undertaken to understand the possible interventions and infrastructure available to enhance access and catchments for high priority modes (walk, cycle and bus) and ensure the target mode splits are attainable for Rockingham station. The resulting recommendations have been developed in consultation with stakeholders and in the context of relevant planning policies and the long term vision for the area. These recommendations include low cost, quick win treatments, alongside large aspirational improvements that will require support from the community and key stakeholders.



\*Average weekday train boardings for 19-23<sup>rd</sup> March 2018, based on PTA SmartRider tag-on data and cash payments

**Figure 37: Existing Rockingham Station Access Mode Split**

Source: Public Transport Authority

The highest target mode share increases are for access by walk and cycle, with 142% growth in boardings targeted for walking access patrons and 384% growth in boardings targeted for cycling access patrons. Recommendations have therefore been focussed on improving access for these two modes, with the following key recommendations:

- + Establish a new 1.5km high quality cycle route to service the southwest quadrant (Cooloongup), with cut-throughs at cul-de-sacs to follow the boundary of existing parks where possible to minimise conflict with vehicles;
- + Install a new shared path connection to service the north quadrant (Hillman), to tie in with the existing shared path route through Gabyon Park to open up a significant new walking catchment that is currently outside the 15 minute ped-shed;
- + Upgrade the existing shared path on the south side of Rae Road to a 3m wide red asphalt shared path to create a strong connection between the Station and the City Centre precinct;
- + Investigate opportunities for a trial bike-share scheme, with docking stations at Rockingham Station, the City Centre (shopping centre) and the foreshore, to capitalise on the station's function as both a commuter boarding and destination station, as well as its tourism attractions within a 15 minute bike ride from the station; and
- + Develop a station-specific wayfinding strategy, to improve legibility for pedestrian and cyclist travel to the station.

The above recommendations do not consider alterations to the existing urban structure.

### **PROPOSED INFRASTRUCTURE**

With regard to future rail infrastructure, the State Government's release of the PP3.5 Framework identifies Karnup as a key growth area likely to experience significant investment, and therefore important to identify and understand future land uses such as housing and community facilities. Karnup is also very well located for the purpose of future rail expansion; it also has direct access to the freeway system and is the ideal location to meet a general long-term shortage of employment land in the lower metropolitan south-west and Peel.

The State Government has committed to the development of a new train station at Karnup which will continue to drive investment opportunities within the City. Development of the future station will form part of the State Government's METRONET expansion project and provide opportunities to plan for future transport, housing, and recreational facilities within the Karnup Station Precinct and surrounding areas. To support development of the Karnup station, a precinct structure plan is being prepared by the DPLH to establish the planning framework that will guide development of the area when preparation of the station is considered in further detail.

### **BUS NETWORK**

The City is serviced by an expansive bus network managed by the PTA. Catchment analysis demonstrates that the vast majority of the City's established residential neighbourhoods have access to bus facilities.

Provision of adequate bus facilities in newer urban areas are delivered by the State Government, as demand dictates.

### **FUTURE TRANSPORT CONSIDERATIONS**

The Perth and Peel Transport Plan for 3.5 Million and Beyond includes proposals to construct rail, light rail and bus rapid transit. However, there are no plans to construct LRT (light rail transit) or construct a BRT (bus rapid transit) until after 2050. There are also no plans to construct any type of mid-tier rapid transit in the area south of Cockburn Central within the current planning timeframe (beyond Perth at 3.5 million).

It is essential that TOD opportunities are considered in the City to help reduce congestion, promote more sustainable transport, and to help catalyse future development. Three primary opportunities have been identified for further investigations.

### **ROCKINGHAM CITY CENTRE TRANSIT SYSTEM (RCCTS)**

Planning for the RSC has long been underpinned by a mid-tier transit system which enhances connectivity between key nodes in the RSC, and to catalyse development along the route. This intended route provides a link between Rockingham Station, City Centre, TOD Village, and the Waterfront Village.

Through the RPSP design process, a route has been formalised under the expectation that it will first be based on bus movements, with a transition to trackless trams or an alternate mode, to be considered in the future. The proposed route includes three key segments:

- + **Segment 1:** The southern segment runs from Rockingham Station to Chalgrove Avenue (via Contest Parade). It traverses through the City Centre with large sections of existing bus priority. No changes to the route are proposed in this segment.

- + **Segment 2:** The central segment travels from Chalgrove Avenue through the TOD Village to Dixon Road. It crosses Goddard Street (from Market Street) in a dedicated green crossing (active and public transport only). At Dixon Road, the route travels westward to Patterson Road (via Goddard Street).
- + **Segment 3:** The northern segment runs along Patterson Road into the Waterfront Village. The route traverses the precinct in a clockwise route, via Kent Street and Wanliss Street (before reaching Patterson Road and heading back to Rockingham Station). A terminus on Wanliss Street is possible.

The implementation of the RCCTS is expected to result in the following:

- + Increase connectivity between major activity nodes;
- + Support growth of existing and new business opportunities;
- + Increase public transport access from the Rockingham Train Station; and
- + Unlock potential to incentivise development, through TOD opportunities around transit stops.

#### **ROCKINGHAM – KARNUP TRANSIT CORRIDOR**

Refers to the route as illustrated on **Figure 16**. The primary purpose of this corridor is to help unlock opportunities for infill development with a focus on improving housing density and diversity. It will also contribute to an enhanced public transport network which better connects housing areas with employment.

#### **KARNUP - BALDIVIS - WARNBRO TRANSIT CORRIDOR**

Refers to the route as illustrated on **Figure 16**. The primary purpose of this corridor is to help unlock opportunities for infill development with a focus on improving housing density and diversity through the Karnup Urban Expansion Area.

## PUBLIC TRANSPORT SUMMARY

- + It has been identified that local planning has often prioritised private vehicle transport over other modes, which is evident in areas such as the RSC.
- + Many issues identified with transport within the City relate to car dominance and lack of appropriate public/alternative modes of transport. Opportunities for the strategy include but are not limited to:
  - Locate new urban centres around future mobility hubs and TODs to encourage increased use of alternative transport options;
  - Introduction of Central Area Transit (CAT) buses providing high-frequency services to the Rockingham Train Station and future mobility hubs; and
  - Intensification of land uses within the City Centre to justify the introduction of alternative modes of transport, particularly to health services, entertainment, and cultural centres.
- + The location of the City's train stations inhibits localised mode share, with most people relying on car travel to access public transport.
- + The Perth and Peel@3.5Million Transport Network discussed the identification of a site to support the addition of an additional passenger service of the Mandurah Line, which has been identified at Karnup. This is identified as one of the primary TOD opportunities in the LPS.
- + Establishment of a mid-tier transit system in the RSC would substantially improve TOD opportunities and assist with improving mode share by supporting more localised trips by public transport.
- + The proposed Read Street/Warnbro Sound Avenue Corridor aims to maintain a high level of accessibility to jobs, education and other attractions within the City, and to achieve the target of reducing the level of car use per person by 25% and use of public transportation to 15%. The future opportunities for public transportation network should focus around identifying infill developments, enhancing existing transport across the LGA, and maximise TOD opportunities between the City Centre and the Karnup Train Station where significant employment/ housing opportunities are predicted in the future.

## ROCKINGHAM LPS 2050 ASPIRATIONS



10-15% reduction in private vehicle trips



15% of all future local trips made by public transport



17% of all future local trips made by walking



8% of all future local trips made by cycling / e-rideables

Figure 38: Rockingham LPS Transport Aspirations



## 4.5.2. ROADS

Modelling undertaken by Jacobs Transport and Employment Study estimates traffic generated within the City of Rockingham would double from 225,000 to 454,000 per day by 2050 under the 'business as usual' scenario proposed in Perth and Peel @ 3.5 Million. The same modelling showed that when growth in Mandurah and Peel was accounted for, traffic through Rockingham would grow by 133%.

### ROAD NETWORK

The City of Rockingham is located approximately 40km from the Perth Central Business District and served by major Primary and Regional Distributor road network (refer **Figure 39**). Access within the City is primarily by local distributor roads, as described below.

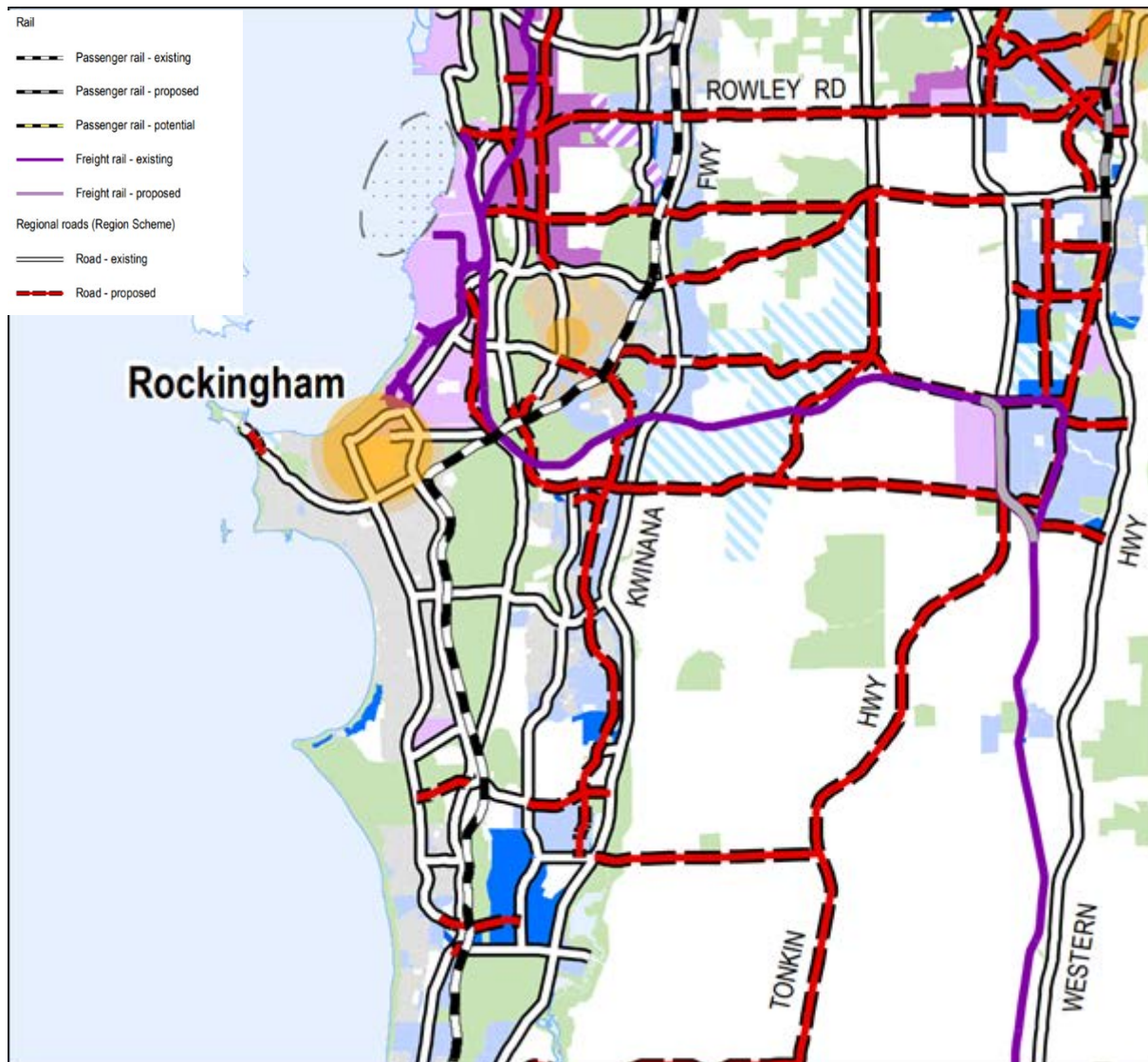


Figure 39: PP3.5 Transport Network

The existing regional road network passing through the City comprises the following two categories of roads, Primary and Regional. The following roads identified form crucial linkages to and within the City and should be factored carefully into future planning decisions.

### **PRIMARY DISTRIBUTOR ROADS**

Primary Regional Road reserves fall under the responsibility and jurisdiction of Main Roads Western Australia (MRWA). The sub-regions future regional road network is shown on and includes several new and upgraded primary distributor roads. They include:

- + **Patterson Road** – is a major arterial major road between Kwinana and Rockingham which partly services the Kwinana heavy industrial area.
- + **Rockingham Road** – Rockingham Road is a major arterial road connecting north Rockingham, through Kwinana and into South Fremantle.
- + **Thomas Road** – Thomas Road is a major east-west road connecting Rockingham Road in Kwinana's industrial area with Kwinana's urban area. Thomas Road between Kwinana Freeway and South-western Highway carries an average of 17,000 vehicles per day, with 14% being heavy vehicles. Given the growing population of the area, it's crucial that planning for Thomas Road enables long-term sustainable usage.

From July 2022 onwards, works will be undertaken on Thomas Road between Bombay Boulevard and Kwinana Freeway in Casuarina to enable drainage construction, service relocations, new road and intersection construction. This work will widen Thomas Road to two lanes in each direction and construct a new roundabout at Bombay Boulevard and Thomas Road intersection to enhance safety and access. A new shared path will also be built on the south side of Thomas Road connecting to the Kwinana Freeway path network and the existing path on Thomas Road west of Kwinana Freeway.

- + **Kwinana Freeway** – By 2050, the Kwinana Freeway and Tonkin Highway will provide the main network for north/south road movement within the locality.
- + **Ennis Avenue** – Ennis Avenue is a major arterial road connecting south Rockingham, through to Port Kennedy. In November 2021, the City commenced work on the next stage of the Ennis Avenue Shared Path Project, with the current phase of works to deliver a new section of shared path along Ennis Avenue between Carlston Road and Dixon Road. Once complete, the project will provide a north/south cycling link along Ennis Avenue from Rockingham Train Station to Patterson Road, and an east/west cycling route along Dixon Road between Patterson Road and Goddard Street.

### **REGIONAL DISTRIBUTOR ROADS**

Important Regional Roads which are under the responsibility of the City are:

- + **Mandurah Road** – Mandurah Road provides a direct link between Mandurah Road and Perth providing access to the residential and rural-residential sections of Baldivis. Since the construction of Forrest Highway, traffic along Mandurah Road has significantly declined given the availability of this more direct route into the south-west region.
- + **Mundijong Road** – Mundijong Road is an important east/west arterial road that supports crucial transport and freight from the City and to the Intermodal freight terminal. As outlined in the Perth and Peel @3.5Million Transport Network, there is consideration to realign the freight railway that currently passes through Mundijong. Although not directly related to the City, given the importance of this freight network, additional consideration should be given to how modifications to this route may impact the City should be explored in further detail.

- + **Kulija Road** – is a continuation of Mundijong Road and extends into the City Centre to connect with Dixon Road. As mentioned above, Mundijong Road is a crucial freight network as identified in the Perth and Peel @3.5Million Transport Network, therefore maintenance and upgrades are crucial to maintain an effective route into the Kwinana Industrial complex.
- + **Baldivis Road** – provides a north/south connection from Safety Bay Road and provides a crucial road network to the rapidly expanding Baldivis region. The City has been influenced by the local road network which comprises local distributor and access roads. The local road network within the City, especially within the south-west transit corridor, should be considered as key growth areas and investment for new infrastructure. It is during the structure planning and subdivision stages that the design of the road reservations and infrastructure such as shared and bicycle paths and road intersections are finalised.

In PP3.5, the following road upgrades are proposed: for the Kwinana–Rockingham–Karnup area:

- + Nairn Drive will connect to Wellard Road — via Kerosene Lane and Baldivis Road with a direct grade-separated crossing over the railway;
- + Stakehill Road will be extended west to Warnbro Sound Avenue and upgraded east of Nairn Drive;
- + Dampier Drive will be extended east of Ennis Avenue to Nairn Drive; and
- + Baldivis Road will be extended south to join Anstey Road.

Realistically, it will not be possible to accommodate a large projected increase in traffic within and through Rockingham without extensive road expansion. However, it is reasonable to assume that any practical expansion of the road network would not be able to accommodate the projected traffic, which would exceed the road network capacity and result in extensive congestion and delay within the sub-region. Therefore the support of alternative transport modes and change in behaviours to reduce car dependency is fundamental to a future City that achieves aspirations for liveability, wellbeing and sustainability.

## CAR DEPENDENCY

An increased population in the City will necessitate greater use of both private and public transport services and facilities. Private vehicles use street space inefficiently, often resulting in congestion and poor air quality. However, linear public transport systems can present a significant time penalty over private vehicle use due to multiple stops and longer distances, often limiting their reach.

An increased number of cars on the road will result in a need for increased road maintenance and improved traffic management to avoid future traffic hazards and congestion. More private transport will also increase the need for car parking spaces which is already proving a challenge within many Australian cities.

The increase in the use of private transport for trips to work (especially to the CBD) is simply not sustainable for the future given Perth's ever expanding urban sprawl and finite road capacity. Private vehicle ownership exacerbates existing road congestion and increases travel time and fuel consumption. Significant improvements and investments into the public transport network are required to encourage change in people's attitudes and rethink their travel habits from private vehicles to public transport, or other alternatives.

The City is very reliant on private vehicle ownership and the low density dispersed pattern of development together with low employment self-sufficiency are strong obstacles that hinders the City from

transitioning to higher public transportation usage. This is even more strongly evident as we come out of the COVID-19 pandemic restrictions which has resulted in a surge in the use of private vehicles, with urban mobility research suggesting that 16% more people across Australian cities surveyed expect to use private vehicles daily, post-pandemic compared to pre-COVID-19 (Transurban, 2022).

This was confirmed at the 2021 census, with only 4.7% of the City's residents travelling to work using solely public transport which (lower than the Greater Perth average of 6.5%), with a further 1.5% relying on a combination of car and public transport (comparable to Greater Perth average of 1.4%). This represents a reduction in public transport use of -4.4% when compared to statistics from 2016.

Consistent with other outer suburbs, approximately 55.6% residents of Rockingham travelled outside the local government area for work. An effective transition from private car use to higher public and alternative modes of transport use would greatly rely on the integration of local population and employment, which is a critical condition for viable growth.

The high level of car dependence in the City has evolved over time through a combination of:

- + Large areas of land being developed almost exclusively for low density residential (minimal mixed-use development within walking distance to end uses, e.g. public transport); and
- + A transport network and system that has been designed to encourage and assumes travel by car and provides far fewer opportunities for travel by public transport, cycling and walking.

The result is that many residents in Rockingham have little option other than to travel by car because:

- + They live too far from public transport, or the service is too infrequent. A significant proportion of public transport users travel by car to access the train (park and ride or drop off);
- + Limited numbers of people live within walking distance of their place of employment, shops and other services due to limited mixed-use and primarily low-density residential development; and
- + The cycling network remains poorly connected and most cyclists would be required to ride on major arterial roads, posing safety risks, likely diverting a significant portion of the potential cycling population.

The overall transport network as shown in the current state planning and transport strategies provides very limited detail on both road and public transport infrastructure and services that will be required to meet the needs of Rockingham over the next 20 – 40 years. The existing transport networks and system have been designed to encourage private car use and provide little opportunity for public transport, cycling, electric vehicles and walking. In future, more infill developments are required to provide a more consolidated urban form which will improve the viability and connectivity of the public transportation network.

## ROADS SUMMARY

- + The City's existing movement network is heavily dependent on private vehicle ownership and car travel, with approximately 80% of all trips being undertaken by this mode. Cities and centres with high car dependence have been shown to perform poorly in terms of overall accessibility, congestion, road safety, affordability, and the associated cost of the transport system.
- + In the wake of COVID-19, public transport use in the City has declined almost reducing by half when compared to the 2016 census.
- + When planning roads, it is necessary to design the road/street cross section line with the needs of the various road users by including cycling lanes, footpaths, and medians. Depending on how public transport will be further implemented within the City, it will also be necessary to allow space for light rail or bus transit within specific road reserves.
- + Future planning will need to have consideration for the planned upgrades / extensions of key roads as set out in the PP3.5 framework.

## 4.5.3. ACTIVE TRANSPORT / E-TRANSPORT

### CYCLING

Cycling is becoming increasingly popular in Western Australia. In addition to reducing traffic on our roads, cycling also improves health and fitness, is an efficient form of transport and forms a key component of a City's infrastructure to ensure a safe, sustainable, and resilient city.

The City is strategically positioned where the benefits of a comprehensive cycling strategy can be hugely beneficial for the sustainability of the City. In order to assist the City in working towards development of a cycling strategy, the following objectives are proposed to be addressed:

- + Identify a safe and efficient cycle network that utilises an appropriate level of service to connect between the residential areas, key trip generators and future key growth areas of the City;
- + Identify an implementation plan and description of works to be undertaken with costings and design suggestions;
- + Promote cycling as a healthy, efficient and cost effective transport mode within the City; and
- + Raise mutual awareness of the requirements of cyclists and other road users and improve the actual and perceived safety of cycling.

To support and encourage a safe, sustainable, and resilient city, the City has recently secured funding for the Rae Road Shared Path. This funding provided by the Department of Transport seeks to promote accessibility for pedestrians and cyclists along one of Rockingham's most important stretches. The full project will be approximately 7km long starting at Rockingham Station and running along Rae Road, Garden Island Highway and Safety Bay Road towards the Esplanade on the Rockingham Foreshore.



## E-MOBILITY

Electric scooters and bikes have become a common sight in many Australian cities. With the cost of living on the rise, the popularity of e-scooters has led to relaxation of government regulations to allow their use in the public and private sphere. E-transport options have the following positive impacts on the transport options within the City:

- + Convenient transport;
- + Accessible transport;
- + Green trips; and
- + Healthier rides.

Shared electric scooters have become increasingly popular throughout Australia with the City adopting this scheme in March of 2021 with electric scooter provider, Beam. These ride-sharing schemes provide low-cost, convenient, and portable rides that commuters can access anytime and anywhere via a dedicated app. These portable transportation solutions are changing the way people travel. Electric scooters provide a convenient, affordable, sustainable option for trips inside and outside the urban area.

Future mobility hubs around e-scooters and e-bikes can offer a new, low carbon solution to meet the city's mobility needs in a sustainable, efficient and convenient way. Despite the rise in popularity, it is still too early to tell how much of an impact they will have on the future of transportation, particular in outer suburbs activity centres. However, it cannot be denied that e-scooters and e-bikes have already strongly influenced the way in which we move within cities. Transport is ever changing and is moving away from fossil fuels in favour of electric vehicles, hydrogen buses and trains, and ride-sharing services.

In response to the opportunities arising from these mobility innovations and alternatives, the RPSP proposes a trial E-Transport route between the City Centre and Waterfront, relying on creation of new paths on Read Street.

### ACTIVE TRANSPORT / E-TRANSPORT SUMMARY

As the City grows, there will be more emphasis on providing high-quality, safe, and comfortable pedestrian and cycling infrastructure, especially around activity centres. With rising pressure on the road network, environmental and wellbeing, costs of private vehicle dependence and the expanding range of travel options, there are significant opportunities to develop and encourage active transport and the rise of e-vehicles.

As described, Rockingham is heavily car dominant and has lacked detailed design for integrating a comprehensive pedestrian and cycling network throughout the City. Opportunities to be explored include but are not limited to the inclusion of Urban Mobility Hubs to facilitate alternative modes of transport and an electric vehicle strategy, identifying how the City can be a leader in sustainable development for the south-west corridor. The preparation of a cycling strategy should also be further expanded on to enable further connection options to the surrounding locality and the CBD.

### 4.5.4. FREIGHT

The economic development, production and exchange of goods and services greatly depend on freight movements. There is an industrial area within the City as well as several commercial areas. The Royal Australian Navy has a presence in the area which generates a need for goods and services. Further, the agricultural land uses nearby requires sufficient means to deliver their product to the market, either locally or further airfield for export. Freight routes need protection, and they are normally planned as a 'freight corridor'. Freight routes are usually with higher speed, greater volume and are normally incompatible with residential land uses due to noise and safety issues.

The PP3.5 Framework identifies the road and rail routes which comprise freight movement in the sub-region, these are shown on **Figure 41**. Importantly, no major upgrades are proposed as part of this framework, though it is worth noting that the PTA are investigating an amendment to the freight rail reserve north of the RSC (**Figure 40**).

The City supports the new alignment due to the benefits it offers over other alternatives, it has been consistent in its position that the State Government is obliged to facilitate the relocation of existing sport and recreation clubs. The City has established potential relocation sites for the Clubs but there is no financial commitment to achieve the outcome. The action would be to request and advocate the State Government fund the relocation of the Rockingham BMX Club and Rockingham Archery Club from the Ennis Avenue Reserve, and in doing so, explore the opportunities for the southern expansion of the Alumina Road industrial estate. The resultant displacement of the sporting clubs presents an opportunity for the expansion of industrial development into the Ennis Avenue Reserve with Development WA being the logical developer (D20/139287).

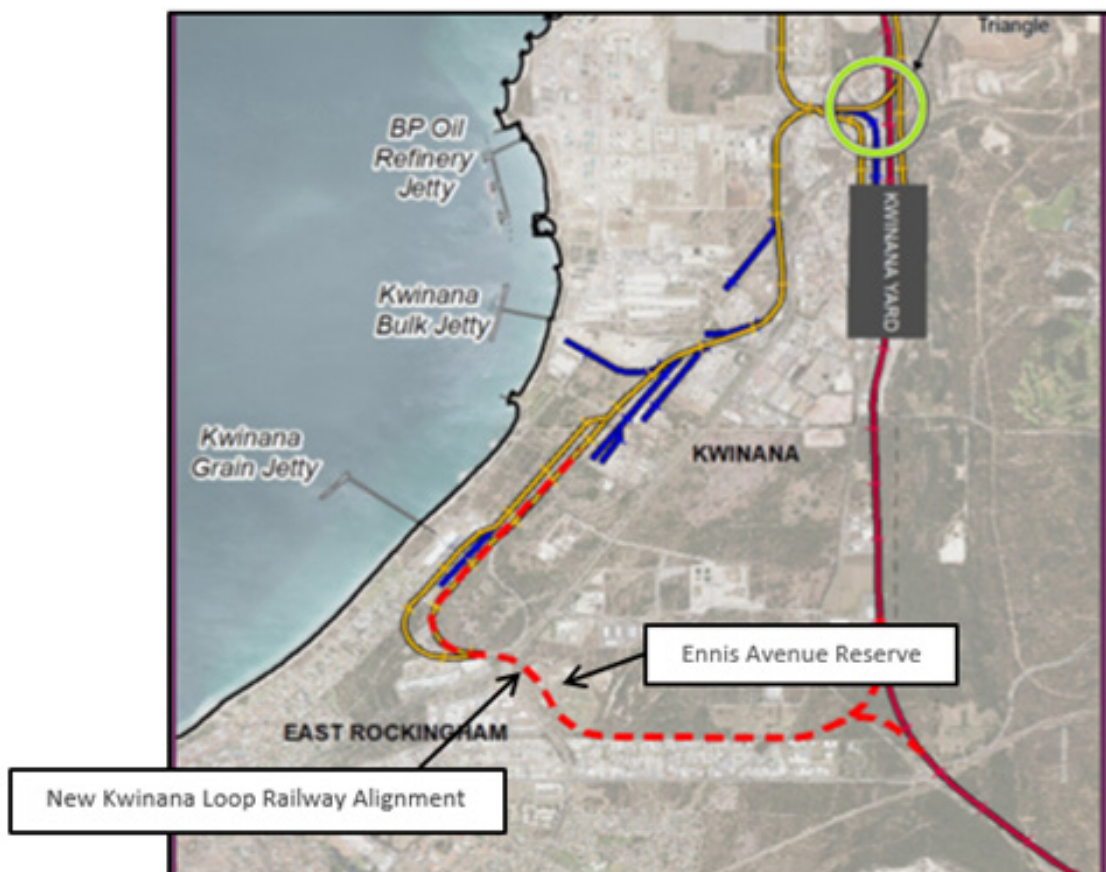


Figure 40: Proposed Kwinana Loop Railway Alignment

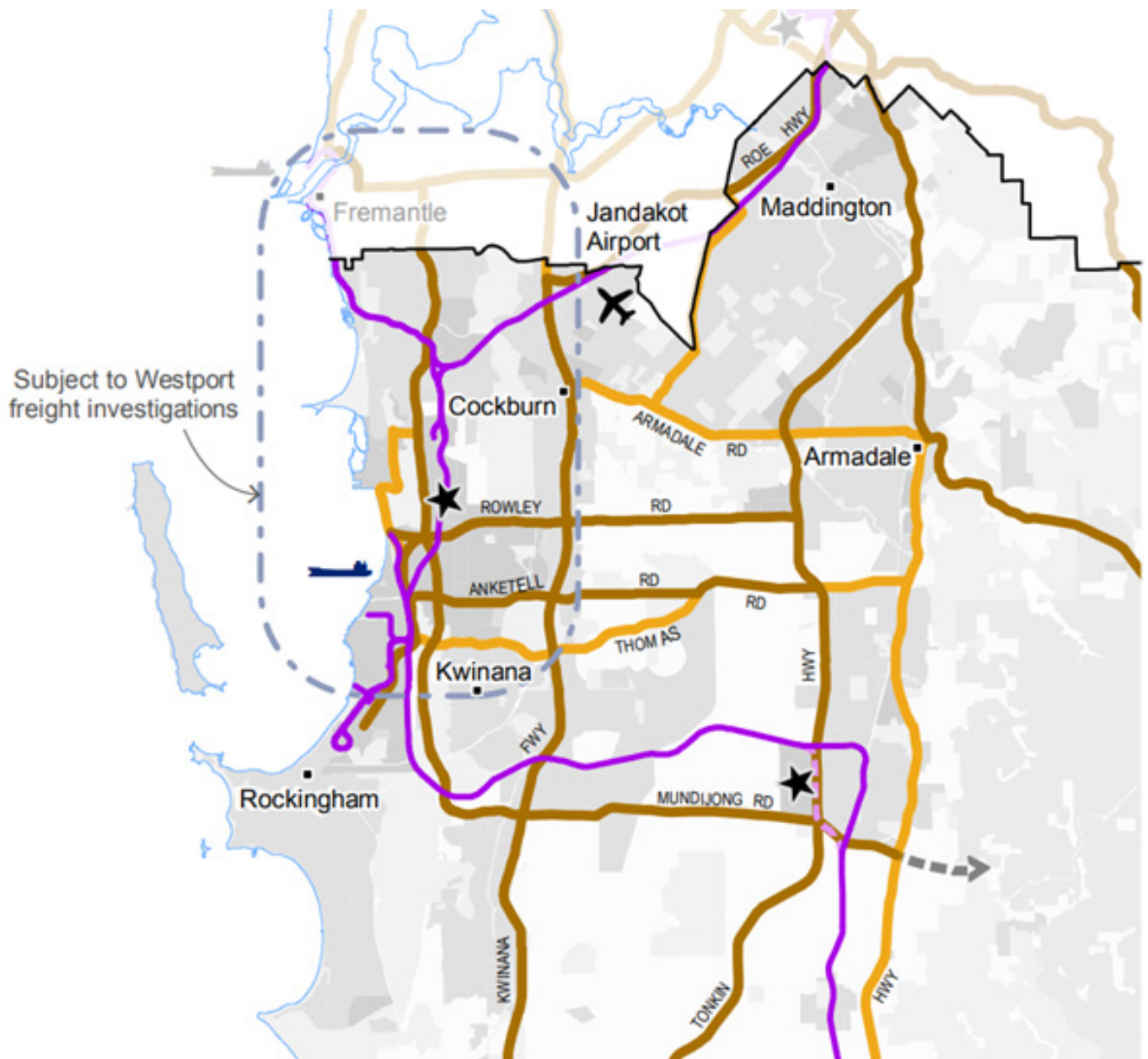


Figure 41: PP3.5 Freight Movement

Source: DPLH, PP3.5

## FREIGHT SUMMARY

- + Freight has played a critical role in the local economy of the sub-region for decades, having influenced the way in which Rockingham and the surrounding locality has expanded.
- + PP3.5 identifies several primary and secondary freight corridors to support freight to primarily the Port of Kwinana and the intermodal freight terminal along Mundijong Road, located in the Shire of Serpentine Jarrahdale.
- + A realignment of the freight rail reserve is being considered north of the RSC which will have implications on land use planning.

## 4.5.5. UTILITIES

This theme promotes the delivery of infrastructure in a coordinated manner by both public and private agencies, to ensure the close integration of land use planning and servicing. An understanding of issues and opportunities is summarised below. Generally, the intent at the local planning strategy stage is to avoid promoting development where land is not well serviced or if servicing is difficult to provide, this applies in both an infill and greenfield context.

### TELECOMMUNICATIONS

Telecommunication infrastructures should be developed in a manner that is compatible with the surrounding environments and will not adversely impact on the amenity of the area while providing an efficient communication network for the community. Following the analysis from SPP5.2, Western Australia has been identified with a lack of coverage in telecommunications such as mobile telephone networks, National Broadband Networks (NBN) fixed wireless broadband towers and amateur radio equipment. Below Ground Telecommunication Infrastructure refers to pit and pipe infrastructure used to house fixed line voice and data services.

In general, TPS2 does not permit Telecommunication Infrastructure in the Residential and Special Residential zones and in the Development Zone where an area is denoted as 'Residential' under a Local Structure Plan. In all other zones, the use is not permitted unless Council has exercised its discretion by granting Development Approval.

### SERVICING

#### WATER

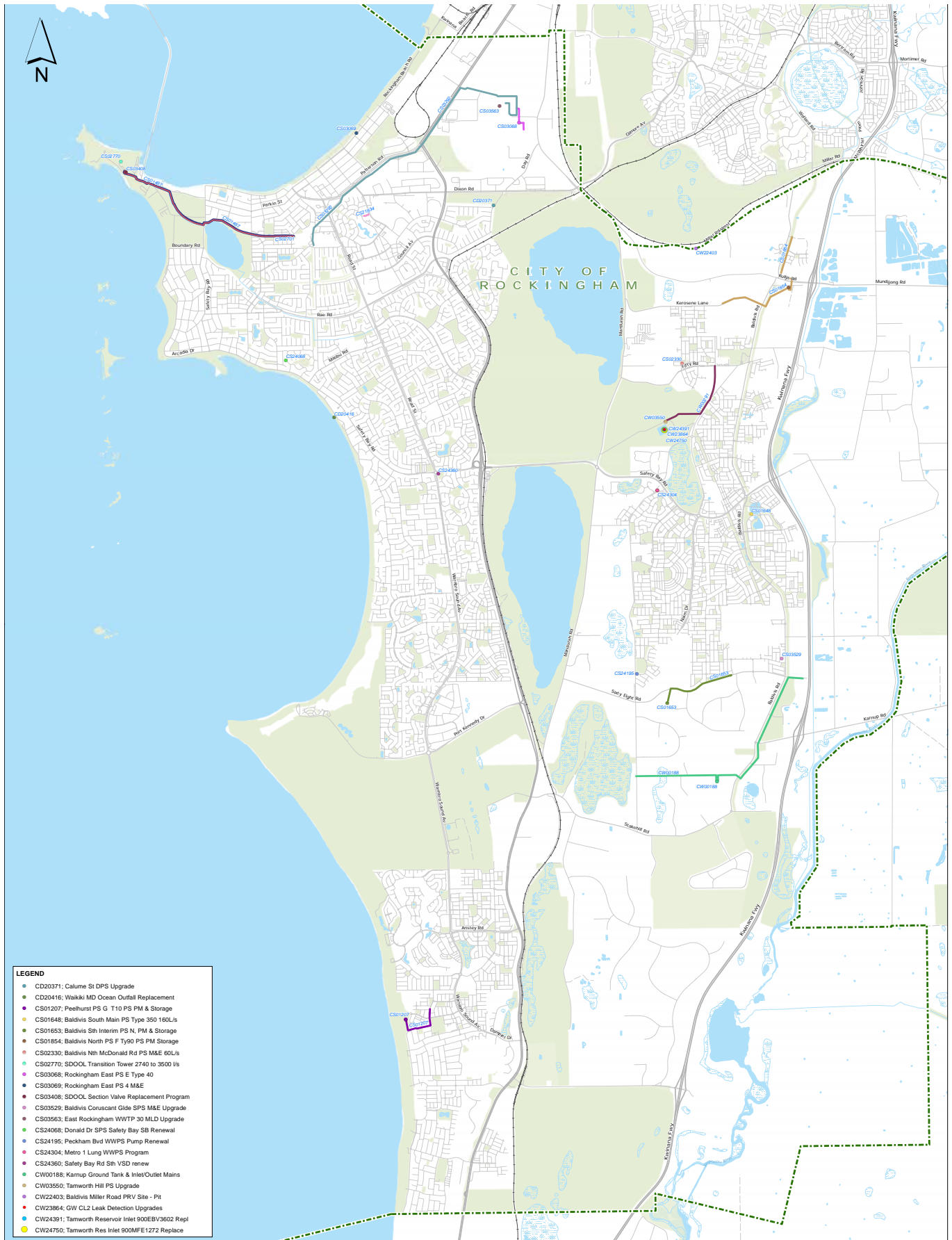
Potable water for the City's residents is supplied by the Water Corporation, and is sourced from dams, groundwater extraction and desalination plants. Water is collected at the three main sources and then treated. Following treatment, the water is transported to reservoirs where it is distributed through a gravity pipe network to residential, community and industrial buildings. Potable water within the City is distributed by gravity to homes and other buildings from Tamworth Hill Reservoir in Baldivis. Water Corporation has plans to establish another reservoir to service the Karnup area when urban development reaches a level that would trigger the need for further water provision (refer to **Figure 42** for proposed capital works upgrades).

Groundwater in the region comprises unconfined, semi-confined and confined aquifers that exist as separate layered systems. The aquifers, in order of increasing depth include: The Superficial and Rockingham Sand Aquifers (unconfined), Leederville Aquifer (semi-confined to confined), and Yarragadee Aquifer (confined).

As a growing local government area, the City has increasing water demands, and many residents rely on groundwater for various purposes, which presents a challenge for the City to ensure this resource is sustainably managed. Of particular importance are the many wetlands of national and international significance within the City's boundaries, most of which are groundwater-dependent, with extensive groundwater abstraction adversely impacting these sensitive environments.

Among the community water usage, low-density residential housing accounts for 80% of the total water usage; whereas, high density residential only accounts for 3% of the total usage. To ensure a sustainable outcome in regard to future water usage, a more consolidated urban form is needed, and Water Sensitive Urban Design (WSUD) principles should be adopted to new developments where possible. Water recycling facilities for greywater should also be provided at neighbourhood and district scales.





**Figure 42: Water Corporation 5-Year Capital Works**

Source: Water Corporation



Preliminary discussions with the Water Corporation highlighted that one of their primary concerns is to ensure that there is sufficient infrastructure capacity to support multiple dwelling developments. It is recommended that early engagement be undertaken by the City / proponents, especially in areas where a structure plan has not yet been commenced (as servicing strategies are usually required in their preparation).

### **WASTEWATER**

For areas where sewerage is not available, on-site wastewater treatment systems (such as septic tank systems and aerobic treatment units) need to be installed to treat the waste water. Properties that are located within sensitive environmental areas will require nutrient retentive systems.

Greywater systems recycle the wastewater from bathrooms and laundries for use as garden irrigation. Only greywater systems that have been approved by the Executive Director, Public Health and the City may be installed.

Preliminary discussions with the Water Corporation confirmed that some sections of Singleton are currently unsewered, and that future upcoding would be compromised.

### **WASTE MANAGEMENT**

Australia's recycling system is reaching a level of vulnerability as developing countries have reduced/restricted the amount of recyclable material intake. Australian cities are facing a high volume of contaminated recyclable material being imported and the lack of an adequate demand for this resource. Circular economy principles were then introduced by the State Government to address this issue.

Due to past practices, there is community concern and confusion on waste management issues and a growing lack of faith in the recycling system. In early 2018, an audit of several recycling and general waste bins was undertaken following two community events. The audit confirmed that there was a lack of understanding about what items could be recycled, with all waste needing to be sent to landfill due to contamination. In addition to the Council Policy on Single Use Plastics and Balloons, the City has prepared a Waste Plan which has a focus on community education

The waste management actions identified in the Sustainability Strategy do not have any land use planning implications, as such no specific LPS actions are identified.

## **UTILITIES SUMMARY**

- + The City's main potable water source is supplied by the Water Corporation in forms of dams, groundwater extraction and desalination plants. The heavy extraction of groundwater has an adverse impact on the environment.
- + Analyses have shown high water usage negatively correlates to low urban density where low-density residential housing accounts for 80% of the total water usage and high density residential only accounts for 3% of the total usage.
- + The Water Corporation has highlighted a need to carefully consider infrastructure capacity, particularly for larger infill developments that are occurring in areas which do not have structure plans.

## 4.6 CONCLUSION

Part Two of this Strategy has provided an overview of the relevant planning context, data, analysis and issues arising that are pertinent to land use planning and future built form outcomes in the City of Rockingham. The information and interpretation of the implications for the City, form the rationale underpinning the LPS actions for specific Planning Areas, contained in Part One. The LPS provides recommendations for revised provisions or land use classifications, or other instances suggests additional studies be undertaken to address and support resolution of the issues through planning and organisational partnerships, during the years ahead.

# APPENDICES

# ACRONYMS AND ABBREVIATIONS

<b>ABS</b>	Australian Bureau of Statistics
<b>AHIS</b>	Aboriginal Heritage Inquiry System
<b>BRMP</b>	Bushfire Risk Management Plan
<b>CCW</b>	Conservation Category Wetland
<b>CDATA</b>	Cultural Development and the Arts
<b>CHRMAP</b>	Coastal Hazard Risk Management and Adaptation Plan
<b>CIP</b>	Community Infrastructure Plan
<b>CMP</b>	Conservation Management Plan
<b>COVID-19</b>	Coronavirus
<b>DBCA</b>	Department of Biodiversity Conservation and Attractions
<b>DoT</b>	Department of Transport
<b>DPLH</b>	Department of Planning Lands and Heritage
<b>LCACS</b>	Local Commercial Activity Centres Strategy
<b>LDP</b>	Local Development Plan
<b>LNA</b>	Local Natural Area
<b>LPP</b>	Local Planning Policy
<b>LPS</b>	City of Rockingham Local Planning Strategy
<b>LPS2</b>	City of Rockingham Local Planning Scheme No.2
<b>LPS4</b>	City of Rockingham Local Planning Scheme No.4
<b>LPS Regulations</b>	Planning and Development (Local Planning Schemes) Regulations 2015
<b>MNES</b>	Matters of National Environmental Significance
<b>MRS</b>	Metropolitan Region Scheme
<b>PHCP</b>	Peel-Harvey Coastal Plain Catchment area
<b>POS</b>	Public Open Space
<b>PP</b>	Planning Policy
<b>PP3.5</b>	Perth and Peel @ 3.5 million
<b>PTA</b>	Public Transport Authority
<b>RAP</b>	Reconciliation Action Plan
<b>REIWA</b>	Real Estate Institute of Western Australia
<b>REW</b>	Resource Enhancement Wetland
<b>RIZ</b>	Rockingham Industrial Zone
<b>RLS</b>	Rural Land Strategy
<b>RPSP</b>	Rockingham Precinct Structure Plan
<b>RSC</b>	Rockingham Strategic Centre
<b>SCA</b>	Special Control Area
<b>SEIFA</b>	Socio-Economic Indexes for Areas
<b>TOD</b>	Transit Oriented Development

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