



ACUMEN

Carabooda Needs Assessment

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1 INTRODUCTION

Acumen is progressing a Needs Assessment to support a District Structure Plan (DSP) for Carabooda. Pracsys has been engaged to undertake the Needs Assessment to address State Planning Policy guidelines, providing background socioeconomic analysis, demand analysis, floorspace provision projections and recommendations for the development area and the district centre. The analysis also addresses the requirements of an Economic, Retail and Employment (ERE) Strategy¹.

The report details the following components:

- An analysis of demographic and economic context reflective of Carabooda
- An analysis of demand for goods and services
- An analysis of local and regional industry drivers
- A strategic review of relevant local and state policies and frameworks
- A review of retail trends
- A Needs Assessment to determine supportable retail and non-retail activity centre floorspace
- Employment generated by activity centre floorspace
- Implementation recommendations to ensure that activity centres are high performing and activated

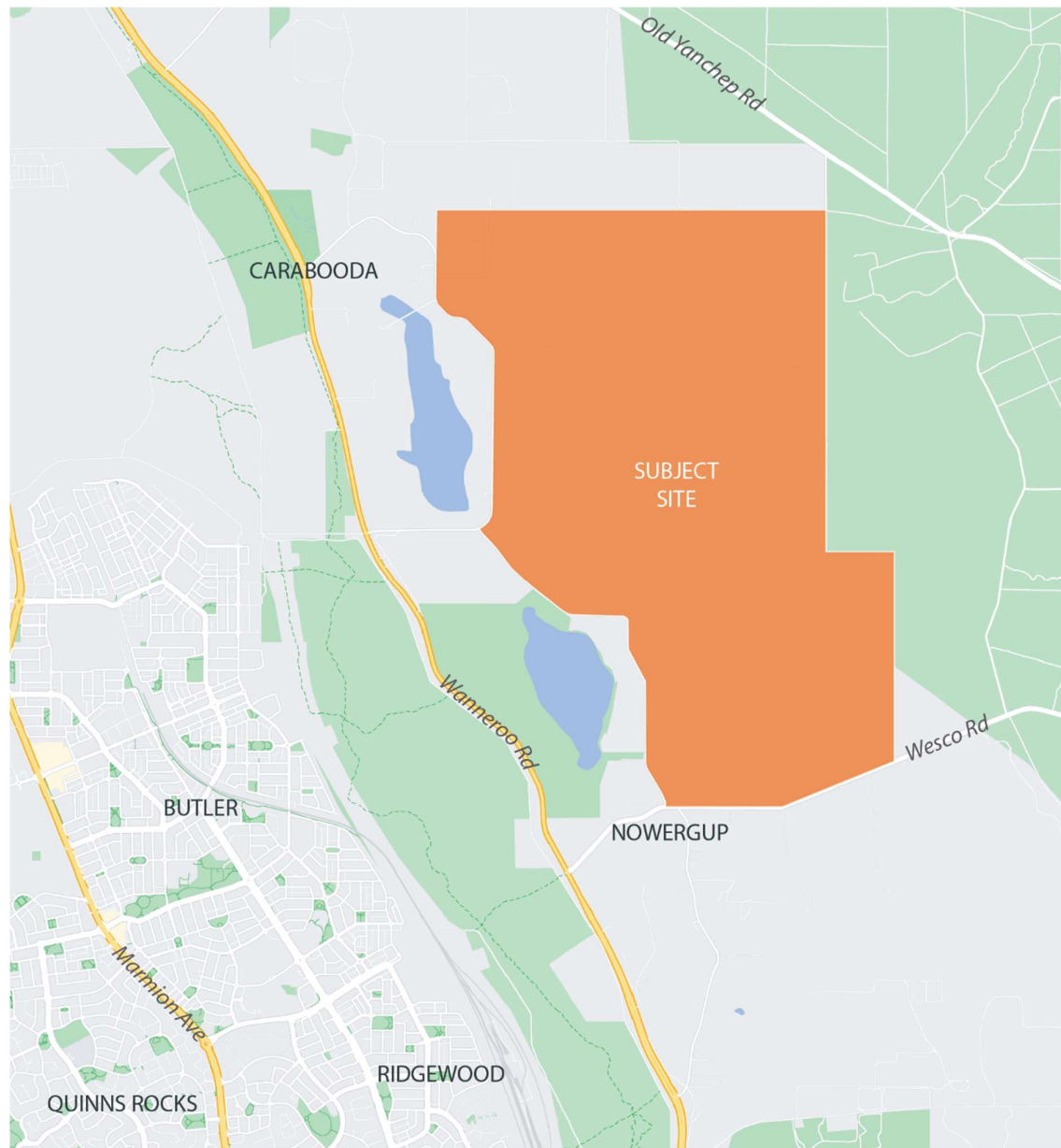
This report contains variations to the typical methodology undertaken to complete a Needs Assessment and ERE Strategy as Carabooda is a greenfield development. A substitute population has been used in certain parts of the analysis to reflect the future population of the urban development. Some common analysis components were deemed inapplicable, such as a property market profile, and were excluded.

¹ While an ERE Strategy is only required for a PSP under SPP7.2, key areas of analysis for an ERE Strategy were completed in previous work for Carabooda and are informative. These additions form a comprehensive retail assessment.

1.1 Background

Carabooda is situated east of Wanneroo Road, bounded by Carabooda Lake and Lake Nowergup to the west, Wesco Road to the south, and Bailey Road to the north (Figure 1).

Figure 1. Site Location – Indicative Urban



Source: CLE Town Planning + Design 2023, Pracsys 2023

Most of the subject site's land is currently zoned Rural. Established residential areas in Alkimos and Butler are located just west of the subject site, separated by Wanneroo Road. Eglinton and Yanchep are north-west of the subject site.

1.2 Retail Needs Assessment Purpose and Objectives

State Planning Policy 4.2 Activity Centre 2023 (SPP4.2) states: *The need for activity centre uses refers to the scale and mix of residential and non-residential uses likely to be needed within a catchment area over the plan period (10 years for Precinct Structure Plans).*²

Needs Assessments measure demand in an identified trade area and identify the scale of supply necessary to appropriately accommodate this demand in square metres Net Lettable Area (NLA) of the Department of Planning, Land Use and Heritage's (DPLH) Planning Land Use Category (PLUC), Shop/Retail (SHP)².

This Needs Assessment follows the requirements of SPP4.2 Implementation Guidelines to consider and assess demand for activity centres uses. The assessment should be based on facts and unbiased evidence³. The key objectives of a Needs Assessment are to:

- Define the catchment area of the proposed development application request
- Review drivers of floorspace, including forecast population growth and socio-economic characteristics, employment and changing demand patterns
- Consider the competitive environment and the surrounding activity centre hierarchy
- Develop a net demand assessment
- Assess the level of Shop/Retail floorspace supportable at the site

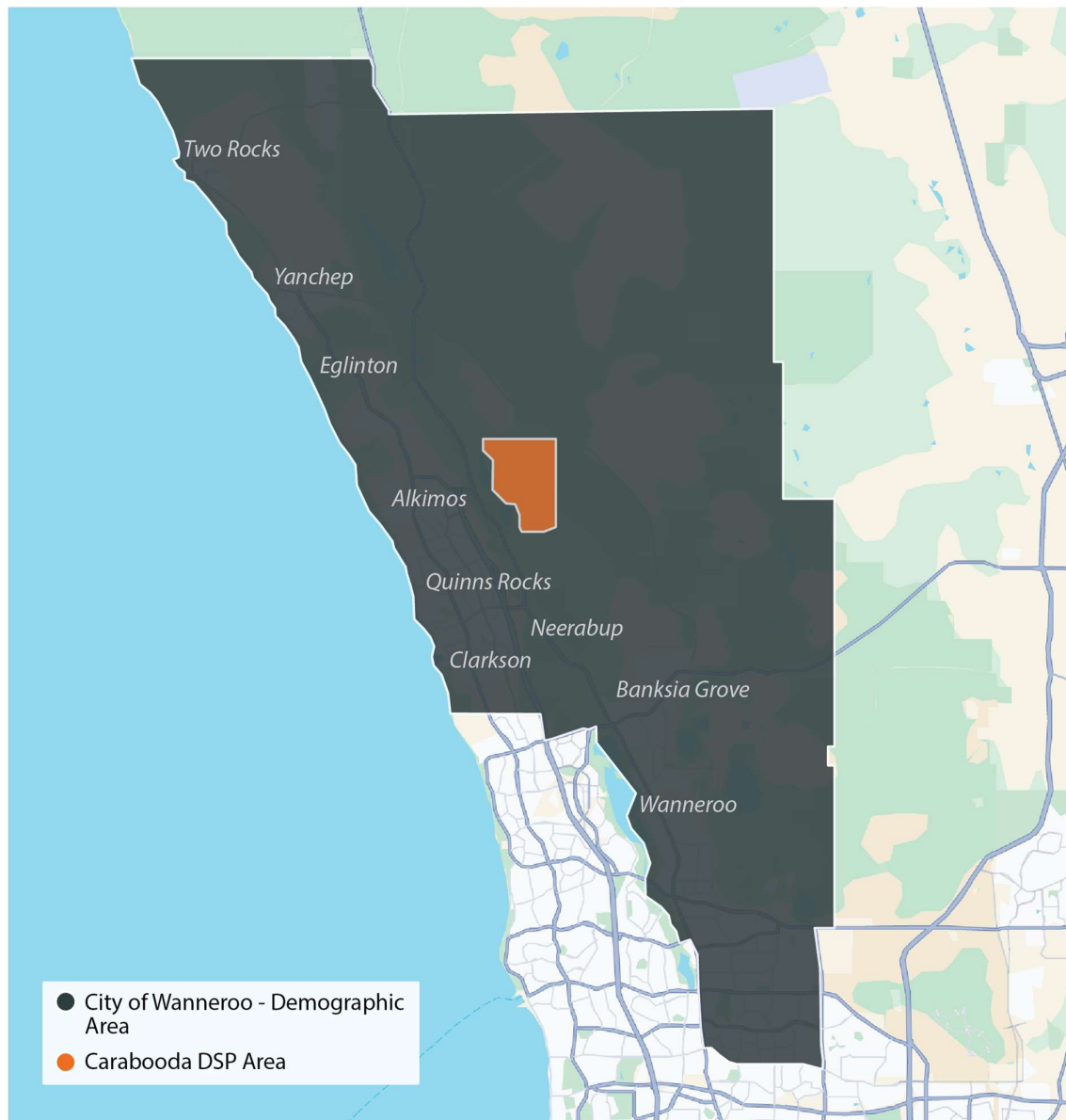
² Please see Appendix 1: LUES Glossary for more detail regarding DPLH Land Use and Employment Survey Categories

³ WAPC, 2023, *State Planning Policy 4.2 Activity Centre Implementation Guidelines*, Government of Western Australia

2 DEMOGRAPHIC ANALYSIS

This demographic analysis compares the population of the City of Wanneroo (the City) to Greater Perth to understand the local demand for goods and services (Figure 2). The City was selected as a representative population for Carabooda. The City is an effective representative population because its existing urban developments are largely similar in location and age to Carabooda.

Figure 2. City of Wanneroo and Carabooda Map

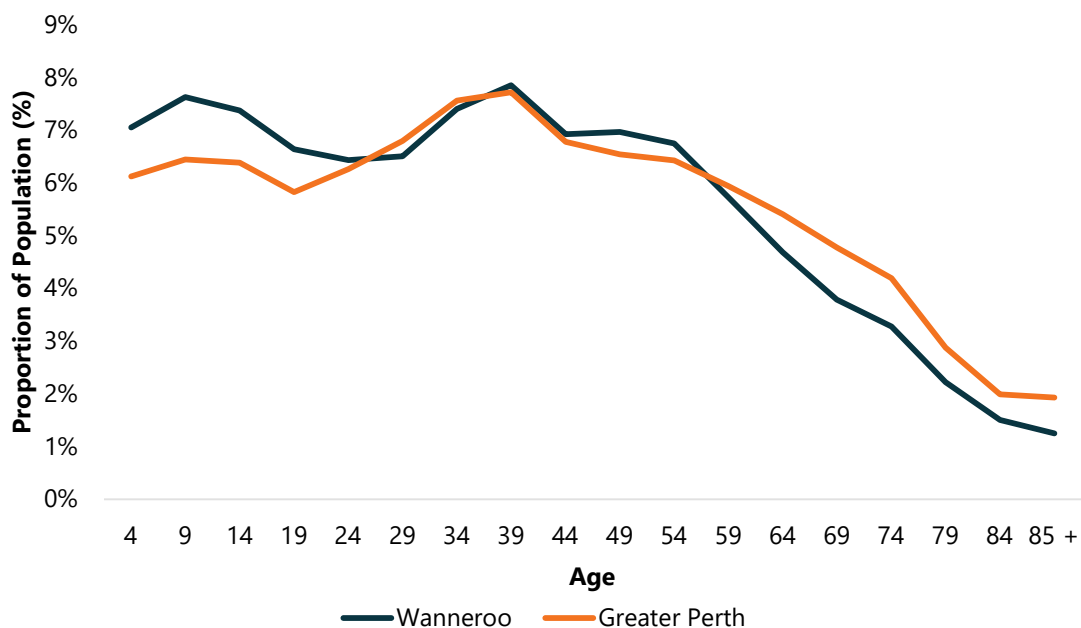


Source: Pracsys 2025

2.1 Age Profile

A greater proportion of the City's population is below the age of 15 relative to the Greater Perth benchmark (22% versus 19%) (Figure 3). This may be indicative of demand for education and childcare facilities. The City also has a greater working age population (people between 15 to 60 years old), reflective of Carabooda's potential to contribute to employment targets for the region. Urban expansions such as Carabooda often face high demand from younger, working age adults and families. A high concentration of working age adults and families may also reflect a high level of expenditure on necessity goods and services, supporting the viability of retail developments.

Figure 3. Wanneroo and Greater Perth Age Profile



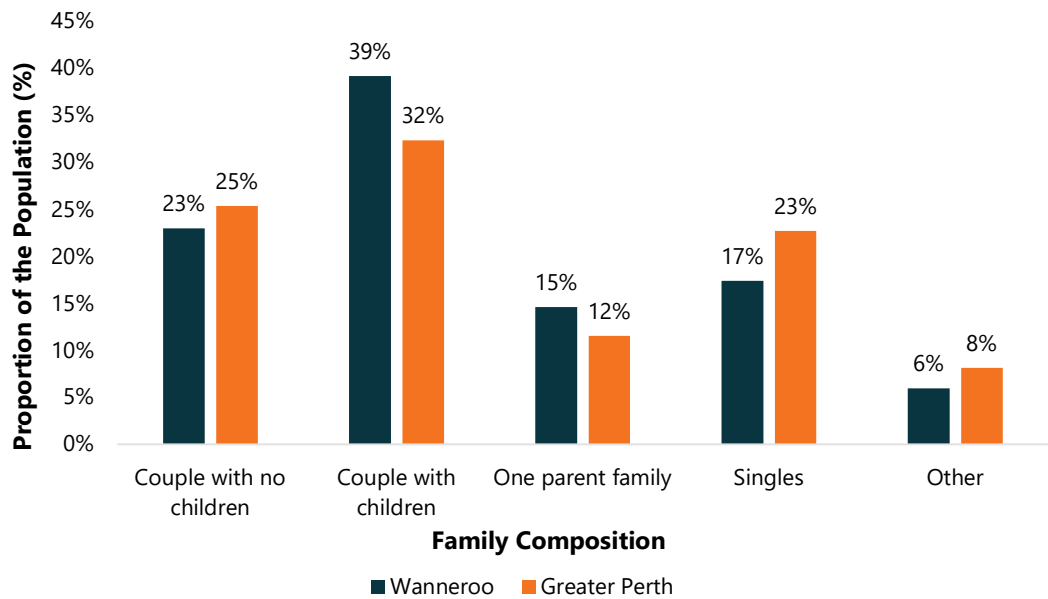
Source: ABS Census 2021, Pracsys 2025

2.2 Family Composition

The City's has a greater proportion of couple families with children relative to Greater Perth (39% versus 32%) (Figure 4). This reinforces the age profile's skew towards children and working age adults and the demand for education and childcare. The prevalence of young families can also equate to demand for community, cultural and recreation facilities. It is likely that Carabooda will have an even greater proportion of young families than the City as a greenfield development. The City has a significant gap in the proportion of single people relative to the benchmark (17% versus 23%) as they tend to live closer to the City where higher density housing is more prevalent. The provision of higher density housing

such as townhouses may be an opportunity for Carabooda because of its connection to Alkimos Station and thus strategic centres such as Yanchep, Joondalup and Perth City.

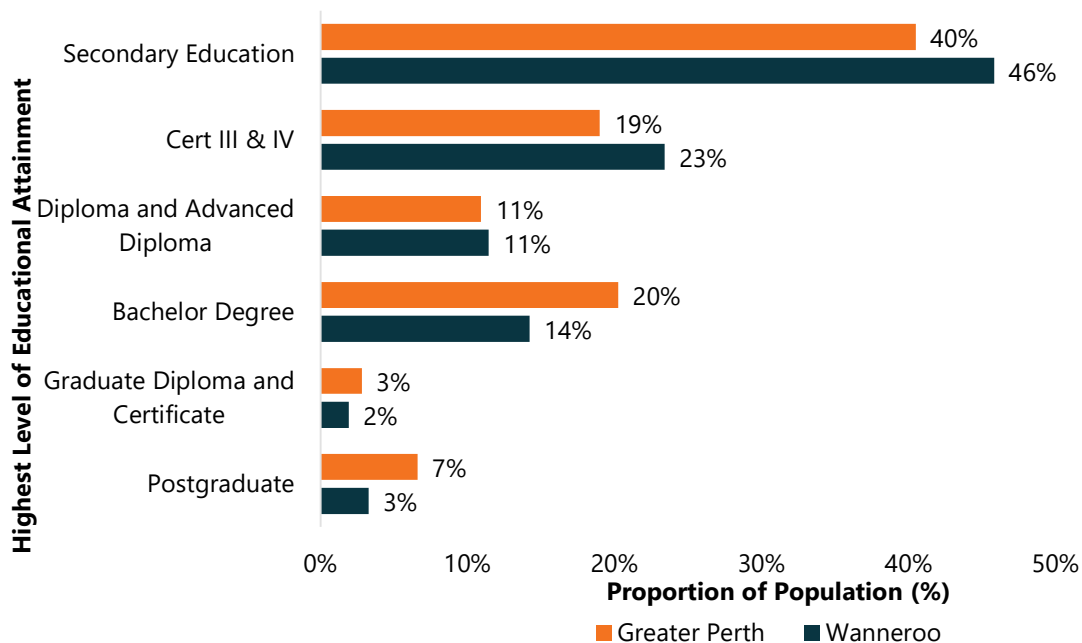
Figure 4. Wanneroo and Greater Perth Family Composition



Source: ABS Census 2021, Pracsys 2025

2.3 Educational Attainment

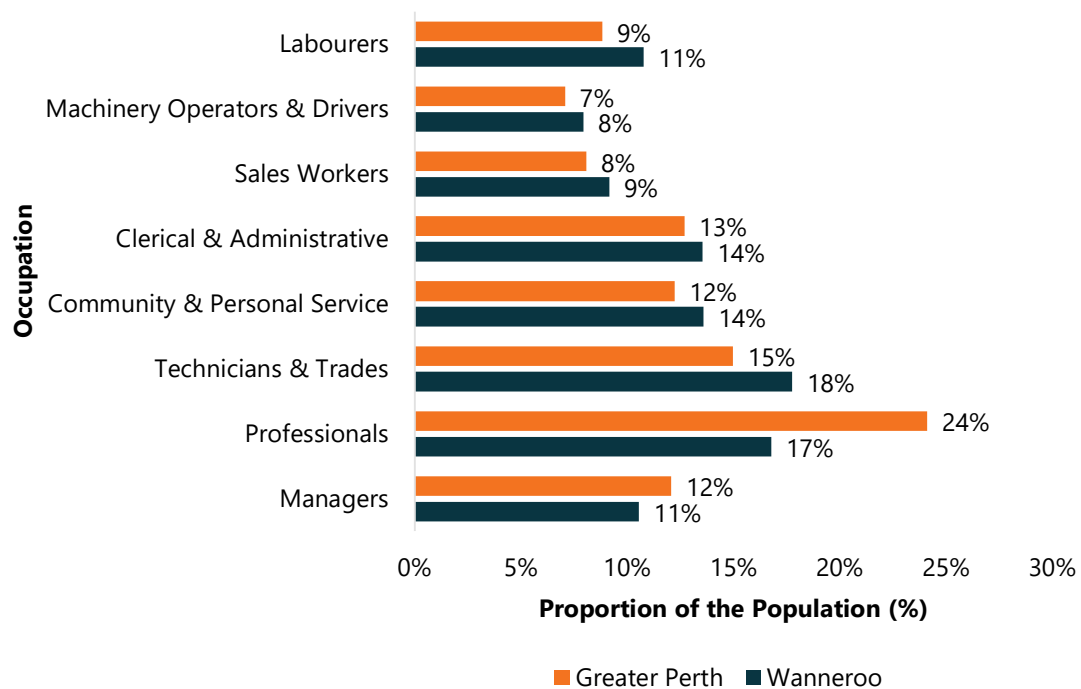
The City has a greater proportion of people with a highest level of educational attainment in Certificate III and IV qualifications (46% versus 40%) (Figure 5). This may indicate that there is high demand for fitness and recreational facilities such as gymnasiums and swimming pools as the most populous Vocational Educational and Training (VET) courses are those in fitness and sport. This is reinforced by the extent of young families in the City, who will likely contribute to demand entertainment and recreational facilities.

Figure 5. Wanneroo and Greater Perth Highest Level of Educational Attainment

Source: ABS Census 2021, Pracsys 2025

2.4 Occupation

The City has a greater proportion of Technicians and Trades workers (18% versus 15%) and Labourers (11% and 9%) relative to Greater Perth (Figure 6). This is offset by the City's gap in Professionals and Managers. Professionals and Managers are typically high-income occupations and support local commercial development because of the extent of their disposable income. This expenditure may leak towards larger activity centres such as Alkimos (emerging) and Butler as higher income earners tend to spend more on comparison retail offerings such as fashion and household goods. The City's income profile and its implications for Carabooda will be further examined in Section 6.1, Income and Expenditure.

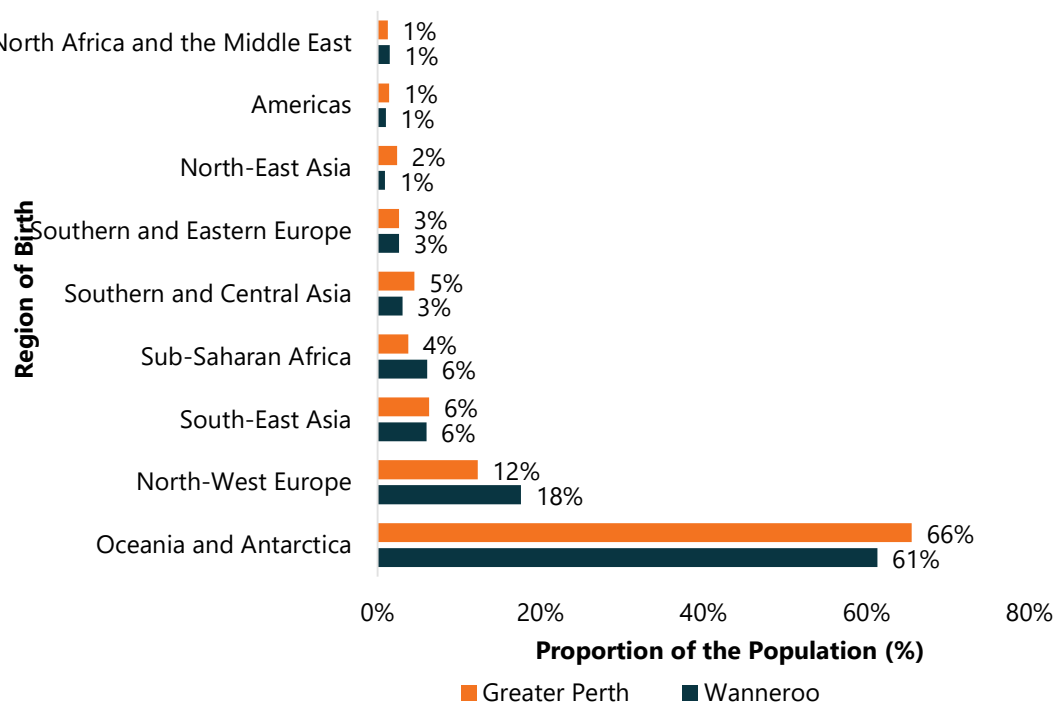
Figure 6. Wanneroo and Greater Perth Occupation

Source: ABS Census 2021, Pracsys 2025

2.5 Cultural Diversity

The City of Wanneroo has a lower proportion of people from Oceanic region relative to Greater Perth (Figure 7), largely consisting of people born in Australia. This is a result of a higher concentration of people born in North-West Europe (18% versus 12%) and Sub-Saharan Africa (6% versus 4%). The City's concentration of people born in North-West Europe is largely accounted for by the United Kingdom. Carabooda may face greater demand for specific goods and services catered to North-West European peoples' preferences. People born in the United Kingdom can tend to have higher-value occupations relative to those born in Australia such as Professionals (28% versus 23%) and Managers (18% versus 14%)⁴. This reflects Carabooda's potential to support economically valuable occupations.

⁴ ABS, 2021, People in Australia who were born in England, [Link](#)

Figure 7. Wanneroo and Greater Perth Region of Birth

Source: ABS Census 2021, Pracsys 2025

2.6 Summary

The City of Wanneroo was utilised as a representative population that reflects Carabooda's future demographic profile in a comparison against Greater Perth averages. Key findings activity centre development include:

- Urban expansions such as Carabooda often face high demand from younger, working age adults and young families
- A high concentration of working age adults and families may reflect a high level of expenditure on necessity goods and services for future residents of Carabooda, supporting the viability of retail developments
- The City's concentration of Technicians and Trades Workers and Labourers further indicates an increased propensity to spend on necessities
- A high proportion of young families relative to other family compositions may reflect demand for education and childcare amenities as well as community, cultural and recreation facilities
- Carabooda may face greater demand for specific goods and services that reflect the presences of people born in North-West Europe



3 ECONOMIC ANALYSIS

The following subsections outline the economic impacts of the urban development of Carabooda. The analysis has its foundation in the following variables regarding population and dwellings (Figure 8).

Figure 8. Key Variables

Key Variables	Values
Population	27,000
Lots	10,000
Dwellings	11,000
Average annual uptake of lots	300
Years to full development	33

Source: Acumen 2025, Pracsys 2025

3.1 Labour Force Status

The City of Wanneroo was used as a foundation to determine high level estimates for Carabooda’s future labour force profile (Figure 9). The 27,000 residents of the development area will generate a labour force of approximately 14,325 people.

Figure 9. Carabooda Labour Force Status

Areas	Wanneroo	Carabooda
Population		27,000
People over 15 years of age	74%	20,041
Labour force	71%	14,324
Not in the labour force	29%	5,716
Employed	94%	13,505
Unemployed	6%	819

Source: ABS Census 2021, Pracsys 2025

3.2 Employment Quality

A portion of Carabooda’s potential workforce will be population-driven (goods and services for the population that will live in the area), and the remainder of the workforce will be employed in strategic industries. To assess the proportion of jobs in the area that will likely be population-driven versus strategic, the analysis identifies the drivers of employment quality.

Employment quality is a key indicator of the strength of a local economy. The term employment quality refers to the ability of one job to generate other jobs and have positive multiplier effects on the economy. Employment can broadly be understood in terms of knowledge requirements and industry uses. It is measured by assessing occupation and industry of employment data. The breakdown of population-driven versus strategic industries is as follows:

Population-Driven Industries (service local population):

- **Consumer Services:** Basic business-to-consumer activity (for example, retail trade)
- **Knowledge Intensive Consumer Services (KICS):** Business-to-consumer activity with high knowledge requirements (for example, medical services)
- **Producer Services:** Basic business-to-business activity (for example, printing services)

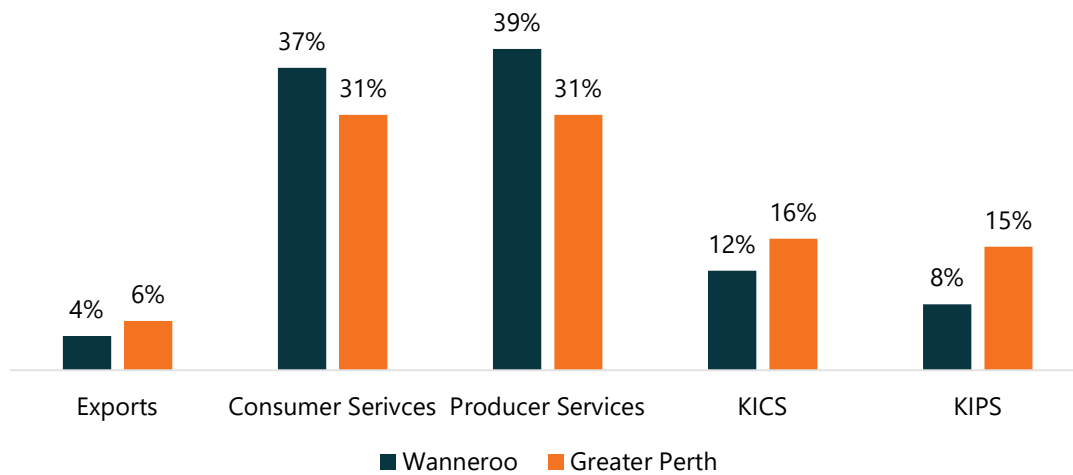
Strategic Industries:

- **Knowledge Intensive Producer Services (KIPS):** Business-to-business activity with high knowledge requirements (for example, architectural services)
- **Export:** Direct export-related activity (for example, agriculture or mining)
- Service population-driven and strategic industries
- **Producer Services:** Basic business-to-business activity (for example, transport services)⁵

KIPS, Export and a portion of Producer Services employment are collectively referred to as strategic employment. Strategic employment is termed so as it does not rely on a local population catchment and is sustained by income sources outside of the local economy. Strategic employment is desirable as it is less prone to automation and is associated with higher levels of education, qualification and income.

The extent of employment categories for the City of Wanneroo against Greater Perth has been developed (Figure 10).

⁵ Producer services are both population-driven and strategic. The share of Producer Services that are estimated to be in Strategic Industries in the analysis is assumed to be equal to the ratio of Strategic versus Population-Driven employment without Producer Services.

Figure 10. City of Wanneroo and Greater Perth Employment Quality

Source: ABS Census 2021, Pracsys 2025

The configuration of employment quality for the City of Wanneroo may not reflect Carabooda as the development is not expected to have significant strategic opportunities such as those offered at business and light industrial areas across the City. Carabooda will likely contribute by providing residence to people who travel to strategic nodes in the City such as Yanchep, Alkimos, Neerabup, Muchea and more.

3.3 Employment Self-Sufficiency

The relationship between home and work has important implications on our lives. Decisions about where we live must balance housing choice and associated lifestyle (neighbourhood amenities such as schools, shopping and recreation) and access to the best jobs possible. This choice is a common consideration across all demographic groups and household structures.

Employment self-sufficiency (ESS) is the ratio of local jobs to the local labour force and is a measure of local economic dynamism. In new outer suburban areas ESS will be relatively low (<70%) as there are fewer jobs than workers while in inner areas ESS is generally high (>100%) as there are more jobs than workers to fill them.

The jobs for which people travel the greatest distances are often those that pay the most, or in economics terms, the highest productivity jobs. These are referred to as strategic jobs – associated with export or high knowledge industries. Such industries tend to agglomerate around transport and commercial infrastructure such as airports, ports, universities and cities.

If strategic infrastructure does not exist in a region, a higher proportion of residents must travel to secure high productivity jobs. Perth's northwest corridor has comparatively little access to strategic infrastructure and therefore few high productivity jobs.

One solution is to formulate a long-term strategy of public infrastructure investment to attract and generate strategic industries. Another strategy is to enhance high-speed public transport to move large volumes of workers to and from their homes to places of strategic industries employment.

This analysis identifies existing and possible sources of future employment to fill the strategic employment needs of future Carabooda residents. Carabooda is not intending to be a focal point for strategic infrastructure because other locations have been identified as most suitable for such investment. The Carabooda development is expected to support the surrounding activity centre hierarchy and strategic nodes.

Consideration should also be given to the existing rural and agricultural employment within the DSP area. The land is currently zoned Rural and supports horticultural and other agricultural activities, a proportion of which will be displaced as the area transitions to urban development. These employment losses should be quantified and netted against the local and sub-regional employment opportunities identified for Carabooda in this assessment. The estimated current employment in the project area is approximately 100-150 jobs. The loss of these jobs is likely to result in a transfer of employment to somewhere else in WA. It has been conservatively assumed that the transfer of these jobs to other locations results directly in an additional 72 jobs to meet ESS requirements (in alignment with the ESS target of 60%). These additional jobs are assumed to be strategic employment opportunities and have accordingly been added to the strategic component of the local job target.

Opportunities to mitigate these losses should also be considered, including the staging of development to allow agricultural operations to continue in the interim, and the potential for relocation or intensification of horticultural activity in the surrounding rural area.

3.4 Strategic Employment Opportunities

The analysis identified 2,210 potential strategic employment opportunities available to the residents of Carabooda from several different sources (Figure 11). This reflects Carabooda's potential to support strategic industries across the North-West Sub-Region.

Figure 11. In-Region Strategic Employment Opportunities for Carabooda Residents

Source	ESS 100%	ESS 60%	Strategic Job Target Share
Yanchep	550	330	15%

Source	ESS 100%	ESS 60%	Strategic Job Target Share
Alkimos	370	220	10%
Neerabup	950	570	26%
Future Inter-modal Hub	470	280	13%
Other Nodes	1,360	810	36%
Total	3,700	2,210	100%

Source: Pracsys 2022

Strategic employment available to future residents was based on the distribution of jobs at relevant employment centres and the number of strategic opportunities required to meet the Carabooda population. Employment targets for Yanchep and Alkimos were drawn from the Sub-regional planning frameworks; Neerabup employment was identified from public estimates⁶; Bullsbrook Intermodal Terminal Employment was based on work Pracsys did for the City of Swan (Confidential), and other employment nodes were based on high level assumptions of employment based on population growth and current employment centre jobs.

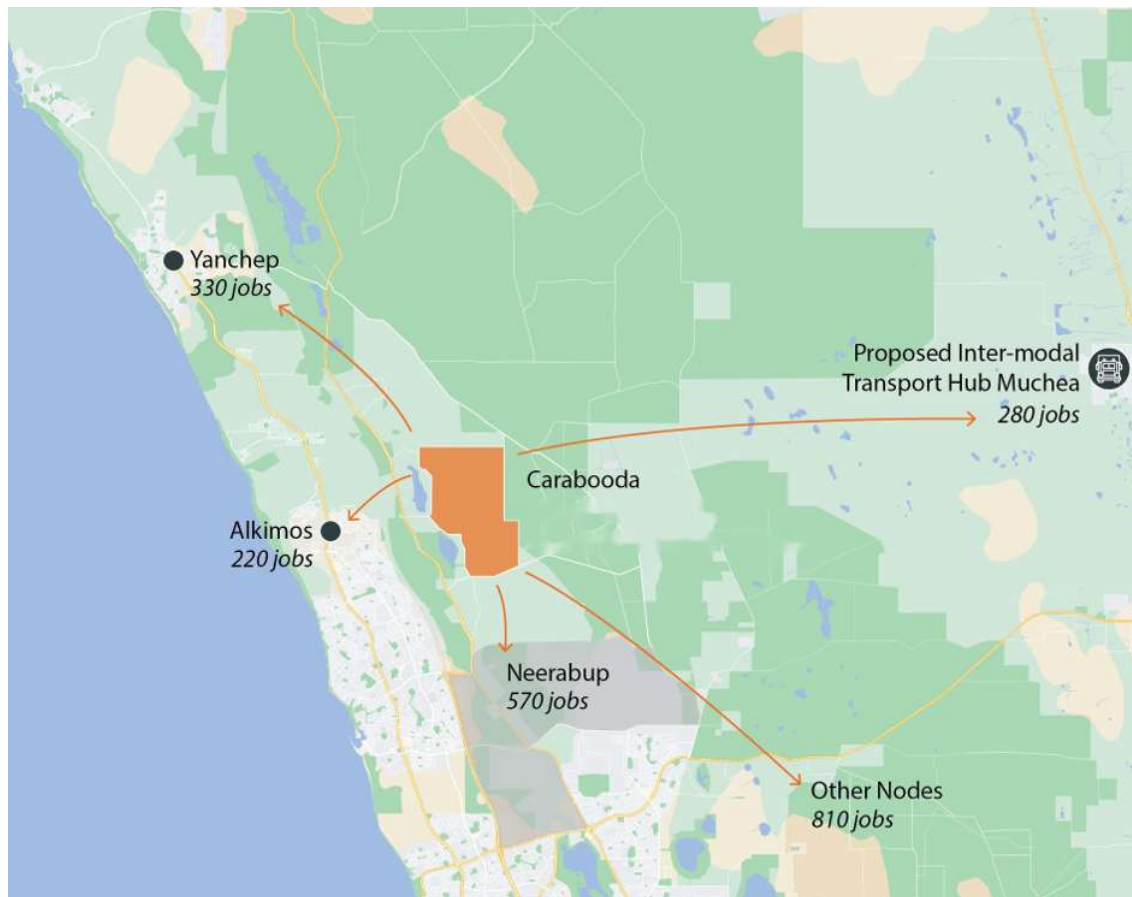
The number of strategic employment jobs required by the Carabooda population was then applied to the distribution of employment to provide a high-level estimate of the strategic jobs accessed at each location by future Carabooda residents.

There is a shortfall to the local strategic job target when accounting for sub-regional sources. The shortfall will likely dissipate as existing strategic sources expand, and further strategic opportunities arise in the North West Sub-Region.

Strategic Employment locations and estimated jobs available to residents of Carabooda have been mapped for clarity (Figure 12).

⁶ *Innovative one key to Neerabup jobs*, Yanchep News Online, 2018

Figure 12. Strategic Employment Locations and Estimated Jobs Available to Residents of Carabooda



Source: Pracsys 2026

Yanchep Strategic Centre

Yanchep is the nominated Strategic Centre for the northern end of the North-West Sub-Region. The centre's role is to provide a full range of economic and community services necessary for the communities in their catchments and the wider region. Servicing a future regional population of 300,000 to 400,000 residents, Yanchep is intended to provide health, community and social services and opportunities for business agglomeration.

Yanchep Strategic Centre is planned to support approximately 8,280 jobs in the sub-regional planning framework. Based on this concentration of employment, it is estimated that approximately 330 strategic jobs would be filled by Carabooda residents in the long term. This is supported by the notion that as the region's population increases over time an increased provision for services delivered at a Strategic Centre will also rise, supporting the growth of the Yanchep Strategic Centre as a whole. It is expected

that a proportion of the workforce associated with the growing Yanchep Strategic Centre will reside within Carabooda given its close proximity.

Alkimos Secondary Centre

Alkimos is an existing Secondary Centre in the North-West Sub-Region. Its purpose shares similar characteristics to that of a Secondary Centres with smaller catchments, typically up to 150,000 residents. Given the region's strong population growth forecasts, it is expected that the Alkimos Secondary Centre will grow to accommodate a higher level of strategic employment over time.

Alkimos Secondary Centre is planned to support approximately 5,770 jobs in the sub-regional planning framework. Based on this concentration of employment, it is estimated that approximately 220 strategic jobs would be filled by Carabooda residents in the long term. This result makes sense because Alkimos is in very close proximity to Carabooda, providing residents of Carabooda with strategic employment opportunities at the growing Centre.

Neerabup Industrial Area

The Neerabup Industrial Area (NIA) has been a key strategic priority for the City of Wanneroo. The City and State Government own most of the land at the NIA, with the site poised to provide long-term economic growth opportunities through job creation. The NIA site is strategically positioned to host an extensive number of strategic and export-oriented enterprises because its proximity to existing and proposed major road connections.

Neerabup industrial area has a notional employment estimate of 20,000 jobs. Based on this concentration of employment it is estimated that 570 strategic jobs would be filled by Carabooda residents in the long term, given the Site's close proximity the NIA.

Future Inter-modal Hub

A long-term plan that will see the Muchea Industrial Park transform into a strategic industrial hub, generating thousands of jobs over the coming years, has been given the green light. Located in the Shire of Chittering, 50 kilometres north-east of the Perth CBD, the park is situated at the junction of key arterial roads. Muchea Industria Park is connected to both the metropolitan area and the State's mining and agricultural districts. The Bullsbrook SIA will form a critical link with Muchea. This precinct is located in Bullsbrook along Northlink Hwy, and will provide the key inter-modal terminal connecting freight and road transport with extensive industrial uses.

Businesses based in these Hubs will benefit from direct access to Western Australia's triple road-train network, creating the capability to service and link the capital's ports and freight networks with the State's North and Mid-West regions. Their locations, and their ability to support heavy vehicle access, means they are well-positioned to suit a range of enterprises, including freight, logistics and agribusiness. Muchea and the Bullsbrook SIA are expected to support up to 40,000 jobs; it was assumed

a quarter of these would be relevant to the residents of Carabooda. This results in an estimated 280 Carabooda residents filling strategic jobs between these strategic industrial areas.

Tourism

Carabooda is located along Wanneroo Road, providing access to Indian Ocean Drive to the North. This route is prominent for Grey Nomad's passing through the region on their travels.

The Rural Way proposed by the City would see a tourist drive on Wanneroo Road, Gibbs Road, Karoborup Road, Carabooda Road and Old Yanchep Road and the lakes system, both in Nowergup Lake and Yanchep Park. The Rural Way is focussed on preserving and protecting the rural character of the region while supporting continuous development of agriculture, economic growth and appropriate tourism service, and promoting the marketing and development of partnerships within the community and tourism.

The Rural Way will connect natural and heritage attractions on the east side of Wanneroo Road. With a network of driving, walking and cycling trails, the Rural Way would offer several styles of accommodation, natural products including local produce, wineries, distilleries, arts and family-based attractions and activities. The Carabooda development is positioned well to capture a sizeable proportion of potential visitors to and along the Rural Way.

4 STRATEGIC CONTEXT

The table below details the strategic alignment of the development to key local, regional and state policies and strategies including the North-West Sub-Regional Planning Framework (2018) and the City of Wanneroo's Economic Development Strategy 2022 – 2032 (Figure 13).

Figure 13. Strategic Alignment

Policy and Description	Relevant Objectives / Focus Areas	Project Alignment
City of Wanneroo's Economic Development Strategy 2022 - 2032⁷		
The City of Wanneroo's Economic Development Strategy 2022 - 2032 is a key document setting the City's intentions for the next 10 years in relation to supporting and enabling the local economy	Enable businesses to provide diverse and quality local job opportunities Facilitate the delivery of sustainable economic growth Enhance social and environmental outcomes for intergenerational equity	The development of Carabooda will provide residents access to a range of diverse employment opportunities locally and within the City of Wanneroo The development of Carabooda and the associated population will allow for an increased level of disposable income in the City of Wanneroo, supporting a vibrant and sustainable local economy The development of Carabooda and the proposed associated infrastructure will provide a high level of social amenity while maintain the existing vibrant natural landscape to be enjoyed by generations present and those to come
North-West Sub-Regional Planning Framework (2018)⁸		
Part of the Perth and Peel @3.5 million suite of land use planning and infrastructure frameworks Provides an overview of the long-term goals for land use and infrastructure to guide future growth across the North-West Sub-Region	Target ESS of 59.5% in the North-West Sub-Region Achieve a consolidated urban form and development Provide transport linkages that connect people with key centres of activity and employment, and access to areas beyond the Perth and Peel regions	This project will support existing strategic industries at the Yanchep Strategic Centre and any potential future strategic zones in proximity to the site, contributing to the sub-region goal of achieving its 2050 ESS target

⁷ City of Wanneroo, 2022, https://www.wanneroo.wa.gov.au/downloads/file/4537/economic_development_strategy_-_2022_to_2032

⁸ Department of Planning, Lands and Heritage, 2018, https://www.wa.gov.au/system/files/2021-05/FUT-PP-North-West_Sub_Region_March2018.pdf

Policy and Description	Relevant Objectives / Focus Areas	Project Alignment
	Facilitate increasing the number of people living close to where they work with the identification of suitable sites for employment, with a focus on attracting strategic economic and employment land use to the sub-region	The Carabooda development is located in proximity to a number of proposed road transport and rail upgrades, providing the potential residents with the ability to connect to the existing Activity Centre Hierarchy, other employment nodes and education facilities
Perth and Peel at 3.5 Million (2021)⁹		
A spatial framework and strategic plan establishing the vision for future growth of the metropolitan Perth and Peel region.	This plan has five strategic themes for development in Perth and Peel: ○ A liveable City ○ A prosperous City ○ An accessible City ○ A sustainable City ○ A responsible City	Rezoning the Site to Urban will help to create a liveable area that will provide quality open space and will ensure urban expansion happens in the most suitable area The Carabooda development will retain employment in the City of Wanneroo and will have a diverse mix of facilities and infrastructure. The Carabooda development will ensure an accessible development, connecting the community with jobs and services, maximising the use of road infrastructure. The Carabooda development will be sustainable, preserving the vibrant natural landscape currently and enhancing the public open space network The Carabooda development will maximise social infrastructure use in the City of Wanneroo, allowing for the strategic expansion of the urban area.
Diversify WA (2019)¹⁰		

⁹ Department of Planning, 2010, https://www.dplh.wa.gov.au/getmedia/3060b8c7-b9ed-4113-abee-8a9c5ac0240d/FUT-plan_directions2031_Part1

¹⁰ Government of Western Australia, 2019, https://www.wa.gov.au/sites/default/files/2019-07/DiversifyWA_0.pdf

Policy and Description	Relevant Objectives / Focus Areas	Project Alignment
Diversify WA is an Economic Development Framework identifying avenues for economic growth and development throughout the State	Developing a strong economy Developing a resilient economy Creating secure and quality jobs	Rezoning Carabooda to Urban will assist in creating a strong economy in the City of Wanneroo. It will support shop/retail floorspace and community infrastructure. The subject site will provide the existing and potential future strategic workforce (such as tourism) in the North-West Sub-Region a well provided for place of residence, helping to create a resilient and diversified economy
State Planning Policy 4.2 – Activity Centres¹¹		
SPP 4.2 aims to develop activity centres which meet different levels of community need and enables employment goods and services to be accessed equitably and efficiently by the community	Activity centre function and characteristics details the main role and typical attributes and provides implementation guidelines Activity centre density targets identify average density and walkable catchment for centres with and without a station Diversity performance targets are diversity driven by land use, employment, proximity to public transport, etc New activity centres or the expansion and consolidation of existing activity centres does not unreasonably undermine existing centres	Carabooda's future activity centres have been developed in line with the existing activity centre hierarchy and the proposed roles for the centres are appropriate for meeting the needs of the local community Consideration as to the location of planned centres involved mapping population density and walkable catchments for the proposed activity centres A Needs Assessment has been undertaken to provide the necessary diversity and extent of employment opportunities and land uses to support the future population Concepts for Carabooda's activity centres accounted for the function of existing and planned activity centres in the region to ensure the future population is well-served without undermining the activity centre hierarchy

Source: Pracsys 2023/25

¹¹ DPLH, 2023, <https://www.wa.gov.au/government/publications/state-planning-policy-42-activity-centres>

The North-West Sub-Region contains the Local Governments Areas (LGA) of the City of Wanneroo and the City of Joondalup. The North-West Sub-Regional Planning Framework has set out the desired level of ESS by 2050, consisting of a ten-percentage point increase in ESS (49.25% to 59.5%).

The City of Wanneroo is one of the fastest growing LGAs in Western Australia and is forecast to soon be the largest LGA by population in the State. This places a strategic responsibility on the City to contribute to the North-West Sub-Region achieving its 2050 ESS targets. According to the Sub-Regional Planning Framework, the North-West Sub-Region is expected to accommodate an additional 417,840 persons between 2011 to 2050, increasing the total number of people in the area from 322,490 to 740,330. Based on the ratio of population to employment in 2050, this indicates the Sub-Region should be aiming to create an additional 143,560 jobs between 2011-2050 to achieve its ESS target.

As part of the City of Wanneroo's Economic Development Strategy 2022 – 2032, the City sets out a more ambitious ESS target of 60% by 2031. This target applies to the combined Cities of Wanneroo and Joondalup, and not to the City of Wanneroo alone. The proposed Carabooda development will contribute to the City reaching this target.

5 RETAIL TRENDS

An activity centre should be development in line with current retail trends to maximise expenditure and overall demand. The identified trends highlight the fast-changing nature of retail that businesses need to adapt to. It is key to ensure that planning for activity centres allows for flexibility in uses and floorspace areas. The following trends are worth considering as activation and development opportunities arise (Figure 14)¹².

Figure 14. Retail Trends and Drivers

Trend	Description	Drivers
Small-to-Medium Format Supermarkets	Supermarkets that complete the same function as a full line supermarket but on a smaller floorplate and plot of land.	The floorplate and land required to support a full line supermarket in increasingly densified areas has led operators to develop alternate, smaller supermarket designs. The flexibility of these supermarkets aligns with community and local government preferences for a more activated and walkable neighbourhood.
Cost of Living Pressure	Cost of living pressure refers to the effect of rising goods and services expenses on households' ability to maintain a standard of living	Periods in which macroeconomic indicators are unfavourable, such as high inflation, can generate concern among households. In these scenarios, consumers seek to curtail their spending leading to less discretionary and even essential purchases.
Conscious Retail	Conscious retail is increasingly keeping customers loyal to a brand /distributor.	Many consumers have made a lifestyle choice to have a smaller global footprint, support brands that provide better conditions for factory workers in developing countries or support local products. Consumers are often willing to pay a premium for these products.
Data Retail	'Big Data' is being used to continually monitor and respond to changing consumer desires,	Collecting and analysing data on retail sales is being used to inform all parts of the retail sale process, from supply chain to understanding customer satisfaction with their purchase. Retailers who do not use data to inform their decisions are much less

¹²<https://www.commbank.com.au/content/dam/caas/newsroom/docs/commbank-iq-cost-of-living-report-may-24.pdf>;
<http://www.smartcompany.com.au/industries/retail/top-five-retail-trends-watch-2017/>;
<https://www.rangeme.com/blog/6-trends-that-will-reinvent-retail-in-2017/>;
<https://www.appearhere.co.uk/inspire/blog/the-retail-trends-with-staying-power>;
<http://digitalmainstreet.ca/retail-trends-10-experts-share-their-predictions-for-2017/>;
<https://www.vendhq.com/au/university/retail-trends-and-predictions-2017>;
<https://www.digitalpulse.pwc.com.au/retail-trends-2017-paul-zahra/>;
<https://www.forbes.com/sites/bernardmarr/2015/11/10/big-data-a-game-changer-in-the-retail-sector/#63dc4fbd9f37>

Trend	Description	Drivers
	shortening the product cycle.	likely to understand their customer's preferences or forecast demand and may find it difficult to remain competitive with those who do.
International Retail	The last few years have seen an influx of international brands penetrating the Australian market.	An untapped Australian market and Australian's demanding goods they can see online but cannot purchase locally. Additionally, the ability to geoblock products and charge higher prices in the Australian market has driven demand.
Omnichannel Retail	Digital marketing has been used to keep customers loyal to a brand/distributor.	The emergence of digital marketing across a range of devices, platforms and applications have provided multiple channels for retailers to market their products. Physical stores need an online presence to be competitive, as a consumer may shop using both means at different times.
Mobile Devices	Accessing retail via mobile devices and integrating mobile devices.	Mobile devices are providing unprecedented 24/7 access to retail offerings.
Subscription retail	Subscription retail allows retailers to encourage increased loyalty and connection to their brand.	Retailers need a business model that 'locks in' customers to increase the threshold of switching brand
Fast Retail	Business models comprised of virtual stores accessible from anywhere with fast distribution networks.	Technology has enabled customers to decide when, how and where to go. Consumers are no longer beholden to opening times or physical geography, consumer desires rather than retailers are driving consumption.
Retailtainment	Entertainment as an integral part of the retail experience.	The popularity of online retail channels has resulted in physical retailers needing to provide a retail experience or social experience as a point of difference. Millennials integrate retail and entertainment as a single social experience.
Small Retail	Speciality shops and smaller floorplates are becoming more popular.	Smaller stores with more curated selections, and specialty shops with niche products and more knowledgeable staff are predicted to be more competitive than larger stores where products can be harder to find.
Personal Retail	Consumers are increasingly desiring products that can be personalised.	Consumers are going shopping with a strong idea of what they want, rather than shopping to see what is available and fits their needs. They want to find a product that reflects their personal brand and is tailored to their needs rather than generic and mass-produced.

Trend	Description	Drivers
Ethical Consumerism	Consumers are considering the ethical and environmental impact of their purchases; where the product was produced and if it reflects their values.	This has been driven by a range of factors such as COVID-19, social media raising awareness around working conditions and environmental impact, news, Oxfam and other organisations that rate brands.
Ecommerce	The rise of online shopping coincides with a rise in e-commerce. Online shopping provides the ability of consumers to stay home, and e-commerce has revolutionised who can be a retailer.	This has been driven by fast-paced lives, the rise of social media, more people starting online businesses. Online shopping is what customers are doing, and ecommerce is what businesses are doing. This also means in-store shopping has to be enticing or convenient enough to attract consumers.
Buying Local	Supporting local businesses and individuals	Consumers are becoming increasingly willing to purchase from small businesses and locally. This has been accelerated through COVID-19 to support small, struggling businesses and due to a lack of imported goods.
Open Air Shopping Experiences	People are starting to prefer outdoor malls rather than enclosed malls.	People wanting to be in nature, prefer to walk between shops outside rather than in a shopping centre, however, the trade area pull is larger for indoors than outdoors
Circular Fashion	More consumers are turning to be a part of a circular economy model in which they consume and give away items in a more sustainable manner.	This has been driven by second-hand ecommerce like Etsy, people both buying and selling as individuals or small 'brands' and the growth of the sharing economy.
Authenticity	Customers are increasingly wanting to feel a personal connection with brands and are becoming more aware of manipulative advertisements.	Increased availability of information is making consumers more aware of marketing tactics. This is making consumers more inclined to purchase from brands/retailers they feel are authentic.
Virtual Reality	Retailers are increasingly looking to differentiate themselves through the integration of technology with the customer experience.	Augmented Reality (AR) and Virtual Reality (VR) technologies have had a significant impact on the retail sector. AR and VR provide immersive and engaging experiences for customers, enabling them to visualize and interact with products in new ways such as virtual storefronts. This trend can reduce the footprint required of physical stores.

Source: Pracsys 2025

6 NEEDS ASSESSMENT

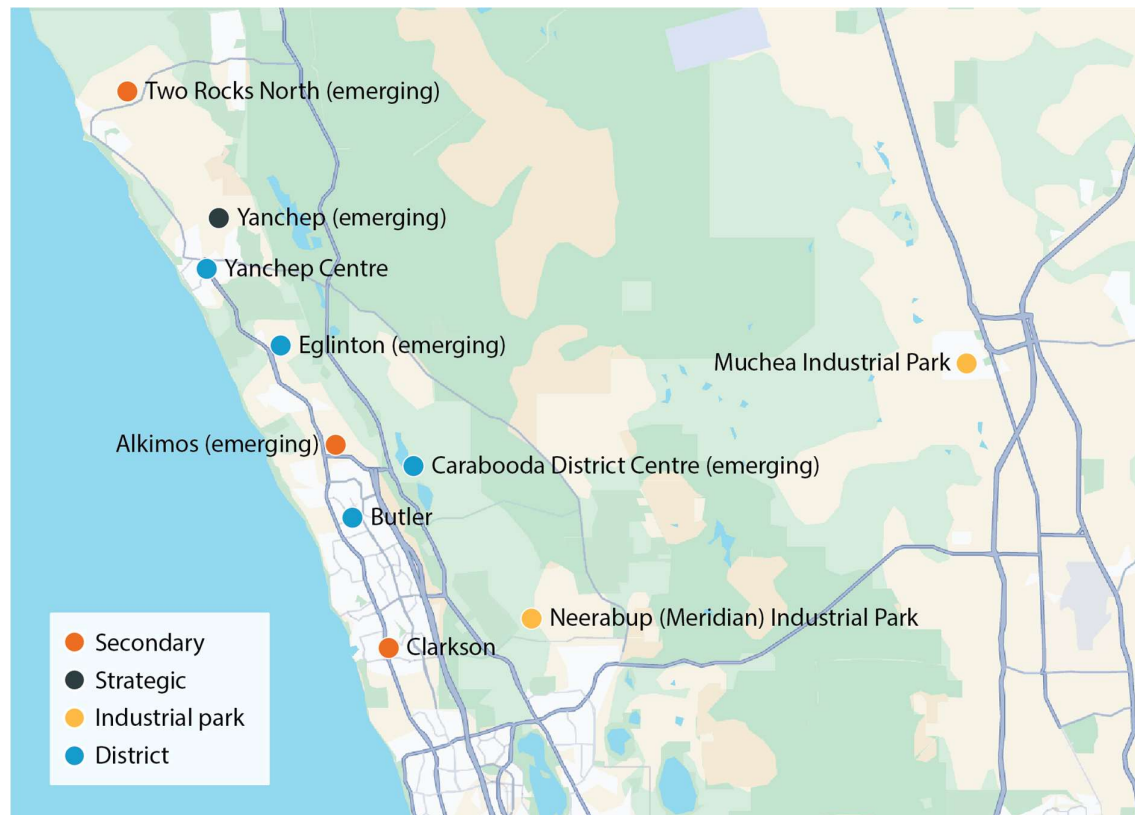
Residents will require sufficient access to Shop/Retail offerings and community infrastructure to support their retail, health, transport, recreation and education needs and ensure a high level of liveability. The Needs Assessment has projected demand for land uses in activity centres over time using service ratios for the City of Wanneroo.

6.1 Supply and Demand Analysis

Trade Area

The City of Wanneroo is expected to be well-served by existing and future activity centres (Figure 15). The City's activity centre hierarchy includes a mix of strategic, secondary and district centres as well as strategic industrial parks.

Figure 15. Higher Order Activity Centre Hierarchy



Source: Pracsys 2025

SPP4.2 states that communities should have immediate access to goods and services for their daily and weekly shopping needs. While the City has a range of activity centre offerings, the future Carabooda

population faces built barriers (such as Wanneroo Rd and Mitchell Fwy) that limit access to the closest activity centres, Alkimos and Butler.

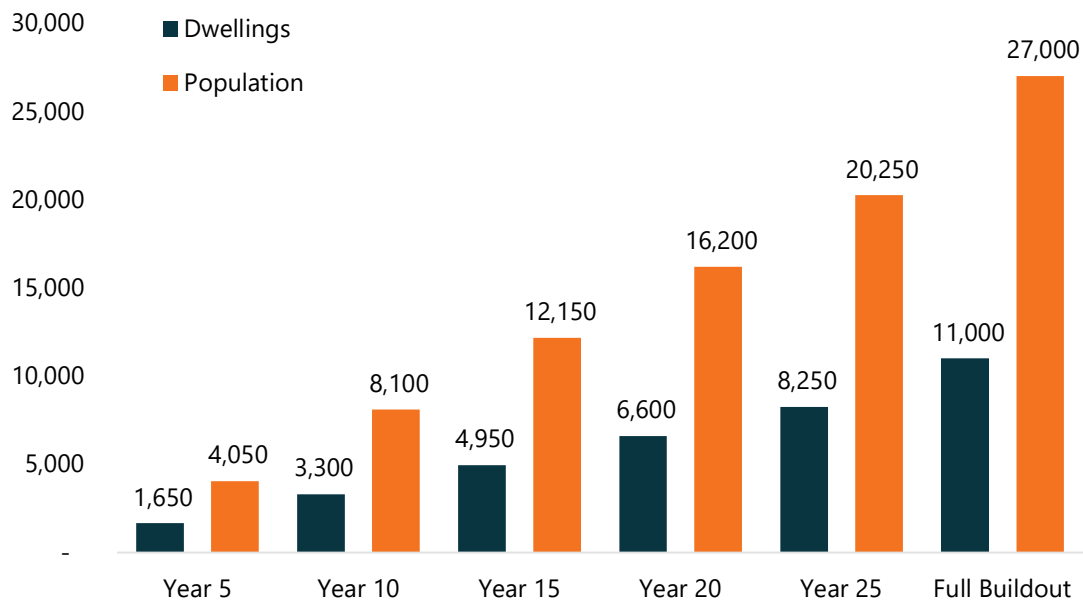
Activity centres have been proposed for the Carabooda subject site, inclusive of a district centre, to ensure that goods and services are highly accessible. The proposed activity centre floorspace in Carabooda is not expected to have an impact on the existing activity centre hierarchy as the provision of commercial floorspace focuses on simply meeting the needs of the immediate population.

The catchment, or trade area, is the spatial boundary from which commercial floorspace generates most of its customers. The trade area equates to the Carabooda DSP area as the development of commercial floorspace will be determined by growth in the local population. The subject site is estimated to support 27,000 people and 11,000 dwellings at full development.

Population and Dwelling Growth

Key variables established in Section 3, Economic Analysis, were utilised to linearly project the uptake of lots and dwellings at a high level (Figure 16). The subject site is expected to be fully developed after 33 years.

Figure 16. Dwelling and Population Forecast Estimate



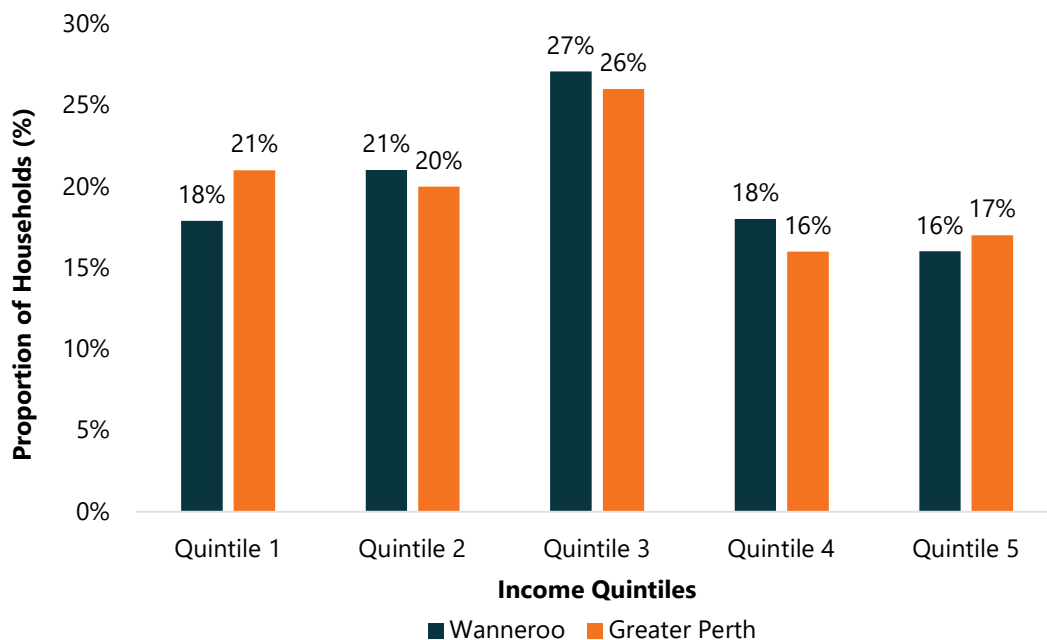
Source: Acumen 2025, Pracsys 2025

Income and Expenditure

The future household income levels of Carabooda will directly impact the success of retail and non-retail developments as the extent and composition of expenditure is primarily determined by income.

The City of Wanneroo has been utilised as a conservatively high representation of Carabooda. Households in the City have been equally distributed into five levels of weekly income. Generally, lower-income quintiles spend a higher proportion of their income on basic goods and services while upper-income quintiles have a greater level of disposable income and consume more comparison retail items. Compared to the Greater Perth benchmark, the City's income composition is broadly similar (Figure 17). Incomes in the City are slightly more concentrated in the fourth and fifth quintiles (1% more) and more in the third quintile (27% versus 26%). This composition of household income for Greater Perth was likely impacted by the negative impacts of COVID-19.

Figure 17. Wanneroo and Greater Perth 2021 Weekly Income Profile

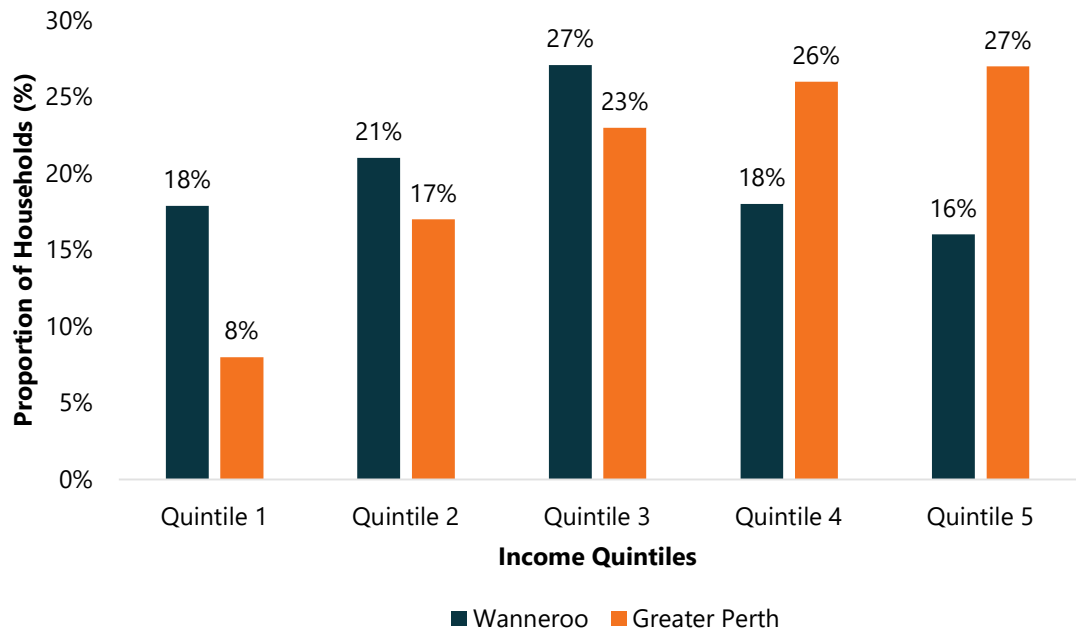


Source: ABS Census 2021, Pracsys 2025

2016 ABS census data has been used for Greater Perth to compare the areas without the effect of COVID-19 (Figure 18). The City appears to have a greater concentration of households in the two lowest quintiles compared to Greater Perth (39% versus 25%). The City has a significantly lower proportion of households in the fourth and fifth quintiles relative to greater Perth (34% versus 55%). This indicates that the City has a lower average household income relative to Greater Perth. The difference in the low quintiles and upper quintiles reflects the City's age profile with a higher proportion of young families who likely have not reached their earning potential. Households in lower income quintiles have a limited level of disposable income. These households are likely to prioritise convenience retail purchases including groceries, food and pharmaceuticals.

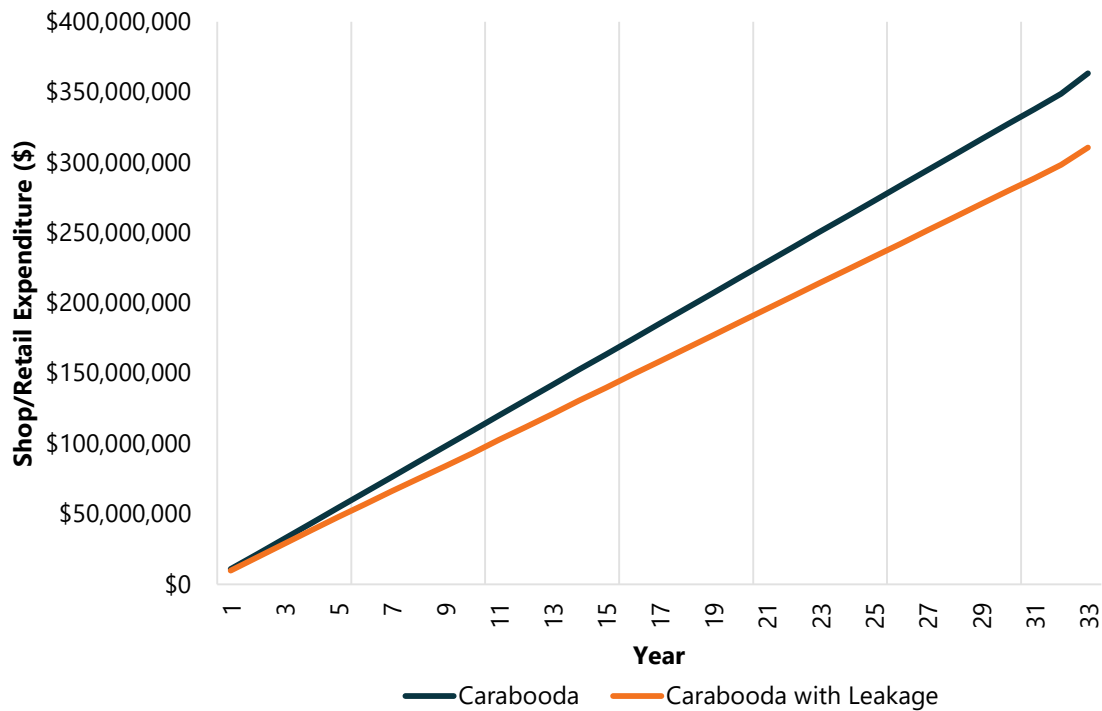


Figure 18.Wanneroo 2021 and Greater Perth 2016 Weekly Income Profile



Source: ABS Census 2016/21, Pracsys 2025

ABS Household Expenditure Survey data and income quintiles for the City of Wanneroo were used to estimate the total expenditure pool of the Carabooda. The model combines the propensity to spend on commodities based on household income quintiles to derive the total Shop/Retail expenditure in the area (Figure 19). Given projected household growth, Shop/Retail expenditure is estimated to increase from \$11 million in Year 1 to \$363 million at full buildout. The increase in the subject site’s expenditure reflects the expansion in residential dwellings that is expected to occur over the next 20 to 30 years. Some of this turnover is projected to be lost to online leakage however, the effect of online leakage on the viability of the proposed activity centres is expected to be minimal.

Figure 19. Carabooda Shop/Retail Expenditure

Source: ABS Census 2021, ABS HHES Survey 2017/18, Pracsys 2025

6.2 Shop/Retail Floorspace Projections

The future population of Carabooda will require a sufficient quantum of Shop/Retail floorspace to support their daily and weekly shopping needs. DPLH Land Use and Employment Survey (LUES) data has been used to determine service ratios (floorspace per person) to calculate the minimum quantum of Shop/Retail floorspace to support the local population. Three service ratios were identified to provide a potential range for future development (Figure 20).

Figure 20. Shop/Retail Service Ratios

Description	Benchmark Area	Shop/Retail Service Ratio
Low	City of Wanneroo	0.83
Average	Average	1.22
High	Greater Perth	1.60

Source: DPLH LUES 2015/17

Between 22,410m² and 43,200m² of Shop/Retail floorspace is required to service the expected population of the Carabooda urban development at full buildout (Figure 21). The Shop/Retail floorspace and other activity centre-based floorspace will likely be allocated to one district centre, one

neighbourhood centre and two local centres¹³. The number and role of these centres were identified to ensure that the existing activity centre hierarchy was not undermined.

Figure 21. Shop/Retail Floorspace Projections

Range	Year 5	Year 10	Year 15	Year 20	Year 25	Full Buildout
Low (m ²)	3,362	6,723	10,085	13,446	16,808	22,410
Average (m ²)	4,921	9,842	14,762	19,683	24,604	32,805
High (m ²)	6,480	12,960	19,440	25,920	32,400	43,200

Source: Pracsys 2025

Employment generated by this floorspace has been estimated in Section 6.4, Employment Projections.

6.3 Non-Shop/Retail Floorspace Projections

Service ratios based on DPLH LUES data have been used to determine the quantities of common Non-Shop/Retail land uses located in activity centre boundaries. Non-Shop/Retail floorspace is essential to ensure that multi-purpose trips are encouraged, and that the population is supported by a wide range of commercial offerings.

Storage/Distribution, Manufacturing/Processing/Fabrication, Primary-Rural and Utilities/Communications are not typical activity centre uses but can be found in high order activity centre with a large footprint¹⁴. These PLUCs were excluded from analysis for a conservative estimate of activity centre floorspace. This exclusion also reflects the roles of the proposed activity centres in Carabooda. Strategic and secondary centres and industrial complexes in the City of Wanneroo will likely provide these functions.

The extent of other activity centres uses is often determined by size of the Shop/Retail offering as supermarkets, grocery stores and clothes shops are often a consumer's primary purpose for visiting. Greater Shop/Retail floorspace supports greater visitation and thus supports less productive, lower turnover uses. Colocation of uses and functions also aligns with the government priorities as it supports multi-purpose trips.

Data for the City of Wanneroo has been used to estimate the potential quantum of Non-Shop/Retail floorspace based on the projections for Shop/Retail floorspace (Figure 22).

¹³ The expected location of these activity centres can be found in the primary documentation provided by CLE Town Planning + Design for the Carabooda subject site.

¹⁴ Please see the definitions for all PLUCs in Appendix 1: LUES Glossary

Figure 22. Shop/Retail to Non-Shop/Retail Floorspace Ratios

PLUCs	City of Wanneroo Floorspace	SHP to Non-Shop/Retail Ratio
ENT	43,661	0.28
HEL	35,933	0.23
OFF	49,747	0.32
RES	14,208	0.09
RET	55,207	0.35
SER	18,186	0.12
SHP	156,800	1.00

Source: DPLH LUES 2015/17

The Carabooda development's activity centres will likely support between 7,110m² and 13,706m² of Office/Business floorspace at full development based on the extent of Shop/Retail floorspace (Figure 23). Residents of Carabooda could require between 31,006m² and 59,770m² of Non-Shop/Retail floorspace across its proposed activity centres.

Figure 23. Non-Shop/Retail Floorspace Projections

Range	Year 5	Year 10	Year 15	Year 20	Year 25	Full Buildout
Office/Business						
Low (m ²)	1,066	2,133	3,199	4,266	5,332	7,110
Average (m ²)	1,561	3,122	4,684	6,245	7,806	10,408
High (m ²)	2,056	4,112	6,168	8,223	10,279	13,706
Entertainment/Recreation/Cultural						
Low (m ²)	936	1,872	2,808	3,744	4,680	6,240
Average (m ²)	1,370	2,740	4,111	5,481	6,851	9,135
High (m ²)	1,804	3,609	5,413	7,217	9,022	12,029
Health/Welfare/Community Services						
Low (m ²)	770	1,541	2,311	3,081	3,852	5,136
Average (m ²)	1,128	2,255	3,383	4,511	5,638	7,518
High (m ²)	1,485	2,970	4,455	5,940	7,425	9,900
Residential						
Low (m ²)	305	609	914	1,218	1,523	2,031

Range	Year 5	Year 10	Year 15	Year 20	Year 25	Full Buildout
Average (m ²)	446	892	1,338	1,784	2,229	2,973
High (m ²)	587	1,174	1,762	2,349	2,936	3,914
Other Retail						
Low (m ²)	1,184	2,367	3,551	4,734	5,918	7,890
Average (m ²)	1,733	3,465	5,198	6,930	8,663	11,550
High (m ²)	2,282	4,563	6,845	9,126	11,408	15,210
Service Industry						
Low (m ²)	390	780	1,170	1,559	1,949	2,599
Average (m ²)	571	1,141	1,712	2,283	2,854	3,805
High (m ²)	752	1,503	2,255	3,006	3,758	5,010

Source: Pracsys 2025

Previous work undertaken by Pracsys identified the number of specific facilities, places or floorspace that may be demanded at full development (Figure 24). These facilities have the potential to collocate with Shop/Retail and are largely examples of specific facilities that could be developed within PLUCs. Industry and government standard service ratios that were used to calculate these values can be seen in Appendix 2: Other Service Ratios. A glossary to understand land use codes and categories can be found in Appendix 1: LUES Glossary.

Figure 24. Other Potential Activity Centre Facilities

PLUCs	Facility	Quantity
POS	Public Open Space (Active, district centre)	1 facility
ENT/HEL	Community Centre (Small, district centre)	1 facility
ENT	Library (Small, district centre)	1 facility
ENT/HEL	Community Centre (Local centre)	2 facilities
POS	Public Open Space (Active, local centre)	2 facilities
RES	Aged Care	212 places
HEL	Childcare	989 places
HEL	Medical Centre	540m ² of floorspace

Source: Pracsys 2025

Floorspace projections do not reflect limits to the development of activity centres but outcomes of initial population forecasts. These projections should be treated as guidelines as opposed to restrictions. For

further discussion on the implementation of these projections, please see the following appendices for implementation recommendations:

- Appendix 4: Supporting High Performance Activity Centres
- Appendix 5: Apply the Evidence Base
- Appendix 6: Supporting Centre Development

6.4 Employment Projections

Floorspace-to-employment ratios were utilised to determine the quantum of jobs generated by the floorspace required to support the population. The activity centre land uses could generate up to 3,553 jobs in Carabooda (Figure 25).

Figure 25. Shop/Retail and Non-Shop/Retail Employment Projections

Range	Year 5	Year 10	Year 15	Year 20	Year 25	Full Buildout
Shop/Retail						
Low	139	278	417	555	694	926
Average	203	406	610	813	1,016	1,355
High	268	535	803	1,071	1,338	1,784
Office/Business						
Low	85	169	254	339	424	565
Average	124	248	372	496	620	827
High	163	327	490	653	817	1,089
Entertainment/Recreation/Cultural						
Low	16	32	47	63	79	105
Average	23	46	69	93	116	154
High	30	61	91	122	152	203
Health/Welfare/Community Services						
Low	17	34	51	68	85	114
Average	25	50	75	100	125	167
High	33	66	99	132	164	219
Residential						
Low	3	6	10	13	16	21
Average	5	9	14	19	24	31
High	6	12	19	25	31	41
Other Retail						
Low	14	27	41	55	69	91
Average	20	40	60	80	100	134
High	26	53	79	106	132	176
Service Industry						
Low	3	6	9	12	15	21

Range	Year 5	Year 10	Year 15	Year 20	Year 25	Full Buildout
Average	5	9	14	18	23	30
High	6	12	18	24	30	40

Source: Pracsys 2025, DPLH LUES 2015/17

6.5 Activity Centre Discussion

The City of Wanneroo is expected to be well-serviced by existing and future strategic, secondary and district centres as well as strategic industrial parks. The future residents of the Carabooda development will require sufficient access to Shop/Retail offerings and other commercial offerings to support their retail, health, transport, recreation and education needs and ensure a high level of liveability.

SPP4.2 supports this notion by stating that people should have a high level of accessibility to a range of goods and services. The estimated floorspace for activity centres in Carabooda reflects the minimum requirement to support 27,000 people. These estimates ensure that the population's daily and weekly shopping needs are met but at a conservative level to also ensure the wider activity centre hierarchy is unaffected.

The Shop/Retail floorspace and other activity centre-based floorspace will likely be allocated to one district centre, one neighbourhood centre and two local centres. The number and role of these centres were identified to ensure that the existing activity centre hierarchy was not undermined. A district centre is appropriate for the Carabooda development according to SPP4.2 as the population falls within the indicative trade area of 20,000 – 50,000 people. SPP4.2 further outlines that district centres are appropriate for a range of land uses to meet the needs of the local population and encourage multi-purpose trips. Desired land uses include shop uses (liquor stores, fast food), office uses (medical centres, dental, commercial) and service commercial (bulky goods showrooms, hotel, gym, hardware store, etc.).

7 CONCLUSION

Acumen is progressing a Needs Assessment to support a District Structure Plan (DSP) for Carabooda. Pracsys has been engaged to undertake a Needs Assessment to address State Planning Policy guidelines, providing background socioeconomic analysis, demand, provision projections and recommendations for the development area and the district centre.

The City of Wanneroo is expected to be well-served by existing and future activity centres. The City's activity centre hierarchy includes a mix of strategic, secondary and district centres as well as strategic industrial parks. The future residents of the Carabooda development will require sufficient and highly accessible Shop/Retail and other commercial offerings to support their retail, health, transport, recreation and education needs and ensure a high level of liveability.

Proposed activity centres for Carabooda will ensure that goods and services are highly accessible for the net benefits of residents. The proposed activity centre floorspace in Carabooda will not have an impact on the existing surrounding activity centre hierarchy as the provision of commercial floorspace focuses on meeting the needs of the immediate population. The trade area for the new urban area's centres therefore equates to the Carabooda DSP area. The development is estimated to support 27,000 people, 11,000 dwellings and a labour force of 14,324 people at full development.

The DPLH Land Use and Employment Survey (LUES) data was used to determine service ratios (floorspace per person) to calculate the minimum quantum of Shop/Retail floorspace required to support the local population. Between 22,410m² and 43,200m² of Shop/Retail floorspace and between 31,006m² and 59,770m² of Non-Shop/Retail floorspace is required to service the expected population of the Carabooda urban development at full buildout. This floorspace could generate approximately 3,553 jobs in local activity centres.

The Shop/Retail floorspace and other activity centre-based floorspace will likely be allocated to one district centre, one neighbourhood centre and two local centres. The number and role of these centres were identified to ensure that the existing activity centre hierarchy was not undermined. A district centre is appropriate for the Carabooda development according to SPP4.2 as the population falls within the indicative trade area of 20,000 – 50,000 people. SPP4.2 further outlines that district centres are appropriate for a range of land uses to meet the diverse needs of the local population and encourage multi-purpose trips. Desired land uses include shop uses (liquor stores, fast food), office uses (medical centres, dental, commercial) and service commercial (bulky goods showrooms, hotel, gym, hardware store, etc.). These land uses align with the Shop/Retail and Non-Shop/Retail projections undertaken in this analysis.

8 APPENDICES

8.1 Appendix 1: LUES Glossary

Information regarding Planning Land Use Category (PLUC) descriptions and Western Australian Standard Land Use Classification (WASLUC) can be obtained from the Department of Planning, Land and Heritage (DPLH) Land Use and Employment Survey (LUES) Information Sheet¹⁵.

SHP – Shop/Retail

Any activity which involves the sale of goods from a shop located separate to, and/or in, a shopping centre other than those included in Other Retail.

RET – Other Retail

Many of these activities are not normally accommodated in a shopping centre. By virtue of their scale and special nature the goods of these activities separate them from the Shop/Retail category (for example car sales yard or carpet showroom).

OFF – Office/Business

Administrative, clerical, professional and medical offices are activities which do not necessarily require the land area/floor space or exposure of other land uses. Although offices require building and parking facilities, these needs are quite distinct from those of commercial uses and service industries.

HEL – Health/Welfare/Community Services

Government, government-subsidised and non-government activities that provide the community with a specific service, including hospitals, schools, personal services and religious activities.

ENT – Entertainment/Recreation/Cultural

Activities which provide entertainment, recreation and culture for the community and which occur in buildings and/or on land, such as passive and active sports venues, museums, amusements and gambling services.

RES – Residential

Includes all types of residential land use ranging from single housing to nursing homes for the aged, residential hotels, motels, other holiday housing, institutions and religious housing.

MAN – Manufacturing/Processing/Fabrication

¹⁵ DPLH, 2017, *Land Use and Employment Survey Information Sheet*, Government of Western Australia, https://www.wa.gov.au/system/files/2021-07/LUES_Glossary.pdf

This category includes land use activities involving the manufacture, processing and fabrication of all general goods. Both the scale and associated environmental impact of these activities separate them from other land use categories.

STO – Storage/Distribution

Any land use activity which involves the storage, warehousing or wholesaling of goods usually conducted from large structures, or involving large bulk goods, but does not include activities that attract the general retail trade activities.

SER – Service Industry

This category includes service industries offering a range of services. The scale and environmental impact of such activities require their separation from other land uses. These services include film processing, cleaning, motor vehicle and other repair services, and other servicing activities, including some construction activities.

UTE – Utilities/Communications

All forms of local, state, national and international communication, transportation and other utilities (for example, electricity, gas, water, sewerage, roads, parking and other transport or communications related activities) covering the public and private sectors.

VFA – Vacant Floor Area

This category accounts for vacant floor areas of buildings, including both non-residential and residential.

8.2 Appendix 2: Other Service Ratios

The following table contains select service ratios for Non-Shop/Retail floorspace (Figure 26).

Figure 26. Demand Ratios for Specific Facilities, Places and Floorspace

Facility	Ratio	Source
Public Open Space (Active, district centre)	1:25,000	City of Wanneroo, 2020, Link
Community Centre (Small, district centre)	1:30,000	
Library (Small, district centre)	1:35,000	
Community Centre (Local centre)	1:7,500	
Public Open Space (Active, local centre)	1:7,000	
Aged Care	Varies depending on age bracket e.g. 0.0004% for 0-	Aged care places have been estimated using aged care participation rate data from

	49-year-olds and 6% for 80-84-year-olds	the Australian Institute of Health and Welfare for the North Metropolitan Aged Care Planning Region.
Childcare	Varies depending on age bracket e.g. 9% for 0-year-olds and 32% for 4-year-olds	ABS, 2018, Link
Medical Centre	0.02m ² per person	DPLH LUES 2015/17

Source: Pracsys 2025

8.3 Appendix 3: Floorspace-to-Employment Ratios

The following table contains floorspace and employment data used to generate floorspace-to-employment ratios (Figure 27).

Figure 27. Floorspace-to-Employment Ratios

Land Use	Floorspace (m ²)	Employment	Ratio
ENT	43,661	737	0.017
HEL	35,933	796	0.022
MAN	6,251	97	0.016
OFF	49,747	3,953	0.079
PRI	2,600	0	0.000
RES	14,208	150	0.011
RET	55,207	640	0.012
SER	18,186	144	0.008
SHP	156,800	6,476	0.041
STO	42,029	34	0.001
UTE	1,927	94	0.049

Source: DPLH LUES 2015/17

8.4 Appendix 4: Supporting High Performance Activity Centres

Principles of economic activation are key to the development of vibrant and viable activity centres. Pracsys uses Six Principles of Economic Activation to assess the relative performance of centres from an economic perspective. This includes how key anchors such as supermarkets drive pedestrian traffic (activation), how businesses can benefit from this pedestrian traffic, and suitable locations for less high traffic uses such as other retail. A summary of six principles has been included in the following table. These principles should be applied as the subject site develops (Figure 28). This is seen as a critical opportunity for ensuring the performance of high order activity centres in the subject site such as the Carabooda District Centre.

Figure 28. Summary of the Six Principles of Economic Activation

Activation Principle	Summary
1. Purpose of Place 	The role of the Centre based on its size and classification: Addresses the question – what does this place represent to its target user population (residents, workers, visitors)? This should link to the SPP4.2 identified roles of centre classifications.
2. Access – Arrival Points 	This refers to how centres are accessed by users (the arrival points): - Decisions about access begin 5km from the place - Transport networks should be planned to travel through centres (not bypass them) – ensure the design funnels people and traffic into the core - Pedestrian congestion and a mix of transport nodes is beneficial to activation - It is better to arrive at the “front door” of the place, not around the back or in the side
3. Origins – Car Parking and Transport Nodes 	Origins are nodes from which pedestrian movements begins: - Parking, multi-storey development and transport nodes are the drivers of pedestrian movement - Strategic distribution of car parks and transport nodes will optimise pedestrian movement - Location is more important than numbers - Space the origins around the periphery of centre - Street parking is important (for commercial areas) - Apply use fees to ensure turnover of parking but not so much that consumers do not park at all - Relax time limits in appropriate areas to ensure customers have time to undertake shopping trip relevant to proximate uses

Activation Principle	Summary
4. Exposure – Pedestrian Movement 	Exposure indicates Active Frontages that are exposed to high levels of pedestrian traffic: • Economic activation is driven by the frequency and concentration of transactions • Channel movements and concentrate transactions by pushing people past as many shop windows as possible • Rents and sales are directly related to pedestrian traffic (e.g. a butcher will pay higher rent to be at supermarket entry) • Minimise possible routes from origin to destination points (e.g. car park to main attraction) as architectural “permeability” is not always a good thing for business viability
5. Destinations – Major attractions 	Destinations are areas that attract high concentrations of customers/people: • Identify main destination – what will bring users into the core? • Assess user behaviour ○ Number of visits ○ Timing of visits (time of day, seasonality) • Give major destinations special treatment ○ Understand what they need ○ Build centre around them • Amplify the impact of attractions by creating support amenity and infrastructure to maximise frequency, length of stay and expenditure
6. Control – Strategic Sites 	Key Sites are locations that could be considered as future destinations and/or suitable sites for anchor tenants (i.e. supermarkets). Tenure control is a significant advantage for overall development success • Tenure control is vital for overall development success – determine which sites (supporting what uses) must stay in public ownership • Identify active frontages and take control of key sites or implement appropriate planning measures (i.e. a set of preferred uses for a site) • Corner sites drive uses on either side (more appropriate for high turnover uses such as a café where there is high pedestrian traffic) • Not all areas in a place need to be active – be selective

Source: Pracsys 2025

8.5 Appendix 5: Apply the Evidence Base

Several considerations have been developed to support the development of Carabooda’s District Centre with the appropriate evidence-base to maximise viability and resilience (Figure 29). Highlighted cells are considerations only relevant to those approving or assessing changes to activity centres (e.g. the City).

Figure 29. Activity Centre Planning Considerations

Number	Consideration
1	The floorspace projections in this analysis provide guidance to understand the potential quantum of floorspace that may be demanded at a certain time point. Reaching a certain dwelling number or year does not automatically indicate a centre should expand. Actual population growth should be reviewed using Small Area 2 ABS spatial areas and / or Forecast.id small areas within 5km and Carabooda's population. The population estimates in this analysis and other factors affecting the activity centre hierarchy at the time of potential expansions will need to be considered (i.e. future developments that may not be in this analysis, changing floorspace per person requirements, etc.) to assess whether additional floorspace is required in future.
2	The floorspace and dwelling projections in the reported years should be used to monitor the provision of uses at the District Centre. When a dwelling level is reached, this is an indication that further floorspace can be considered if private interest arises; even if this occurs prior to the year identified in the Needs Assessment. Interest from private industry can be an indicator of current or future potential demand and should be considered as part of the overall decision-making process. This being said, private interest may undermine the activity centre hierarchy and appropriate measures should be used to ensure development applicants have demonstrated an actual need for additional goods or services (see Consideration 5). If a dwelling level does not occur by an identified year, the dwelling level should be the guiding factor for potential development and not the year.
3	The Needs Assessment provides floorspace quantum estimates for the centre. These should not be treated as a strict floorspace cap but as targeted supportable floorspace with some flexibility for small under or over provisions (the under or over provision should be based on identified need at the time).
4	It may not be possible to support all the identified floorspace at the centre; new local centres could be considered in areas where dwelling development is occurring and there is sufficient demand to support a centre (to be demonstrated by a development applicant). Where new residential developments occur or where there are significant increases in residential density, planning of new centres should address the daily/weekly shopping needs of residents through an appropriate distribution of high and lower order centres.
5	Several factors should be considered when assessing the potential for a large expansion of a current centre (see SPP4.2, Table 2: Major activity centre use floorspace thresholds) or for a proposed new centre. There should be robust evidence that: • There is a need (i.e. high population growth within the centre's catchment) • There is alignment with SPP4.2 objectives (i.e. walkable catchment, public transport access, etc.) • The development would not affect the viability of the activity centre hierarchy • The proposed uses are viable (i.e. if a supermarket is proposed, the applicant's evidence must demonstrate there is sufficient demand for that offering). Where the demand for uses can be demonstrated, there should be flexibility to allow for a variety of uses across all centre types to enable operators to meet specific and potentially changing needs of consumers

Number	Consideration
	There are wider community benefits such as improved service, increased employment, reduced travel times, etc.
6	A current centre in a fully developed area should not be allowed to expand solely on the basis that another centre has not expanded to the level identified in the Needs Assessment at a given timepoint. This may be reconsidered in developing areas where another centre is constrained and there has been population growth within the catchment (robust evidence should be required as per Consideration 5).
7	New centres may be allowed to incorporate additional floorspace where a current centre cannot expand due to land or other constraints, with some caveats: - The new centre should be in a location that provides suitable access to residents of the current centre's catchment - The new centre needs to demonstrate the same robust evidence as above

Source: Pracsys 2024

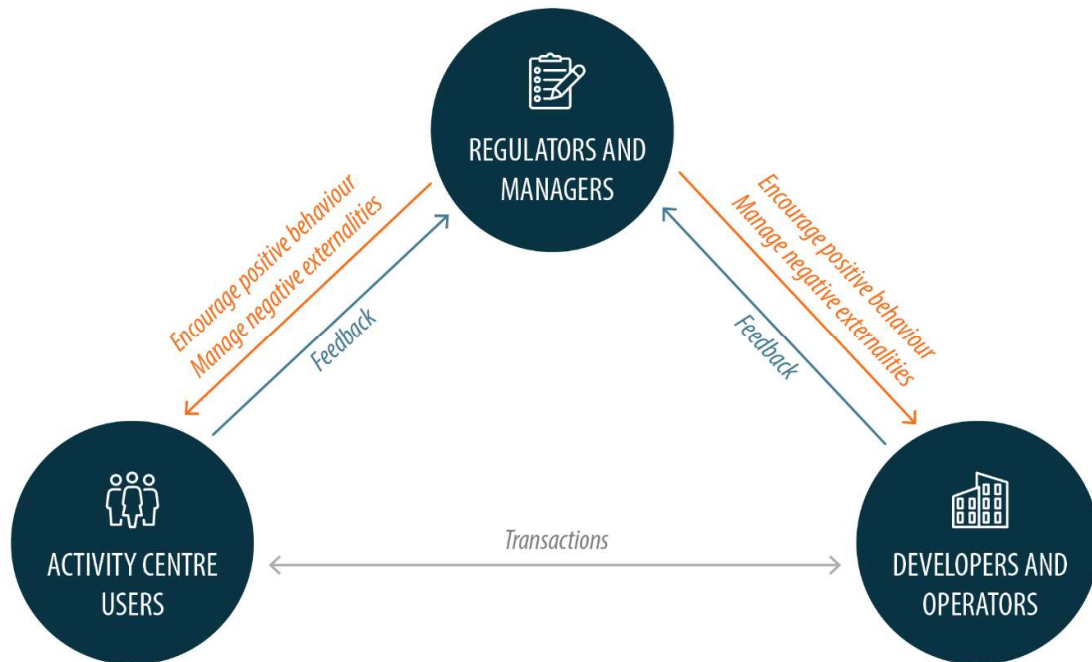
These considerations should allow the Carabooda development the flexibility to allocate floorspace where and when it is needed. The recommendations should assist the City in deciding when development is appropriate and ensure that development benefits the community without unduly impacting its other activity centres.

8.6 Appendix 6: Supporting Centre Development

It is assumed that the City of Wanneroo will facilitate employment growth through an understanding of the key drivers that attract businesses to the activity centre. Any strategy to reimagine the function, scale or use of the centre should respond to the 'felt needs' of the user groups it caters for, including:

- Activity centre users
- Enterprise developers/operators (and the workers)
- Regulators/managers

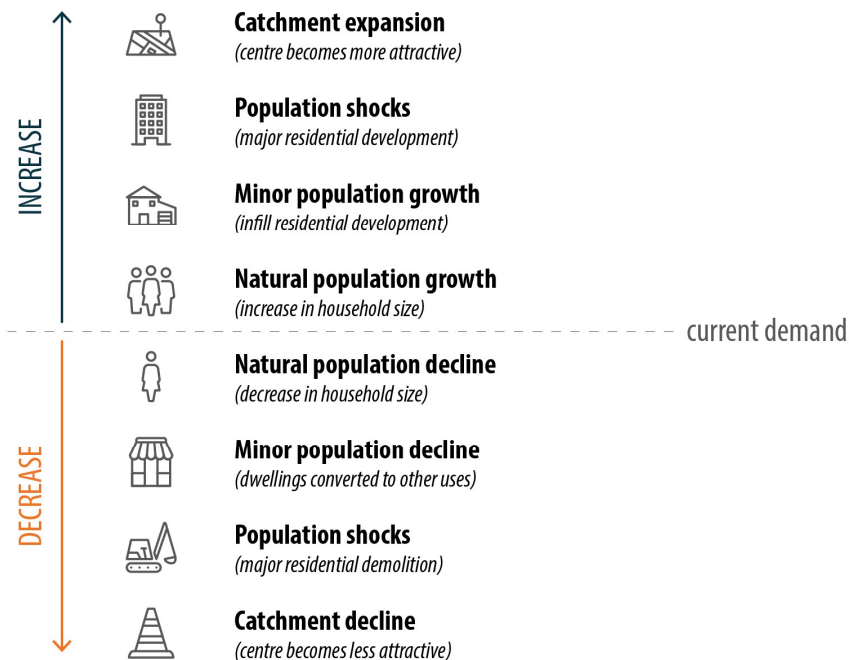
Decisions are made to benefit one or more of the user groups in the context of an overarching strategic vision (Figure 30).

Figure 30. User Group Interactions

Source: Pracsys 2023

Understanding the drivers of user behaviour is required to achieve a vibrant and viable activity centre. Regulators and managers (e.g. State and Local government and other authorities) can generally only encourage or influence certain behaviours, rather than control them. Ultimately the market and centre users will decide what activity is viable for the centres, with regulators and managers able to exert influence toward the desired approach. It is therefore paramount that the planning for the activity centre aligns with desired outcomes of users and employment providers.

There are a number of key drivers for population-driven industries that need to be considered when planning for activity centres (Figure 31).

Figure 31. Examples of Demand Drivers for Population-Driven Businesses


Source: Pracsys 2023

A change in any of the above characteristics will promote a change in floorspace and interest from the market for redevelopment. For example, on the demand side, an increase in the level of density surrounding the centre increases the effective userbase and proportion of expenditure that is likely to be directed and captured by the centre, this will provoke a competitive response from developers in which investment will be made to capture this extra expenditure pool. The Town's Masterplan facilitates and plans an increase in dwellings that will promote walkable access to the centre. This necessitates enhanced centre access to improve the user experience and provide the opportunity to improve the viability of retail operators.

Similarly, a change in the urban fabric (on the supply side) that makes the centre more attractive will increase the trade area of the centre. This could, for example, be improved streetscaping or connectivity, activation and event strategies within the centre or improved connection to the local tourism areas. This should provoke a similar competitive response from developers wishing to take advantage of the extra expenditure pool. These types of initiatives may be implemented to encourage redevelopment of the centre by key stakeholders to meet the needs of planned future residents.

When considering strategic employment, the relevant industries are largely exogenous to changes in these drivers and principally rely on the comparative advantages of an area (resources, location) and individual decisions of businesses. Changes in strategic employment can be affected through promoting

the unique advantages of the area to businesses, encouraging business collaboration and other business-friendly policies. Typical considerations include travel time to major employment centres and travel time to work for employees and the cost of the premises.