

CITY OF SWAN

Local Planning Strategy



Endorsed by the
Western Australian Planning Commission

August 2020

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Local Planning Strategy Executive Summary and Part 1

August 2020



Schedule of Modifications

Version	Comment	Document Date	Approval Date
1.0	Council briefing to forward Draft LPS to the WAPC for certification	March 2013	13 March 2013
2.0	Minor modifications completed and requested WAPC consent to advertise	June 2016	28 June 2016
3.0	Minor modifications completed and consent granted from WAPC to advertise LPS	February 2018	6 February 2018
4.0	Adopted by Council for WAPC endorsement after submissions were considered and minor modifications completed.	July 2019	28 August 2019
5.0	Modified for WAPC endorsement (WAPC endorsed LPS subject to minor modifications at SPC Meeting on 30 June 2020)	August 2020	

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EXECUTIVE SUMMARY

The City of Swan's Local Planning Strategy sets out the long-term planning and development directions for the City. It incorporates State and Regional Planning strategies and policies and provides the rationale for land use zones and other provisions to be included in a review of the Local Planning Scheme. The Local Planning Strategy is a key component of the City's Strategic Community Plan 2017-2027.

The SCP is the Council's principal strategy and planning document guiding the development of all other plans and activities that the City undertakes. It is a long term plan (10 years) outlining a vision, aspirations and priorities for the City's development, based on research and considering community input. It is a requirement under Section 5.56 of the *Local Government Act 1995* and is part of the City's integrated planning framework.

The SCP outlines the vision for the City and identifies community well-being priority areas of focus over the next 10 years. Community well-being is broken into five key result areas — Economic, Natural Environment, Built Environment, Social and Governance. Each of the key result areas contains elements to give the overall blueprint for the City.

The development of the SCP was based on extensive research and consultation with the community and key stakeholders and this in turn, informed the preparation of the Local Planning Strategy.

LOCAL PLANNING STRATEGY

The City of Swan's Local Planning Strategy is required to be prepared under Part 3 of the Planning and Development (Local Planning Schemes) Regulations 2015 and requires the endorsement of the Western Australia Planning Commission (WAPC). The Local Planning Strategy will be the principal land-use planning document used to assist the City with its decision making over the next ten years. It sets out the long-term planning directions for the City, incorporates State and Regional Planning strategies and policies and provides the rationale for the zones and other provisions to be included in a review of the Local Planning Scheme.

The Local Planning Strategy consists of two parts: Part 1 - The Local Planning Strategy comprising strategies, actions and maps which spatially represent some of the actions and Part 2 - Background Information and Analysis comprising policy context, local profile and key issues identified. Numerous State Government and City of Swan policies and plans have been referred to in the preparation of the LPS and these are listed and described in Appendix 1.

The key planning issues likely to affect the City over the next ten to fifteen years have been identified and a comprehensive list of strategies and actions developed to respond to the challenges of planning for growth. These are grouped into ten themed areas of:

- Natural Resource Management and Environmental Protection
- Economy and Employment
- Tourism
- Rural Land Uses Subdivision and Development
- Transport, Traffic and Access
- Population and Housing
- Retail and Activity Centres
- Open Spaces and Community Facilities
- Urban Design and Heritage
- Infrastructure Services

These themed headings were derived from guidelines contained within the Department of Planning, Lands and Heritage's Local Planning Manual March 2010.

MAJOR FEATURES OF THE LOCAL PLANNING STRATEGY

Accommodating population growth

The City is forecast to experience significant population growth from 112,802 in 2011 to 239,934 by 2031¹. In order to address future housing needs resulting from this population growth, the City prepared the Urban Housing Strategy which comprised of a Infill Strategy and a Greenfields Strategy. The Infill Strategy identified approximately 15,500 sites in sixteen established residential localities across the City for higher residential densities, taking advantage of access to existing infrastructure services, facilities and resources. The Greenfields Strategy applies to areas subject to current and future structure planning, with most of the growth expected to take place in the Urban Growth Corridor suburbs of Dayton, Brabham, Bennett Spring, Caversham and Bullsbrook.

1 The City of Swan utilises the services of Informed Decisions (id) for its population forecasting

Protecting The Environment

The City of Swan contains some of Perth's most important environmental assets and is part of an internationally recognised 'biodiversity hotspot'. The City has prepared a Local Biodiversity Strategy to provide a framework for the protection of significant local natural areas in the City and the objectives of Local Biodiversity Strategy this strategy are to be integrated into the City's planning framework through the Local Planning Strategy. Rapid population growth can place significant pressures on the environment and the Local Planning Strategy contains strategies to ensure that the City accommodates this growth in a way that does not negatively impact on the environment and responds to the challenges of planning for climate change.

Meeting Future Employment Needs

Population growth should be accompanied by economic growth that is essential to provide local employment and help to increase the employment self-sufficiency for the North-east sub-region. Economic growth can also provide the City with a strong rate base to help meet its community infrastructure obligations into the future. Fortunately, the City has enjoyed sustained economic growth over the past decades largely due to the range of locations and land use zones suitable for significant and diverse economic activity.

Perth and Peel @3.5million has identified a land bank for industrial land supply in the North-east sub-region. Bullsbrook South, Hazelmere South and North Ellenbrook have been identified as potential medium-term (four to ten years) non-heavy industrial sites and the Bullsbrook townsite (North) has been identified for non-heavy industrial use in the long term (more than ten years). It will be important for the future provision of employment-generating land uses to ensure that this identified land banks preserved.

The creation of a viable and sustainable network of activity centres, the identification of new industrial and commercial areas and ways to stimulate the tourism industry will each play a major role in accommodating future employment and economic growth. The planning framework to deliver these outcomes is an important feature of the Local Planning Strategy.

The Growth Of Midland Centre

Midland is a major focus which has been designated a Strategic Metropolitan Activity Centre and is the economic hub of the North-east sub-region and hinterland areas. Major government investment is and has occurred in the Midland hospital and tertiary education facilities as well as significant private investment in business and retail activity. Creating pedestrian and cycle links between Midland and the environmental assets of the Swan and Helena Rivers will add to the amenity and urban fabric of Midland. The Midland Activity Centre Structure Plan and its planning framework will help facilitate this growth and vision.

Meeting The Transport Challenge

The geographical size of the City and its forecasted rapid and substantial growth present many challenges in coordinating a whole-of-government approach to improvements to the public transport system, creating efficient freight and safe transport networks and reducing car-dependency.

Improvements to the public transport network and services will require State Government investment. The City will play a role in advocating for the needed improvements and the City will take an integrated approach to transport and land use planning through its land use planning decision making processes. It will ensure that:

- A cohesive network of activity centres and industrial hubs that are connected to each other by an efficient road and rail network is created;
- Activity centres can accommodate diverse land uses especially higher density residential, and provide high amenity infrastructure to encourage cycling and walking;
- Activity centres are located around public transport stations or hubs;
- Residential densities are increased near centres of employment, shopping and high frequency public transport routes;
- The demand for parking in the activity centres is managed so as to reduce car congestion;
- Neighbourhoods are well connected by an efficient road system that will facilitate improved bus services; and
- Cycle infrastructure and pedestrian pathways are improved;

The Local Planning Strategy contains a suite of measures to mitigate major congestion on the road network, reduce reliance on the private car and to promote the health benefits of walking and cycling in a cleaner environment, which can lead to an increased sense of well-being and productivity.

The road and rail freight network needs to function efficiently so that the continuing economic growth of the City can be sustained. The Local Planning Strategy promotes the State Government's North Link and supports the new alignments of the road and rail freight routes through Hazelmere and improvements to safety along Great Northern Highway and Great Eastern Highway.

IMPLEMENTATION

The implementation of the Local Planning Strategy will occur through subsequent amendments to the Local Planning Scheme, City-led initiatives to achieve a wide range of planning outcomes described in the Local Planning Strategy and State and/ or Federal Government contributions to investment in public infrastructure. Its place in the City of Swan hierarchy of plans is shown in Figures 1 and 2.

The LPS is required under legislation to be reviewed every five years in conjunction with a review of the Local Planning Scheme.

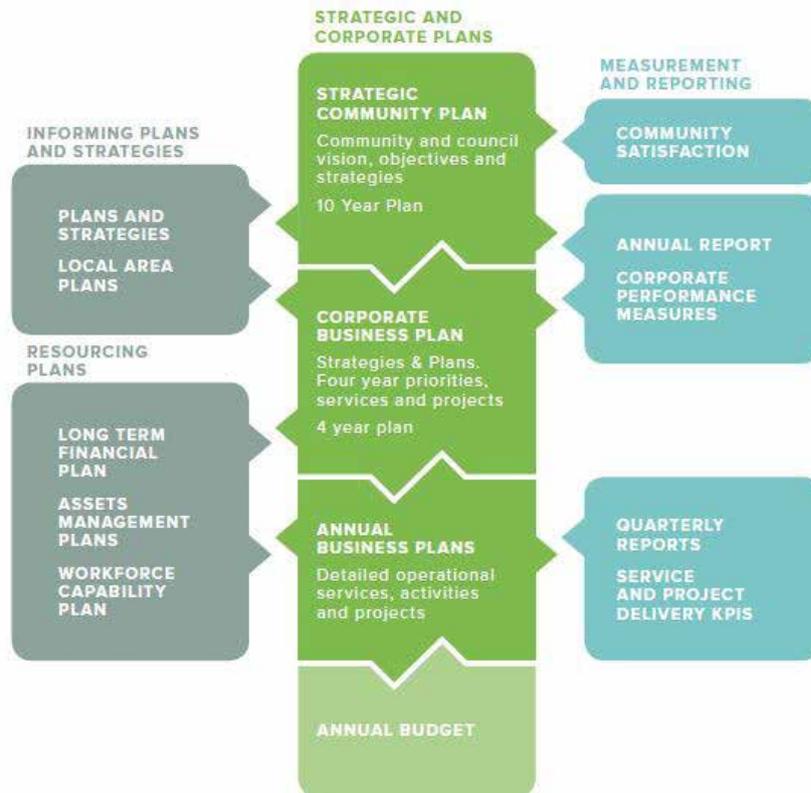


Figure 1. City of Swan Integrated Planning Framework Model

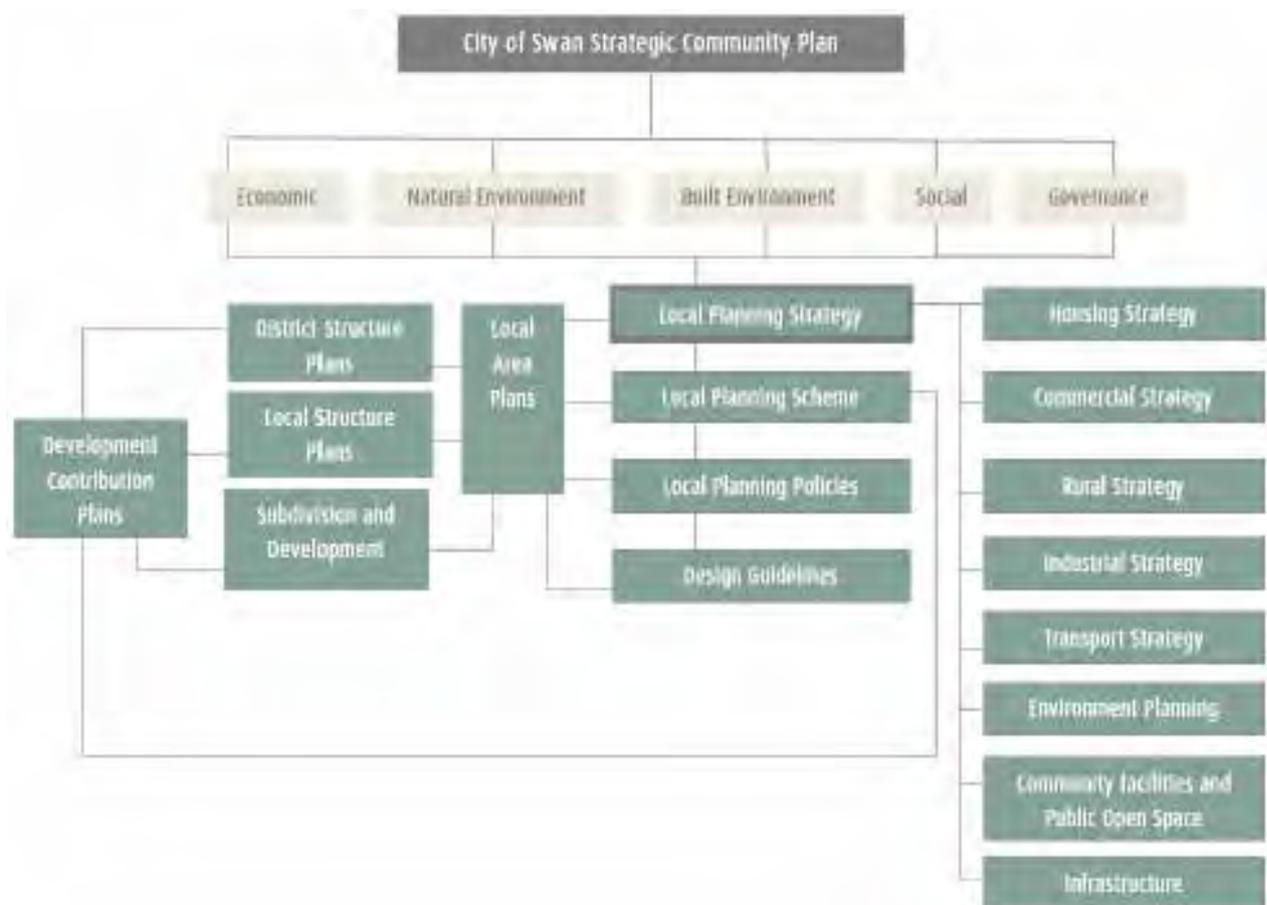


Figure 2. The Local Planning Strategy within the City of Swan framework

PART 1 LOCAL PLANNING STRATEGY

1. VISION AND PLANNING PRINCIPLES

Vision

The City of Swan’s vision, aspirations and priorities for the next ten years are outlined in the City of Swan’s Strategic Community Plan 2017 - 2027. The SCP contains the following vision statement:

- One city diverse places
- Our City reflects the diversity of our people, our industry and our landscapes, providing a place where people want to live, work and recreate.
- Our City is a place for all people, having access to local and central services and employment that meets changing community needs and growth, whilst being affordable, innovative and celebrating and protecting our rich history, heritage and culture.
- Our City is a significant and thriving economic region, contributing to the growth and wealth of our communities and the State.

The Strategic Community Plan is aligned to five Key Result Areas:

- Economic Thriving, Sustainable Business Capacity and Growth
- Natural Environment Environmentally Sustainable Leadership and Stewardship
- Built Environment Diverse, Connected, Sustainable Places
- Social Connected, Safe, Inclusive
- Governance A Sustainable and Capable Council

The Strategic Community Plan will direct the City over the next 10 years and will be implemented through the City’s four-year Corporate Business Plan which provides the outline of the City’s operations, including services, assets, Council priorities and projects with detailed financial estimates and administrative responsibilities.

Principles

The WAPC’s State Planning Strategy 2050 “Planning for sustained growth and prosperity” contains six inter-related principles which apply across all regions, local government areas including the City of Swan and communities.

- Environment: Conserve the State’s natural assets through sustainable development.
- Community: Enable diverse, affordable, accessible and safe communities.
- Economy: Facilitate trade, investment, innovation, employment and community betterment.
- Infrastructure: Ensure infrastructure support development.
- Regional development: Build the competitive and collaborative advantages of the regions.
- Governance: Build community confidence in development processes and practices.\

2. OBJECTIVES

The general objectives of the Local Planning Strategy are:

- To set out a long-term strategic planning framework for the City of Swan that will guide future decisions for economic, social and environmentally sustainable development;
- To provide direction to the City, Department of Planning, Lands and Heritage, the Western Australian Planning Commission (WAPC) and the Minister for Planning on assessments of future Local Planning Schemes and Policies, Scheme amendments, structure plans, and subdivision and development applications;
- To provide the context for coordinated planning and delivery of physical and social infrastructure for the City;
- To provide the basis for coordinated decision making on future servicing of the City by local and State governments and servicing agencies; and
- To provide a rationale for the City's strategic land use decision making.

There are specific objectives for the ten themed areas listed in the table below:

THEMED AREAS	OBJECTIVES
1. Natural Resource Management and Environmental Protection	Protect the City's natural resources, provide responsible environmental management and manage impacts of climate change.
2. Population and Housing	Facilitate a wide range of housing and lifestyle choices for current and future residents.
3. Economy and Employment	Facilitate the creation of a sustainable economy and provide opportunities for growth in a wide range of employment areas.
4. Retail and Activity Centres	Develop a viable and sustainable network of activity centres to provide for the community's social and economic needs.
5. Tourism	To stimulate the tourism industry and showcase the Swan Valley and the City's main attractors.
6. Open Space and Community Facilities	Provide a diverse range of functional and quality open space and community facilities that can be managed in a sustainable way to meet the long term needs of the community.
7. Rural Land Uses, Subdivision and Development	Encourage sustainable development and land uses in rural areas whilst recognising the importance of protecting agricultural, natural and basic raw material resources.
8. Urban Design and Heritage	Enhance the built form throughout the City to create interesting and attractive places and protect the City's heritage.
9. Transport, Traffic and Access	Provide an integrated transport system that provides residents, workers and visitors with high quality, safe and efficient transport mode choices to meet the personal, employment and freight transport needs of the City into the future.
10. Infrastructure Services	Achieve a whole of government approach in the provision of and improvements to essential infrastructure (water, wastewater and power).

3. THE STRATEGIC PLAN

The City of Swan is the largest metropolitan local government by land area in Western Australia comprising approximately 20% of the Perth Metropolitan Region and is located in the north-eastern corner of the Perth Metropolitan Region. The City is home to 150,000 residents (Forecast.id, 2018) living in diverse communities ranging from rural settlements such as Bullsbrook and Gidgegannup, established suburbs such as Ballajura and historic Guildford, inner-city living in the Midland City Centre and the rapidly growing Urban Growth Corridor suburbs such as Brabham, Dayton and Bennett Springs.

Between 2001 and 2011, the City achieved an average growth rate of 3 per cent per annum and is forecast to grow at a faster rate of around 3.3 per cent per annum to 165,821 by 2021 . Between 2021 and 2036, the average annual growth rate is forecast to slow down to 2.2 per cent per annum as the growth corridors become fully developed.

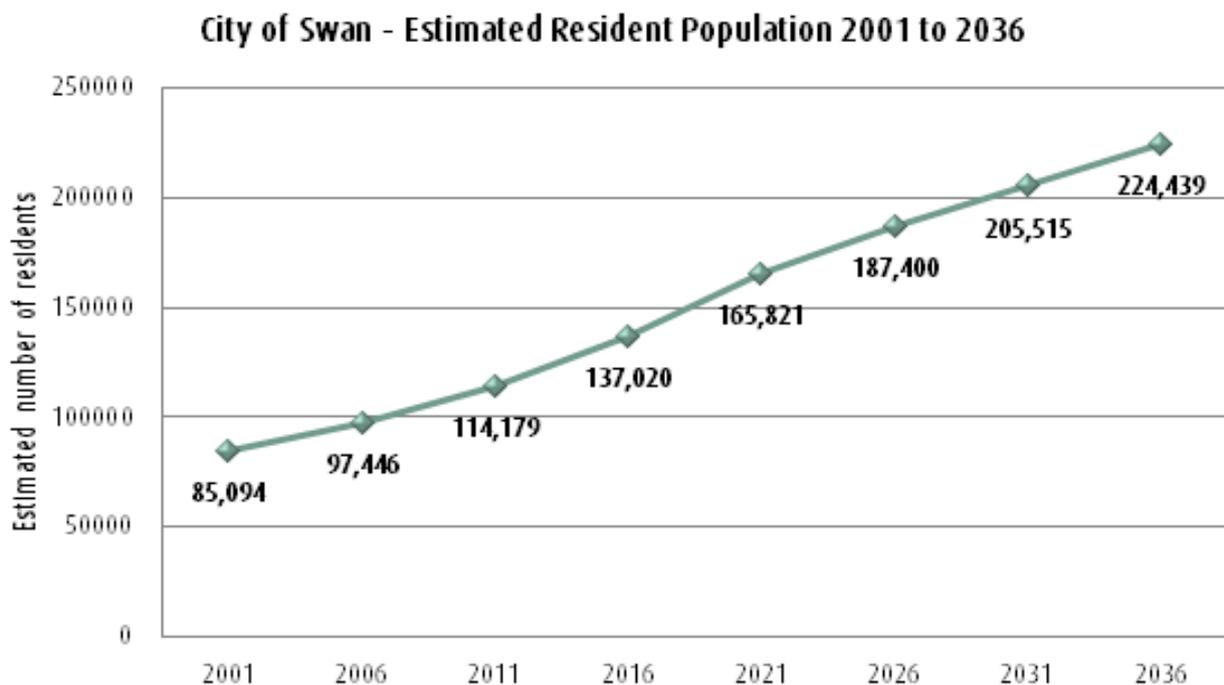


Figure 3. Figure 3: Estimated Resident Population 2001 – 2036²

This rapid population growth forecast over the next ten years can be attributed to several factors:

- The City is in close proximity to the Perth metropolitan core. This proximity to employment, commercial and recreational activities provides high amenity living;
- The City contains its own employment base, recreation and tourism activities, environmental features and good road networks;
- The City offers a range of quality education and training opportunities;
- There is a supply of relatively affordable land for housing; and

Midland is a growing employment centre and a strategic hub for the North-East Metropolitan Region. The new projected

² Source: <http://forecast2.id.com.au/Default.aspx?id=223&pg=5000g>

population for the City in 2031 is about 25,000 higher than the 190,235 previously forecasted in Directions 2031 and Beyond and can most likely be accommodated over a 20 year time-frame. Population projections evolve as circumstances and conditions change so it is important that planning is continually informed by the most relevant and accurate data. Directions 2031 and Beyond is replaced by Perth and Peel @3.5million as the primary tool for the State Government and local governments to plan for growth in the Perth and Peel region.

The Local Planning Strategy outlines the strategic objectives, direction and plan of action for the City to ensure that coordinated and sustainable development can occur over time. It has been prepared with due consideration given to the background information and identification of key issues contained in Part 2 of this document.

The Local Planning Strategy Maps provide a spatial representation of current and future strategic land uses, and future infrastructure improvements and further studies to be undertaken (refer to Map 1). Please note that the details of these proposed land uses are provided in the individual themed sections from 3.1 to 3.9.



3.1 NATURAL RESOURCE MANAGEMENT AND ENVIRONMENTAL PROTECTION

OBJECTIVE: Protect the City's natural resources, provide responsible environmental management and manage impacts of climate change.

CONSOLIDATED KEY ISSUES

Biodiversity Protection

The City of Swan comprises one of the largest areas of natural environment in the Perth metropolitan area and includes 45,730 hectares of remnant vegetation remaining across all land ownership types, This represents 43% of the original extent of native vegetation. Approximately half of all remnant vegetation occurs on privately owned land and only 6.5% of remnant vegetation is formally protected.

The City's population and housing forecasts indicate significant growth over the next 20 years. This will place considerable pressure on the local environment and present ongoing challenges associated with the development of environmentally sensitive and sustainable communities. One such challenge is the retention and enhancement of the City's Urban Forest which represents a significant challenge that threatens both the City's Biodiversity and Liveability objectives.

Water Management

The City currently faces a number of water management issues and constraints including scarce water supply, limited existing water infrastructure, protection of public drinking water source areas, development in wet landscapes, sustaining the rural environment and stormwater management in steep catchments.

Water is critically important in the City as within its boundary is a large proportion of the Swan-Helena Catchment and the Gngangara Aquifer. The forecast population growth with its corresponding impact on diverse ecosystems will have challenges for the City as it plans ahead to develop environmentally sensitive communities that will be resilient to future change. There is a need to manage groundwater dependant ecosystems and groundwater abstraction in relation to water levels and water quality to protect these ecosystems. It is also important to investigate and implement innovative solutions that provide "fit for purpose" water supply to ensure our communities are resilient and liveable in the future.

Car Dependency

The fragmented settlement pattern in the City is typical of an outer growth council area with a large rural base. This has resulted in communities such as Beechboro, Ballajura and Lockridge being dependent on the private car for their transport needs and therefore vulnerable to volatility in the price of oil. The City's rapidly growing Urban Growth Corridor and peri-urban communities such as Ellenbrook and Bullsbrook are also likely to display similar vulnerability issues in the future. Furthermore, car dependency causes adverse impacts on the environment.

Basic Raw Materials

There are constraints to future urban development in parts of the City due to the existence of a number of environmentally sensitive areas and basic raw material resource areas that are protected through statutory measures such as zoning in the Metropolitan Region Scheme, the City's LPS17, WAPC policies (SPP 2.4 – Basic Raw Materials in particular) and through State and Federal environmental legislation. Land uses such as extractive industries, wastewater treatment plants and landfill have buffers associated with them that may curtail the development potential of adjoining sites.

It is important to recognise that the availability of basic raw materials in close proximity to the metropolitan region is essential for keeping down the costs of development and contributing to affordable housing.

Impact Of Airport Noise And Industries On Sensitive Land Uses

The Perth Airport and Royal Australian Airforce Base Pearce have associated noise contours which encroach into urban and rural areas and restrict sensitive land uses including residential uses.

Industrial enterprises are vital for the economy. However, care must be taken to ensure that sensitive land uses are not located close by and that there is an acceptable level of environmental protection for adjacent existing sensitive land uses.

Climate Adaptation

Significant climate modelling work has been undertaken by agencies such as CSIRO and robust trend data has been established to support the case to adapt settlements to cope with expected changes in sea level, temperature, rainfall, bushfire and storm events and to determine suitable responses to enable this. This has implications for the City as within its boundaries, lie large areas of rural land in bushfire-prone areas, industries dependent on groundwater, the Swan River which may be subject to flooding during storm events and settlements in bushfire-prone areas.



STRATEGIC DIRECTIONS AND RESPONSES

Biodiversity Protection

Direction

- The City has prepared a Local Biodiversity Strategy to provide clear targets and actions for conservation which will ensure the City's biodiversity values are effectively conserved, protected, retained and managed for the future. A number of Significant Local Natural Areas (SLNAs) making up 6.5% of the City's land area are already considered to be protected through reservation as national parks, conservation reserves or local reserves. Potentially Significant Local Natural Areas (PSLNAs) will be considered to be SLNAs following a suitable flora and vegetation survey. It is the intention of the strategy that any PSLNAs determined to be significant are retained and where possible, protected and their biodiversity values managed for the future. A key goal for the City is to integrate the objectives of the Local Biodiversity Strategy into the City's Statutory Planning policies, functions and processes.
- The City endeavours to increase its overall canopy cover through rigorous public space planting, maintenance and tree replacement programs. This will lead to improved public space amenity, shading and attractive streetscapes whilst reducing the urban heat island effect.

Response

- Promote the protection of biodiversity through scheme provisions.

Water Management

Direction

- The City needs to identify ways in which land use management and development control can protect biodiversity and areas of environmental significance, support sustainable land management and protect water resources. Furthermore, the City has an obligation to manage groundwater dependant ecosystems and groundwater abstraction in relation to water levels and water quality to protect these ecosystems and to investigate and implement innovative solutions that provide "fit for purpose" water supply to ensure our communities can be liveable in the future.
- Development in areas known to contain acid sulphate soils need to be assessed using the WAPC Planning Guidelines for Acid Sulphate Soils.

Response

- Promote the sustainable management and protection of water resources through the application of efficient water management practice and controls.

Car Dependency

Direction

- The City needs to identify ways in which land use management and development control can assist to reduce car-dependency particularly in the rapidly growing Urban Growth Corridor and peri-urban communities such as Ellenbrook and Bullsbrook.

Response

- Promote the more efficient use of energy, the use of renewable energy where possible, and the use of alternative modes of transport to the car.

Basic Raw Materials

Direction

- Development potential in certain parts of the City may not be completely achievable due to their proximity to environmentally sensitive land uses or basic raw material resource areas. The overriding consideration is to ensure future communities are less likely to be impacted by industrial noise or odour.

Response

- Ensure an acceptable level of environmental performance for industry and/or separation from sensitive land uses.
- Ensure that significant resources are protected through appropriate planning mechanisms.

Impact Of Airport Noise And Industries On Sensitive Land Uses

Direction

- Development potential in areas lying within areas subject to significant levels of aircraft noise from Perth Airport are limited and any future development must be properly designed to minimise the impact of aircraft noise. Areas identified for increased infill development in the Urban Housing Strategy that lie under the updated ANEF 25 contour (aircraft noise zone) are not suitable for increased residential development and thus should not be coded greater than R20. The City will endeavour to mitigate the impact of noise and industrial activity on sensitive land uses in accordance with SPP 5.4 Road and Rail Noise.

Response

- Ensure an acceptable level of environmental performance for industry and/or separation from sensitive land uses.

Climate Change And Adaptation

Direction

- Emerging liability issues for local governments across Australia mean that in a planning context, the City needs to respond to the consequences of climate change, both in terms of mitigation and adaptation. Settlements in areas that may become flood prone or are of high fire risk in the future must be identified and the use of appropriate land use controls should be investigated for these settlements. The impact of climate change on rainfall and therefore water availability and quality, as well as the suitability of existing building stock and infrastructure for higher temperatures should also be considered.

Response

- Promote planning measures that encourage climate change adaptation and mitigation to ensure our communities are both resilient and liveable.

STRATEGIES AND ACTIONS

Strategic Response	Actions	No.
3.1.1 Promote the protection of biodiversity through scheme provisions.	Review the local planning scheme to investigate the use of planning mechanisms to retain and enhance the urban forest coverage within the City and to achieve the principles of the Local Biodiversity Strategy	1
	Apply the relevant environmental regulations and the principles of the City's Local Biodiversity Strategy to protect areas of biodiversity when assessing structure plans and subdivision applications.	2
3.1.2 Promote the sustainable management and protection of water resources through the application of efficient water management practice and controls.	Ensure that the provisions of the City's local planning scheme and local planning policies are consistent with Gngangara Groundwater Protection requirements and consider including a special control area under the local planning scheme.	3
	Incorporate water sensitive urban design measures for Public Open Space and other public areas.	4
	Investigate the feasibility of alternative water supply measures to meet the non-potable water demands of public open space.	5
	Where appropriate the City will protect and enhance watercourses, wetlands and other water resources in the City's rural areas.	6
	Implement the initiatives and objectives identified in Regional Water Management Strategy and Better Urban Water Management.	7
3.1.3 Promote the more efficient use of energy, the use of renewable energy where possible, and the use of alternative modes of transport to the car.	Investigate and apply suitable sustainability assessment principles and performance measures to the structure planning and subdivision approval processes.	8
3.1.4 Ensure an acceptable level of environmental performance for industry and/or separation from sensitive land uses.	Require the provision of buffers or complementary land uses to mitigate the impact of industrial uses on sensitive land uses in accordance with the State Planning Framework.	9
3.1.5 Promote planning measures that encourage climate change adaptation and mitigation to ensure our communities are both resilient and liveable.	Consider the Swan and Helena Rivers Flood Study and Floodplain Management Plan - Draft Flood Risk Assessment and Floodplain Development Strategy, to ensure communities and infrastructure are resilient to the predicted flood and storm surge levels.	10
	Apply State Bushfire Protection guidelines and SPP3.7 to guide structure plans, subdivisions and development applications.	11
	Investigate measures to adapt to reduced rainfall and increased urban heat, including water efficiency and expansion of water-sensitive green infrastructure.	12
3.1.6 Ensure that significant resources are protected through appropriate planning mechanisms.	Review the City's current planning framework to ensure it protects areas that contain significant resources.	13

Refer to Map 2 for further information regarding Natural Resource Management and Environmental Protection.



3.2 POPULATION AND HOUSING

OBJECTIVE: Facilitate a wide range of housing and lifestyle choices for current and future residents

CONSOLIDATED KEY ISSUES

Rapid Population Growth

Over the next 30 years, projections indicate that the City of Swan will become home to more than 175,000 additional residents. Representing a more rapid rate of population growth than previously experienced, this will place additional pressure on housing and infrastructure supply and, as noted in Perth and Peel @3.5million, an additional 73,450 dwellings will be required in the City over the next 30 years to 2050.

The Urban Growth Corridor is currently considered to be under-developed which presents a challenge associated with the need to cater for the rapidly growing population. The area is also still lacking adequate infrastructure (roads, public transport, water, electricity, etc.) which will require significant investment over the next two decades. It is logical to capitalise on this level of investment so that a cohesive urban corridor with efficiencies of scale and an interconnected public transport network can be achieved.

Ageing Population

The increases in population will occur across all age groups but the largest proportional increase (relative to population size) is in the 65+ age groups which together are forecast to grow by more than 20,000 persons (+150%) with the largest proportional increases being in the 80-84 and 85+ age groups that are forecast to grow by 202% and 243% respectively between 2016 and 2036. Currently, there is a shortage of appropriate accommodation for older persons in established areas, including single bedroom dwellings, therefore, without changes in policy, the shortage of suitable housing for aged persons could become more critical.

Lack Of Housing Diversity

Although the family household is expected to remain the dominant household type, there is an existing underlying demand for homes to match small households in established areas. Consisting of two or less people, smaller households are forecast to grow at a faster rate than previously experienced. The provision of smaller homes on smaller blocks can be achieved through changes in density and policy. Broadening the range of community living options for people with special needs is also an important social objective to pursue and is consistent with the aims of the State Affordable Housing Strategy 2010-2020.

Whilst the expected population growth can be accommodated in high growth areas such as Ellenbrook, the Urban Growth Corridor and future urban expansion areas, the provision of a greater range of housing products will also provide much-needed housing diversity in established areas close to existing services and infrastructure whilst addressing issues of housing affordability and affordable living.

Rural settlements

Some rural settlements could benefit from additional housing options being provided to make them more sustainable and increase housing options for residents in those areas. Lack of infrastructure and bushfire constraints are important considerations to determine the extent to which additional development could be supported.

STRATEGIC DIRECTIONS AND RESPONSES

Rapid Population Growth

Direction

- Perth and Peel @3.5million states that an additional 73,450 dwellings will be required in the City over the next 30 years. Growth areas such as the Urban Growth Corridor, Ellenbrook and Bullsbrook are capable of accommodating this growth.
- Activity centres and their surrounds are suitable places to accommodate higher density housing such as apartments, adding to the diversity of housing stock available in those neighbourhoods. In and around the major centres such as Midland, Ellenbrook and the future Brabham centre, good urban design elements can result in attractive higher density housing in the heart of activity centres.
- The proximity of higher density residential housing to places of employment and activity centres could reduce the need for car-based travel. Furthermore, the integration of higher density housing with public transport infrastructure has the potential to improve the amenity of these centres by reducing car-based traffic congestion.

Response

- Support residential development in greenfield areas identified by Perth and Peel @3.5Million.
- Identify suitable new urban areas as indicated in the North-east Sub-regional Planning Framework in consultation with the State Government.
- Support the viability of activity centres by providing appropriate housing and densities within activity centres and suitable areas around activity centres.

Ageing Population

Direction

- The City will provide for single bedroom homes, aged and dependent persons' dwellings, and consider the community's desire to "age in place" through the provision of increased housing opportunities and residential density increases for people who wish to remain in their communities.

Response

- Provide opportunities for people to 'age in place' with good access to support facilities.

Housing Diversity

Direction

- The major new initiative in the LPS has been the preparation of the City of Swan Urban Housing Strategy (UHS) consisting of an Infill Strategy and a Greenfields Strategy. The UHS is an informing document, and the LPS is the main document to guide consideration of infill and greenfield developments. The UHS formed the basis of residential dual codings which was gazetted in October 2015 and comprises the introduction of textual provisions for dual residential coding and the reclassification of approximately 13,500 properties to designate a dual residential code. The Infill Strategy identifies 15,500 sites across 16 established residential localities for higher residential densities taking advantage of access to existing infrastructure services, facilities and resources. The combination of family-oriented development in greenfield areas, medium density housing near services and public transport and inner-city living in high density residential accommodation such as apartments will see the City of Swan well positioned to become a provider of diverse and dynamic lifestyle opportunities in the Perth metropolitan area.

a. Infill Strategy

- Features of the Infill Strategy include:
 - Increased residential densities surrounding activity centres and locations with good access to public transport, schools, shops and centres of employment (refer to Map 4).
 - Incentives to provide single bedroom homes, aged and dependent persons.
 - Consideration of the community's desire to "age in place" through the provision of increased housing opportunities and residential density increases for people who wish to remain in their communities.
 - Encouragement of site assembly of at least 1,300m² to achieve maximum development potential and better built form outcomes.
 - The introduction of Dual Residential Codes (DRCs) in areas that have potential for higher residential densities. DRCs are the preferred planning tool rather than conventional upcoding because design criteria can be introduced to achieve the bonus development opportunity as stipulated by the DRCs.
 - Design criteria that promote Liveable Neighbourhoods, Transit Oriented Development and Crime Prevention through Environmental Design (CPTED).

b. Greenfield Strategy

- There will be considerable growth in existing and future greenfield areas consistent with the objectives of Perth and Peel @3.5million and in particularly, the North-East Sub-regional Planning Framework. Many greenfield areas are already zoned urban with strategic planning for them completed. Local structure plans, design guidelines and detailed area plans will be consistent with the relevant sub-regional strategies and district structure plans. Future greenfield areas are not yet zoned "urban" and are in the localities of Bullsbrook, West Swan West, Gidgegannup, South Guildford and Hazelmere (Bushmead). The Urban Housing Strategy proposes that the City, together with State Government agencies and service providers, manages growth in the future greenfield areas effectively and in accordance with the principles of Liveable Neighbourhoods. The Bullsbrook Townsite Master Plan (now endorsed as the Bullsbrook Townsite District Structure Plan) was adopted in October 2014 and will guide future planning in the Bullsbrook townsite.

Response

- Promote housing diversity to address sustainability principles such as reducing car dependence and to address housing affordability issues.
- Support additional housing options in rural townsites where appropriate.
- Support the viability of activity centres by providing appropriate housing and densities within activity centres and suitable areas around activity centres.

Rural Settlements

Direction

- Opportunities exist for rural settlements to become more sustainable through appropriate development in locations that have good access to community services and infrastructure, and are not subject to extreme bushfire risk but will not adversely impact on the environmental values of the area. Such development will be limited to townsites, namely Gidgegannup and Bullsbrook, where service availability and access to community facilities is more attainable. The Bullsbrook Townsite District Structure Plan will guide future development in the townsite. The Gidgegannup townsite was included in MRS Amendment 1239/41 effective December 2014 as Urban Deferred. In December 2015, the urban deferment was lifted and the townsite area is now zoned Urban. Gidgegannup is currently constrained by matters relating to waste water treatment, water supply, quarrying, public transport and traffic implications and these will need to be resolved before any urban expansion can be supported.

Response

- Support additional housing options in rural townsites where appropriate.

STRATEGIES AND ACTIONS

Strategic Response	Actions	No.
3.2.1 Support residential development in greenfield areas identified by Perth and Peel @3.5Million.	Ensure structure plans and subdivisions in greenfield areas of the City are in accordance with the relevant planning framework, and where appropriate implement through future amendments to the MRS and the Local Planning Scheme.	14
3.2.2 Identify suitable new urban areas as indicated in the North-East Sub-regional Planning Framework in consultation with the State Government.	Work with the Department of Planning, Lands and Heritage, the WAPC and relevant State Government agencies to assist with strategic planning for future greenfield areas.	15
3.2.3 Promote housing diversity to address sustainability principles such as reducing car dependence and to address housing affordability issues.	Investigate options to facilitate and increase the supply of diverse housing within the City.	16
3.2.4 Provide opportunities for people to 'age in place' with good access to support facilities.	Continue to support aged/dependent persons' dwellings in appropriate locations through the City's Planning Framework..	17
3.2.5 Support the viability of activity centres by providing appropriate housing and densities within activity centres and suitable areas around activity centres.	Develop, review and implement housing strategies for activity centres in accordance with the Local Commercial and Activity Centres Strategy.	18
3.2.6 Support additional housing options in rural townsites where appropriate.	Support the Bullsbrook District Structure Plan through amendments to the MRS and the Local Planning Scheme.	19
	A future planning framework for the Gidgegannup townsite should consider opportunities for new residential areas in and around the townsite that will contribute to the townsite's viability and is sustainable in the long term - environmentally, socially and economically..	20

Refer to Map 4 for further information regarding Housing.

3.3 ECONOMY AND EMPLOYMENT

OBJECTIVE: Facilitate the creation of a sustainable economy and provide opportunities for growth in a wide range of employment areas

CONSOLIDATED KEY ISSUES

Employment And Employment Self-Sufficiency

The City has a diversified and vibrant economic base with the seven main industries being Construction, Retail Trade, Manufacturing, Health Care and Social Assistance, Education and Training, Public Administration and Safety, and Transport, Postal and Warehousing. Construction is the most significant sector in terms of value and number of employees. The City's employment self-sufficiency rate (ESS) is 92.9% reflecting a strong labour market with many employment opportunities. Perth and Peel @3.5million forecasts a total of 192,950 jobs in the North-East sub-region by the year 2050 with an ESS of 85.8 per cent for the sub-region. A significant proportion of these additional jobs are likely to be within the City of Swan mainly in the strategic metropolitan centre of Midland with its ready access to the Perth-Midland railway line, the secondary centre of Ellenbrook, district centres at Bullsbrook and Brabham, the industrial centres at Malaga, Hazelmere, and Bullsbrook, and tourist attractors such as Guildford and the Swan Valley. Preserving current industrial and commercial land as well as planning for the provision of future employment areas remains a high priority.

Activity Centre Growth

State Planning Policy (SPP) 4.2 Activity Centres for Perth and Peel contains a hierarchy of activity centres for the planning and development of activity centres in the Perth and Peel regions. Midland is the Strategic Metropolitan Centre in the North-East sub-region and therefore is vitally important in terms of the provision of additional employment opportunities, particularly for commercial, community and government functions. Midland provides more than 40% of the total retail floor space throughout the City and its continued expansion will continue to generate new employment opportunities.

Preserving Existing Industrial Land

Malaga is one of the City's major industrial areas with manufacturing, construction, wholesale and retail being the largest industries in terms of both turnover and employment. As seen in other industrial centres in the Perth metropolitan region, market forces and increases in the gross rental values of land have had a substantial impact on the development of Malaga over the past 20 years. The pressure for expansion of land uses within Malaga is causing conflict between the operations of some businesses therefore it will be important to align Malaga's planning environment with the strategic directions of state and local planning.

Within the City, Bullsbrook South and Hazelmere are considered to be strategic industrial areas and there are three smaller industrial areas located in Bellevue, Bullsbrook Central and Middle Swan. The preservation and future expansion of industrial land for employment and economic development is a major priority for the State Government and the City of Swan.

Future Industrial Land

Perth and Peel @3.5million has identified a land bank for industrial land supply in the North-East sub-region. Most of the identified sites are within the City of Swan, highlighting the important role the City will play as the major provider of future industrial land in the region. Bullsbrook South, Bullsbrook North, and Hazelmere South have been identified as potential medium-term non-heavy industrial sites with a zoning time-frame of 4 to 10 years. The Bullsbrook Townsite precinct (north) has been identified for non-heavy industrial use in the long term (more than 10 years). The City is faced with the challenge to facilitate the growth of future industrial land and subsequently increase employment opportunities for the rapidly growing population.

The Need For An Intermodal Terminal Hub

Intermodal terminals are strategic points in the transport distribution network that enable freight to be transferred from road to rail and vice versa. If properly planned and developed, they would improve the efficiency of the entire freight transport chain, add value to existing industrial areas, have the characteristics of a specialist activity centre and provide future local employment. There is no intermodal terminal in the North-West or North-East sub-regions of Perth at present, however, Bullsbrook South has the potential to accommodate an intermodal terminal.

Swan Valley

The economic growth of the Swan Valley is affected by factors such as labour, capital, water and land use issues that increase the risk associated with the medium to long term economic sustainability of the Valley. The viticulture industry has historically been a dominant social and economic force in the Swan Valley but more recently, the Valley has also developed into an important tourism destination attracting metropolitan, interstate and international visitors. The Swan Valley Action Plan 2019 provides the Government's vision and actions for retaining Swan Valley as a productive rural area into the future.

The adequate allocation of water by the Department of Water and Environmental Regulation (DWER) is a major concern for the ongoing viability of the viticulture industry. Priority must be given to the viticulture industry with respect to water allocation. The City supports the development of a robust merits based allocation system that prioritises water allocation based on community need and allows for the reservation of water for future needs. The City also supports the investigation and implementation of alternative water solutions that supplement existing groundwater and will provide "fit for purpose" water for irrigation in the Swan Valley.

Opportunities for industries in the Swan Valley to integrate with and feed into other economic opportunities arising out of infrastructure investments such as NorthLink and the Great Northern Highway should be identified.

Small Business

Small business is a key success factor of the City's local economy with about 48% of registered businesses in the City being sole-traders with a majority turning over less than \$100,000 annually. Home based businesses are a subset of the sole trader sector and play an important role in decentralising employment to the suburbs and reducing car dependency. Small businesses are more vulnerable to businesses cycles therefore a flexible approach is needed to encourage small businesses to locate in activity centres where proximity to other businesses will be of mutual benefit. Home based businesses should be allowed to flourish in a controlled manner in suburban areas, where they do not impact on residential amenity.

Access To Education And Training

Approximately 55% of people who work in the City of Swan have a tertiary qualification³ however, less than half (46%) of the City's residents have gained a post-secondary qualification⁴. Therefore, access to education and training facilities is critical in order to move towards a knowledge/skills-based economy, and assist residents in finding better paid jobs locally.

3 Source: City of Swan Economic Profile

4 Source: City of Swan Community Profile

STRATEGIC DIRECTIONS AND RESPONSES

Employment And Employment Self-Sufficiency

Direction

- Major employment sectors such as retail, construction, manufacturing, transport, distribution and warehousing, tourism, and education and health services will be the focus of measures to create more jobs within the City. Growth in these sectors will be driven by factors including the strategic location of the City relative to key road and rail freight infrastructure with good access to the ports, Perth airport, inland container terminals and increased demand for population-based services such as health care and social assistance for the ageing population. Building on the strengths of the existing economic base by identifying opportunities and removing constraints to growth in these industry sectors will also be critical to the creation of a successful and sustainable local economy.
- As outlined in the North-East Sub-regional Planning Framework, the mix between white-collar, blue-collar and service-based employment is predicted to shift towards a higher proportion of service and white-collar workers with an increase expected in the proportion of workers in the community and service sectors. To accommodate this shift, future focus should be on creating opportunities for more diversity in employment in activity centres and industrial areas whilst protecting those areas from competing and non-complementary land uses.

Response

- Provide for suitable home based employment in residential areas.
- Support the establishment of small businesses in activity centres.
- Promote Midland as a Strategic Metropolitan Centre and economic hub of the North-East sub-region.
- Support the creation of new industrial areas in Bullsbrook South and north Ellenbrook consistent with Perth and Peel @3.5million.

Existing And Future Commercial Development

Direction

- Activity centres are important places where more jobs can be created and encouraging mixed uses within centres would also improve employment self-sufficiency.
- Midland Strategic Metropolitan Centre A new Midland Activity Centre Structure Plan sets the planning framework for generating more intense commercial and light industrial development and more employment opportunities in the Midland Centre and peripheral areas. The Midland Health Campus is located in the centre and the related growth in the health services sector will add to the diversification of jobs in Midland.
- Ellenbrook is an emerging Secondary Centre where the opportunity for increased diversity of employment exists. As the Urban Growth Corridor continues to develop, Ellenbrook will take on a major role as an employment and service centre and the need to provide a greater mix of land uses to accommodate employment growth will become a high priority.

Response

- Promote Midland as a Strategic Metropolitan Centre and economic hub of the North-East sub-region.

Existing And Future Industrial Development

- **Malaga** The core industrial area of Malaga needs to be protected to avoid commercial encroachment. The approach to additional uses along Alexander Drive, Marshall Road and Malaga Road currently zoned "Highway Zone" needs to be rationalised with an appropriate commercial rezoning to allow limited showroom, bulky goods as well as complementary offices and limited general commercial.

- **Hazelmere** The State Government’s Hazelmere Enterprise Area structure plan, endorsed in 2011, sets out a long-term plan for the area. Since then, more than 190 hectares of employment-generating land has been freed up in the Hazelmere industrial area, north-east of Perth Airport.
- **Ellenbrook** The need to provide new industrial land in North Ellenbrook has been identified in Perth and Peel @3.5million. The growth in home-based business in Ellenbrook is a trend that needs to be accommodated.
- **Future industrial area at Bullsbrook** Consistent with EELS 2012, the supply of industrial land in these areas is critical to providing a strong employment base for the anticipated growth in the Urban Growth Corridor and Bullsbrook.
- **Future Intermodal Terminal** The Western Australian Regional Freight Network Transport Plan identified the Bullsbrook/ North Ellenbrook area as suitable for a future intermodal freight terminal and further investigations of road and rail connections, site options and essential services requirements has concluded that a site in South Bullsbrook has the potential to accommodate an intermodal terminal. South Bullsbrook is on the Great Northern Highway, serviced by several major road networks with planned linkages to the Perth-Darwin Highway (NorthLink) and adjacent to the state rail network. The hub also has the potential to be a specialist activity centre.
- **Major transport infrastructure projects** such as the Perth-Darwin Highway (NorthLink) will be catalysts for new industrial and commercial developments. Existing commercial enterprises in strategic employment areas should be encouraged to take up opportunities to expand and integrate with these industries in order to facilitate long-term economic growth, encourage diversification and value-adding.

Response

- Protect the core area of Malaga as a primary industrial area whilst accommodating limited commercial and retail uses in high exposure areas as identified in the Local Commercial and Activity Centres Strategy (LCACS).
- Promote and facilitate the Hazelmere industrial area consistent with Perth and Peel @3.5million.
- Support the creation of new industrial areas in south Bullsbrook and North Ellenbrook consistent with Perth and Peel @3.5million.
- Support the road links between Great Northern Highway and Perth Darwin Highway (NorthLink) necessary for the economic growth of industries in the Swan Valley and other employment areas.

Swan Valley

Direction

- Greater protection and support for agricultural production is essential, most importantly, the adequate allocation of non-potable water so that the Swan Valley can fulfil its economic potential as envisaged by the Swan Valley Action Plan.

The Department of Planning, Lands and Heritage has prepared the Swan Valley Action Plan 2019 which provides the Government’s vision and actions for retaining Swan Valley as a productive rural area into the future.

Response

- Support the road links between Great Northern Highway and Perth Darwin Highway (NorthLink) necessary for the economic growth of industries in the Swan Valley and other employment areas.
- Ensure that the future economic growth of the Swan Valley is not constrained by inadequate non-potable water supply.
- New legislation and a new planning scheme for the Swan Valley consistent with the Swan Valley Action Plan will be prepared.

Small Business

Direction

- The City of Swan has a rich base of home based businesses, micro-businesses, town centre businesses, and those located in the various industrial precincts. Small businesses, particularly in the sole-trader sector, are a key success factor of the local Swan economy. The City's approach is one of driving small business development as it will be vital to sustaining and growing local employment opportunities. Changes to statutory planning provisions should be considered to promote diversity of land uses in activity centres so that small businesses will be attracted to relocate to activity centres where their proximity to larger businesses will be of mutual benefit.
- Home based businesses are a sub-set of the sole trader sector and should be encouraged in residential areas provided the amenity of the neighbourhood is not adversely affected. Home based businesses should be supported especially in the Swan Valley and Ellenbrook, where these business types are evident.

Response

- Support the establishment of small businesses in activity centres.
- Provide for suitable home based employment in residential areas.

Access To Education And Training

Direction

- To have a productive workforce, a move towards a knowledge and skills-based economy is essential. Increased access to training and education facilities may assist in providing resident workers greater scope for finding employment in the City. The role of TAFE and the new Curtin University Facility in Midland should be promoted and considered in future planning of the area.

Response

- Support the establishment of education and training facilities within major activity centres.



STRATEGIES AND ACTIONS

Strategic Response	Actions	No.
3.3.1 Promote Midland as a Strategic Metropolitan Centre and economic hub of the North-East sub-region.	Implement the adopted Midland Activity Centre Structure Plan to guide the centre's growth as the main centre for new higher density housing, shopping, business activity, service delivery, light industry, entertainment and community facilities.	21
3.3.2 Protect the core area of Malaga as a primary industrial area whilst accommodating limited commercial and retail uses in high exposure areas as identified in the Local Commercial and Activity Centres Strategy.	Ensure that the role and function of Malaga as a Strategic Industrial Centre is protected and that retail and commercial uses are complementary to its operation and does not include uses more appropriately located in activity centres.	22
3.3.3 Promote and facilitate the Hazelmere industrial area consistent with Perth and Peel @3.5million.	Review the Hazelmere Enterprise Area Structure Plan and ensure its implementation through local planning scheme amendments.	23
3.3.4 Support the creation of new industrial areas in south Bullsbrook and north Ellenbrook consistent with Perth and Peel @3.5million.	Work with the State Government and relevant State agencies to develop and implement the Bullsbrook Freight and Industrial District Structure Plan to facilitate industrial development.	24
3.3.5 Support the road links between Great Northern Highway and Perth Darwin Highway (NorthLink) necessary for the economic growth of industries in the Swan Valley and other employment areas.	In future structure plans in Ellenbrook/North Ellenbrook areas, make provisions for possible road links between Perth Darwin National Highway (NorthLink) and Great Northern Highway.	25
3.3.6 Ensure that the future economic growth of the Swan Valley is not constrained by inadequate non-potable water supply.	Work with the State Government and the Department of Water and Environmental Regulation to ensure adequate non-potable water allocation and alternative supply for the Swan Valley.	26
3.3.7 A new Act and scheme to be created consistent with the Swan Valley Action Plan.	Monitor the State Government's progress in preparing and implementing new legislation and a new planning scheme for the Swan Valley consistent with the Swan Valley Action Plan.	27
3.3.8 Support the establishment of small businesses in activity centres.	Identify appropriate zones, lot sizes and car parking standards within activity centres and where appropriate amend the Local Planning Scheme and relevant Local Planning Policies to facilitate small businesses.	28
3.3.9 Provide for suitable home based employment in residential areas.	Review planning policy measures in the current planning framework in order to encourage home based employment with appropriate controls to protect residential amenity.	29
3.3.10 Support the establishment of education and training facilities within major activity centres.	Support the establishment of education and training facilities close to major transport nodes, preferably in Midland and Ellenbrook.	30

Refer to Map 3 for further information regarding Economy and Employment.

3.4 RETAIL AND ACTIVITY CENTRES

OBJECTIVE: Develop a viable and sustainable network of activity centres to provide for the community's social and economic needs.

CONSOLIDATED KEY ISSUES

Diversification And Enhancement Of Activity Centres

There is an established hierarchy of activity centres as outlined in SPP 4.2 with the highest order centre being Capital City followed by Strategic Metropolitan Centres, Secondary Centres, District Centres and Neighbourhood Centres (supported by local centres). These centres currently lack land use and employment diversity. Furthermore, some of these centres are in need of attractive, people-friendly and safe public spaces.

Midland City Centre

The Midland centre is a Strategic Metropolitan Centre and is the economic anchor of the North-East sub-region. Its strategic importance will be the principal driver for growth and development as the main centre for new higher density inner-city housing, shopping, business activity, service delivery, entertainment and community facilities. Midland currently faces the challenge of providing a sufficient amount of goods, services and accommodation for the rapidly growing population.

Ellenbrook Secondary Centre

The Ellenbrook Centre is a Secondary Centre and will be a major centre for employment and activity in the urban growth area. It is faced with the challenge of providing sufficient goods, services and a variety of housing for the local community.

District And Neighbourhood Centres

The only District Centre within the City's boundaries identified in SPP 4.2 Activity Centres for Perth and Peel is the Brabham district centre; however, the existing Bullsbrook townsite, currently a neighbourhood centre, is challenged with accommodating a significant population increase over the medium to longer term. This will potentially elevate its status to a district centre. There is also a network of current and proposed neighbourhood centres including Gidgegannup which is currently constrained by limited services and infrastructure. Gidgegannup is zoned 'Urban' under the Metropolitan Region Scheme however, an urban rezoning under the Local Planning Scheme cannot be progressed until these limitations have been addressed and further investigation has been undertaken.

Retail Needs

In 2011, the City commissioned a Retail Needs Assessment Study to identify the demand and supply trends for retailing in the City and to provide the basis for subsequent planning initiatives such as the preparation of the Local Planning Scheme and future structure plans for the Midland Strategic Metropolitan Centre and Ellenbrook Secondary Centre. This study was updated in conjunction with the preparation of a Local Commercial and Activity Centre Strategy which has been adopted as a Local Planning Policy in 2017.

The study has also highlighted issues such as recognising the importance of the Midland Strategic Metropolitan Centre, establishing what the retail needs of the urban growth areas are, the need to minimise retail escape spending⁵, addressing the growing trend for homemaker centres⁶ to establish in non-contiguous development patterns along numerous major roads, and the need to refine the network of activity centres within the City.

STRATEGIC DIRECTIONS AND RESPONSES

Diversification And Enhancement Of Activity Centres

Direction

- The success of activity centres in general, is dependent on the provision of a diverse mix of land uses that will assist in attracting people to the centres and deliver a range of services such as retail, entertainment, business services and community facilities. The enhancement of these centres with increases in floor space will also assist in providing additional local employment. It will be important to support the consolidation or clustering of activities in centres to realise benefits through shared infrastructure provision, encourage vibrancy and co-locate complementary business in order to help generate employment.
- Creating attractive, people-friendly and safe public spaces in and around activity centres will significantly improve the visitor experience which in turn, can lead to increased retail spend.

Response

- Encourage and consolidate a wide mix of activities in centres.
- Support the physical enhancement of Activity Centres.
- Consolidate and refine the network of neighbourhood centres.

Promote integrated development supportive of an efficient public transport system.

Midland City Centre

Direction

A major focus for the City is the adoption of the Midland Activity Centre Structure Plan. Its key features are:

- Recognising the status of the Midland Centre as a Strategic Metropolitan Centre and the economic hub of the North-East sub-region, and ensuring appropriate land uses and built form outcomes are accommodated within it;
- Recognising the need for more intense development, focused around public transport and points of amenity;
- Creating a new network of green spaces, characterised by small to medium urban greens and public squares;
- Endorsing the City's vision for relocating the Midland Train Station and Transit Interchange to a more centralised location at Cale Street to better serve the St. John of God Midland Public Hospital and pedestrian core;
- Creating a spine of taller development along the railway line, south of Great Eastern Highway and Victoria Street within a landscaped setting including extensive street tree planting;
- Formalising a network of pedestrian oriented, activated streets with complementary building form, principally around Midland's old town and linking to the Midland Gate Shopping Centre;
- Improving north-south links by extending Cale Street across the rail line as an at-grade crossing and reinforcing Helena Street as a complementary north-south crossing;
- Creating attractive and well-treed entry boulevards along Great Eastern Highway, Lloyd Street and Morrison Road; and
- Identifying locations for development of public parking facilities, reducing the requirement for onsite car parking and allowing more efficient use of car bays.

5 Retail escape spending is described in the City of Swan Retail Needs Assessment August 2011 as retail expenditure that is spent in other metropolitan centres outside the City of Swan's boundaries

6 The Retail Needs Assessment describes these activities as typically bulky merchandise retail such as furniture, whitegoods and other electrical equipment, camping equipment, hardware and so on. The land use category used in LPS17 is "showroom".

Response

- Promote Midland as a Strategic Metropolitan Centre and the major economic hub of the North-East sub-region.
- Encourage and consolidate a wide mix of activities in centres.

Ellenbrook Secondary Centre

Direction

- The Ellenbrook Secondary Centre is the next largest after the Midland Strategic Metropolitan Centre. As urban development in Ellenbrook and its surrounds proceeds and approaches maturity, the Ellenbrook centre should evolve to include a more diverse range of uses but should not replace or challenge the overarching regional role of the Midland Strategic Metropolitan Centre.

Response

- Ensure the Ellenbrook Secondary Centre is able to achieve its potential as a major centre for employment and activity.

District And Neighbourhood Activity Centres

Direction

- The growth of the retail sector will occur as a natural consequence of population growth particularly in the greenfield areas. Developments in new activity centres such as Brabham and the future Broadway district centre in Ellenbrook, will need to be monitored to ensure there is an adequate supply of retail floor space to serve the community's needs. The functional nature of the Brabham district centre will need to be re-examined in light of rapid population growth.
- The existing Bullsbrook townsite, currently a neighbourhood centre, is planned to accommodate a significant population increase over the medium-to-longer term which will potentially elevate its status to a district centre (in a new location east of Great Northern Highway).
- The Gidgegannup townsite is a long-term investigation area and studies are required to justify the possible future expansion and upgrading of the Gidgegannup neighbourhood centre to align with population growth as it occurs.
- The principle of centres anchored by a supermarket tenant as the basis for network planning should be appreciated within structure plans for emerging urban communities to avoid potentially under-performing small neighbourhood and local centres. The hierarchy of existing neighbourhood centres needs to be refined to give more clarity to their intended roles and functions.

Response

- Promote the provision of adequate retail floor space in district and neighbourhood centres in urban growth areas.
- Support and refine the activity centre hierarchy whilst ensuring 'out of centre' proposals do not undermine this hierarchy.
- Support the establishment of a District Centre in Bullsbrook to cater for future population growth.

Retail Needs Assessment And City Of Swan Local Commercial And Activity Centres Strategy

Direction

- The City of Swan’s Local Commercial and Activity Centres Strategy (LCACS) was adopted by Council on 27 September 2017. The main objective of the LCACS is to provide strategic guidance for the preparation and assessment of activity centre structure plans, district and local structure plans, and development applications. The LCACS plays an important role in positioning activity centres as key economic and employment nodes.
- The LCACS establishes an activity centre hierarchy which is an effective means of providing high-level guidance of sustainable growth in activity centres in terms of the location, scale and nature of investment and land uses intended for activity centres. The strategic directions are consistent with the LCACS objectives. The LCACS provides a detailed list of actions that support the above principles for activity centre policy, in addition to specific actions for each centre. All the actions are listed in Appendix 2.
- The development of ‘homemaker centres’ comprising outlets selling large format, homemaker and bulky goods is a rising trend for the City. These centres are not activity centres but should be located in well planned and integrated developments rather than in non-contiguous developments along numerous major roads.

Response

- Encourage and consolidate a wide mix of activities in centres.
- Support the physical enhancement of Activity Centres.
- Promote the provision of adequate retail floor space in activity centres in urban growth areas.
- Encourage well planned locations for showrooms.



STRATEGIES AND ACTIONS

Strategic Response	Actions	No.
3.4.1 Promote Midland as a Strategic Metropolitan Centre and the major economic hub of the North-East sub-region.	Implement the adopted Midland Activity Centre Structure Plan to facilitate the Centre's growth as the main centre in the North-East sub-region.	31
3.4.2 Ensure the Ellenbrook Secondary Centre is able to achieve its potential as a major centre for employment and activity.	Review the Ellenbrook Centre Structure Plan to ensure that a greater mix of uses can be achieved.	32
3.4.3 Promote the provision of adequate retail floor space in activity centres in urban growth areas.	Review existing Brabham Activity Centre Structure Plan to reflect the change in status of Brabham from a large Neighbourhood Centre to a District Centre.	33
	Ensure that new neighbourhood centres in urban growth areas are allocated sufficient retail floor space as recommended in the Local Commercial and Activity Centres Strategy (LCACS).	34
	Investigate whether a district centre in the Gidgegannup townsite should be planned for in the long-term.	35
3.4.4 Support and refine the activity centre hierarchy whilst ensuring 'out of centre' proposals do not undermine this hierarchy.	Support the Activity Centre hierarchy identified in the LCACS and restrict 'out of centre' retail development to those that are, consistent with the achievement of a net community benefit without undermining the Activity Centre hierarchy.	36
3.4.5 Support the establishment of a district centre in Bullsbrook to cater for future population growth.	Support the establishment of a District Centre in accordance with the Bullsbrook Townsite District Structure Plan.	37
3.4.6 Encourage and consolidate a wide mix of activities in Centres.	Ensure that Activity Centres accommodate a wide range of uses including community and cultural facilities.	38
	Support vibrant, viable and sustainable activity centres which offer a wide range of shopping and visitor experiences.	39
3.4.7 Support the physical enhancement of Activity Centres.	Ensure that development in Activity Centres provides for a mix of uses and built form diversity which promotes the physical enhancement of the Centre.	40
	Implement the provisions of the Local Commercial and Activity Centres Strategy (LCACS).	41
	Undertake place based planning such as local development plans and design guidelines to guide developments within centres which will facilitate their enhancement.	42
3.4.8 Consolidate and refine the network of neighbourhood centres.	Ensure that adequate neighbourhood and local centres are provided for emerging urban communities.	43

Strategic Response	Actions	No.
3.4.9 Promote integrated development supportive of an efficient public transport system.	Ensure all structure planning and transport planning for activity centres addresses the integration of land use development and public transport facilities.	44
3.4.10 Encourage well planned locations for showrooms.	Identify key preferable locations for showrooms in the eastern and southern edges of the Midland Strategic Metropolitan Centre and in the Malaga industrial area along Malaga Drive, Marshall Road and Alexander Drive. Amend the City's planning framework as required to achieve the desired outcome.	45

Refer to Map 4 for further information regarding Retail and Activity Centres



3.5 TOURISM

OBJECTIVE: To stimulate the tourism industry and showcase the Swan Valley and the City's main attractors.

CONSOLIDATED KEY ISSUES

Growing The Tourism Economy

In order to grow the City's market share of visitors and ensuring that the City contributes fully to Western Australia's 2020 tourism targets, decisive action and the commitment of all stakeholders involved in the visitor economy is required. As outlined in the City of Swan Tourism Development Strategy 2015-2020, the City aims to position itself to become the destination of choice for its target markets. The City aims to increase the value of the visitor economy by generating an additional \$132m visitor expenditure by 2020, supporting up to 1600 new jobs, developing a 7 day visitor economy and lifting brand awareness for the Swan Valley as the City's key visitor attractor.

Swan Valley Tourism

The Swan Valley is a highly recognised and prized tourism asset in the City of Swan and is the oldest and most visited food and wine tourism destination in Western Australia. It is governed by a hierarchy of planning legislation framework with the most important planning instrument being the Swan Valley Planning Act. Subsidiary legislation such as those governing agricultural practices and water usage also influences overall land use and development in the Swan Valley. The City of Swan's development, planning and marketing of tourism is further guided by the City's Economic Study for the Swan Valley 2009.

The current planning and legislative framework does not adequately address the conflict of land use between different activities in the Swan Valley. The viticulture industry provides an important underpinning economic base for the tourism industry however, the Swan Valley Action Plan is clearly intended to provide for tourism, particularly agritourism that would support the viability of the viticulture industry.

The demand for tourism-related land use and activities is increasing. The needs of the tourism industry have to be balanced alongside the overriding requirement to protect the viticulture industry. The objectives of the different industry sectors such as tourism and agriculture and individual industry sectors such as breweries and wineries present challenges for the City as it strives to support the tourism industry and at the same time, protect the Swan Valley from inappropriate development and still operating within the legal framework of the SVPA. This division highlights a need for the State Government's review of the SVPA to establish a clearer vision and objectives under the SVPA and all subsidiary legislation affected by the Act.

Heritage Tourism And Linking With The Swan And Helena River

While the Swan Valley is the key tourism asset of the City, there are plans to develop other tourism destinations within the City primarily Midland, Guildford, Bullsbrook and Gidgegannup. The areas of Midland and Guildford offer the greatest potential for intensifying tourism visitation based on their heritage values.

The Midland Centre is the Strategic Metropolitan Centre of the North-east sub region. There is a statutory requirement under State Planning Policy 4.2 to prepare a Midland Activity Centre Structure Plan to guide future decision-making and help create a lively, thriving and identifiable City Centre. It is worth noting that the City Centre is currently 'disconnected' from two of its prime environmental assets - the Swan and Helena Rivers. Improving walkability, cycle access and wayfinding to capitalise on the Centre's proximity to the two rivers are important transformational projects for the City to embrace.

Rural Tourism

There is potential for tourism to conflict with agricultural land uses particularly where there is an expected level of amenity. Impacts such as spray drift, dust, odour, noise and traffic are accepted to a certain degree in rural areas as they are characteristic of the regular rural operations, but may not be appropriate in a tourist related setting. Management and mitigation of the conflicts between traditional agricultural land uses and tourism are significant in determining long-term land use allocations.

STRATEGIC DIRECTIONS AND RESPONSES

Growing The Tourism Economy

Direction

- The City of Swan Tourism Vision outlined in the Tourism Development Strategy 2015-2020 is “The City will be one of Western Australia’s premier visitor destinations, a destination that is famed for its gourmet food and beverage and is alive with events and experiences that characterise its unique heritage, people and places.” In the implementation of the Strategy, target markets and market trends will have been considered in addition to key tourism development themes, including international markets, indigenous products, trails and product clustering, the cruise sector, export capacity building, food and wine, festival and events, technological infrastructure and digital initiatives.

Response

- Promote the establishment of tourism industries in the Swan Valley and other areas of the City, ensuring that the economic viability of existing agricultural industries is not compromised.

Swan Valley Tourism

Direction

- The Department of Planning, Lands and Heritage has prepared the Swan Valley Action Plan 2019 which provides the Government’s vision and actions for retaining Swan Valley as a productive rural area into the future.
- The City of Swan’s Tourism Development Strategy 2015-2020 has as a priority, establishing ‘Swan Valley’ as a leading part of the ‘Destination Perth’ set of experiences. It further identifies opportunities for new accommodation in the Swan Valley, improved signage including the Swan Valley Food and Wine Trail, establishing marketing initiatives which focus on driving growth in midweek visitation and investigating the feasibility of developing/improving east and west road links within the Valley. The strategy also recommends the City invest in infrastructure to support new experiences that deliver on the positioning of the Swan Valley to support river based experiences between wineries such as a cycling network.

Response

- Support tourism development in rural areas, that are of an appropriate scale and nature which complement the rural character and respects the primary productivity of the City’s rural areas, whilst recognising the contribution tourism has on the local economy.

Heritage Tourism And Linking With The Swan And Helena River

Direction

- The City has a rich natural, cultural and built heritage. Ways to encourage more people to visit heritage places such as Guildford, Midland and the Swan and Helena Rivers should be investigated including a new Swan Valley Visitor Centre and an Aboriginal Cultural Centre within the City.
- It is also important for the Midland City Centre and Guildford to be easily connected to its prime environmental assets namely, the Swan and Helena Rivers. Improving and providing direct links between the City Centre and the Swan and Helena River environs will help ensure that the rivers properly associate with the City Centre and form part of an integrated urban fabric with high amenity values.

Response

- Encourage visitation and support linkages to places of significance such as Whiteman Park, Guildford, Midland and the Swan and Helena Rivers.

Rural Tourism

Direction

- Tourism based business in rural areas has grown significantly, and there is an evident relationship between the rural landscape being both an attractor of tourism and recreation based industries. The City has significant nature based tourism, with National Parks, State Forests, nature reserves, walk trails and the Swan River. Wildflower drives, Noble Falls, the Paruna Sanctuary in Gidgegannup and the Walyunga National Park are notable rural tourist and recreation attractors. The City of Swan's Tourism Development Strategy has specific recommendations with regards to Bullsbrook and Gidgegannup .
- Agri-tourism is a form of niche tourism that is considered a growth industry in Australia and can be a supplementary source of income for rural landowners. Agri-tourism and food tourism refers to activities such as visiting working farms or other, farm or food related business (including restaurants, markets, produces outlets and natural attractions) for enjoyment, education, or active participation in activities and events. Rural areas that are successful in agri-tourism and food tourism tend to have common features; access to accommodation; appropriate infrastructure and proximity or easy access to urban areas. Parts of the City of Swan's rural areas are well equipped to facilitate these types of land uses therefore long-term and sustainable coordination of agri-tourism and food tourism is needed to promote and develop this type of land use activity.

Response

- Support tourism development in rural areas that are an appropriate scale and nature which complement the rural character and respects the primary productivity of the City's rural areas, whilst recognising the contribution tourism has on the local economy.

STRATEGIES AND ACTIONS

Strategic Response	Actions	No.
3.5.1 Promote the establishment of tourism industries in the Swan Valley and other areas of the City, ensuring that the economic viability of existing agricultural industries is not compromised.	Implement the Swan Valley Action Plan.	46
3.5.2 Encourage visitation and support linkages to places of significance such as Whiteman Park, Guildford, Midland and the Swan and Helena Rivers.	Develop and promote a pedestrian shared path network to provide visitors with easy access to places of cultural and heritage interest in Guildford and Midland.	47
	Implement the recommendations of the Swan Cycle Connect Strategy and Swan Valley Bike Plan to complete the proposed bicycle networks.	48
	Promote improved road, cycle and pedestrian links between the City Centre, Guildford and the Swan and Helena Rivers.	49
	Work with the relevant agencies to progress with the Swan Riverside Regional Park Plan and investigate developing a river foreshore plan to reflect the City's vision for the Swan River.	50
	Identify and implement key tourism opportunities resulting from the future Whiteman Park Station.	51
3.5.3 Support tourism development in rural areas, that are an appropriate scale and nature which complement the rural character and respects the primary productivity of the City's rural areas, whilst recognising the contribution tourism has on the local economy.	Where appropriate consider tourism and accommodation in rural areas where they supplement traditional agricultural farming practices, primary productivity and rural industry.	52
	Support the diversification of traditional forms of agriculture, incorporating tourism, recreation and supporting tourist uses (i.e. accommodation) in appropriate locations.	53
	Develop and implement a City-wide trails strategy identifying existing trail assets including bridle, walking, cycle and kayak/canoe trails.	54
	Encourage low-impact, adequately scaled ecotourism opportunities in rural parts of the City, considering prevailing areas of natural beauty and unique biodiversity values.	55
	Ensure tourism related developments and land use can be supported by sufficient services, particularly with respect to water supply, effluent disposal and transport infrastructure.	56

Refer to Map 3 for further information regarding Tourism

3.6 OPEN SPACE AND COMMUNITY FACILITIES

OBJECTIVE: Provide a diverse range of functional and quality open space and community facilities that can be managed in a sustainable way to meet the long term needs of the community.

CONSOLIDATED KEY ISSUES

Adequacy Of Public Open Space

Quality public open spaces and community facilities are a vital part of a City's urban fabric and quality of life. They assist in defining a community's identity and provide social, environmental and economic benefits to residents, workers and visitors. The City has prepared an Open Spaces and Community Buildings Strategy (OSCBS) to guide the planning, development and maintenance of open space and community facilities within the City of Swan.

As the City transforms and population levels increase significantly, the adequate provision of public open space (POS) and community facilities will be critical to the health and wellbeing of local communities. The type, functionality and adequacy of public open space for residents in high density/high rise areas are important considerations in view of the increases in residential density.

Most of the water used in POS is self-supplied by the City of Swan and schools, which use their own groundwater bores and irrigation infrastructure. With limited groundwater to support future growth in the City, alternative and affordable non-potable water infrastructure is needed to supply the water needed to maintain the liveability and productivity of POS areas within the City.

Provision Of Suitable Sporting Spaces

A number of issues have emerged that are impacting on the City's ability to ensure that the community's recreational needs are met. The application of State policies such as Liveable Neighbourhoods has resulted in a reduction of sporting spaces being provided within a community by allowing POS to perform a range of other functions such as providing biodiversity conservation corridors traditionally met in other ways. The policy of allowing the collocation of POS sites with smaller school sites has also contributed to a shortfall of sporting spaces as has the over-provision of non-functional open spaces.

Provision Of Community Facilities

The City faces challenges in providing facilities required for a healthy and active community while balancing emerging economic and environmental considerations. In order to remain sustainable into the future, new approaches to the location of facilities and their funding need to be found.

Planning For Future Growth

Significant growth is forecast and an additional 73,450 dwellings will be required in the City over the next 30 years. Greenfield areas will accommodate most of the growth and the provision of community infrastructure must be in line with community expectations and Council's financial resources. The areas identified for higher density residential development within existing residential may experience future shortfalls in community infrastructure and these need to be monitored.

STRATEGIC DIRECTIONS AND RESPONSES

Adequacy Of Public Open Space

Direction

- The City should ensure that there is adequate provision and distribution of open space for recreation and sporting uses.
- In Greenfield areas, the provision of numerous small pocket parks may need to be reviewed at structure planning stages to avoid future under-utilisation of local open space. The emphasis should rather be on providing a network of functional open spaces.
- An investigation needs to be undertaken as to whether the current type, functionality and adequacy of public open space in high density areas will satisfy the future recreational needs of residents.
- Ensure that water allocation is based on community needs and allow for reservation of water for future POS particularly in Greenfield areas. Furthermore, work with State Government agencies and water utilities to identify alternative fit-for-purpose water sources.

Response

- Promote the provision of a diverse range of open space that meets the needs of the current and future community.
- Ensure that higher density areas are provided with sufficient and suitable public open space.

Provision Of Suitable Sporting Spaces

Direction

- A regional sporting complex needs to be provided in the City on a site in the vicinity of Whiteman.
- The City should ensure that there is adequate provision and distribution of open space for recreation and sporting uses.
- Response
- Promote the provision of a diverse range of open space that meets the needs of the community in a sustainable way.
- Promote the location of community facilities in well used and accessible areas.

Provision Of Community Facilities

Direction

- Due to increasing costs, new approaches are required to fund the construction and refurbishment of community facilities. Developer contributions are one avenue for the City to pursue in the future.
- The provision of City-owned community facilities will need to be reviewed over time to accommodate changing demographics and to identify well used and prominent locations where these facilities could be successfully co-located.
- The Community Infrastructure Plans (CIPs) will provide guidance for the future planning, location development and funding priorities for public open space and community facilities based on projected growth, demands, trends and expectations. It will ensure that provision of these facilities will be considered in a timely manner, integrating community facility planning with land-use planning.

Response

- Promote new approaches to funding the redevelopment of community facilities.
- Promote the location of community facilities in well used and accessible areas.

Planning For Future Growth

Direction

- Greenfields areas are required to accommodate most of the projected dwelling growth therefore, the provision of community infrastructure must be in line with community expectations and Council's financial resources.

Response

- Promote the provision of a diverse range of open space that meets the needs of the community in a sustainable way.
- Promote the location of community facilities in well used and accessible areas.



STRATEGIES AND ACTIONS

Strategic Response	Actions	No.
3.6.1 Promote the provision of a diverse range of open space that meets the needs of the current and future community.	Ensure that structure plans and subdivisions provide adequate local, neighbourhood, district and regional open space in accordance with City's and Department of Planning, Lands and Heritage planning frameworks.	57
	Structure plans should ensure that public open space will meet the future recreational and sporting needs of the community and adopt a balanced and financially sustainable approach in line with the principles of Community Infrastructure Plans.	58
	Working with the Department of Water and Environmental Regulation (DWER), the City will ensure that water allocation is based on community needs and allows for reservation of water for future needs. Particularly in Greenfield areas. In areas where groundwater is not available for irrigation, the City working with State Government agencies and water utilities will investigate alternative fit-for-purpose water sources.	59
3.6.2 Ensure that higher density areas are provided with sufficient and suitable public open space.	Local Area Plans and Community Infrastructure Plans encompassing the infill areas should identify where future gaps in the provision of community infrastructure are likely to occur and in high density areas consideration will be given to designing public open spaces suitable for residents in high density areas.	60
3.6.3 Promote the location of community facilities in well used and accessible areas.	Structure plans and Local Area Plans should identify sites for community facilities adjacent to or in activity centres or on public transport routes. These sites should be of a sufficient size to ensure that the successful co-location of community facilities can occur in the future as required.	61
	In established areas, the provision of community facilities will need to be reviewed over time to accommodate changing demographics and to identify locations where facilities could be successfully co-located.	62
3.6.4 Promote new approaches to funding the redevelopment of community facilities.	Investigate developing a new City-wide development contribution scheme to fund future improvements to existing community facilities.	63

Refer to Map 2 for further information regarding Open Space.

3.7 RURAL LAND USES, SUBDIVISION AND DEVELOPMENT

OBJECTIVE: Encourage sustainable development and land uses in rural areas whilst recognising the importance of protecting agricultural, natural and raw-material resources.

CONSOLIDATED KEY ISSUES

Urban Growth And Agricultural Land Uses

Rural land uses within the City of Swan have changed considerably over time and continue to change as they are influenced by environmental, physical, economic and social factors. Continual urban expansion has resulted in pressures being brought to bear on areas of intensive agricultural uses. The City of Swan contains Local Priority Agriculture Areas in the Swan Valley, Gidgegannup and Bullsbrook areas and there is a need for the long term protection of primary productivity in these areas.

It is recognised that the current regulatory framework is ineffective at addressing the long term viability of land uses within the Swan Valley. The eastern portion of the Swan Valley (Area C of SVPA) has lower quality soils, fragmented land ownership and is experiencing declining agricultural incomes. Over time, alternate crops and diversification of land uses may become important considerations for this part of the Swan Valley to provide a buffer against market fluctuations. The City of Swan should work closely with Department of Planning, Lands and Heritage to implement the relevant recommendations of the Swan Valley Action Plan.

Consideration should be given to services and infrastructure that supports agriculture and rural land use, in addition to any limitations of those activities, such as adequate buffer distances and limited water availability.

Sustainable Rural Settlement

There is a general presumption against ad-hoc subdivision of rural land; appropriate rural residential development based on accessibility to infrastructure, services and amenities may be supported in some areas, particularly where risk of bushfires is considered acceptable. Such areas will be limited towards townsites, namely Gidgegannup and Bullsbrook, where service availability and access to community facilities is more attainable.

Rural settlement in Swan should address long term cumulative aspects of rural development, such as the net loss of remnant vegetation when applying clearing requirements and other measures for bushfire protection, such as firebreaks. Rural residential developments must be responsive to climate change and demonstrate sufficient and sustainable supply of water for both domestic and firefighting purposes, whilst retaining biodiversity values.

Basic Raw Materials

Basic raw material resources ranging from clay, rare earth minerals, and precious metals to sand, limestone and gravel are extensively located within the City. The importance of these resources to future urban development in the Perth metropolitan area has been recognised in the WAPC's SPP2.4 Basic Raw Materials which seeks to protect resource-rich areas from being developed for incompatible land uses which could limit future extraction, and to also provide a consistent planning approval process for extractive industry proposals. However, there is a potential conflict between achieving one of the objectives of Perth and Peel @3.5million in accommodating future growth and protecting basic raw material rich areas from incompatible land uses.

Planning For Bushfire Protection

The majority of rural land within the City is classified as bushfire prone. Land use and development in rural areas therefore needs to respond to the threat of bushfire, balancing the potential impact of bushfire risk management regimes on the environment and natural resources. Specific planning and building requirements apply to developments within designated bushfire prone areas in accordance with the Planning and Development (Local Planning Schemes) Regulations 2015 and State Planning Policy 3.7 Planning in Bushfire Prone Areas. The City has a responsibility to ensure sensitive or potentially hazardous land uses do not increase the risks on life and property.

STRATEGIC DIRECTIONS AND RESPONSES

Urban Growth And Agricultural Land Uses

Direction

- Prime agricultural land should be protected by discouraging the fragmentation of existing productive agricultural land and controlling the location and extent of urban activities adjacent to or in rural areas as entrenched in the WAPC's SPP 2.5 Rural Planning. In this regard, the City of Swan aims to protect rural areas which support agricultural land use and primary production, recognising the economic, social and historical significance of primary industry in the City.
- The planning framework and processes should aim to protect land containing productive soils from the impact of rural development, land use activity and inappropriate subdivision. Diversification of land use activities and support of new forms of agriculture and potential new enterprises in rural areas should be considered where it compliments, rather than conflicts with, primary production.
- The planning processes and local framework should consider natural land and water resources which contribute to the City's ecosystem. Land management should be based on catchments as the geographical unit rather than geopolitical boundaries. The City should consider the changing nature of catchments and adapt decision making and management of these catchments accordingly.
- The Swan Valley Action Plan supports the emerging focus on architectural design and the application of natural building materials as part of a contemporary 'vineyard' palette through both built form guidance and where necessary, development controls.

Response

- Protect rural areas which can support agricultural land-use and primary production, recognising the economic, social and historical significance of primary industries in the City.
- Maintain biodiversity areas on private land containing significant native vegetation.
- Protect and enhance the visual appearance of the rural landscape, recognising prevailing native vegetation and topography as important landscape features through the local planning framework and decision making.

Sustainable Rural Settlement

Direction

- Implement the Local Rural Planning Strategy to provide strategic guidance for future land use planning for the rural areas. Settlement in rural areas should address land use conflict from prevailing primary production land uses and address infrastructure needs such as reticulated water and sewerage requirements. Settlement in rural areas must also address the risks associated with bushfire threat taking into account the potential impact of bushfire hazard mitigation and regimes on the natural environment, particularly where movement networks and emergency access provisions result in unacceptable loss of vegetation.
- Opportunities exist for rural settlements to become more sustainable through appropriate development in locations that have good access to community services and infrastructure and not adversely impact on the environmental values of an area. The revitalisation and consolidation of the Gidgegannup townsite is important for its future viability.
- The protection of valued visual landscape character should be considered when assessing development proposals in rural areas.
- Additional areas of rural living (i.e. rural residential and rural smallholdings) developments should only be considered in accordance with SPP 2.5 – Rural Planning and exceptional circumstances whereby development results in positive social and environmental outcomes and access to services and infrastructure can be suitably demonstrated.

Response

- Ensure a robust planning framework for assessing the suitability of rural land uses and land management practices in rural areas.
- Protect rural areas which can support agricultural land-use and primary production, recognising the economic, social and historical significance of primary industries in the City.
- Support rural settlement and land uses in accordance with SPP 2.5 where high conservation value areas containing significant vegetation are not unreasonably affected or can be protected in perpetuity.
- Maintain biodiversity areas on private land containing significant native vegetation.
- Address the future community's development needs by supporting rural settlement and land uses in appropriate locations.
- Retain and enhance the rural character and landscape of the City's rural townsites and their surrounds.
- Protect, enhance and conserve cultural significance within the City's rural areas.

Basic Raw Materials

Direction

- The potential conflict between future urban growth in areas identified in Perth and Peel @3.5million and the protection of basic raw materials extractive industries should be mitigated.

Response

- Protect basic raw material from incompatible and sensitive land uses.

Planning For Bushfire Protection

Direction

- As outlined in the Department of Planning, Lands and Heritage’s Planning for Bushfire Protection (Edition 2) guidelines and SPP3.7, consideration must be given to providing an appropriate level of protection to life and property from bushfires. Avoid sensitive and hazardous land uses, subdivision and development on land where an unacceptable level of bushfire risk has been identified.

Response

- Ensure bushfire impact prevention is a significant consideration when determining additional settlement and land use in bushfire prone rural areas.

STRATEGIES AND ACTIONS

Strategic Response	Actions	No.
3.7.1 Ensure a robust planning framework for assessing the suitability of rural land uses and land management practices in rural areas.	Require scheme amendments, subdivisions and regionally significant developments to demonstrate Integrated Land Management principles to address any potential rural land use and management impacts and how these will be managed within acceptable limits.	64
3.7.2 Protect basic raw material from incompatible and sensitive land uses.	<p>Ensure areas identified under the State Planning Policy 2.4 - ‘Basic Raw Materials’ are protected and buffer requirements prescribed under EPA’s guidance are sufficiently maintained.</p> <p>Ensure any future urban expansion or intensification of sensitive land uses considers the buffer requirements of existing and future extraction areas.</p>	65
3.7.3 Protect rural areas which can support agricultural land-use and primary production, recognising the economic, social and historical significance of primary industries in the City.	Identify and establish Local Priority Agriculture areas of significance in the local planning framework and limit the encroachment of non-agricultural or incompatible land-uses which may conflict with Local Priority Agriculture areas of significance.	66
	Limit the fragmentation of rural land, particularly in identified Local Priority Agriculture Areas, by requiring applicants to demonstrate proposed development and subdivision retains satisfactory areas of arable land that can reasonably support a commercially viable agricultural, viticulture, horticultural or related activity, and limiting non-agricultural use of such land.	67

Strategic Response	Actions	No.
3.7.4 Foster and facilitate the establishment of new sustainable rural industries or supplementary activities including tourism in order to broaden the economic base of the City.	<p>Review the Local Planning Scheme provisions to ensure activities or industries which are complementary to agricultural and viticultural areas can be supported where:</p> <ul style="list-style-type: none"> • Appropriate measures are taken to minimise potentially negative environmental and social impacts; • Adequate infrastructure is available or can be reasonably provided; and • The scale of the development does not have a negative impact on the character of the locality. 	68
3.7.5 Support rural settlement and land uses in accordance with SPP 2.5 where high conservation value areas containing significant vegetation are not unreasonably affected or can be protected in perpetuity.	Rural residential and rural smallholdings developments should only be considered in accordance with SPP 2.5 – Rural Planning and exceptional circumstances such as where it can be demonstrated the subject land can accommodate viable and sustainable agricultural and/or rural enterprise.	69
	Consider the cumulative impact on vegetation due to clearing requirements imposed on rural development to establish roads, firebreak access, building envelopes and building protection zones (BPZ) around structures, when assessing development applications and structure plans.	70
3.7.6 Maintain biodiversity areas on private land containing significant native vegetation.	<p>Investigate introducing planning mechanisms and covenants on land titles to protect and enhance natural resources and biodiversity. This could include:</p> <ul style="list-style-type: none"> • Endorsed management plans, considering the protection and planting of native vegetation through the development assessment process; • Covenants and other encumbrances when considering subdivisions that preserve a portion, or whole area, of lots subject to areas worthy of protection; and • Support cluster style developments, where appropriate, to minimise clearing requirements and reduce the extensive distribution of building envelopes. 	71
3.7.7 Address the future community’s development needs by supporting rural settlement and land uses in appropriate locations.	Consider rural living proposals only under exceptional circumstances (as defined by SPP2.5) and where appropriate services and community infrastructure can be adequately provided and bushfire risk can be effectively managed.	72

Strategic Response	Actions	No.
3.7.8 Ensure bushfire impact prevention is a significant consideration when determining additional settlement and land use in bushfire prone rural areas.	Apply the provisions SPP3.7 and Planning for Bushfire Protection Guidelines across all stages of the planning process.	73
	<ul style="list-style-type: none"> Review the Local Planning Scheme to consider the suitability and permissibility of hazardous, vulnerable or sensitive land uses in bushfire prone areas that prevail in rural zones. Investigate providing additional guidance (including requiring fire management plans) in local planning policy for rural land use and settlement in bushfire prone areas. 	74
3.7.9 Protect and enhance the visual appearance of the rural landscape, recognising prevailing native vegetation and topography as important landscape features through the local planning framework and decision making.	Consider the cumulative impact of development on the natural landscape, ensuring the scale and appearance of development considers the rural visual environment through: <ul style="list-style-type: none"> Provisions in local planning policy to manage the appearance and scale of development in relation to reflective building materials and building height. Investigate requiring the submission of Visual Impact Assessments which address the visibility and visual prominence of proposed developments and the likely impact on their surrounds. Investigate including objectives and implementation criteria within Local Planning Policy and objectives for Landscape zones identified in the Local Planning Scheme relating to visual amenity issues in rural areas. 	75
	Apply the relevant development control provisions of the Swan Valley Action Plan when assessing development applications in the Swan Valley.	76
3.7.10 Retain and enhance the rural character and landscape of the City's rural townsites and their surrounds	Ensure Local Area Plans for rural townsites (Bullsbrook, Gidgegannup and Upper Swan) contribute to a sense of place and coordinate land use, development and delivery of services.	77
3.7.11 Protect, enhance and conserve cultural significance within the City's rural areas.	Developments should respond to the site context, including Indigenous Heritage significance.	78

Refer to Map 2 for further information regarding Rural Land Uses.

3.8 URBAN DESIGN AND HERITAGE

OBJECTIVE: Enhance the built form throughout the City to create interesting and attractive places and protect the City's heritage.

CONSOLIDATED KEY ISSUES

Redevelopment In Established Areas

The characteristics of the built form within the City of Swan are rich and diverse. They reflect the prevailing architectural forms and subdivisional design at the time of their development spanning over 100 years between the colonial style of the 1840's and 50's exemplified by Guildford, Woodbridge and Midland to contemporary high density living in inner city Midland. The characteristics range from traditional grid pattern of streets to the "Garden City" movement principles of extensive public open space and curvilinear street patterns to "New Urbanism" design philosophies. Older areas like Ballajura, Kiara, Swan View and Lockridge incorporate elements of the "Garden City" movement and the road network is characterised by many loop roads and cul-de-sacs which are inconsistent with the contemporary road network design principles embodied in Liveable Neighbourhoods.

Experiences in many inner city suburbs in Perth highlight a certain level of community concern about the impacts of new development on existing heritage character and amenity. Areas that are undergoing change or likely to undergo change need to be identified so that appropriate plans can be made to manage that change so as to meet community's vision and objectives.

Heritage And Sense Of Place

The City of Swan contains some of the State's most significant heritage buildings and places. Their continued protection is vital to the fabric of the built form of the City as is the protection and recognition of places that are of significance to the Aboriginal community. The City of Swan's Heritage Strategic Plan endorsed in July 2013 identified a number of issues that need to be addressed through the planning system such as finding a balance between heritage conservation with redevelopment and commercial realities. There is limited recognition of the importance and diversity of the City's heritage, and there are gaps in the identification, understanding and documentation of the City's heritage and its associated significance. Furthermore, there is a lack of practical guidance (i.e. advice, policies and guidelines) to inform all stakeholders on heritage conservation and appropriate development of government-owned heritage assets in the district which is often not aligned with the City's objectives.

The lack of crime preventive measures in some areas of the City tends to increase the perception of fear. The creation of safe public spaces such as streets, car-parks and parks is a priority for the community. It is not feasible to have law enforcement agencies present at all times in the public realm. Through good design of public spaces and buildings abutting public spaces, passive surveillance of the public domain can reduce perception of fear and lead to a greater sense of security and place for the community.

STRATEGIC DIRECTIONS AND RESPONSES

Redevelopment In Established Areas

Direction

- The Midland Activity Centre Structure Plan defines the direction of the Midland centre over the next 10 to 20 years. It will influence the form of development, its character, intensity of activity and perception as a place by the community.
- The “New Urbanism” philosophies of subdivision design are in accordance with the design elements of Liveable Neighbourhoods and should be applied in all Greenfield areas and in the redevelopment of existing residential areas such as Ballajura, Kiara, Swan View and Lockridge etc.

Response

- Promote Midland as a vibrant City Centre preserving its unique character and heritage and maintaining its role as a Strategic Metropolitan Centre serving the City and the North-east sub-region.
- Continue to promote Liveable Neighbourhood principles of urban design in greenfield areas.
- Promote the retention of existing character and streetscapes where appropriate.
- Promote liveable and safe environments throughout the City.

Heritage And Sense Of Place

Direction

- The City of Swan’s Heritage Strategic Plan 2013 provides a comprehensive and coordinated framework for the effective management of all aspects of heritage in the City. An Action Plan has been developed with four main themes and a series of strategies and actions has been developed under each theme listed below to guide the City in achieving clear and effective heritage management.
 - Knowing (identification of heritage assets and positive measures already in place);
 - Protecting (prioritising and budgeting for conservation and other protection measures);
 - Supporting (consistently managing private and government owned heritage assets); and
 - Promoting (celebrating achievements and leveraging community and economic benefits).
- The Swan Riverside Regional Park, located in the Woodbridge foreshore area and in close proximity to the Midland centre, has significant historical and cultural significance for the Swan region. Its revitalisation, guided by the Swan Riverside Regional Park Plan will transform it into a magnet for tourism, recreational, social and cultural activity.
- The enhancement of public places through the provision of public art, attractive streetscapes and improvements to community safety through the use of CPTED (Community Policing through Environmental Design) principles in development proposals will create a more liveable City with a strong sense of place.
- The established heritage character of some neighbourhoods, streetscapes and housing are valued by residents and future development in these areas should be respectful of the amenity of the area.

Response

- Promote the retention of existing character and streetscapes where appropriate.
- Further protect the City’s European and Aboriginal cultural and built form heritage.

STRATEGIES AND ACTIONS

Strategic Response	Actions	No.
3.8.1 Promote Midland as a vibrant City Centre preserving its unique character and heritage and maintaining its role as a Strategic Metropolitan Centre serving the City and the North-east sub-region.	Implement the Midland Activity Centre Structure Plan to preserve its character and heritage and support the creation of attractive precincts and streetscapes, a legible network of roads, pedestrian friendly environments, and cycle routes.	79
3.8.2 Continue to promote Liveable Neighbourhood principles of urban design in greenfield areas.	At structure planning and subdivision stages, ensure new developments and road networks are designed in accordance with Liveable Neighbourhood principles.	80
3.8.3 Promote the retention of existing character and streetscapes where appropriate.	Investigate the development of a local planning policy to set out additional built form requirements for new development proposals to protect existing character and streetscapes where appropriate.	81
3.8.4 Promote liveable and safe environments throughout the City.	At structure planning stages and when assessing major development proposals, promote the enhancement of public places through the provision of public art, creation of attractive streetscapes and the use of CPTED principles.	82
	Introduce a Mixed Use Zone into the local planning scheme to allow residential and commercial uses within the same building.	83
3.8.5 Protect the City's European and Aboriginal cultural and built form heritage.	<p>Implement the measures of the Local Heritage Survey and the Heritage Strategic Plan which includes the following actions:</p> <ul style="list-style-type: none"> • Maintain the Local Heritage Survey and Heritage List in line with legislative requirements; • Review policies and guidelines relating to the City's heritage areas; • Investigate incentives to protect the City's heritage; and • Develop a policy to guide the development, including alterations and additions, of heritage listed properties outside heritage areas. 	84





3.9 TRANSPORT, TRAFFIC AND ACCESS

OBJECTIVE: Provide an integrated transport system that offers residents, workers and visitors high quality, safe and efficient transport mode choices to meet the personal, employment and freight transport needs of the City into the future.

CONSOLIDATED KEY ISSUES

Transport Strategy

Prior to the adoption of the Transport Strategy, the City lacked guidance on dealing with future road upgrades, developing new pedestrian and cycle networks, reducing car dependency and improving public transport. With rapid population growth, it is vital for the City to take an integrated approach to transport and land use planning which means all the relevant transport modes and opportunities and the relationships between transport and land use, are considered at each stage of the planning process.

Car Dependency And Public Transport

The reliance on the road network within the City for the movement of cars, commercial and freight vehicles is driving travel demands upwards. With significant growth forecast particularly in the Urban Growth Corridor, the community's demands for high levels of mobility and the increasing dependence on private cars must be addressed through strategies to improve public transport usage and reduce the use of the private car.

The State Government's blueprint for public transport Perth and Peel Transport Plan for 3.5 Million People and Beyond has its primary focus on the central core of the Perth Metropolitan Region. The blueprint does not explicitly support one of the key objectives of Perth and Peel @3.5million which is to decentralize employment to the Midland Strategic Metropolitan Centre and other centres such as Malaga and Hazelmere. Without an efficient inter and intra-regional public transport system, the objectives of Perth and Peel @3.5million are unlikely to be met.

Reducing car dependency in the City is a challenging task given the size and fragmented nature of the City's urban areas. The City is playing its part in promoting public transport through its Urban Housing Strategy which recommends increasing residential densities near activity centres, community facilities and high frequency public transport routes. However, continual improvements and enhancements to the public transport system are required to encourage greater use of public transport.

Access And Parking

Access to services, facilities, work and goods is a key strategic need of the community. Increasing the supply of parking as a stand-alone solution cannot fully meet this need, could also lead to increased traffic congestion and could be considered an inefficient land use particularly when urban densification is an objective. In response to SPP 4.2 Activity Centres for Perth and Peel, the City has prepared the draft Midland Access and Parking Strategy 2012. This recommends actions to update the City's cash-in-lieu for parking policy, promote alternatives to the use of the private car, manage existing public parking for visitors and workers more efficiently, plan for future well designed multi-deck car parks and enable cycle commuting to be integrated into the existing road network. Separate parking strategies for Ellenbrook and Malaga have also been developed.

The eastwards relocation of Midland Station to the vicinity of the St John of God Midland Public Hospital is important for the future development of the Midland Centre.

Road And Rail Freight

The movement of freight through the City provides essential economic benefits to the overall WA economy and is a key consideration in terms of efficiency and safety. There are many points of conflict between road freight and commuter traffic

and between transport corridors such as the rail freight line through Midland and sensitive land uses that need to be resolved.

The Perth-Darwin National Highway (NorthLink), Great Eastern Highway and Great Northern Highway all traverse the City. Strategic planning has been completed for the PDNH and the City and MRWA have given in principle support for a preferred route connecting East Wanneroo and Tonkin Highway. Great Northern Highway, a heavy haulage route which services the Swan Valley and heads north through Bullsbrook, requires intersection upgrades along its length as it traverses the City to improve safety.

The road and rail freight routes through the centre of Midland cause significant amenity issues within the Midland centre and its residential surrounds. A reservation for a future freight rail re-alignment has been identified in the MRS as well as a proposed route for the Lloyd Street extension that would bypass Midland CBD. These have been identified as strategic long-term planning initiatives in the Hazelmere Enterprise Area (HEA) Structure Plan. The Lloyd Street extension would result in more efficient movement of road freight through the HEA to Reid Highway and Great Northern Highway.

Planning For Pedestrians And Cyclists

There has been significant investment in the primary cycling route network within Swan by State government in recent years. This has created a “skeleton” for the City to link a network of local routes into. In planning these routes, it is important to note that while cyclists are now legally able to ride on any footpath, commuter cyclists, recreational cyclists and pedestrians often have different requirements that need to be considered. The Swan Cycle Strategy identifies where cycling infrastructure is needed and prioritises where gaps in cycle routes require completion. Upgrades to existing walking infrastructure such as footpaths and walking trails and developing an integrated network of footpaths in new urban growth areas are also necessary to encourage residents to choose walking or cycling rather than driving as a mode of transport. It is also important that development of the footpath network includes the provision of natural or structural shade wherever possible.

Connecting People And Places

The City has an extensive road network servicing its urban and rural communities. The provision of linkages between different parts of the City is challenging due to geographical and environmental constraints. The local and district road network is forecast to expand significantly to service the new urban growth areas highlighting the need to ensure that high levels of safety and amenity for local communities are maintained. It will be important to ensure that the road network has the capacity to accommodate the increases in vehicular and commercial traffic and provide capacity for improved public transport services. This is particularly the case in the northern Ellenbrook area where the existing road network cannot currently accommodate effective east-west and north-south movement network.

STRATEGIC DIRECTIONS AND RESPONSES

Transport Strategy

Directions

The City will take an integrated approach to transport and land use planning which means all the relevant transport modes and opportunities and the relationships between transport and land use, are considered at each stage of the planning process. The individual elements of a transport, traffic and access network will be considered in their true context of population and economic growth and associated transport, housing and recreational requirements.

Through its land use planning decision making processes, the City will ensure that:

- A cohesive network of activity centres and industrial hubs are connected to each other by an efficient road and rail network;
- Activity centres contain diverse land uses especially higher density residential and provide high amenity infrastructure to encourage cycling and walking;
- Activity centres are located around public transport stations or hubs;
- Residential densities are increased near centres of employment, shopping and high frequency public transport routes;
- The demand for parking in the activity centres is managed so as to reduce car congestion; and
- Neighbourhoods are well connected by an efficient transport system.

To achieve these objectives, the City of Swan has prepared a Transport Strategy, accommodating the existing and future transport requirements of the locality across all transport modes. This strategy is generally consistent with the process described in the Department of Planning, Lands and Heritage 'Guidelines for Preparation of Integrated Transport Plans' and focuses on an integrated transport model which includes land-use decisions, parking, public transport, road and pedestrian/cycling infrastructure. The transport provision has been assessed at the neighborhood, district and regional level to ensure that it addresses the residential, employment and recreational needs of the population.

In particular, the focus of the draft strategy is to:

- Identify constraints in current and planned road capacity, using the projections of the City (as captured in the most recent update of the Main Roads ROM), Perth and Peel @3.5million and the North-east Sub-regional Planning Framework;
- Identify measures to upgrade and improve the regional and local road connections to facilitate safe and efficient vehicle movement, manage freight movements and to reduce congestion;
- Consider the implementation and management of 'Moving People' (Trans Priority) principles to facilitate an efficient movement system; and
- Identify measures to upgrade and improve public transport connections and facilities to reduce congestion.

Responses

- Promote public transport linkages to major centres in order to support successful decentralisation of employment to activity centres and other employment centres.
- Reduce car dependency and promote alternative modes of transport to the car, including public transport, cycling and walking.
- Promote increased densities near activity centres and high frequency public transport routes.
- Support improved network connections within existing localities which is subject to residential growth.

Car Dependency And Public Transport

Directions

- The City must continue to advocate for substantial improvements to the public transport network within the City of Swan to reduce reliance on the private car and assist with achieving the objectives of Perth and Peel @3.5million.
- The City of Swan Transport Strategy provides direction for the City in terms of reducing reliance on the private car and recommending necessary upgrades to the existing road network. A key recommendation is that Ellenbrook and Bullsbrook should eventually be connected by a rapid transit service. This will support the strategic objectives of Perth and Peel @3.5million.
- The State Government should be encouraged to continue to increase the extent of public transport services within the City.
- The provision of higher density housing close to places of employment and activity centres as well as within walking distance of high frequency public transport services will reduce the need for excessive car-based travel. This intent to densify will be particularly important as the location of transport nodes associated with METRONET projects in Swan, clarify.
- Connecting people with places through a well-planned network of public footpaths, commuter and recreational cycleways will help reduce car dependency and promote a healthy lifestyle.
- The provision of bicycle parking spaces and end-of-trip facilities in all new commercial developments in activity centres will make cycling a more attractive travel option for commuters.
- The Midland Strategic Metropolitan Centre will experience significant growth over the next 20 years placing pressure on public transport services and parking infrastructure. The City must ensure that the burden of funding new transport services and parking infrastructure is shared among development interests and State and Local Governments. The draft Midland Access and Parking Strategy 2012 promotes upgrading of the existing Midland shuttle service to a CAT bus system, a reduction in the use of the private car in the City Centre, future planning for multi-deck parking sites, an improved cash-in-lieu policy and improvements to cycleways, footpaths and signage that will enable future residents and visitors to easily move around the various destinations in the City Centre.
- Midland will be developed as a centre for Transit Oriented Development (TOD) with appropriate high densities, mixed uses and intensive uses such as health and education located close to Midland train station. The Ellenbrook secondary centre will also experience significant growth as Ellenbrook and the urban growth corridor complete their respective urbanisation over the next 20 years. Parking, access and increased opportunities for medium and high residential densities are important issues to address.

Responses

- Promote public transport linkages to major centres in order to support successful decentralisation of employment to activity centres and other employment centres.
- Reduce car dependency and promote alternative modes of transport to the car, including public transport, cycling and walking.
- Promote increased densities near activity centres and high frequency public transport routes.
- Promote Midland Central Business District (CBD) as a Transit Oriented Development centre.
- Promote the use of alternative transport modes to the car within the Midland CBD.

Access And Parking

Directions

- The Midland Access and Parking Strategy 2012 recommends actions to update the City's cash-in-lieu for parking policy, promote alternatives to the use of the private car, manage existing public parking for visitors and workers more efficiently, plan for future well designed multi-deck car parks and enable cycle commuting to be integrated into the existing road network.
- The Transport Strategy has categorised areas within the City of Swan by their function or environment. The strategic direction for parking and access in each land use or area refers to:
 - the appropriateness and function of off-street parking
 - requirements for on-site parking
 - potential for synergies between adjacent land uses
 - likelihood for statutory parking concessions
 - provision of off-street public parking facilities and other specific policies relating to individual areas.

Responses

- Promote public transport linkages to major centres in order to support successful decentralisation of employment to activity centres and other employment centres.
- Reduce car dependency and promote alternative modes of transport to the car, including public transport, cycling and walking.
- Support improved network connections within existing localities which is subject to residential growth.

Road And Rail Freight

Directions

- The safe and efficient movement of road and rail freight in and out of the City will require an improved rail freight route and the extension of Lloyd Street through the Hazelmere area that will bypass the Midland CBD and connect more efficiently with other freight routes such as Reid Highway and Great Northern Highway.
- The north-east corridor is a strategic location for an intermodal terminal facility and the City has identified a preferred site in Bullsbrook adjacent to the road and rail freight network. This intermodal terminal should be planned as a specialised activity centre with complementary employment-generating land uses.
- Great Northern Highway is a strategically important heavy haulage route and upgrades to key intersections are vital for traffic safety.
- Future development of land adjacent to freight routes should be consistent with the WAPC's SPP 5.4 Road and Rail Noise.

Responses

- Support improvements to the road and rail freight network through the Hazelmere Enterprise Area.
- Support the establishment of a new intermodal terminal at Bullsbrook.
- Support a safe traffic environment along Great Northern Highway.
- Support a safe traffic environment along Great Eastern Highway.
- Ensure that freight corridors do not impact adversely on adjacent sensitive land uses in terms of noise and vibration. Support improved road connections in greenfield and urban growth areas.

Planning For Pedestrians And Cyclists

Directions

- It is considered ideal for the City to introduce minimum infrastructure standards for cycling facilities into planning policies.
- The City aim to implement recommendations of the Swan Cycle plan to promote improved cycle networks within the City.
- Pedestrian activity is a critical factor in the effectiveness and vitality of Activity Centres such as Midland and Ellenbrook. For this reason, the pedestrian environment must be carefully considered, particularly along primary pedestrian desire lines. This includes construction of high quality paths, natural or structural shade and street furniture to provide amenity. By allocating resources to the pedestrian environment, the use of pedestrian modes will grow, reducing the demand for other modes as well as the requirement for parking.

Responses

- Reduce car dependency and promote alternative modes of transport to the car, including public transport, cycling and walking.
- Promote the use of alternative transport modes to the car within the Midland CBD.
- Support improved network connections within existing localities which is subject to residential growth.

Connecting People And Places

Directions

- The Transport Strategy identifies improvements that are required to the existing road network. In particular, the road network in the north Ellenbrook area is incomplete and this must be addressed through future transport planning, local structure planning and at subdivision stages. Northlink, once completed and linked into the Ellenbrook road network, will be a significant north south traffic distributor on the western edge of Ellenbrook connecting the area to the important employment areas of Bullsbrook to the north and Malaga to the south. Connections to Railway Parade to the east can be achieved through the extension of existing east-west roads and the construction of new bridges. Funding for those bridges need to be secured.

Responses

- Support improved road connections in greenfield and urban growth areas.
- Support improved network connections within existing localities which is subject to residential growth.

STRATEGIES AND ACTIONS

Strategic Response	Actions	No.
<p>3.9.1 Promote public transport linkages to major centres in order to support successful decentralisation of employment to activity centres and other employment centres.</p>	<p>Work with the State Government to advocate for significant improvements to public transport services within the City including:</p> <ul style="list-style-type: none"> • METRONET projects such as the Midland Station precinct, Bellevue station extension and the Morley- Ellenbrook Line; • High-frequency transit corridor and high-priority transit corridors connecting Midland to Ellenbrook and Mundaring. • Provision of a direct service from Malaga to the proposed Ellenbrook Rapid Transit Service. • Provision of a rapid transit service to link Beechboro, Kiara, Lockridge, and Bennett Spring to Midland. • Provision of a rapid transit service to link Bullsbrook, the identified industrial precincts of North Ellenbrook and South Bullsbrook to Midland. • East-west linkages along Beach/Marshall Roads to link Malaga/Ballajura with Midland. • Investigate and advocate for the provision of a more direct road link between Morley and Midland. 	85
<p>3.9.2 Reduce car dependency and promote alternative modes of transport to the car, including public transport, cycling and walking.</p>	<p>Implement the recommendations of the City's Cycle Strategies to improve the bicycle network.</p>	86
	<p>Review and implement the City's walking, cycling and parking strategies.</p>	87
	<p>Review the City's Parking Policy to include the requirement for the provision of bicycle parking spaces and end-of-trip facilities in all new commercial and mixed use developments in activity centres.</p>	88
<p>3.9.3 Promote increased densities near high frequency public transport routes.</p>	<p>Support high density residential development nearby the Midland station in accordance with the Midland Activity Centre Structure Plan.</p>	89
	<p>Review the City's Urban Housing Strategy (UHS) and through Local Area Planning framework, investigate increased densities near activity centres and high frequency public transport stops.</p>	90
<p>3.9.4 Promote Midland Central Business District (CBD) as a Transit Oriented Development centre.</p>	<p>Continue to advocate for the eastwards relocation of Midland train station closer to Cale Street so it is more centrally located within the Activity Centre area.</p>	91
<p>3.9.5 Promote the use of alternative transport modes to the car within the Midland CBD.</p>	<p>Develop pedestrian and cycle infrastructure in the Midland CBD as recommended by the Midland Activity Centre Structure Plan and Public Domain Strategy.</p>	92

Strategic Response	Actions	No.
3.9.6 Support improvements to the road and rail freight network through the Hazelmere Enterprise Area.	Work with State Government to realign the freight rail line through Hazelmere.	93
	Work with the State Government to secure funding for the construction of the Lloyd Street extension.	94
3.9.7 Support the establishment of a new intermodal terminal at Bullsbrook.	Work with the State Government to ensure land is preserved for the future Bullsbrook intermodal terminal (IMT), and the adjacent uses complement the role and function of the IMT and wider industrial precinct in Bullsbrook.	95
3.9.8 Support a safe traffic environment along Great Northern Highway.	Implement the recommendations of the Great Northern Highway Access Strategy to alleviate traffic pressures on Great Northern Highway and improve safety at key intersections.	96
3.9.9 Support a safe traffic environment along Great Eastern Highway.	Work with State and Federal government agencies to investigate improving safety and securing funding for upgrades to Great Eastern Highway.	97
3.9.10 Ensure that freight corridors do not impact adversely on adjacent sensitive land uses in terms of noise and vibration.	Ensure development proposals on land adjacent to freight routes are consistent with State Planning Policy 5.4	98
3.9.11 Support improved road connections in greenfield and urban growth areas.	At subdivision stage, require developers of greenfield and urban growth areas to make contributions towards the cost and provision of road and bridge upgrades where appropriate.	99
3.9.12 Support improved network connections within existing localities which is subject to residential growth.	Consider opportunities for the widening and possible conversion of ROWs and PAWs to roads via normal development procedures to support infill development.	100

Refer to Map 5 for further information regarding Transport, Traffic and Access

3.10 INFRASTRUCTURE SERVICES

OBJECTIVE: Achieve a whole of government approach in the provision of improvements to essential infrastructure (water, wastewater and power)

CONSOLIDATED KEY ISSUES

Wastewater Infrastructure

The Water Corporation of Western Australia has responsibility for sewerage provision therefore the City has little influence in the location and servicing of that network. The timing of the provision of infrastructure is essentially between landowners, developers and the Water Corporation, and the City's main role is to facilitate the process.

Alternative wastewater treatment systems can be considered as technically feasible options to traditional reticulated sewerage. However, they require the support of regulating authorities such as the Department of the Environment and Conservation, Department of Water and Environmental Regulation, Department of Health, local governments and the Economic Regulation Authority. The role of wastewater treatment (and other approaches) in providing "fit for purpose" water supply is an important consideration for the City of Swan considering the predicted decline in the availability of groundwater. It is worth noting that the feasibility of alternative approaches to wastewater treatment is not usually considered during the early stages of the planning process such as MRS amendments, which can lead to issues of actual deliverability.

Water Infrastructure

The lack of availability of essential infrastructure such as water is a major impediment to future urban development in Bullsbrook, Upper Swan and Gidgegannup. However, recent legislative changes now mean that a third party provider (other than a State Government entity) is able to provide essential infrastructure. This initiative should be encouraged subject to acceptable standards being developed that are satisfactory to the State Government.

The State Government's State Water Plan 2007 provides a strategic policy and planning framework for meeting the State's water demands to the year 2030. Planning for additional water infrastructure is well underway in the North-East sub-region and there are plans for the Water Corporation to expand existing wastewater treatment plants at Mundaring and Bullsbrook, and to establish new water storage and water treatment plants throughout the sub-region.

Energy Infrastructure

Additional energy infrastructure will be required to service the growing population and future industrial areas in the North-East sub-region. To assist in this regard, the Department of Planning, Lands and Heritage and Western Power have developed a Network Capacity Mapping Tool that shows electricity capacity and utilisation as a result of land/building development and the future planning capacity of electricity infrastructure.

Urban Water Management

Most of the water used in the region, including POS and rural areas, is self-supplied by the City of Swan, schools, farmers and other businesses which use their own groundwater bores and irrigation infrastructure. With no groundwater to support future growth in the area, alternative and affordable non-potable water infrastructure is needed to supply the water needed to

maintain the liveability and productivity of the region.

Areas within the City that have been identified in the LPS for future urban and industrial development will be required to address the management of drainage systems in accordance with water sensitive urban design principles to ensure that the water quality of the Gnangara mound, wetlands, groundwater dependant ecosystems and the Swan River and its tributaries are maintained. The State Government's Better Urban Water Management has been designed to facilitate better management of urban water resources by ensuring an appropriate level of consideration is given to the total water cycle at each stage of the planning approval process. It provides guidance for local authorities, land developers and State Government agencies in addressing this issue in development areas.

STRATEGIC DIRECTIONS AND RESPONSES

Wastewater Infrastructure

Direction

- All of the major settlements within the City have access to sewerage but communities at Herne Hill, Bullsbrook, Upper Swan and Gidgegannup will eventually require connection. Most industrial land uses require reticulated sewerage however dry industries such as truck depots do not require that service. In order to properly manage the future urbanisation of greenfield areas, the City and State Government agencies have to facilitate the relevant structure planning processes so that the Water Corporation can plan for the timely provision of reticulated sewerage. The provision of such infrastructure by a third party should be encouraged as well as the provision of technically feasible and environmentally acceptable alternatives.

Response

- Ensure that the provision of reticulated sewerage, water and power infrastructure is addressed during the early planning stages for development areas.
- Support the investigations into the viability of providing reticulated sewerage to rural townsite areas as identified.

Water Infrastructure

Direction

- The provision of potable water is a fundamental infrastructure requirement to the development of new residential and rural residential areas. The City is not a water provider and can only facilitate the structure planning and subdivision planning processes during which agreement can be reached between landowners and the Water Corporation or a suitable third party on the timely delivery of potable water.
- Alternatives to groundwater sources are needed to meet the anticipated water demand for green spaces and other non-potable water needs in the region. A coordinated approach to address local water scarcity issues would include treating, storing, distributing and re-using wastewater within the sub-region rather than disposing of the resource into drainage systems or piping wastewater to treatment plants on the coast.

Response

- Identify alternative and sustainable sources of water where groundwater is not available to meet the non-potable water needs of urban expansion including irrigation or public open space.

Energy Infrastructure

Direction

- Strategic planning for future greenfield areas and expansion of existing areas are subject to investigations by the City and the relevant State Government agencies through the use of the Network Capacity Mapping Tool.

Response

Ensure that the provision of reticulated sewerage, water and power infrastructure is addressed during the early planning stages for development areas.

Urban Water Management

Direction

- In the development areas, adequate drainage systems should be designed into the structure planning and subdivision stages as outlined in Better Urban Water Management.
- Ensure that water allocation is based on community needs and allows for reservation of water for existing and future POS and rural areas. Furthermore, work with State Government agencies and water utilities to identify alternative fit-for-purpose water sources.

Response

- Ensure adequate drainage is provided in development areas to better manage urban water resources.



STRATEGIES AND ACTIONS

Strategic Response	Actions	No.
3.10.1 Ensure that the provision of reticulated sewerage, water and power infrastructure is addressed during the early planning stages for development areas.	During the structure planning process facilitate cost-sharing arrangements with landowners, developers and the relevant provider (Water Corporation, Western Power, or a third party provider) to ensure the timely and equitable provision of reticulated sewerage, water infrastructure and power infrastructure to development areas.	101
	Encourage developers to provide alternative approaches to the provision of potable water where appropriate and feasible.	102
3.10.2 Support investigations into the viability of providing essential infrastructure to rural townsite areas.	Prior to any local planning scheme rezoning, or structure planning being undertaken in the Gidgegannup townsite, appropriate studies relating to the provision of essential infrastructure will need to be undertaken and these issues resolved in order to justify future population and centre growth.	103
	Encourage developers of land identified in Perth and Peel @3.5million and structure plans to liaise with the Water Corporation to form private arrangements to provide reticulated sewerage for future developments.	104
3.10.3 Ensure adequate drainage is provided in development areas to better manage urban water resources.	At structure planning and subdivision stages, ensure that the principles of Better Urban Water Management are applied and work with State Government agencies and water utilities to identify alternative fit-for-purpose water sources.	105
3.10.4 Identify alternative and sustainable sources of water where groundwater is not available to meet the non-potable water needs of urban expansion including irrigation or public open space.	At structure planning and subdivision stages, identify alternative and sustainable sources of water where groundwater is not available to meet the non-potable water needs of urban expansion including irrigation or public open space. The opportunities for integrated, appropriately scaled and cost effective non-potable water supplies need to be identified and planned prior to fragmentation of land ownership and adoption of business as usual approaches.	106

Refer to Map 5 for further information regarding Infrastructure Services.

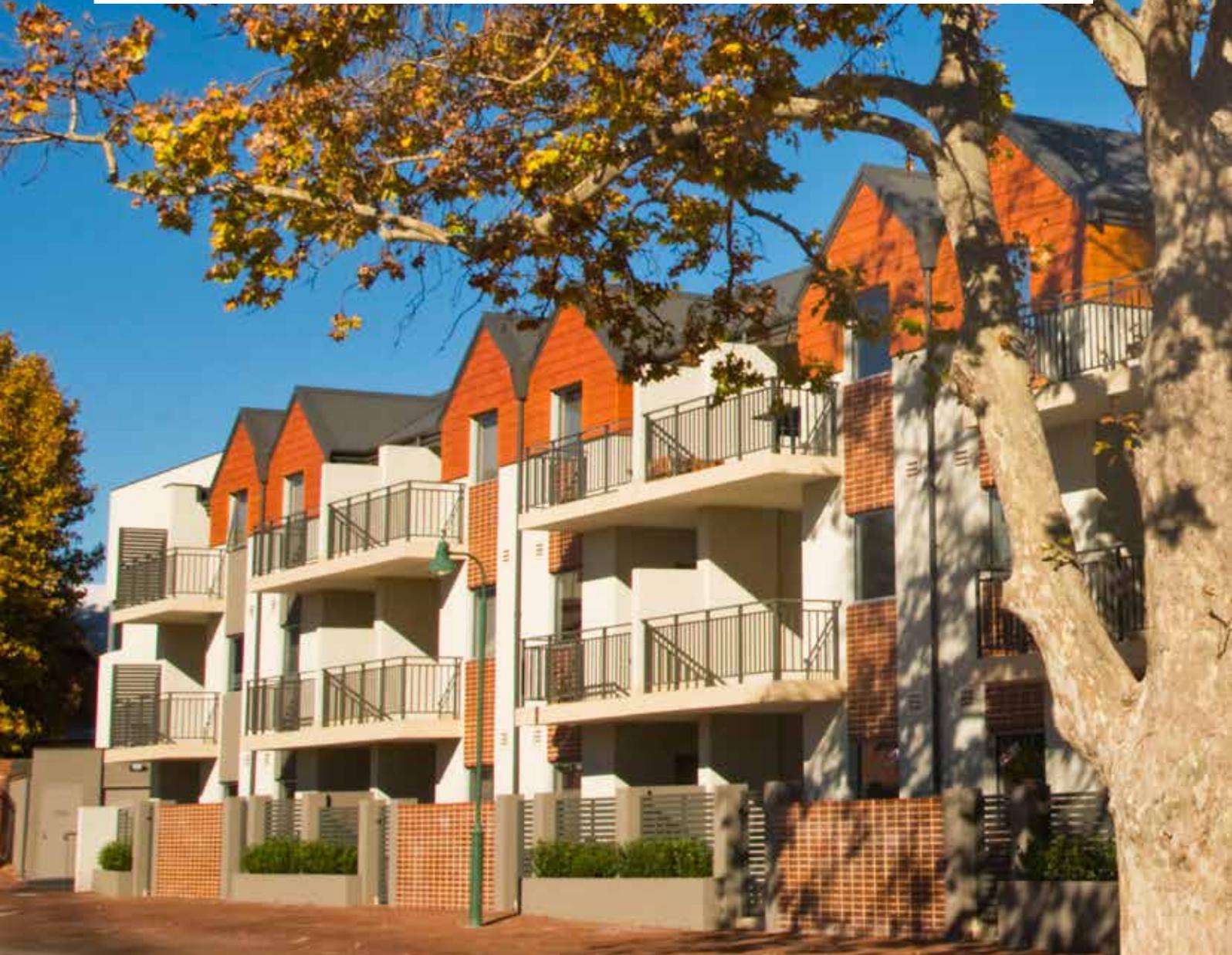
4. IMPLEMENTATION

The LPS sets out the City's general intentions for future long-term growth and change and most of its recommendations will be implemented through a review of the City's LPS17 and amendments to relevant structure plans. There are a number of strategies and actions that are medium to longer term in their application and will require the preparation of plans, strategies and policies that will result in amendments to the Metropolitan Region Scheme and/or the Local Planning Scheme.

A number of strategies outlined in the Local Planning Strategy are on-going strategies and will provide continuous and consistent guidance to decision making authorities with respect to future amendments to the MRS and LPS17, the adoption of structure plans and assessment of development proposals.

Not all strategies in the Local Planning Strategy are directed towards amending the City's various statutory documents. In a number of instances, a corporate approach is required by the City to augment planning measures being implemented so that desirable planning outcomes, such as the creation of a vibrant Midland City Centre, can be achieved.

New land use and development opportunities and challenges will arise over the next 10-15 years and some of these changes cannot be foreseen today. Hence the LPS should not be viewed as a static document and will require continual review.





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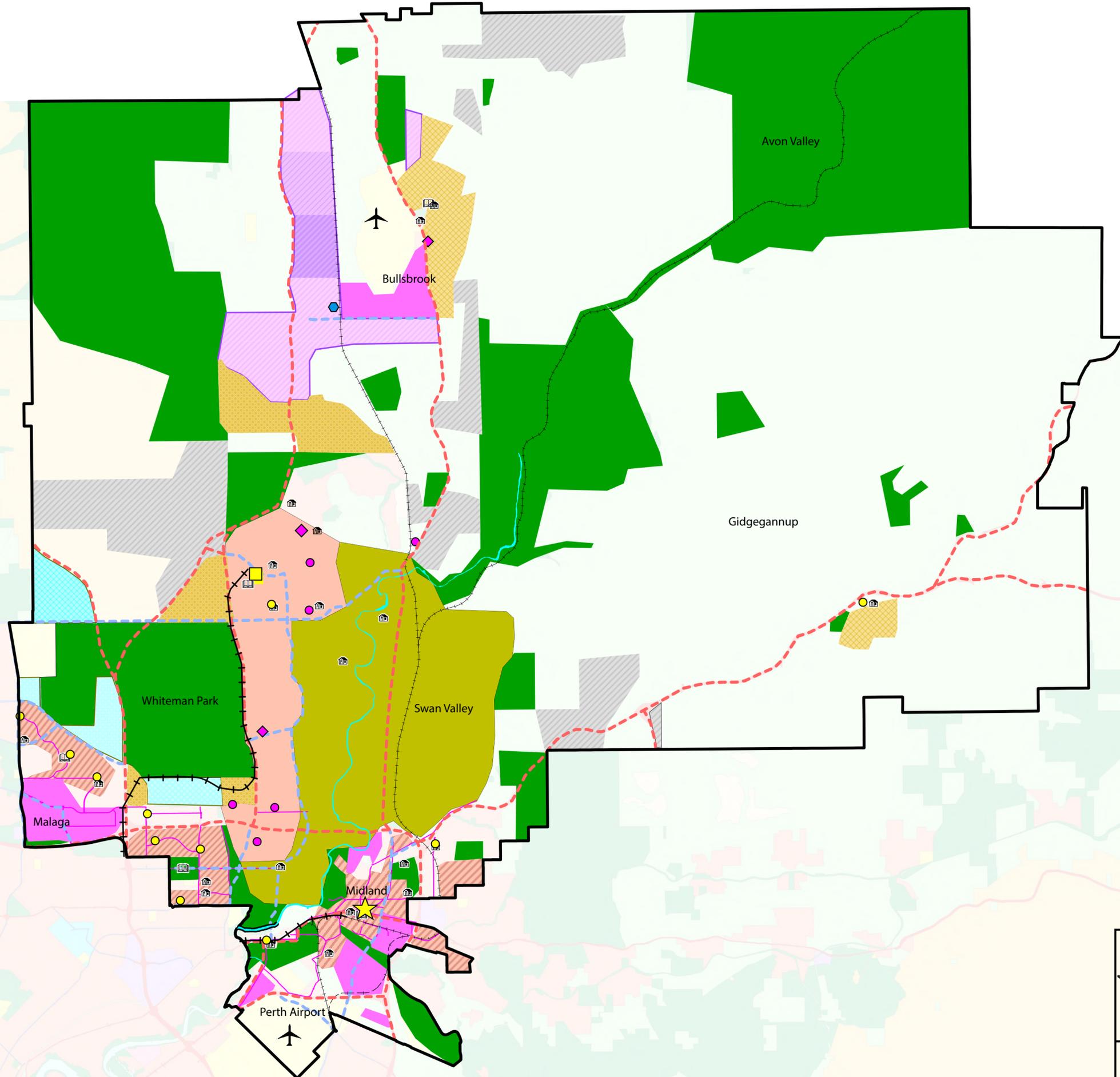
city of swan

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This document can be made available in alternative formats on request.



Map1: Local Planning Strategy

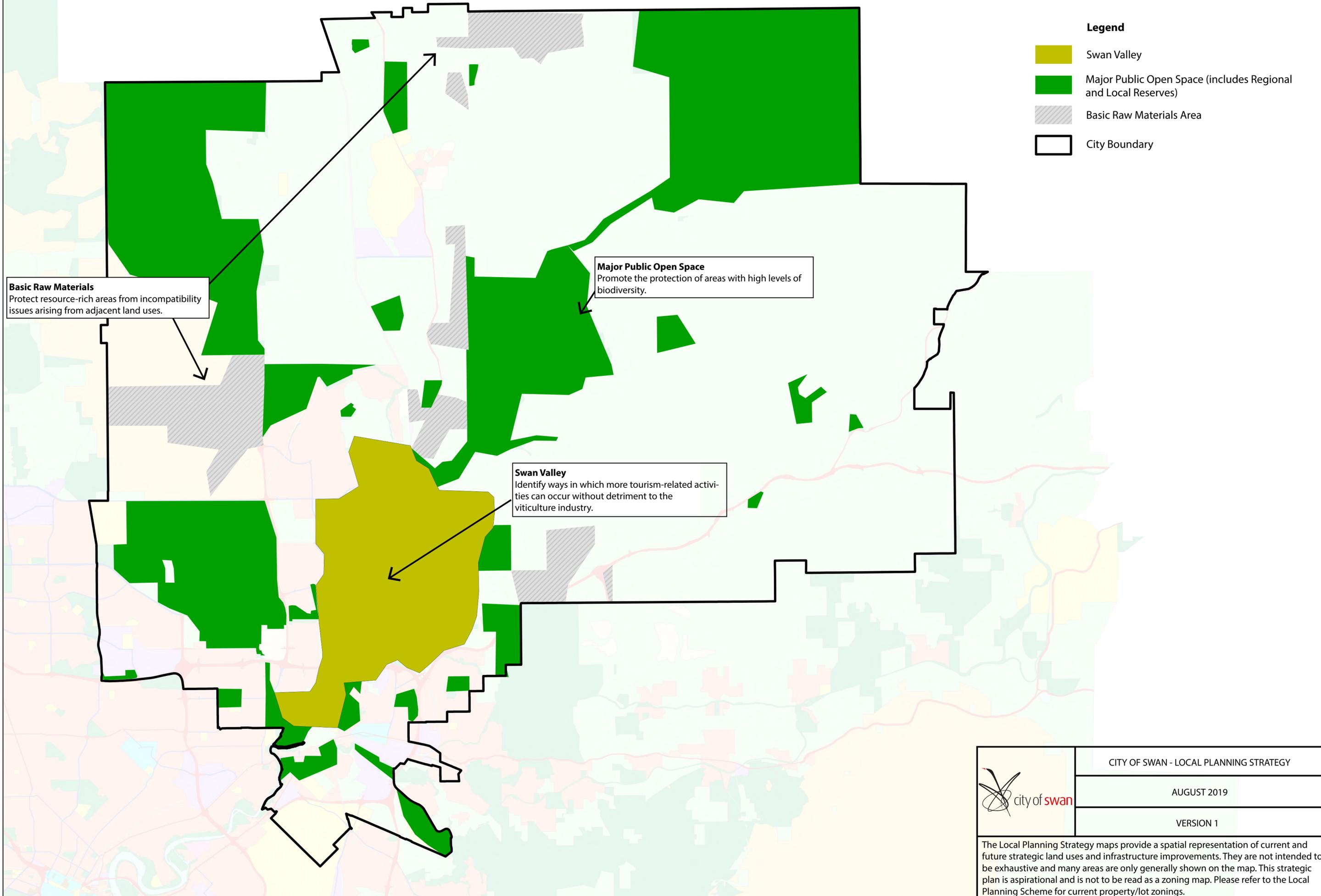


Legend

-  Strategic Metropolitan Centre
-  Secondary Centre
-  Neighbourhood Centre
-  Proposed District Centre
-  Proposed Neighbourhood Centre
-  Proposed Intermodal Terminal
-  Planning Investigation Area
-  Future Urban Area
-  Urban Growth Area
-  Residential Infill Area
-  Raw Materials Area
-  Future Industrial Area
-  Industrial Land
-  Swan Valley
-  Major Public Open Space
-  Swan River
-  Primary Regional Road
-  Other Regional Road
-  Proposed Cycleways
-  Freight Rail
-  Proposed Freight Rail
-  Passenger Rail
-  Community Facilities
-  Airport
-  City Boundary

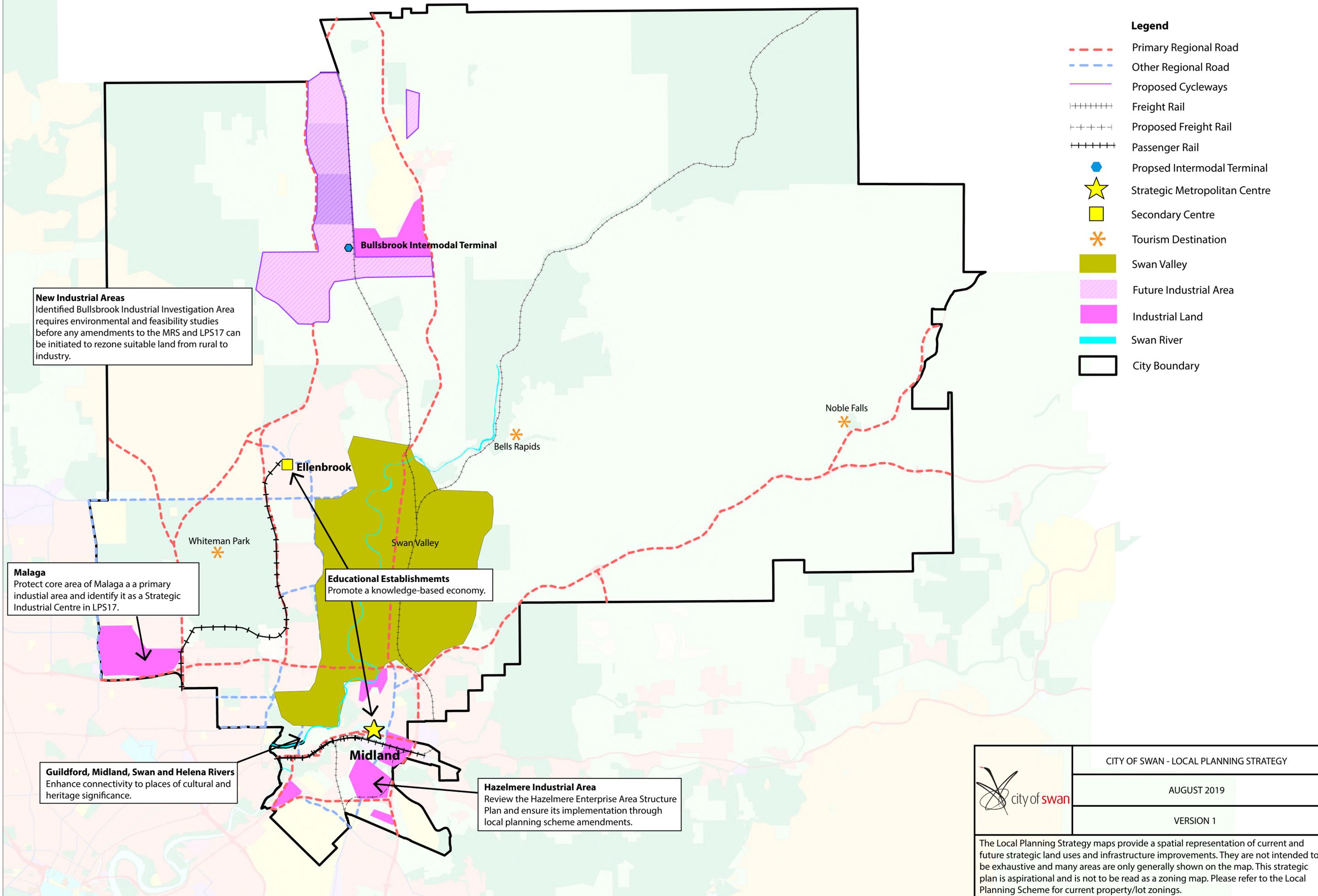
	CITY OF SWAN - LOCAL PLANNING STRATEGY
	AUGUST 2019
	VERSION 1
The Local Planning Strategy maps provide a spatial representation of current and future strategic land uses and infrastructure improvements. They are not intended to be exhaustive and many areas are only generally shown on the map. This strategic plan is aspirational and is not to be read as a zoning map. Please refer to the Local Planning Scheme for current property/lot zonings.	

Map 2: Rural, Natural Resource Management and Environment Protection and Open Space



	CITY OF SWAN - LOCAL PLANNING STRATEGY
	AUGUST 2019
	VERSION 1
<p>The Local Planning Strategy maps provide a spatial representation of current and future strategic land uses and infrastructure improvements. They are not intended to be exhaustive and many areas are only generally shown on the map. This strategic plan is aspirational and is not to be read as a zoning map. Please refer to the Local Planning Scheme for current property/lot zonings.</p>	

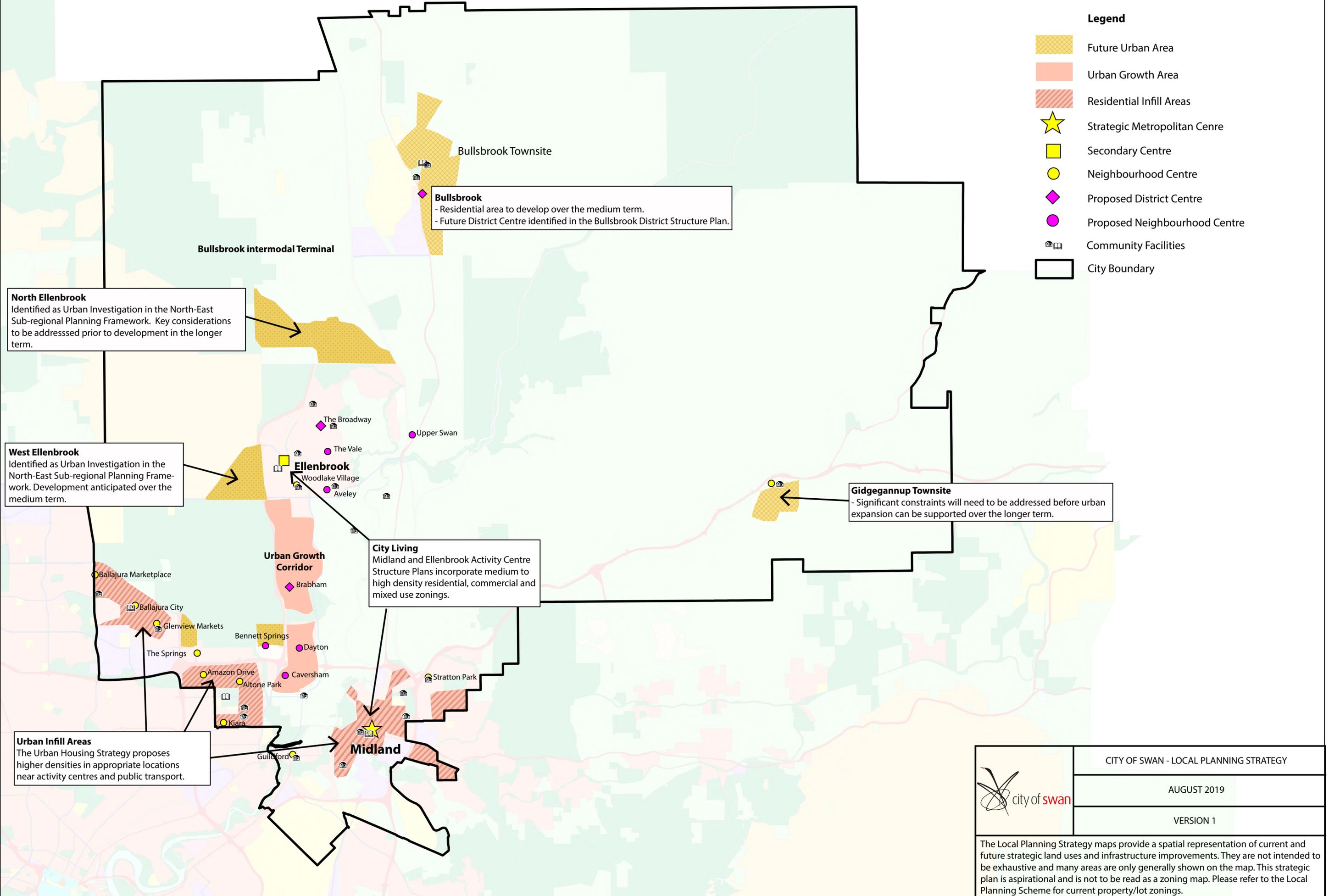
Map 3: Economy, Employment and Tourism



	CITY OF SWAN - LOCAL PLANNING STRATEGY
	AUGUST 2019
	VERSION 1

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Map 4: Activity Centres, Community Facilities and Housing



Legend

-  Future Urban Area
-  Urban Growth Area
-  Residential Infill Areas
-  Strategic Metropolitan Centre
-  Secondary Centre
-  Neighbourhood Centre
-  Proposed District Centre
-  Proposed Neighbourhood Centre
-  Community Facilities
-  City Boundary

North Ellenbrook
Identified as Urban Investigation in the North-East Sub-regional Planning Framework. Key considerations to be addressed prior to development in the longer term.

West Ellenbrook
Identified as Urban Investigation in the North-East Sub-regional Planning Framework. Development anticipated over the medium term.

Bullsbrook
- Residential area to develop over the medium term.
- Future District Centre identified in the Bullsbrook District Structure Plan.

Gidgegannup Townsite
- Significant constraints will need to be addressed before urban expansion can be supported over the longer term.

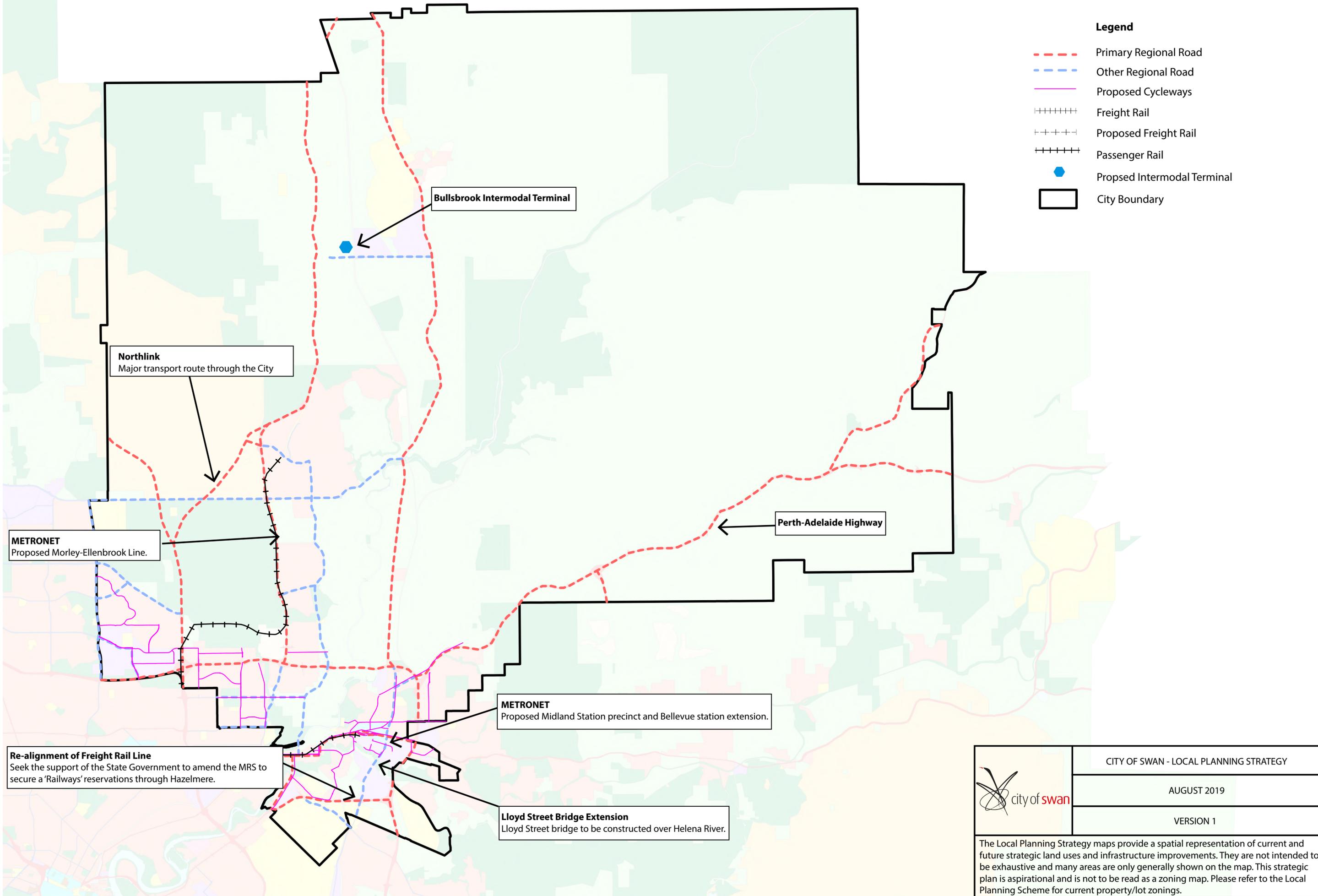
City Living
Midland and Ellenbrook Activity Centre Structure Plans incorporate medium to high density residential, commercial and mixed use zonings.

Urban Infill Areas
The Urban Housing Strategy proposes higher densities in appropriate locations near activity centres and public transport.

	CITY OF SWAN - LOCAL PLANNING STRATEGY
	AUGUST 2019
	VERSION 1

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Map 5: Transport and Infrastructure



- Legend**
- - - - - Primary Regional Road
 - - - - - Other Regional Road
 - Proposed Cycleways
 - +++++ Freight Rail
 - +++++ Proposed Freight Rail
 - +++++ Passenger Rail
 - Proposed Intermodal Terminal
 - City Boundary

	CITY OF SWAN - LOCAL PLANNING STRATEGY
	AUGUST 2019
	VERSION 1

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Local Planning Strategy

Part 2

August 2020







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PART 2 - BACKGROUND INFORMATION AND ANALYSIS

1. INTRODUCTION

This Local Planning Strategy (LPS) is the key strategic land use planning document for the City of Swan. The LPS provides broad direction for the future growth and development of the City for the next 10-15 years, and provides the strategic basis for the review of the local planning scheme and its amendments.

The LPS considers all relevant planning contexts (i.e. State, Regional and Local), it considers the current urban and regional character of the City of Swan and its people, and makes broad projections on how and where future residents may live and work in response to changing metropolitan circumstances. It considers the state of our environment, State Government direction and major planning activities in the region that may impact (positively or negatively) on the liveability of the City and future prosperity of the municipality.

The LPS examines the key issues facing the City including social, environmental, cultural, and economic aspects, and makes recommendations responding to the key issues with a series of strategies and actions.

2. POLICY CONTEXT

The following State Government and City of Swan policies and plans have been identified as being the most relevant to the preparation of the LPS. Appendix 1 provides a detailed description of these policies as they relate to the City of Swan.

State Government policies and plans

State Planning Strategy 2050

Swan Valley Action Plan

Metropolitan Region Scheme

Perth and Peel @3.5millionPerth and Peel Green Growth Plan for 3.5 million

North-East Sub-Regional Planning Framework

SPP 1.1 State Planning Framework

SPP 2 Environment and Natural Resources

SPP 2.2 Gngangara Groundwater Protection

SPP 2.4 Basic Raw Materials

SPP 2.5 Rural Planning

SPP 2.7 Public Drinking Water Source

SPP 2.8 Bushland Policy for the Perth Metropolitan Region

SPP 2.9 Water Resources

SPP 2.10 Swan-Canning River System

SPP 3.0 Urban Growth and Settlement

SPP 3.1 Residential Design Codes of Western Australia

SPP 3.4 Natural Hazards and Disasters

SPP 3.5 Historic Heritage Conservation

SPP 3.7 Planning in Bushfire Prone Areas

SPP 4.1 State Industrial Buffer Policy

SPP 4.2 Activity Centres for Perth and Peel

SPP 5.1 Land Use Planning in the Vicinity of Perth Airport

SPP 5.4 Road and Rail Noise

Better Urban Water Management

Development Control Policy 1.6 Planning to Support Transit Use and Transit Oriented Development

Development Control Policy 2.2 Residential Subdivision

Development Control Policy 2.3 Public Open Space in Residential Areas

Development Control Policy 3.4 Subdivision of Rural Land

Gngangara Groundwater Allocation Plan 2009

Great Northern Highway Study

Industrial Land Strategy 2009 Perth and Peel Kewdale-

Hazelmere Integrated Masterplan
North-East Corridor Extension Strategy
North Eastern Hills Settlement Pattern
Perth-Adelaide Corridor Strategy
Perth-Darwin National Highway Study
Planning for Bushfire Protection Guidelines (Edition 2)
Planning Guidelines for Acid Sulphate Soils 2008
Public Transport Plan 2031(draft)
Swan Urban Growth Corridor Sub-Regional Structure Plan 2009
Swan Valley Development Plan (recently revoked)
The Way Forward – Swan Valley Land Use and Management
Urban Growth Monitor

City of Swan documents

Economic Vision and Strategy
Ellenbrook Parking Strategy
Heritage Strategic Plan
Local Biodiversity Strategy
Local Planning Scheme No. 17 (LPS 17), Heritage List and Local Planning Policies
Malaga Parking Strategy
Midland 2017 - The Challenge
Public Open Space and Community Facility Strategy
Retail Needs Assessment
Strategic Bushfire Analysis
Strategic Community Plan 2017-2027
Swan CycleConnect Strategy
Swan Valley Bike Plan
Tourism Development Strategy
Transport Strategy (draft)

3. LOCAL PROFILE

Introduction

The City of Swan, located between 10 and 50 kilometres of the Perth GPO, covers an area of 1,044 square kilometres and is the largest local government district in the Perth Metropolitan Region comprising approximately 20 per cent of the Region and is one of the fastest growing urban corridors in Australia.

Aveley, Avon Valley National Park, Ballajura, Baskerville, Beechboro, Belhus, Bellevue, Bennett Springs, Brabham, Brigadoon, Bullsbrook, Bushmead
Caversham, Cullacabardee, Dayton
Ellenbrook, Gidgegannup, Gnangara, Guildford
Hazelmere, Henley Brook, Herne Hill, Jane Brook
Kiara, Koongamia, Lexia, Lockridge
Malaga, Melaleuca, Middle Swan, Midland, Midvale, Millendon, Perth Airport
South Guildford, Stratton, Swan View, The Vines
Upper Swan, Viveash, Wlyunga National Park
West Swan, Whiteman and Woodbridge

Within its boundaries, the City has 46 suburbs:

The City also has two regional centres namely Midland and Ellenbrook, several national parks and reserves including Whiteman Park, Walyunga National Park and the Avon Valley National Park, major industrial areas of Malaga, Hazelmere and Midvale, the Swan Valley, historically important townsites such as Guildford and rural areas such as Bullsbrook and Gidgegannup.

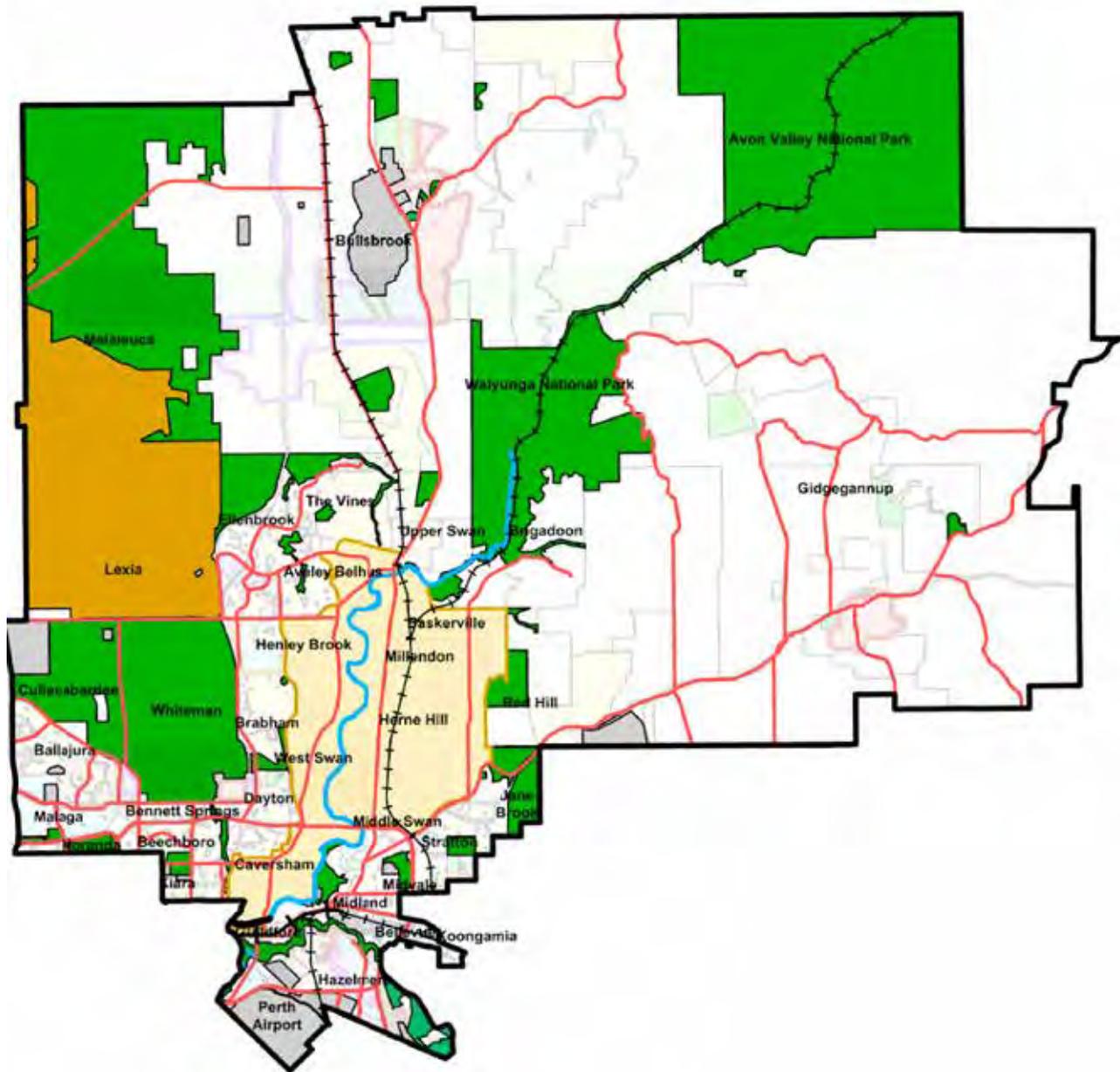
The Swan Valley is Western Australia's oldest wine region and has earned its reputation as Perth's Valley of Taste. Wine specialties of the region include Chenin Blanc, Chardonnay, Shiraz and Verdelho. The region is also recognised worldwide for its fortified wines.

Guildford is the oldest inland settlement in WA and is heritage listed by the National Trust of Australia (WA), while Midland is the commercial centre of the Swan Valley with two major shopping centres, markets and the former Midland Railway Workshops, now emerging as a major tourist attraction.

The City contains a large proportion of land which is currently not under any type of development with over 83% of the total land area zoned as Parks and Reserves or rural land. Despite this, the City accommodates a wide range of land uses ranging from urban development to broad acre farming and is subject to intense pressure associated with urban growth as well as land uses changes and development within the rural sector.

Being an outer-metropolitan growth council, the City also faces additional challenges in ensuring there is sufficient local employment.

Figure 2. City of Swan



3.1 Natural Resource Management and Environmental Protection

3.1.1 Environment

The City of Swan includes three major landforms, the Swan Coastal Plain, the Darling Scarp and the Dandaragan Plateau. This results in a diverse range of flora, fauna, waterways, bushland reserves and other natural features that are impacted by human activity. Through these landforms flow the Avon/Swan River system, the Helena River and their many tributaries.

There is a strong desire to manage groundwater dependant ecosystems and groundwater abstraction in relation to water levels and water quality to protect these ecosystems. Water is critically important in Swan as its boundary contains a large proportion of the Swan-Helena Catchment and the Gngaranga Aquifer.

Acid sulphate soils, subsurface and upstream salt incursion and pollution from industry and residential activity all threaten the quality and availability of the water systems. In addition, reducing rainfall attributed to climate change adds a further threat

to these systems. As a result, this is a fragile ecosystem under increasing population and industry pressure. There a number of environmentally sensitive areas that are protected by legislation and constrain future urban development. These areas are shown on the LPS Constraints Maps 5-7 in Part 1.

3.1.2 Human Settlement

The City of Swan is the largest metropolitan local government (by land area) and is located in the north-eastern corner of the Perth metropolitan area. The City is home to a population of 145,000 (2016) residents living in dispersed and diverse communities. These communities range from industrialised Malaga to the northwest to rural Gidgegannup in the east. Communities such as Ellenbrook, Midland, Bullsbrook and Ballajura provide further evidence of the diversity of the communities within the City's boundary. Each of these communities has a different set of impacts on the ecosystem and developing environmentally sensitive communities that are resilient to future change present an ongoing challenge for the City. This challenge is compounded by the fact that significant population growth is forecast for the future in the City of Swan.

3.1.3 Biodiversity

The City of Swan is situated in the South-West Botanical Province of Western Australia, which is recognised as one of the worlds' 34 international biodiversity hotspots. Biodiversity hotspots can be simply described as 'the richest and most threatened reservoirs of plant and animal life on Earth'. Approximately 43% of the original extent of native vegetation remains within the City of Swan with only 6.5% under formal protection locally. The threats to biodiversity in the City include clearing and fragmentation, development, invasive species, pathogens and global and regional threats.

Biodiversity Strategy the City has prepared a Local Biodiversity Strategy which will be assessed under the Green Growth Plan prior to its final adoption by the City. The strategy vision statement is "Protect and manage a network of natural areas within the City of Swan that support the diversity of local indigenous biodiversity in our region for the future". To achieve this vision, the strategy contains the following goals -

- Protection Goals:
 - Protect 10% of each vegetation complex present within the City of Swan;
 - Protect all Guildford complex vegetation that is in good or better condition;
 - Protect all Forrestfield complex vegetation that is in good or better condition; and
 - Protect all Swan complex vegetation that is in good or better condition.
- Retention Goals:
 - Retain at least 30% of each vegetation complex present within the City of Swan, where this is still feasible;
 - Retain all remaining Guildford complex vegetation;
 - Retain all remaining Forrestfield complex vegetation;
 - Retain all remaining Swan complex vegetation; and
 - Retain all mapped Potentially Significant Local Natural Areas which are in good or better condition.
- Management Goals:
 - Manage biodiversity values in priority reserves within the City of Swan and
 - Encourage and support sound management of biodiversity values on private land within the City of Swan.

A number of Significant Local Natural Areas (SLNAs) making up 6.5% of the City's land area are already considered to be protected through reservation as national parks, conservation reserves or local reserves. Potentially Significant Local Natural Areas (PSLNAs) will be considered to be SLNAs following a sui flora and vegetation survey. It is the intention of the strategy that any PSLNAs determined to be significant are retained and where possible, protected and their biodiversity values managed for the future. The implementation of the strategy is through the Action Plan and a number of actions specifically related to the development of local planning policies and subsequent reviews of the City's local planning scheme.

The following maps (Figure 3 to Figure 10) show the location of Remnant Vegetation, Local Biodiversity Conservation Priority Areas and Potentially Significant Local Natural Areas in the City of Swan.

Figure 3. Vegetation Categorisation for Local Biodiversity Conservation Priorities

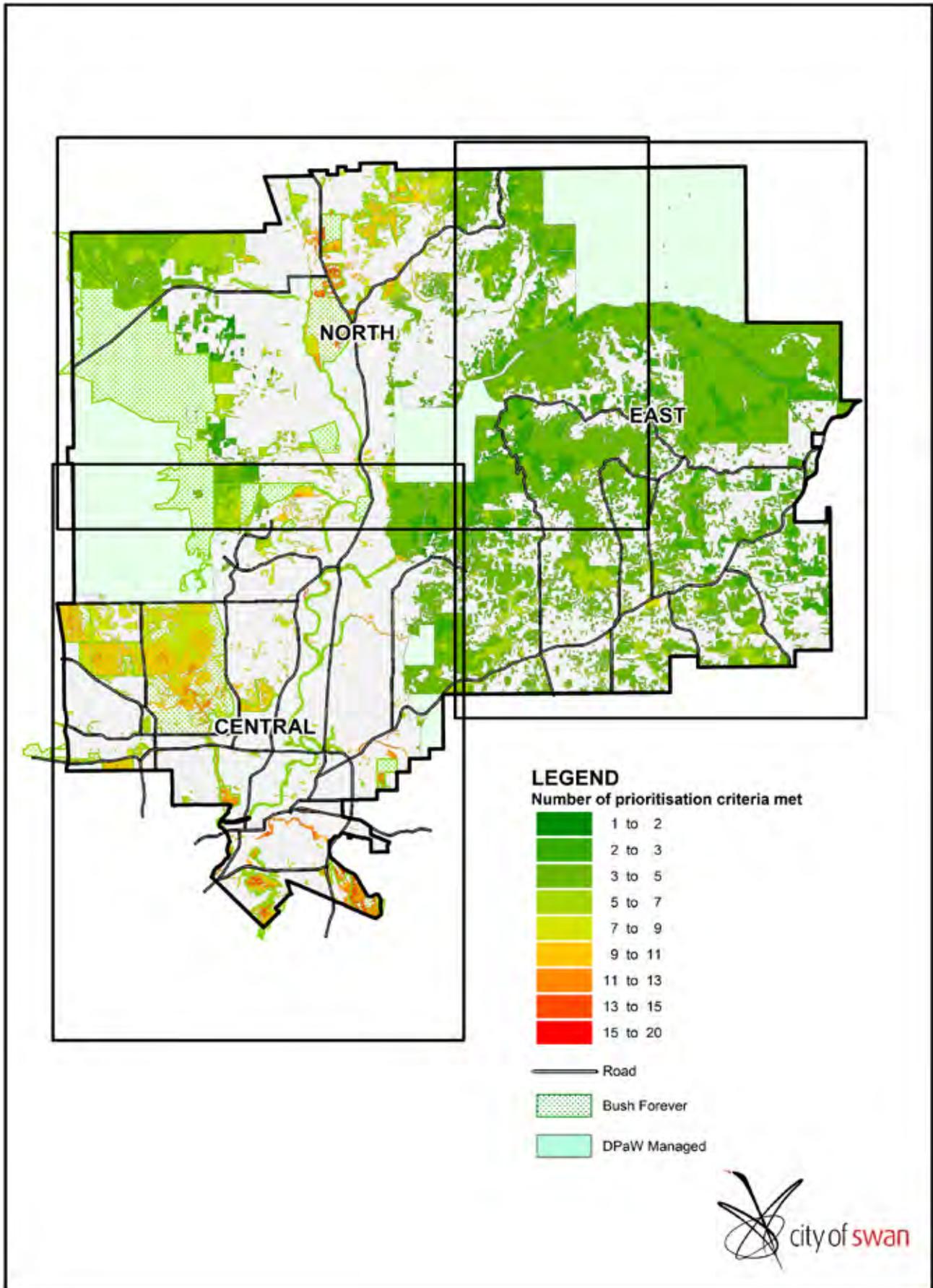


Figure 4. Remnant Vegetation Categorisation for Local Biodiversity Conservation Priorities - Central

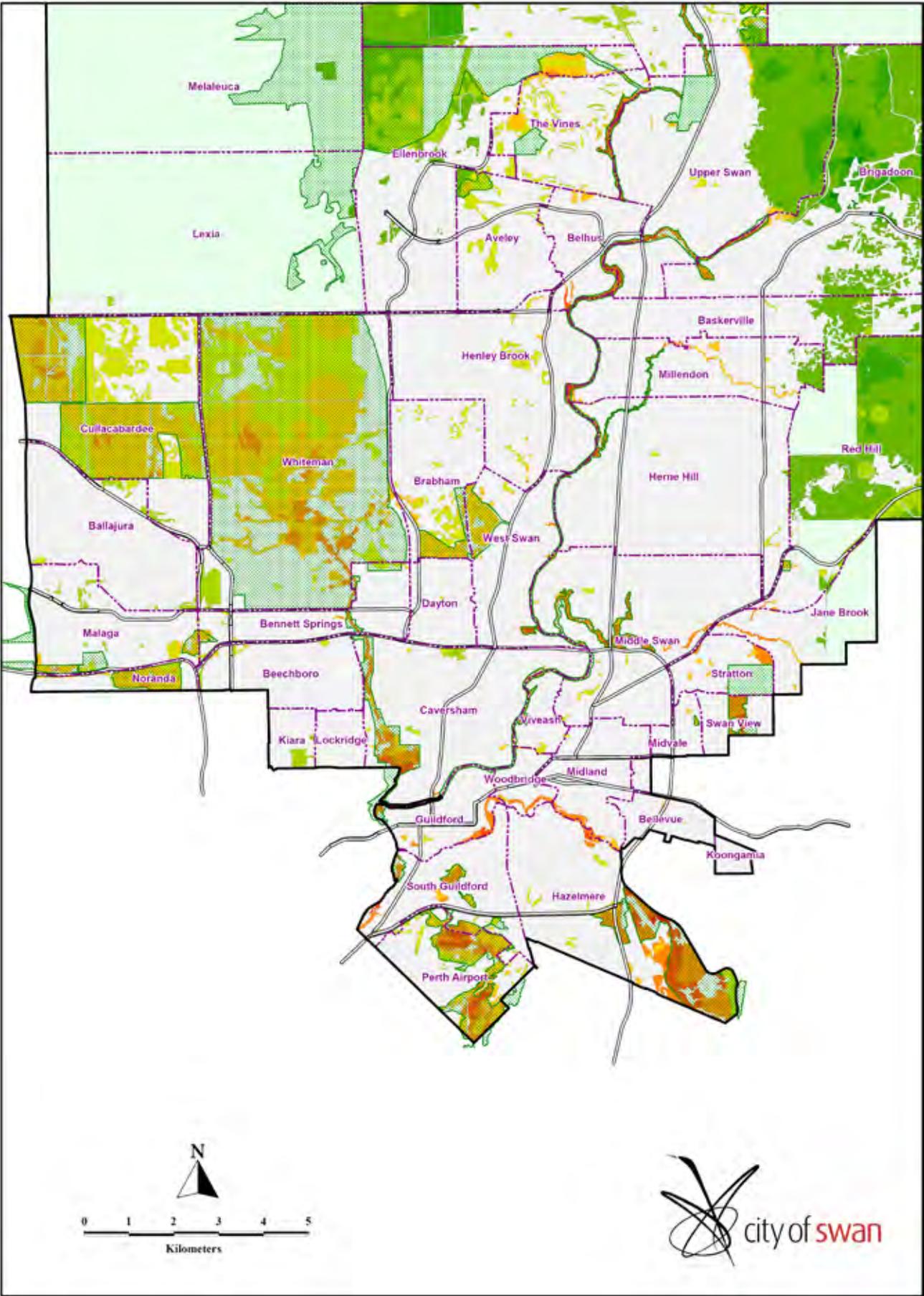
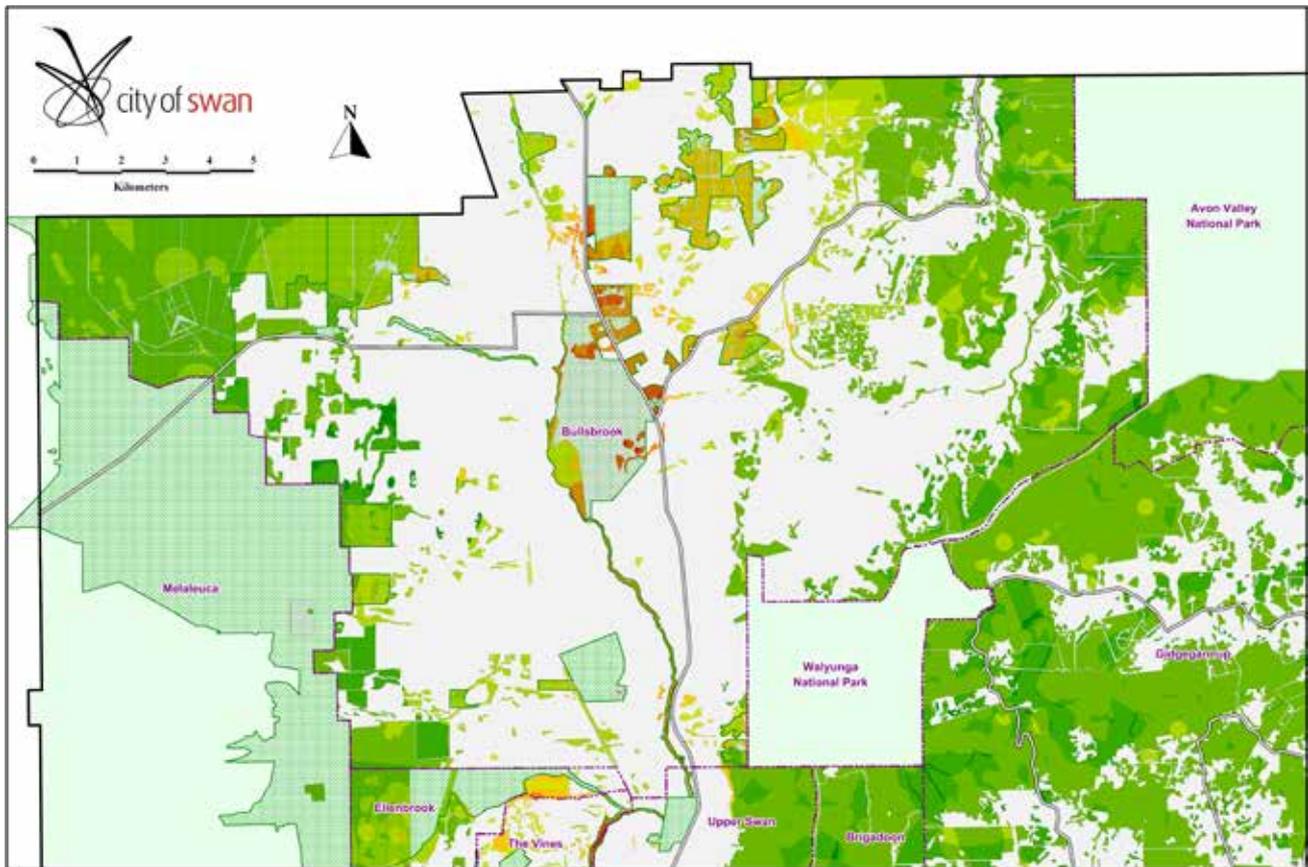


Figure 5. Remnant Vegetation Categorisation for Local Biodiversity Conservation Priorities – North



LEGEND

Number of prioritisation criteria met



Figure 6. Remnant Vegetation Categorisation for Local Biodiversity Conservation Priorities – East

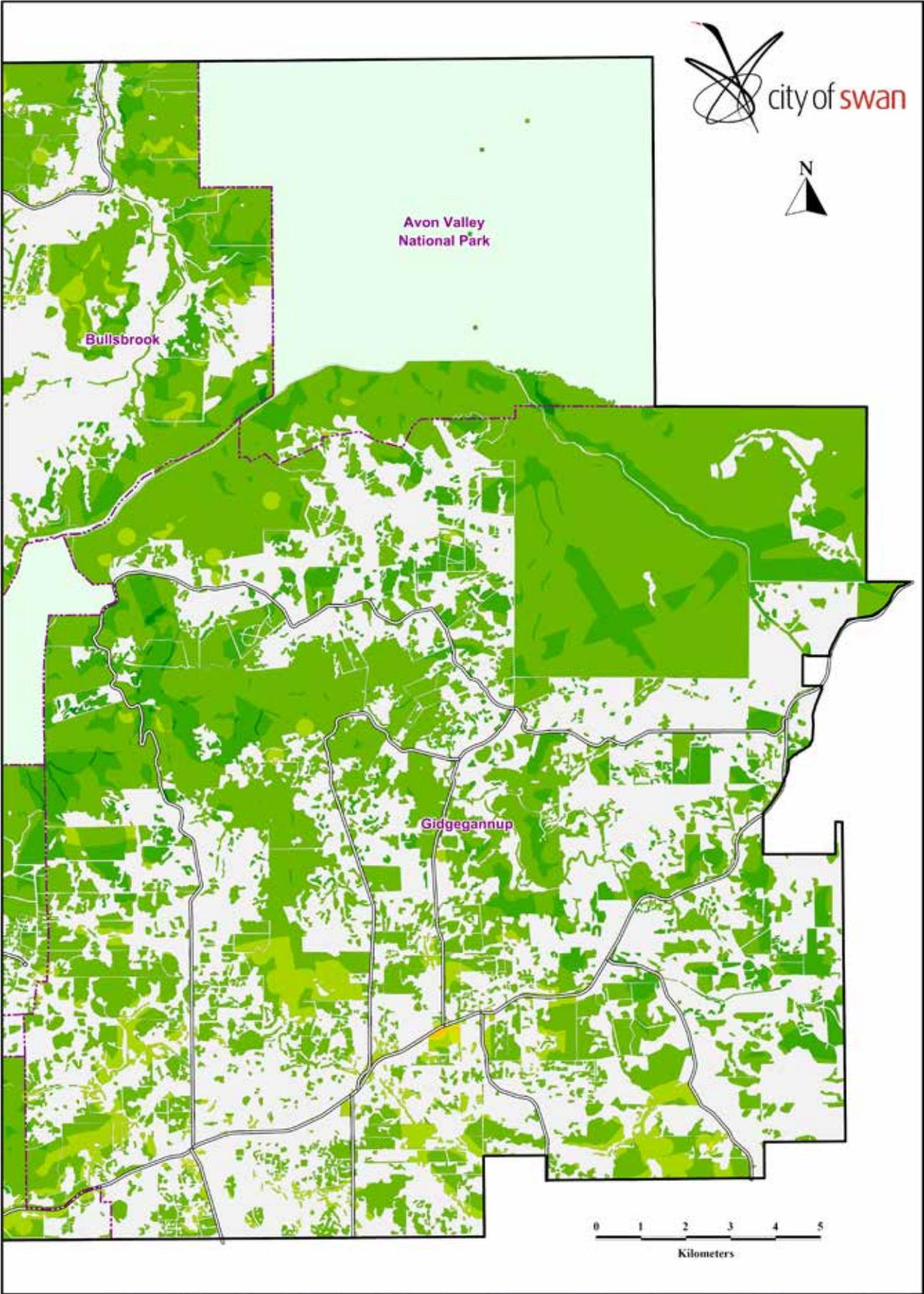


Figure 7. Potentially Significant Local Natural Areas Protection Levels

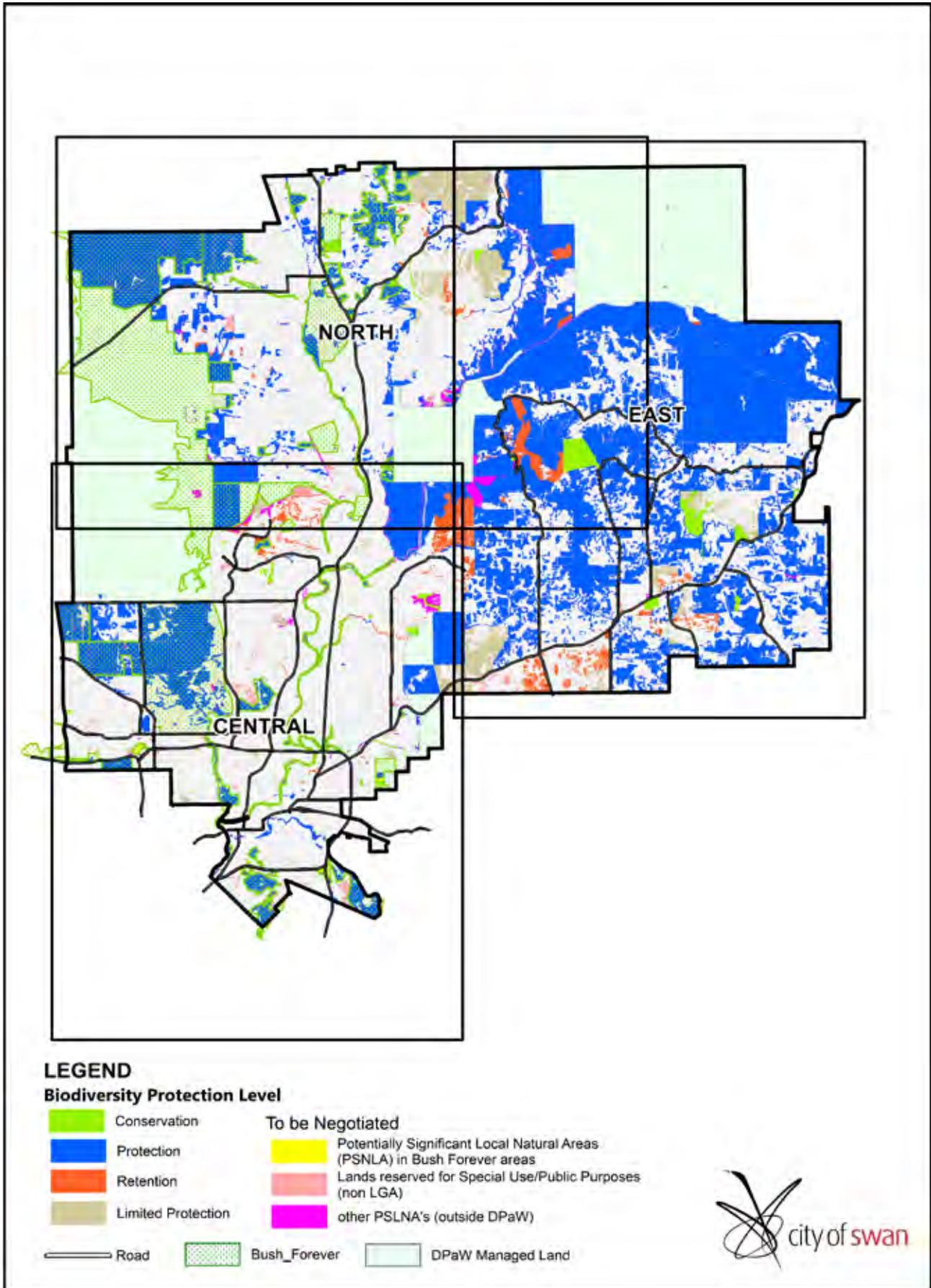


Figure 8. Potentially Significant Local Natural Areas Protection Levels - Central

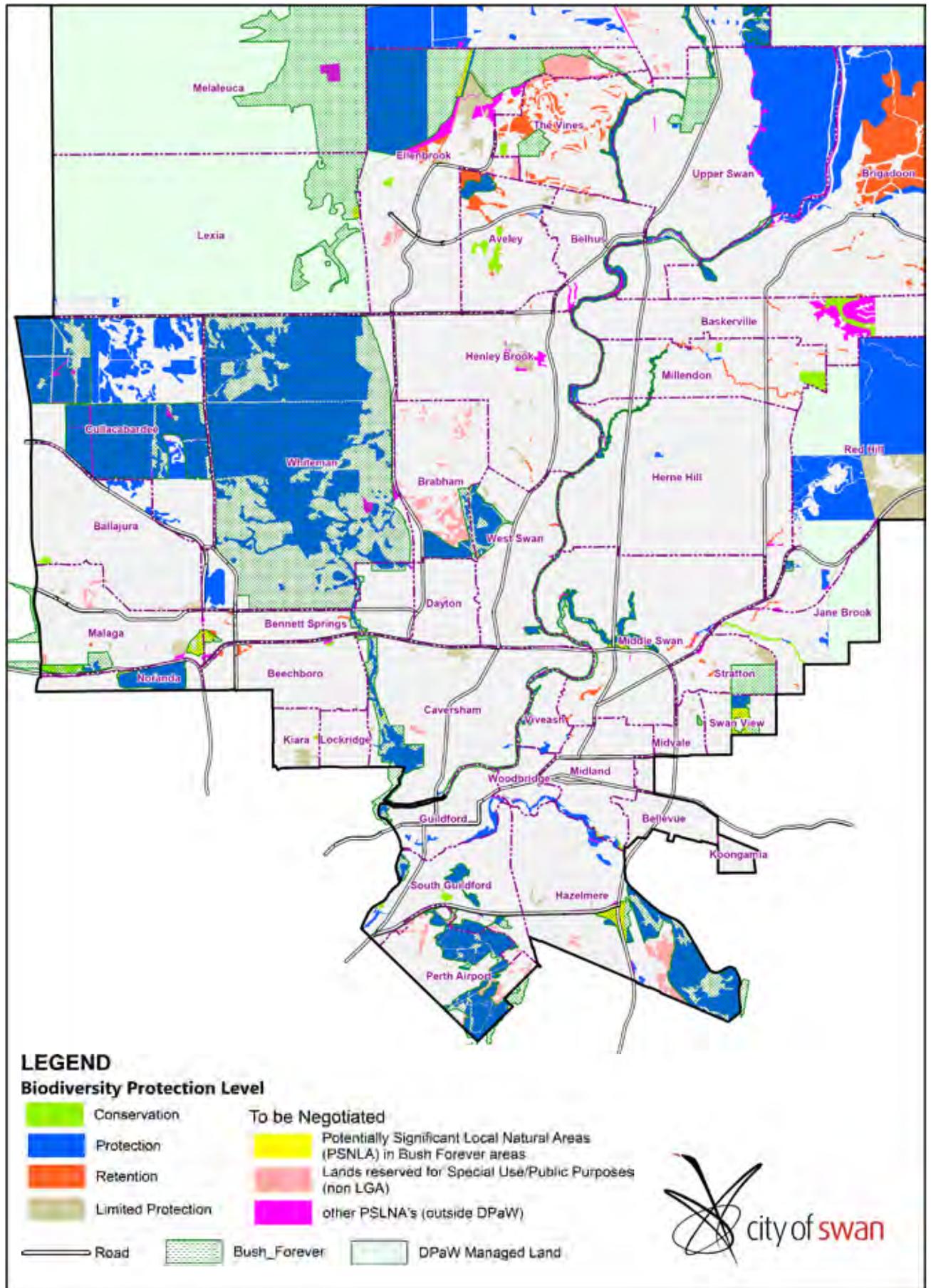
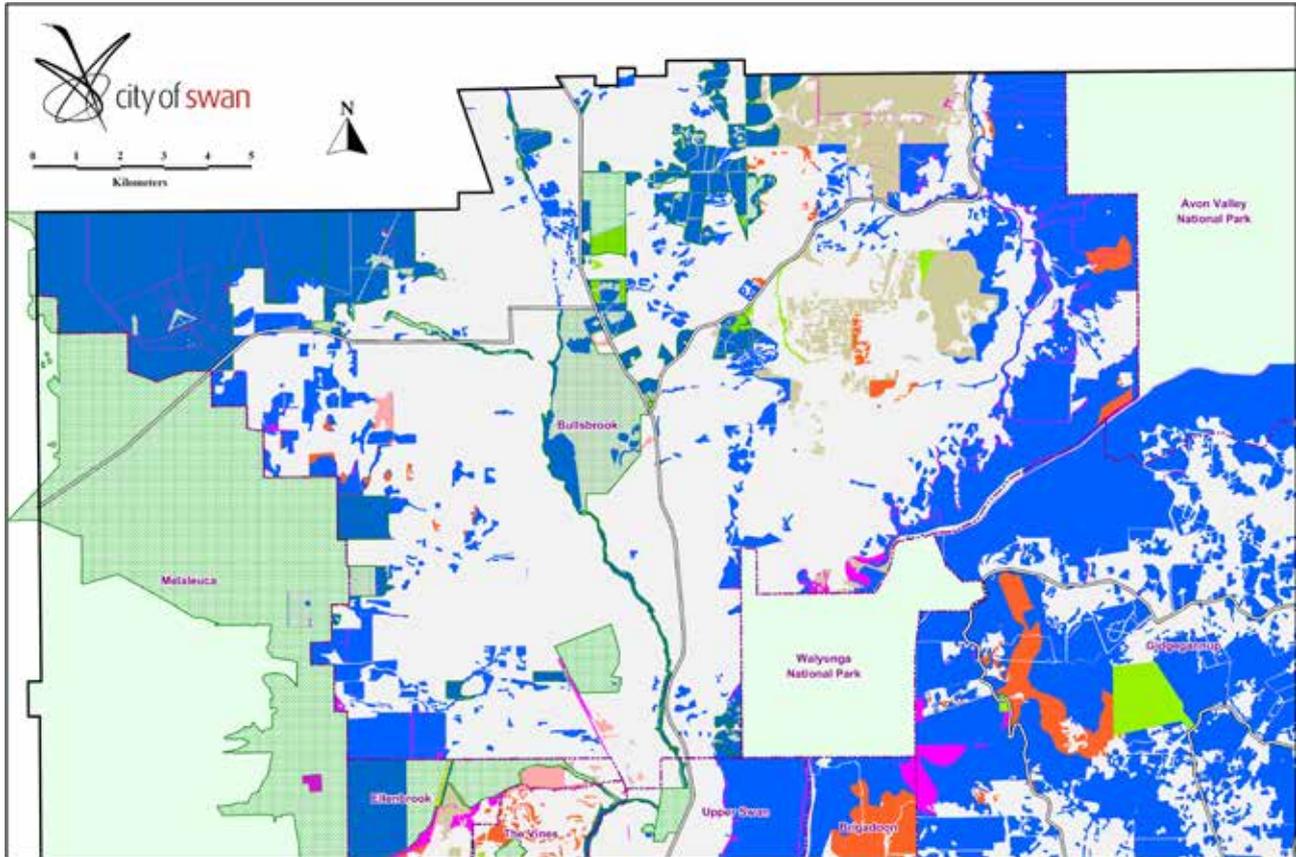


Figure 9. Potentially Significant Local Natural Areas Protection Levels - North



LEGEND

Biodiversity Protection Level

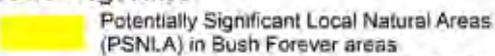
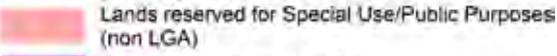
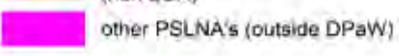
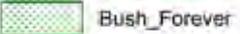
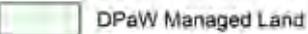
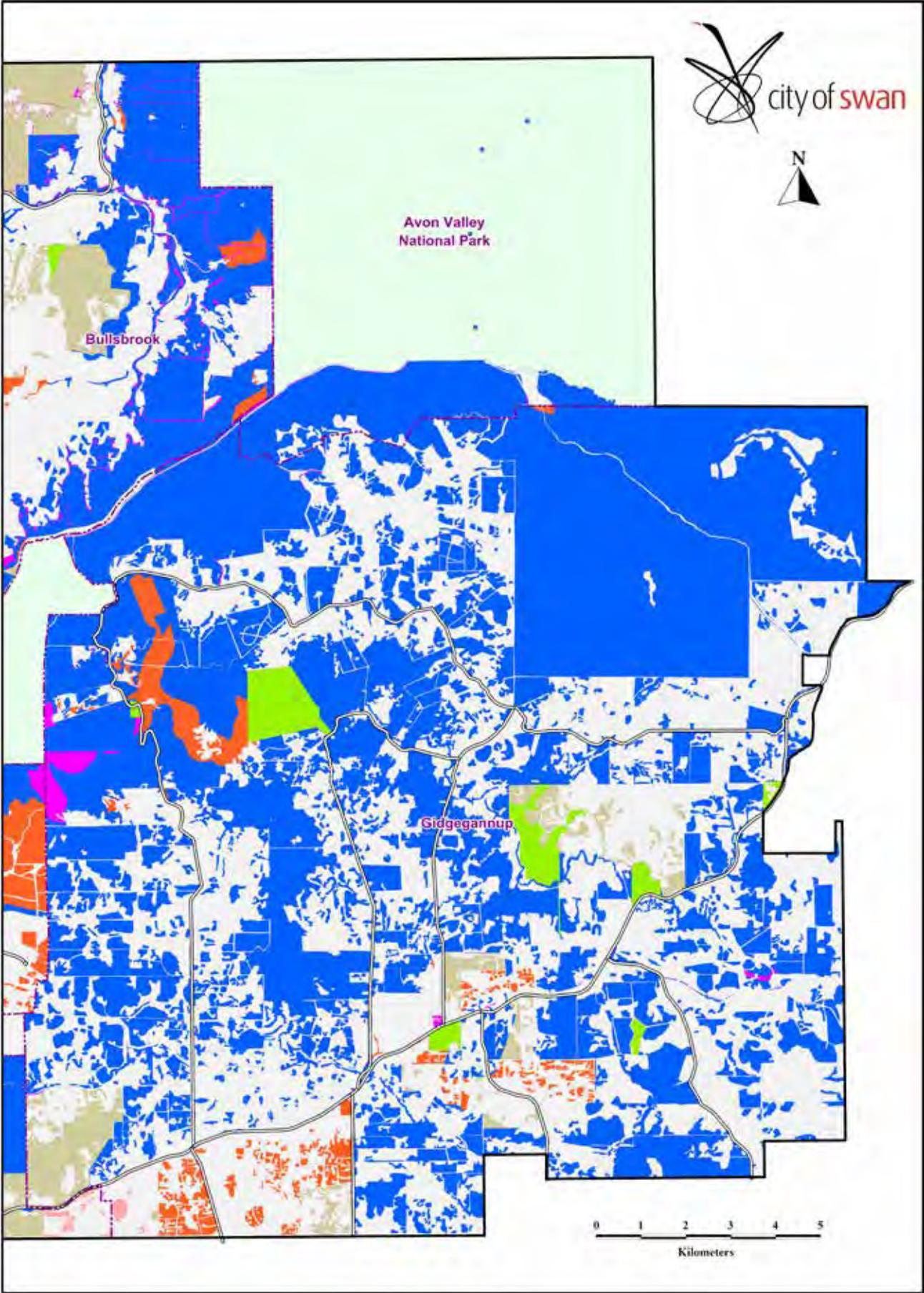
- | | |
|--|---|
|  Conservation |  To be Negotiated |
|  Protection |  Potentially Significant Local Natural Areas (PSNLA) in Bush Forever areas |
|  Retention |  Lands reserved for Special Use/Public Purposes (non LGA) |
|  Limited Protection |  other PSNLA's (outside DPaW) |
|  Road |  Bush_Forever |
| |  DPaW Managed Land |

Figure 10. Potentially Significant Local Natural Areas Protection Levels – East



3.1.4 Acid Sulphate Soils

The WAPC's Planning Guidelines for Acid Sulphate Soils 2008 outline a range of matters that need to be addressed at various stages of the planning process to ensure that the subdivision and development of land containing acid sulphate soils is planned and managed to avoid potential adverse effects on the natural and built environment. The guidelines were prepared jointly by the Department of Environment and Conservation (DEC) and the Western Australian Planning Commission (WAPC).

As the guidelines state, acid sulphate soils occur throughout Australia, but have only recently come to prominence in land use planning as a result of the detrimental environmental consequences that can arise from disturbing them. It is estimated that there are more than 90,000 square kilometres of naturally occurring acid sulphate soils in Australia. Approximately 30% (27,500 square kilometres) of Australia's acid sulphate soils are located in coastal Western Australia. The areas in the City of Swan currently considered being most at risk of disturbance of acid sulphate soils are depicted in Figure 11.

The objective of the guidelines are:

To ensure that the subdivision and development of land containing acid sulphate soils is planned and managed to avoid potential adverse effects on the natural and built environment.

General principles underpinning the guidelines

The following general principles underpin the guidelines, and seek to give effect to the objective.

Principle 1

Acid sulphate soils should be considered in all planning decisions to avoid potential adverse effects on the natural and built environment.

Principle 2

Disturbance of acid sulphate soils should be avoided wherever practicable.

Principle 3

Where the disturbance of acid sulphate soils is unavoidable, subdivision and development should be undertaken in a manner that:

- mitigates the potential adverse effects on the natural and built environment using the most appropriate mitigation strategies and management techniques; and
- achieves acceptable soil and water quality outcomes.

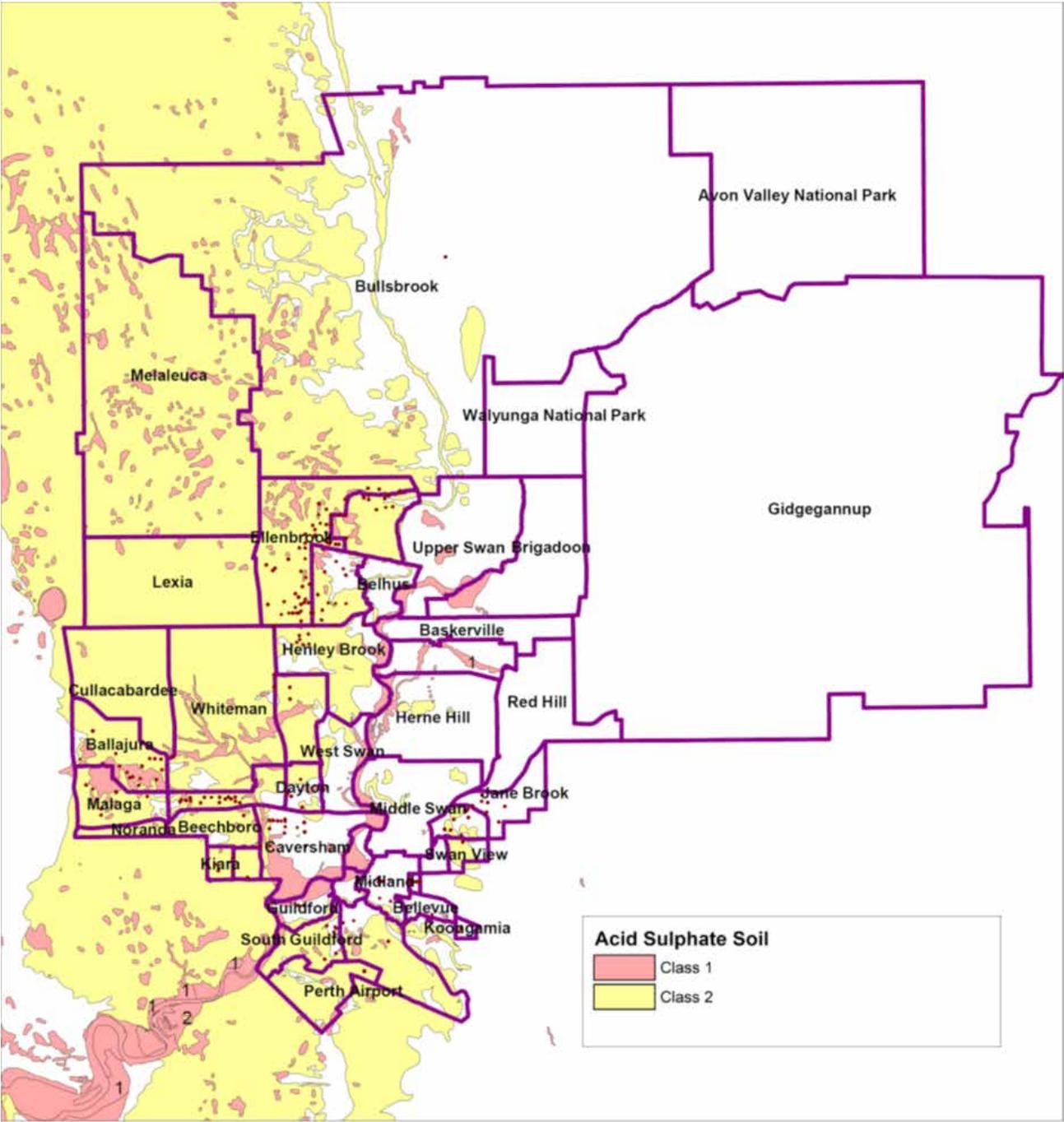
Principle 4

The rehabilitation of previously disturbed acid sulphate soils and existing acid drainage should be encouraged.

The guidelines also contain guidance statements for regional planning strategies, sub-regional planning strategies, region planning schemes, region planning scheme amendments, local planning strategies; local planning schemes, local planning scheme amendments, structure plans, subdivision and strata applications and development applications.

These guidance statements seek to give effect to the general principles and the objective of the guidelines and should be used by the State and local government and proponents when applicable.

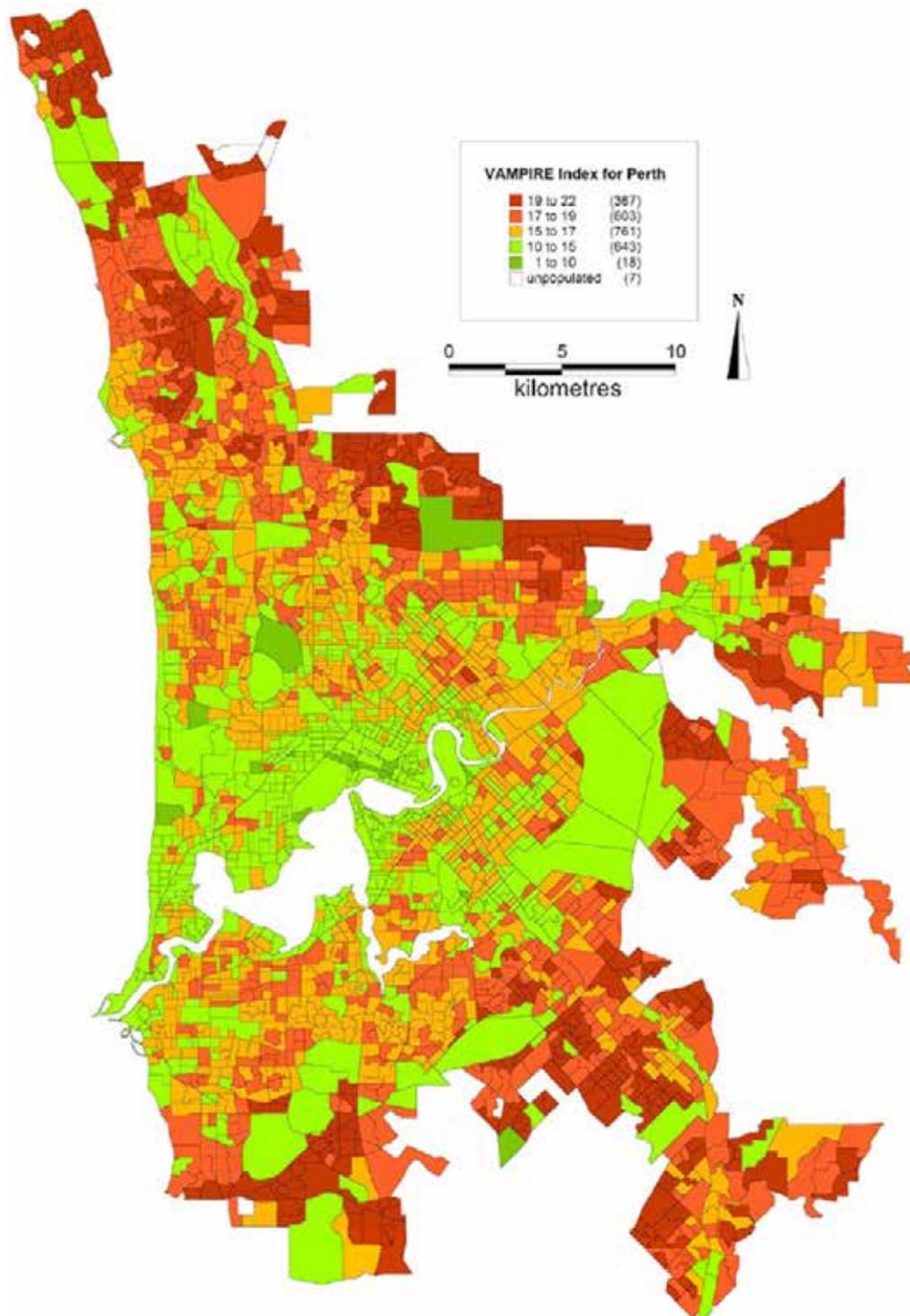
Figure 11. Location of acid sulphate soils in the City of Swan



3.1.5 Carbon Dependence

Carbon is a basic “building block” of life and every living thing on Earth is part of a continuing carbon cycle. However, carbon is often locked in chemical compositions that have high energy value making them ideal fuel sources. Examples include coal, oil and ethanol and these resources have been used to an extent that they now perform a vital role in the human economy. However, issues arise from the fact that these fossil fuel resources are non- renewable and their combustion liberates gas that is responsible for atmospheric warming trends. For a variety of reasons, our lifestyle and settlement patterns are some of the most carbon intense in the World and there is a growing imperative to reduce this intensity and our dependence on these resources.

Figure 12. Mortgage and Oil Vulnerability in Perth



As a consequence of oil dependency another important issue is the vulnerability of the community to the price of oil. Figure 12 is known as the Perth Vampire Map which spatially maps a suburb-level indicator of household "Oil Vulnerability". This indicator is derived by assessing access to public transport and level of mortgage debt. This indicator therefore defines vulnerability by access to alternative transport and capacity to pay for increased fuel prices.

The map clearly shows the City of Swan has some extremely vulnerable communities in its south-western areas. This includes areas such as Beechboro, Lockridge and Ballajura. It is also critical to note that as peri-urban developments, neither Ellenbrook nor any of the proposed urban growth corridor communities are currently mapped. If these peri-urban areas were mapped, it is reasonable to assume that they too would display a similar higher vulnerability index.

The contrast of this map with the State Government's proposed Morley-Ellenbrook Line (Figure 46) couldn't be starker. The State Government's proposals for the future train line are mainly in the central area which have the lowest 'oil vulnerability' (see Figure 12).

The implications for the City are that a growing use of the private car will exacerbate traffic congestion, increase the journey to work travel time and potentially affect economic productivity. It is essential that the State Government be lobbied to improve public transport services and infrastructure within the City. The City can also play a role by encouraging higher density living near public transport routes and major employment centres.

3.1.6 Climate Adaptation

There is a growing acceptance of the irreversibility of human induced climate change and the subsequent need to adapt our settlements to cope with expected change in sea level, temperature, rainfall, bushfire and storm events. This acceptance does not reduce our responsibility to concurrently reduce our dependence on carbon-based energy through avoidance and abatement. It merely suggests that a significant amount of climate change is considered inevitable. With this in mind and with respect to the significant scientific work that has been conducted in recent years, principle #15 of the Rio Declaration¹ is useful;

In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

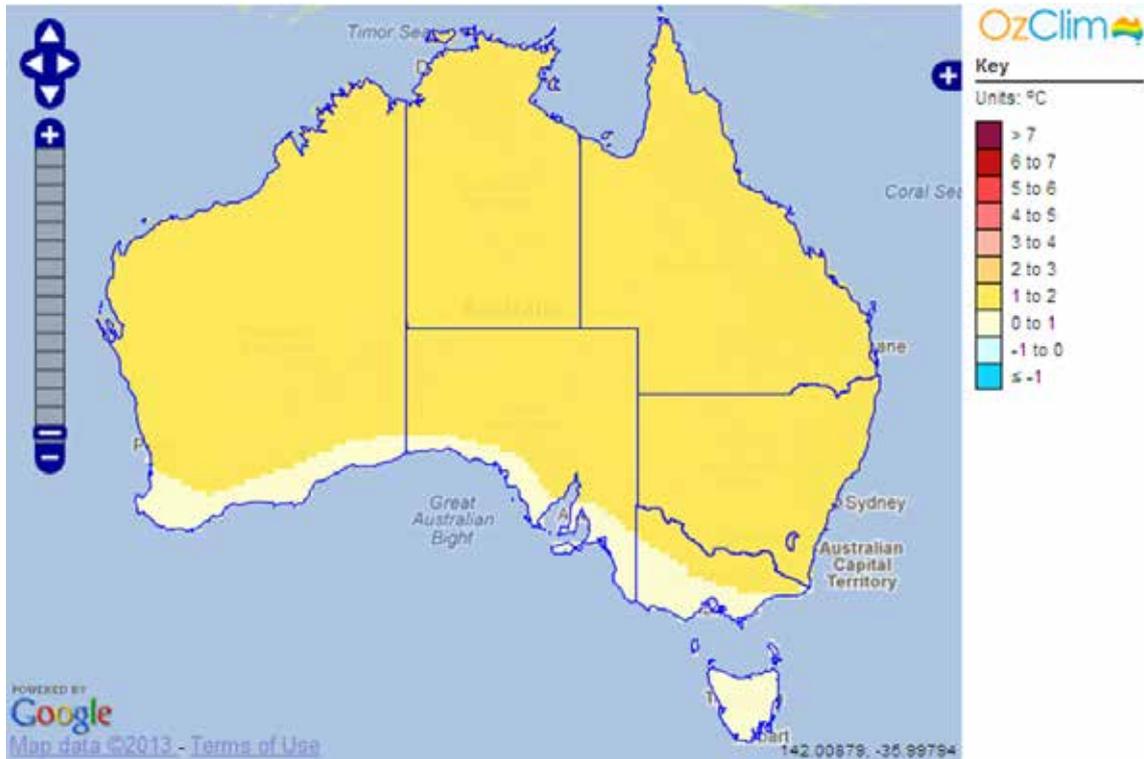
Significant modelling work has been undertaken by the IPCC and robust trend data has been established to demonstrate human induced climate change and support the case for adaptation. With this mind, it is timely to make use of this data and to determine a suitable response to this information.

Many currently approved settlement patterns are suitable for current climactic conditions. However, many of these developments become marginal or unsuitable when predicted climatic change is used as an assessment factor. Settlements in areas that may become flood prone or are of high fire danger risk in the future are some examples of where attention must be focused. The impact of climate change on rainfall and therefore water availability, health impacts and the suitability of our current building stock and infrastructure for higher temperatures should also be considered. Temperature rise, rainfall change and sea-level rise are the three main areas of concern.

The temperature and rainfall scenarios for 2030 have been developed by CSIRO from the IPCC's 4th Assessment Synthesis Report and the 5th Assessment Synthesis report is currently being finalised, hence, the data presented in Figure 13 and Figure 14 should be considered as draft information.

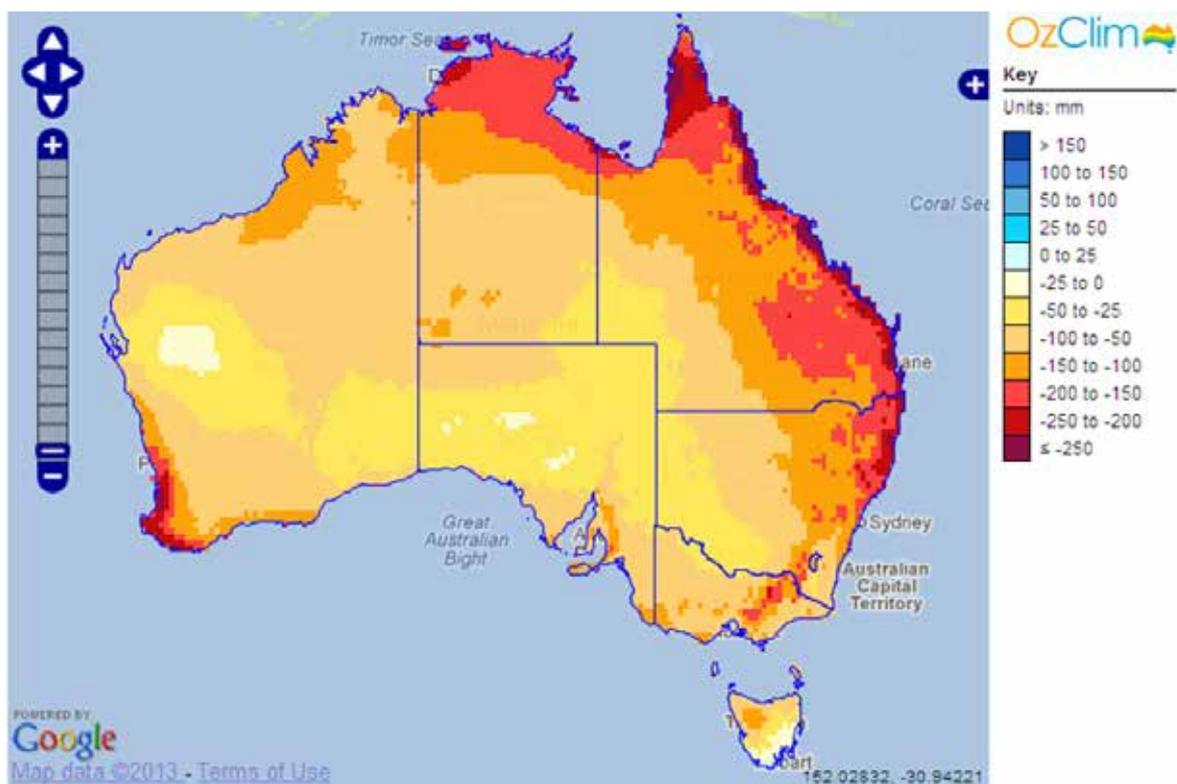
¹ Principle 15 – Rio Declaration – United Nations Environment Program – Proclaimed 14 June 1992. <http://www.unep.org/documents.multilingual/default.asp?documentid=78&articleid=1163&i=en>

Figure 13. Temperature scenario (A1F1 Scenario 2030)



Source: <http://www.csiro.au/ozclim/presets.do>

Figure 14. Rainfall change scenario (A1F1 Scenario 2030)



Sea-level Rise

Three scenarios have been developed by CSIRO for sea level rise between 2030 and 2100 (relative to 1990) and are summarised in Table 1. Although the City of Swan is not a coastal local government area, the impacts of any sea-level rise will affect the Swan River system.

Scenario 3 (High End) is the suggested scenario for the City to use. This is the best available data based on the IPCC 4th Assessment Synthesis Report (2007)². Early indications suggest that "high end" scenarios may be judged conservative in the 5th Assessment Report.

Table 1: Three global sea-level rise scenarios 2030-2100 (metres)

Year	Scenario 1 (low)	Scenario 2 (medium)	Scenario 3 (high)
2030	0.13	0.15	0.2
2070	0.3	0.5	0.7
2100	0.5	0.8	1.1

Source:CSIRO

² http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_synthesis_report.htm

Figure 15. Current river contours

Source: OzCoasts www.ozcoasts.gov.au



Figure 16. Predicted river contours for 2030 based on the high scenario of 0.2m rise (shown in light blue)

Source: OzCoasts www.ozcoasts.gov.au



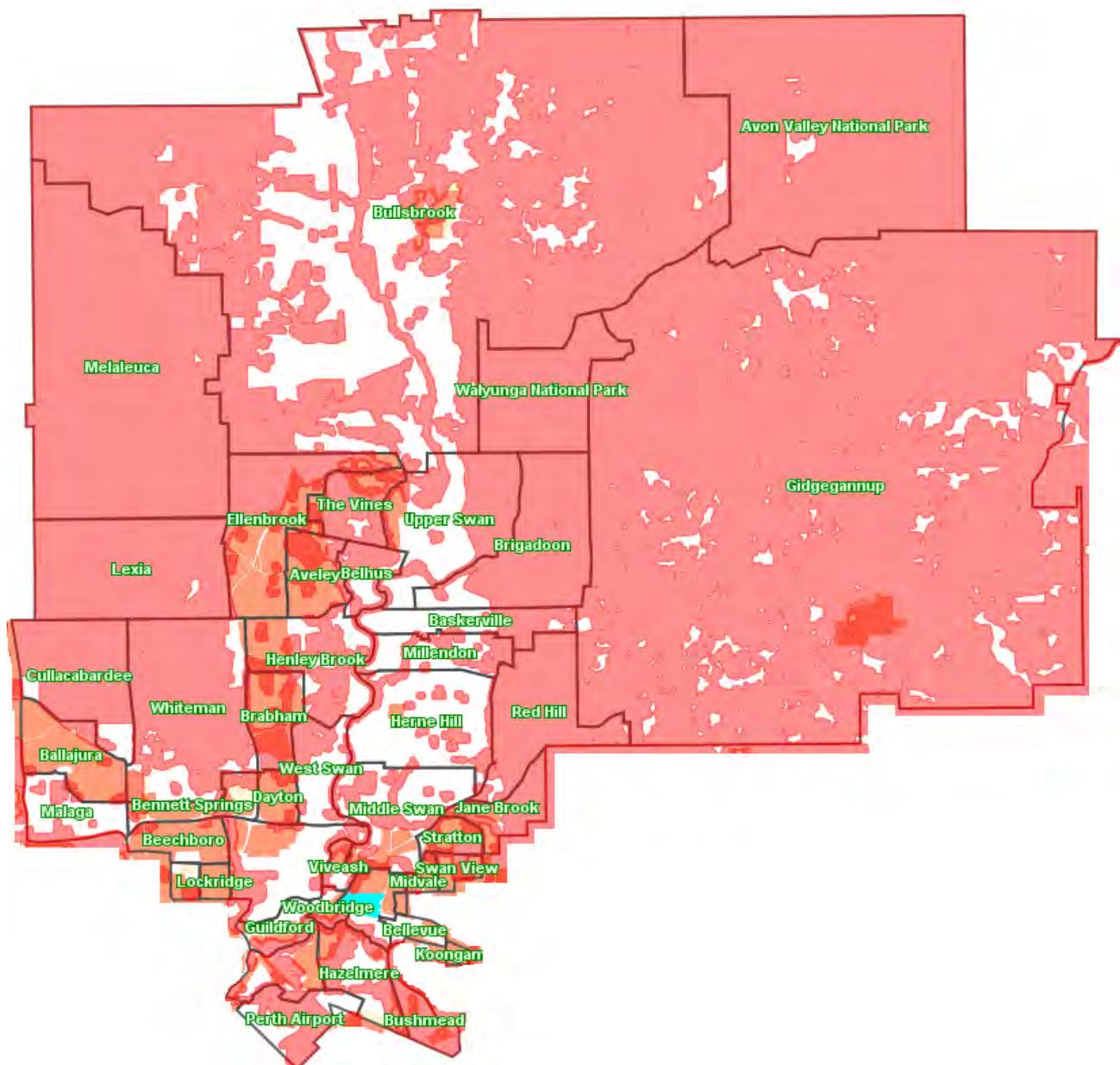
State Planning Policy 3.7 - Planning in Bushfire Prone Areas and the Guidelines for Planning in Bushfire Prone Areas

SPP 3.7 - Planning in Bushfire Prone Areas and the Guidelines for Planning in Bushfire Prone Areas (2017) set out policy measures and bushfire protection criteria. Any new development and intensification of development must comply with the criteria and policy measures. In this respect, the following documents will need to be read in conjunction with:

The Deemed Provisions contained in the Planning and Development (Local Planning Schemes) Regulations 2015, which form part of the City's Local Planning Scheme;

- Where relevant, any supplementary provisions of a Scheme provisions of a Scheme; and
- Australian Standard 3959: Construction of buildings in bushfire-prone areas.

Figure 17. Bushfire prone areas (2019)

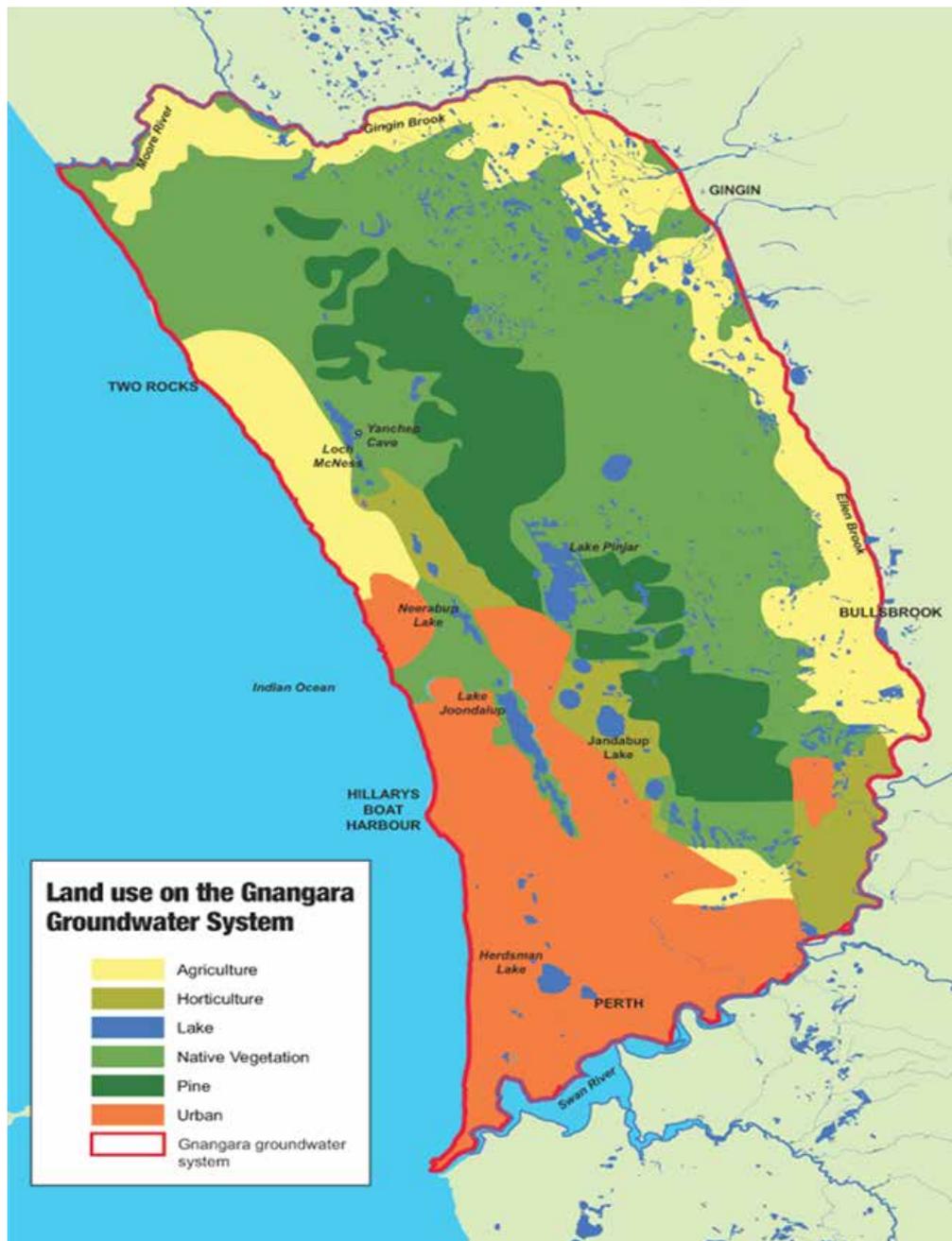


3.2 Water Management

3.2.1 Water Quality

Given that the Swan and Helena Rivers and their tributaries flow through the City of Swan and the Gngara Mound sits below parts of the City, a role exists to protect the quality of the water in these systems. This involves shared responsibility across the community and with various State Government agencies. These systems ultimately contribute to the City's drinking water supply and the Swan River is an iconic component of Perth's identity.

Figure 18. Land Use on the Gngara Groundwater System



Water quality impacts arise from many sources in the City including excessive or inappropriate fertiliser use, exposure of acid liberating soils, saline incursion, chemical poisoning and waste disposal practices such as landfill leaching and illegal disposal. Management for water quality is complex and many agencies contribute. As a result, the overarching challenge of this focus area is to understand the City's role and ensure it is aligned to common water quality objectives.

The City of Swan's Sustainable Environment Strategy seeks to define a specific role for the City of Swan in water quality management, to clearly identify the partners who support and guide this role and to define the areas where improvement can be made.

For this purpose, the key policy considerations are to:

1. Improve the quality of water discharge to drains and waterways;
2. Improve the quality of water for aquifer recharge and
3. Investigate opportunities to divert stormwater lost to waterways to aquifer recharge (if environmental flows are sufficient).

The Strategy seeks to support and can deliver appropriate landscaping and Water Sensitive Urban Design outcomes for the subdivision planning process in the City of Swan.

3.2.2 Water Efficiency

Beneath the City of Swan lies a significant proportion of Perth's groundwater resources and for reasons such as declining rainfall and increasing population, this system is under pressure. Evidence of this pressure is expressed in a number of ways including drying bores, wetlands and cave systems. However, access to water for drinking, irrigation and other high value uses contribute strongly to our culture and lifestyle and for this reason, it is important that this system is actively managed to ensure water balance.

3.2.3 Gnangara Water Mound

Stretching over 2200 square kilometres under the Swan coastal plain, the Gnangara system is Perth's lowest cost and largest source of good quality water. The Gnangara system provides almost half of all the water used in the Perth metropolitan area each year. It supplies water for agriculture, parks, ovals and gardens, and water for Perth's scheme supply – distributed by the Water Corporation. Gnangara groundwater also supports environmental features such as lakes, wetlands and vegetation.

The rapid reduction in rainfall and recharge has been faster than reductions to groundwater use and has shifted the groundwater system out of balance. High groundwater use and lower rainfall have resulted in declining groundwater levels and drying of wetlands and vegetation.

A system out of balance also puts water quality at risk in some locations. Enough groundwater needs to flow out to the river and coast to prevent saltwater intrusion into aquifers. Saline water has already moved inland in the Superficial aquifer in some places.

State government's goal is to rebalance the Gnangara groundwater system by 2030 to secure our lowest cost and most accessible water source for Perth and to support a healthy environment.

Here are some key strategies.

- Reduce groundwater abstraction.
- Improve water-use efficiency to reduce water demand.
- Enhance urban design to reduce demand and increase recharge.
- Reduce reliance on groundwater by using fit-for-purpose alternatives.

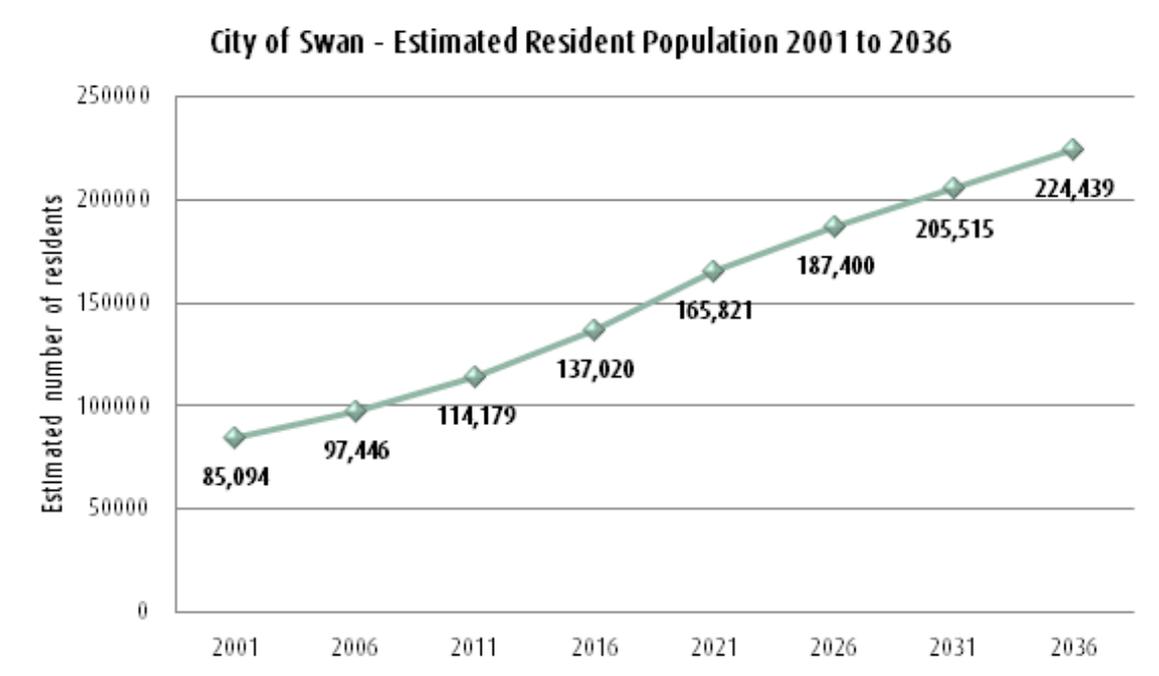
3.3 Population and Housing

3.3.1 Current and Projected Population

The City of Swan's population growth has steadily increased in recent years with the prime focus being around the Ballajura and the Swan View areas (including Stratton and Jane Brook) with the most rapid population increase occurring in Ellenbrook. The growth in population has occurred at a rate of approximately 3.1 per cent per annum.

Between 2001 and 2011, the City achieved an average growth rate of 3 per cent per annum and is forecast to grow at a faster rate of around 3.3 per cent per annum to 165,821 by 2021. Between 2021 and 2036, the average annual growth rate is forecast to slow down to 2.2 per cent per annum as the growth corridors become fully developed.

Figure 19. Estimated Resident Population 2001 – 2036³

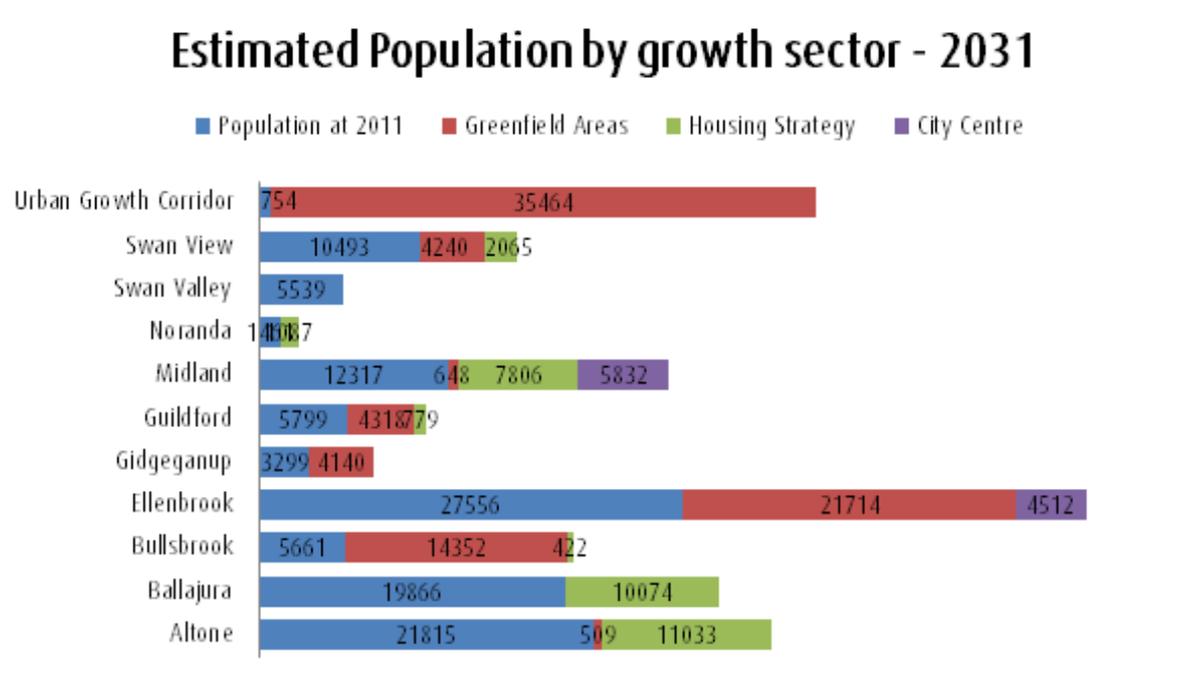


The City anticipates a population growth of almost 150,000 to 224,439 by 2036. This represents an increased rate of growth of around 3.7 per cent per annum over that time. This anticipated growth in population is supported by the WA Planning Commission's Perth and Peel @3.5millionreport which also forecasts an increase in the Perth metropolitan area from its current population of 1.96 million to 3.5 million by 2050. This growth will be influenced by, among other things, net migration, the provision of relatively affordable land and housing in the Urban Growth Corridor and employment opportunities provided by the expanding manufacturing, construction, tourism, educational and medical industries.

Note: Urban Housing Strategy represents projections from the Infill Strategy and City Centre represents high density infill/mixed development.

³ Source: <http://forecast2.id.com.au/Default.aspx?id=223&pg=5000>

Figure 20. City of Swan - Estimated Population by Growth Sector - 2031



(Source: City of Swan Urban Housing Strategy and Informed Decisions www.id.com.au/profile/swan)

As shown in Figure 20, population growth in the City of Swan is expected to occur primarily in the Ellenbrook Place Planning area where development continues and within the Urban Growth Corridor where new development fronts are opening in West Swan, Caversham and Henley Brook (Brabham) as Greenfield estates.

The City has endorsed its Urban Housing Strategy as a guide to the local planning strategy. The strategy will facilitate infill development within the existing established urban areas adding to the overall increase in housing stock. This was achieved through the gazettal of Amendment 92 in December 2015.

Figure 20 also displays the current population (blue), growth forecast in greenfield areas (red), estimated growth resulting from the Urban Housing Strategy (green) and anticipated growth in the Midland and Ellenbrook city centres (purple).

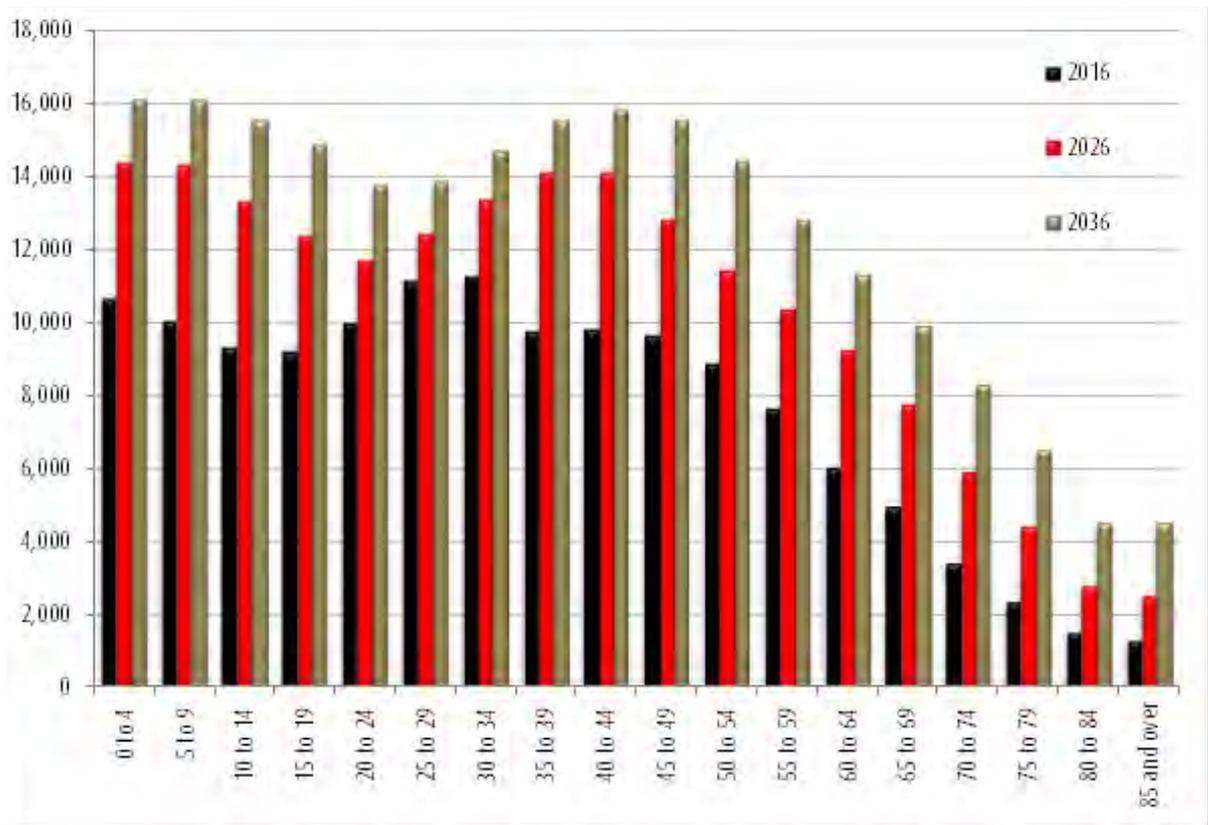
3.3.2 Demographic Structure

The City of Swan is planning for an expected increase in all demographic groups with the largest proportional increase (relative to its population size) being the 785 and over year age group forecast to grow 192.4 per cent by 2026 and 342.9 per cent by 2036.

As shown in Figure 21, the most populous group in 2026 will be 0-4 year olds with 14,355 persons. This growth continues through to 2036 with the largest majority of the population being persons under 15 years of age.

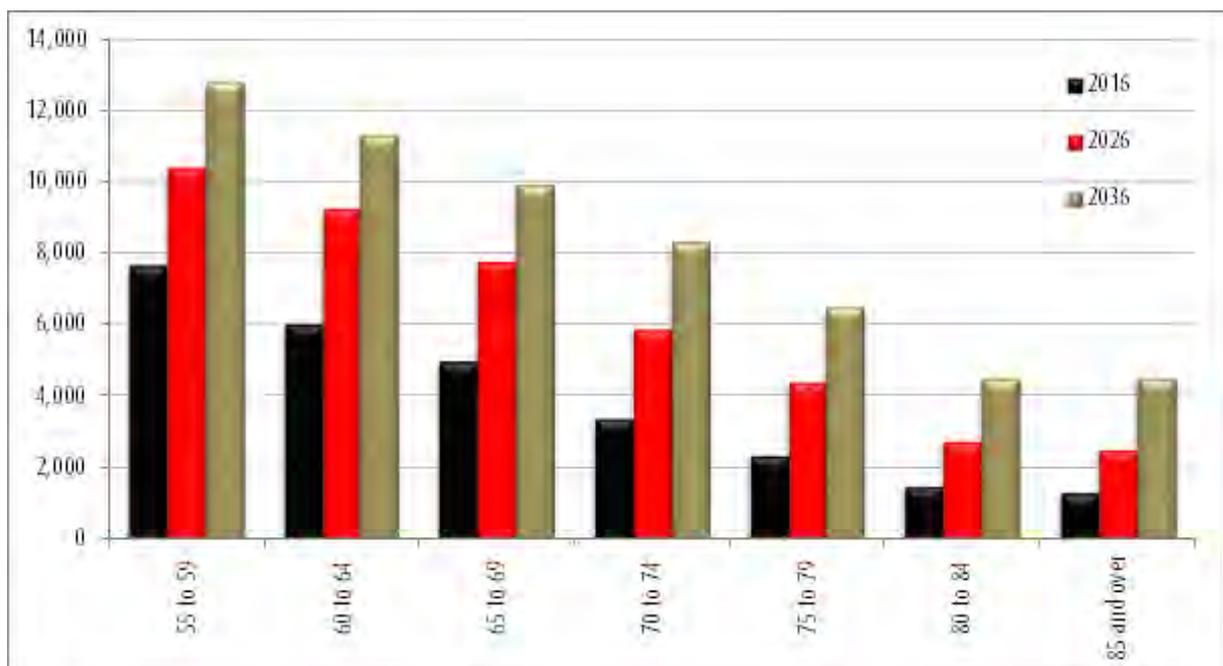
Similarly, Figure 22 shows a distinct trend toward increased numbers of older persons living in the City of Swan by 2036 which is reflective of an ageing population throughout Australia over the next 20 years. Significantly, the figure below shows an increase of almost 11,000 persons expected in both the 55-65 and 65-75 year age groups and an additional 7,000 persons in the 75-85 year age group. With the 85+ age group expected to increase by approximately 3,209 persons, it is evident that people are living longer.

Figure 21. Forecast Age Structure (2016 - 2036)



Source: Population and household forecasts, 2016 to 2036, November 2017 www.forecast.id.com.au

Figure 22. Forecast Aged Persons (2016 - 2036)



Source: Population and household forecasts, 2016 to 2036, November 2017 www.forecast.id.com.au

People with disabilities within the City of Swan

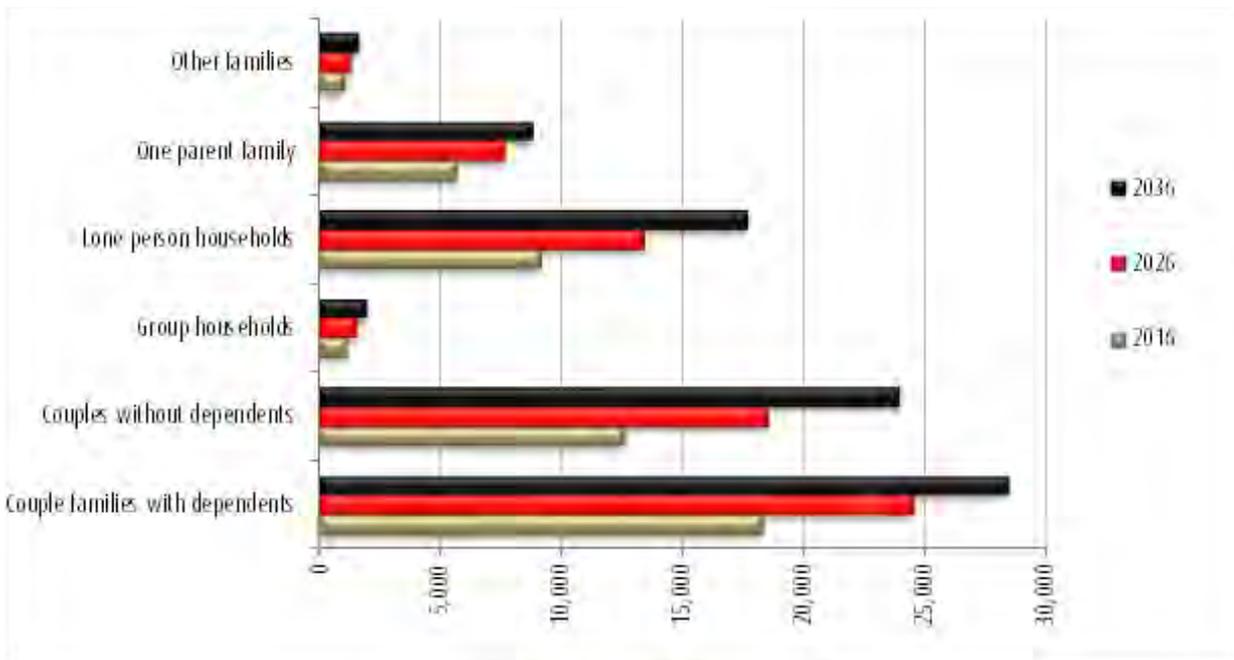
The most recent statistics available for people with disabilities within the City of Swan were from the 2016 Census by the Australian Bureau of Statistics. It found that the number of people living in the City of Swan who self-identified as having a severe or profound disability was 4,810 people. There were 10,168 people providing unpaid care to a person with disability, long term illness or old age.

The 2015 Survey on Ageing, Disability and Carers found that across Australia the rate of disability for all people was 18.3 percent. Based on the City's population of just over 136,000 people in 2016, the estimated number of all people with disability in the City in 2016 was approximately 25,000 people. Refer to the City of Swan Disability Access and Inclusion Plan 2017-2022 for more information relating to the planning of better access and a more inclusive environment for people with disabilities.

3.3.3 Household Composition

The main changes in household types between 2016 and 2036 are forecast to be 'Couples without Dependents' and 'Couple families with Dependents' (Figure 23). Both groups are expected to increase by approximately 90 per cent and 55 respectively. Another significant increase is in the quantity of lone person and empty nest households which can be partly explained by the location of aged persons housing villages but generally relates to a state-wide trend of lower birth rates and sole person households.

Figure 23. Forecast Household Types (2016 – 2036)

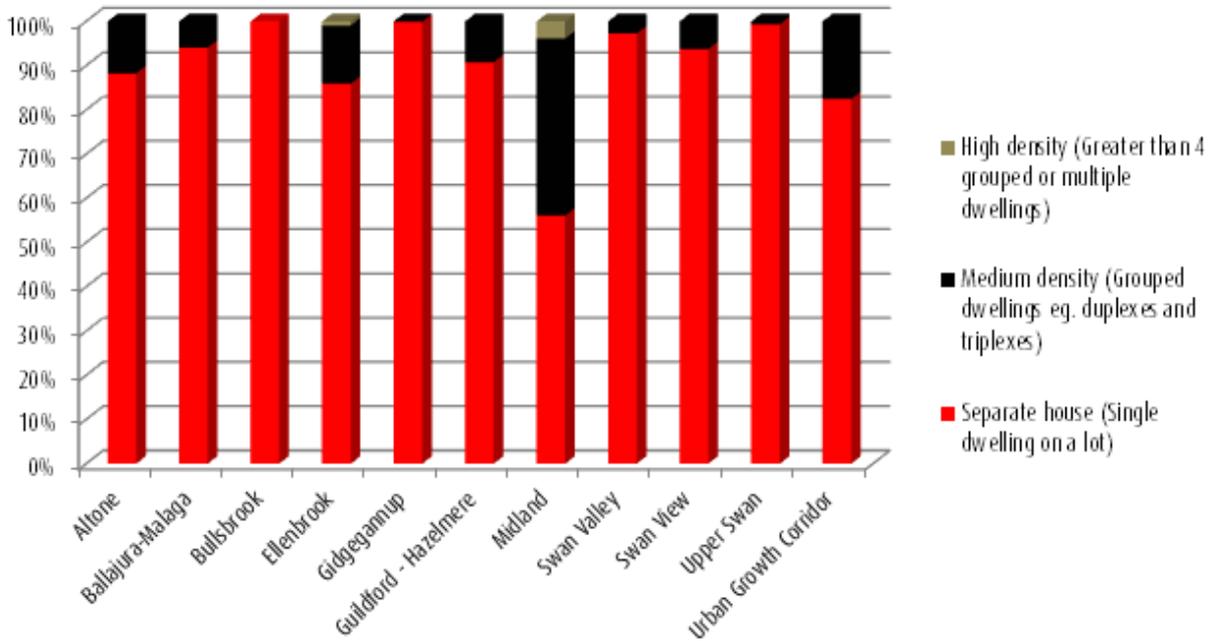


Source: Population and household forecasts, 2016 to 2036, November 2017 www.forecast.id.com.au

Diversity

Current housing within the City is predominantly single house on block as shown in Figure 24. This is reflective of broadacre suburban development and traditional patterns of post war development. Future housing will continue to be predominantly single house on block in greenfield estates, except on sites identified in the Urban Housing Strategy, which would encourage more diverse housing types in locations with high amenity.

Figure 24. Dwelling Mix by Place 2016



Source: Dwelling Mix 2016 www.id.com/profile/swan

Dwelling Density

As shown in Table 2, dwelling densities in the City of Swan are relatively low. The City has large areas of state forest and national park that changes the overall density calculations. Individual Place areas within the City can more accurately reflect true urban densities, with Midland having the highest number (9.2) of dwellings per gross urban hectare. .

The dwelling densities in the urban place planning areas on the whole are lower than the state target of 15 dwellings per hectare for new urban estates and considerably lower than the 26 dwellings per hectare target set in Perth and Peel @3.5million.

The place planning areas of the Swan valley, Gidgegannup and Bullsbrook are predominantly if not completely rural which together with their vast sizes, account for the extremely low density.

Place Planning Area	Dwellings per ha
Altone	8.9
Ballajura	8.4
Ellenbrook*	6.4
Guildford and Hazelmere	5
Midland	9.2
Swan View	7
Urban Growth Corridor*	3.5
Bullsbrook (predominantly rural)*	0.11
Gidgegannup (rural)*	0.03
Swan Valley (rural)*	0.28

Source: City of Swan and Informed Decisions www.id.com/profile/swan

* The low density is related to a large portion of the area not yet being developed.

3.3.4 The Urban Housing Strategy

The major new initiative in the LPS has been the preparation of an Urban Housing Strategy (UHS) consisting of an Infill Strategy and a Greenfields Strategy and is an informing document for the local planning strategy. The UHS provides strategic direction for the City to plan for the changing needs of its community having regard for the forecast population growth and changes to demographic profiles and household composition as outlined in Sections 3.3.1 to 3.3.3.

The Infill Strategy identifies 15,500 sites across 16 established residential localities for higher residential densities taking advantage of access to existing infrastructure services, facilities and resources. This will provide much needed opportunities for housing diversity in the established areas and consequently, increase dwelling densities.

Features of the Infill Strategy include:

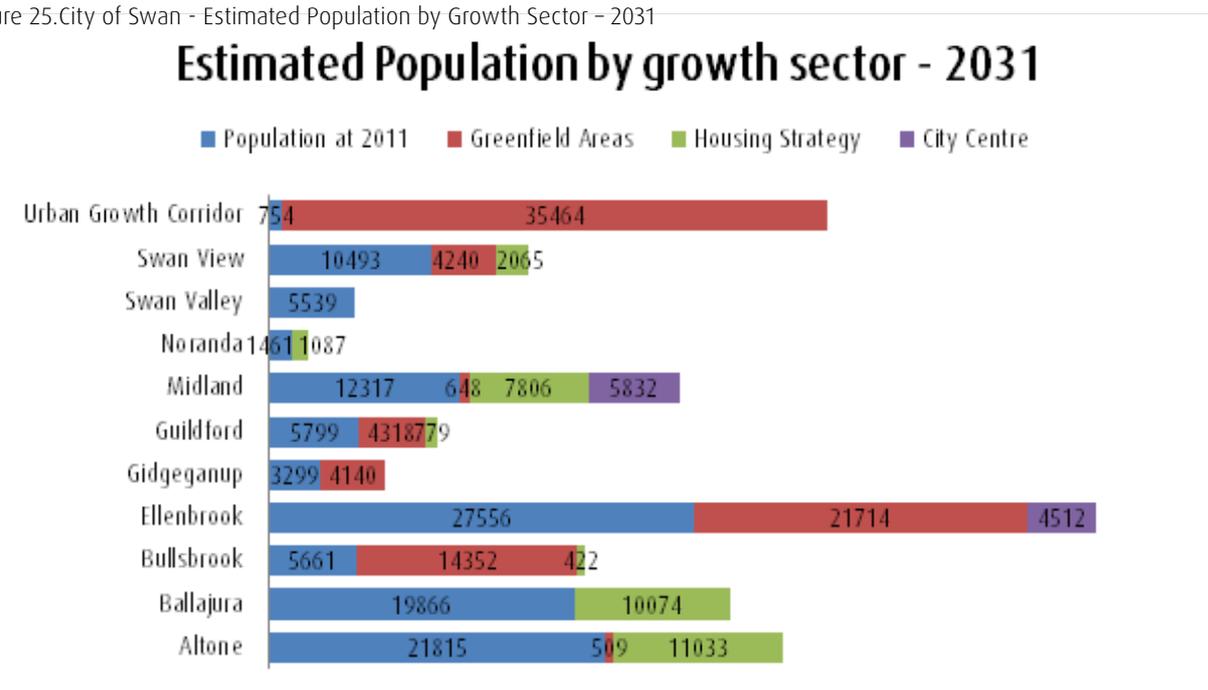
- Increased residential densities surrounding activity centres and locations with good access to public transport, schools, shops and centres of employment.
- Incentives to provide single bedroom homes, aged and dependent persons' or special needs housing.
- Consideration of the community's desire to "age in place" through the provision of increased housing opportunities for people who wish to remain in their communities.
- Encouragement of site assembly to achieve maximum development potential and better built form outcomes.
- The introduction of Dual Residential Codes (DRCs) in areas that have potential for higher residential densities.
- Introduction of design criteria to achieve the bonus development opportunity as stipulated by the DRCs.
- Design criteria that promote Liveable Neighbourhoods, Transit Oriented Development and Crime Prevention through Environmental Design (CPTED).
- Methodology for the conversion of Pedestrian Access Ways to trafficable roads, cul-de-sacs or public open spaces to support increased passive surveillance.

The Greenfields Strategy is based on the State Government's strategic documents Perth and Peel @3.5million and the North-East Sub-Regional Planning Framework. The combination of family-oriented development in Greenfield areas, medium density housing near services and public transport and inner-city living will see the City of Swan well positioned to become a leading provider of diverse and dynamic lifestyle opportunities in the Perth metropolitan area.

The Greenfields Strategy states that there will be considerable growth in existing and future Greenfields areas. Existing Greenfield areas are already zoned urban and strategic planning has been completed. Local structure plans and detailed area plans will be consistent with the relevant sub-regional strategies and district structure plans. The future Greenfield areas are not yet zoned "urban" and are in the localities of Bullsbrook, Upper Swan, West Swan West, Gidgegannup, South Guildford and Hazelmere (Bushmead). The Greenfields Strategy proposes that the City, together with State Government agencies and service providers, manages growth in the future Greenfield areas effectively and in accordance with the principles of Liveable Neighbourhoods.

The following graph shows the estimated number of dwellings by 2031 from the Housing Strategy (LHS) as well, Green Field Strategy, as well as the Midland Activity Centre Structure Plan:

Figure 25. City of Swan - Estimated Population by Growth Sector - 2031



3.4 Economy and Employment

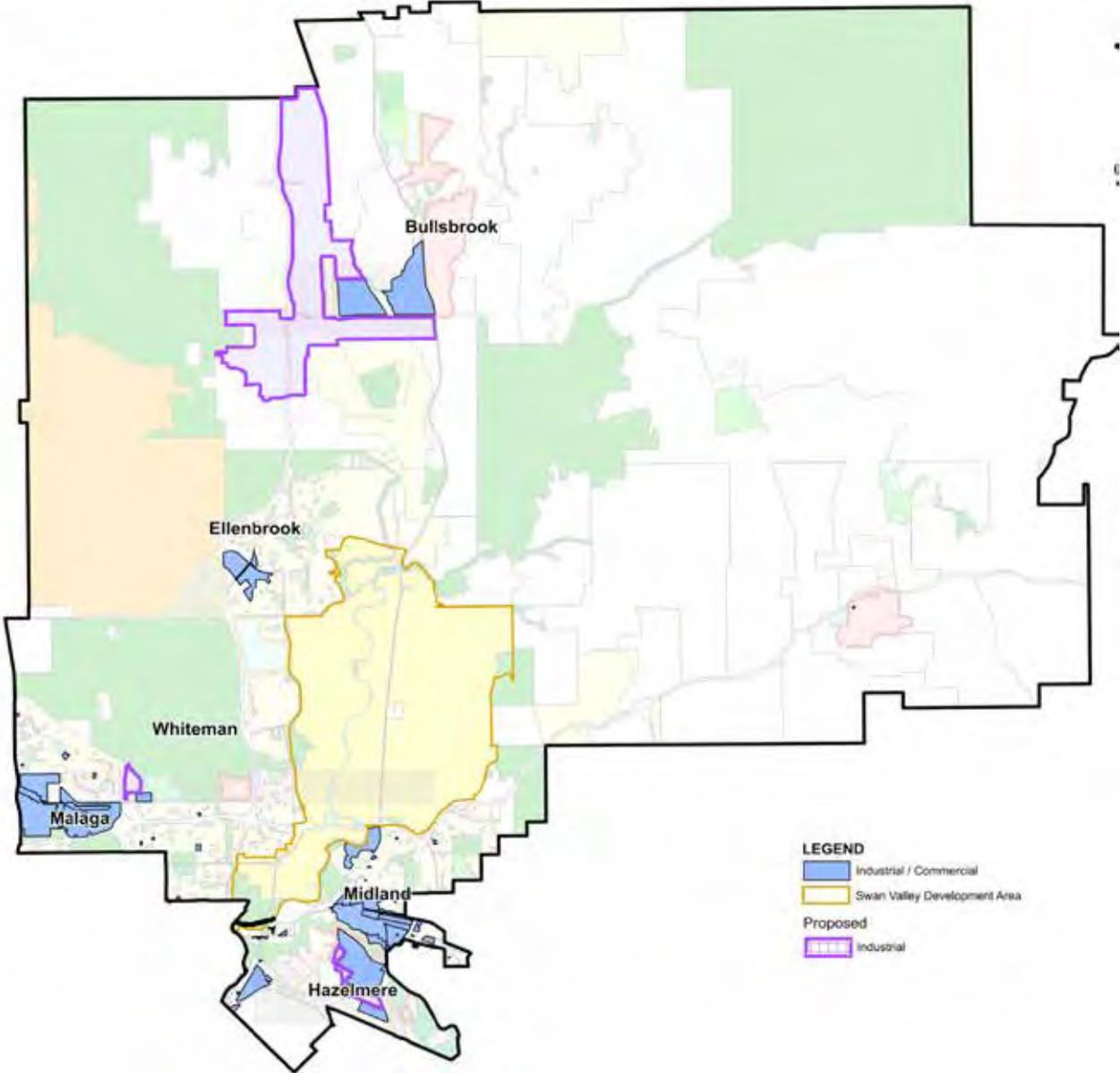
3.4.1 Swan Economic Vision and Strategy 2009

In 2009, the City of Swan produced its Economic Vision and Strategy, to establish a strategic framework to guide the City's business activities towards building a vibrant, diverse and sustainable local economy. Recognising the City of Swan's place in the wider Eastern Metropolitan Region and a desire on the part of Council to work in partnership with other stakeholders to help grow the local and regional economies, the actions contained in the Strategy are designed to facilitate growth and investment in the City for a prosperous economic future. The preferred economic future presents a position statement, articulating the sort of place that the City aspires to become. In short, the City of Swan's preferred economic future is encapsulated in the following statements:

- The City of Swan will continue to grow and diversify its traditional export-oriented 'driver sector' industries in ceramic product manufacturing, textiles, food product manufacturing and transport and storage providing a diversity of employment opportunities for the community.
- The City of Swan will also diversify its economic base into higher order 'knowledge-based', industries in education, health, and professional services.
- The City of Swan will be characterised by the highest quality tertiary education services and facilities having established itself as a centre for world class education and training to local and international markets.
- The City of Swan will continue to play an integral role in tourism development including regional marketing, visitor servicing, product development and interpretive infrastructure. Whilst the Swan Valley is viewed as the City's most iconic tourism asset there will be an increased focus towards the development of other tourism precincts within the City's boundaries.
- The City of Swan and the wider region will benefit from the employment and services associated with a health industry cluster around the Midland Health Campus.
- Midland will be consolidated as a Primary Centre characterised by a vibrant retail, commercial and community services sector serving the local community, the wider Eastern Metropolitan region and rural catchment.
- The City of Swan will enhance its spatial economic structure through the development of existing activity centres, small towns, employment precincts and rural areas by enhancing local accessibility, facilitating infrastructure investments, providing for sufficient industrial land in appropriate locations and supporting business development and investment attraction.
- The City of Swan's appeal as an investment location and as a place in which to work and live will be underlined by the City's lifestyle attributes including its proximity to the Perth hinterland to the north, its diverse geography comprising small towns, rural areas and urban centres, its accessibility to national and international airports and the Perth CBD via road and rail and its wide range of education, recreational and community services and facilities. These attributes will serve as key attractors for new business investment and skilled workers.

The location of the City's major current and future employment centres are shown in Figure 26.

Figure 26. Major current and future employment centres



3.4.2 Overview of the Local Economy

The City of Swan has a diverse economic base and strong economic sectors, including construction, retailing, manufacturing, property and business services, wholesale trade and agriculture/livestock. Table 3 lists the industry sectors in the City of Swan.

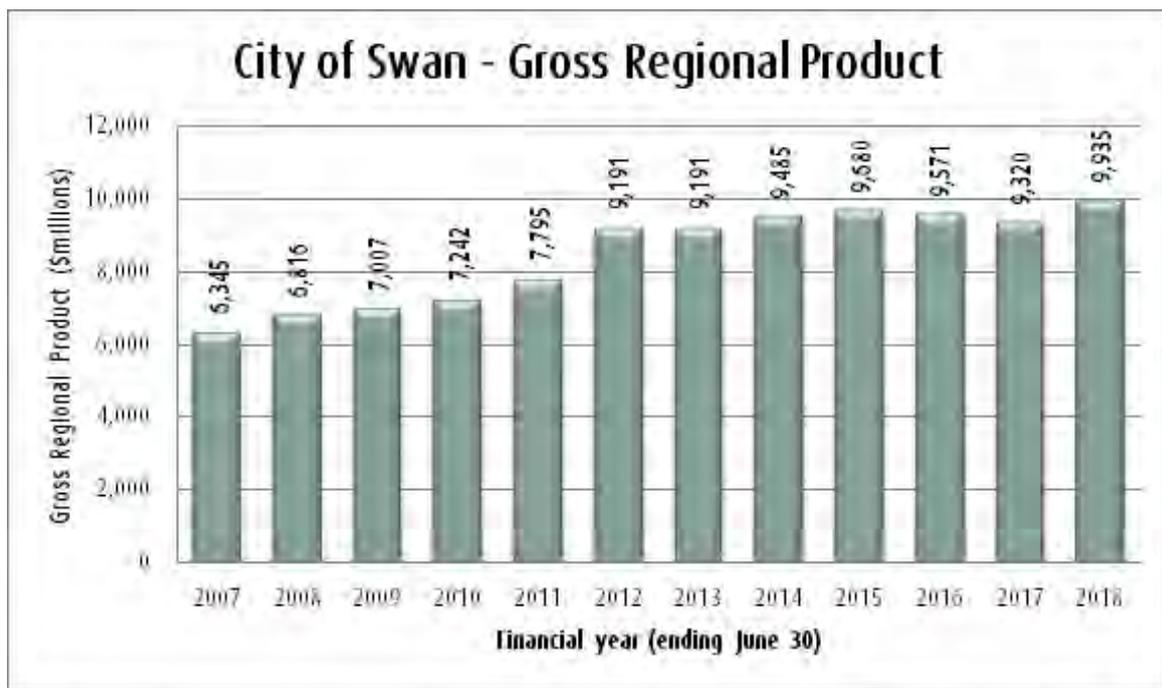
The increasing population has coincided with significant economic growth in the region throughout the last decade, with commercial and industrial developments in Malaga, Midland, Hazelmere, Ellenbrook and the Swan Valley.

The tourism industry is also thriving. A highlight of the area is the Swan Valley, a renowned grape-growing region containing world class wineries, restaurants, cafes, fresh food producers, breweries, distilleries, recreational activities, arts, crafts, historic attractions and accommodation. The City also has significant nature-based tourism with national parks, state forests and nature reserves.

Industrial and commercial areas have also grown with the development of the Malaga industrial area and the expansion of the Midland retail sector. Midland is the main Strategic Regional Centre in the East Metropolitan Region. It is the northern and eastern gateway to regional Western Australia, with Great Eastern Highway, Great Northern Highway and the Midland railway line all leading into Midland.

The City's gross regional product (net wealth generated within the region) reached \$9.9 billion in the financial year ending June 2018. With well-established commercial and industrial areas in Ellenbrook, Hazelmere, Malaga and Midland, and new industrial land earmarked for future release in the north Ellenbrook and Bullsbrook areas, the future of Swan's economy looks favourable.

Figure 27. City of Swan Gross Regional Product 2007 – 2018



Source: National Institute of Economic and Industry Research

3.4.3 Industry Sectors

The City of Swan has a diversified and vibrant economic base. In terms of the division of industry within the region, the City of Swan operates around six key business areas: manufacturing, construction, wholesale trade, property and business services, transport and storage and retail trade.

As shown in Table 3, the most significant industry, in terms of value, is manufacturing, which accounted for 36.3 per cent of all industry value, or \$5,289.68 million in 2006. When combined with construction and the wholesale trade industry sectors, this equates to 58% of all industry value. It will be important to ensure that future land use planning will take into account these industry strengths by having a strong focus on the future creation of industrial areas such as Whiteman, Bullsbrook and north Ellenbrook

The health services and education sectors in years to come are likely to form a significant part of the local economy with major investments in these sectors over the next few years. This will help drive the knowledge-based economy of the City and increase the value-adding of local output.

3.4.4 Small Business

Of the registered ABNs with a business address in the City of Swan, 22 per cent are in the Construction sector, with the Professional, Scientific & Technical and the Rental, Hiring & Real Estate sectors contributing 9 per cent each, followed by Transport, Postal & Warehousing and Other Services at 8 per cent each.

Approximately 48 per cent of ABNs in Swan are sole traders. A large proportion of sole traders are generally an indicator of a vibrant small and micro business base. These traders are located mainly in the residential suburbs of Ballajura, Beechboro and Ellenbrook. The home based business is a subset of the sole trader sector and plays an important role diversifying employment to the suburbs and at the same time, reducing the need for car trips. Home based businesses should be encouraged through suitable changes to land use planning policies that will ensure their future viability but at the same time, protect residential amenity.

Driving small business development will be vital to sustaining and growing local employment opportunities. Home based businesses should be supported especially in the Swan Valley and Ellenbrook, where these business types are evident.

Table 3: Industry Sectors in the City of Swan

Source: ABS 2006 census

INDUSTRY SECTOR	OUTPUT \$M
Manufacturing	\$5289.680
Construction	\$1708.001
Wholesale trade	\$1401.231
Property and Business Services	\$1254.318
Transport and Storage	\$853.401
Retail Trade	\$786.701
Mining	\$618.779
Government Administration and Defence	\$609.318
Education	\$374.035
Health and Community Services	\$329.271
Finance and Insurance	\$271.281
Accommodation, Cafes and Restaurants	\$262.079
Personal and other services	\$246.768
Communication Services	\$207.830
Agriculture, Forestry Fishing	\$158.401
Cultural and Recreational Services	\$131.098
Electricity, Gas and Water supply	\$78.712
Total	\$14580.904

Table 4: Top 10 suburbs in the City of Swan ranked by number of registered ABNs.

Source: ABS 2006 census

Ballajura	3826	Midland	1694
Malaga	3049	Swan View	1454
Beechboro	2374	Bullsbrook	1128
Gidgegannup	950		
Ellenbrook	2194	Henley Brook	802

3.4.5 Annual Turnover by Industry

There is a large range in the annual turnover, with 42.7 per cent businesses earning less than \$100,000. This includes a large number of non-employing businesses. More than 54 per cent of businesses have annual turnover between \$100,000 and \$5 million. More than 2.5 per cent of businesses earn \$5million or more, while three businesses in the construction industry earn between \$50 million and \$200 million (Table 5).

3.4.6 Employment

The City of Swan has grown rapidly in the last 18 years from a residential population of 53,000 in 1991 to an estimated population of 114,560 in 2011, with most of this growth in the new urban areas of Ellenbrook, The Vines, Aveley, Ballajura, Stratton and Jane Brook. Population growth is expected to continue at an annual rate of 2.86 per cent bringing the total population count to around 190,000 people by 2031.

The number of City of Swan residents in work at in August 2011 was estimated at 53,360.

Table 6 compares the employment self-sufficiency (ESS) of the City of Swan with other council areas in the outer growth areas of Perth. The City's ESS of 84.6% is the highest of the listed councils.

Table 5: Annual turnover ranges by industry in the City of Swan in 2007

Industry	Zero to less than \$100k	\$100k to less than \$500k	\$500k to less than \$1m	\$1m to less than \$5m	\$5m to less than \$10m	\$10m to less than \$50m	\$50m to less than \$200m	Total number of businesses
Agriculture, Forestry and Fishing	270	129	39	21				450
Mining	12	18	6	3		3		42
Manufacturing	291	264	90	192	27	27		891
Electricity, Gas and Water Supply	6							6
Construction	774	747	114	138	27	9	3	1812
Wholesale Trade	132	141	69	102	18	12		474
Retail Trade	333	453	147	147	27	18		1125
Accommodation, Café and Restaurants	36	72	24	27	6	3		168
Transport and Storage	396	273	33	42	3	3		750
Communication Services	105	36	3	6				150
Finance and Insurance	201	126	36	27	3	12		405
Property and Business Services	789	570	129	114	15	24		1641
Education	27	12						39
Health and Community Services	57	93	15	15				180
Cultural and Recreational	81	78	12	18				189
Personal and Other Services	138	72	15	3				228
Total	3648	3075	732	855	126	111	3	8550

The ESS of the Shires of Kalamunda and Mundaring are included because combined with the City of Swan, they form the North-east sub-region. The ESS in the North-east sub-region was 66.7 per cent as at August 2011.

In June 2011, almost 80 percent of the 55,192 people working in Swan were employed in nine of the seventeen industry groups listed in Table 3. As shown in, Figure 28 manufacturing, retail and construction provide employment to almost 40 per cent of the workforce. A little more than 20 per cent of the workforce is displayed as "all other industry sectors". This group includes Wholesale Trade(5.3 per cent); Professional, Scientific and Technical Services (4.0 per cent); Administrative and Support Services (2.2 per cent); Mining (1.9 per cent); Agriculture, Forestry and Fishing (1.7 per cent); Rental, Hiring and Real Estate Services (1.7 per cent); Financial and Insurance Services (1.2 per cent); Arts and Recreation Services (1.2 per cent); Electricity, Gas, Water and Waste Services (1.1 per cent); and Information Media and Telecommunications (0.7 per cent).

If the City of Swan is to develop into a more mature, diverse and robust economy, the City's construction and population-based services jobs, whilst continuing to grow, should in time be replaced to a degree by higher value added jobs in high value, export-driven industries. With some very large projects commencing in the near future, it would be reasonable to expect an increased proportion of the workforce in the Accommodation, Retail, Construction and Health Care industry sectors.

Table 6: Employment Self Sufficiency in Growth Area Locations - 2011

Local Government Authority (LGA)	LGA Total Population	LGA Employed Population	LGA Labour Force	Total Jobs within LGA	Employment Self Sufficiency
Armadale	62,297	29,745	31,452	13,135	41.8%
Cockburn	89,685	46,287	48,366	29,744	61.5%
Kwinana	29,228	12,731	13,650	11,529	84.5%
Mandurah	69,903	27,729	29,854	16,885	56.6%
Rockingham	104,106	48,097	51,116	24,231	47.4%
Serpentine/Jarrahdale	17,745	8,812	9,171	3,163	34.5%
Swan	108,460	53,360	56,056	47,436	84.6%
Kalamunda	53,567	27,143	28,179	13,152	46.7%
Mundaring	36,531	17,668	18,388	7,845	42.7%
North-east sub-region	198,558	98,171	102,623	68,433	66.7%
Wanneroo	152,078	73,382	77,135	31,828	41.3%
Total/Average	633,502	300,143	316,800	177,951	56.2%

Source: ABS Census 2011 Working Population Profiles and ABS Census 2011 Table Builder. Updated 4 December 2012.

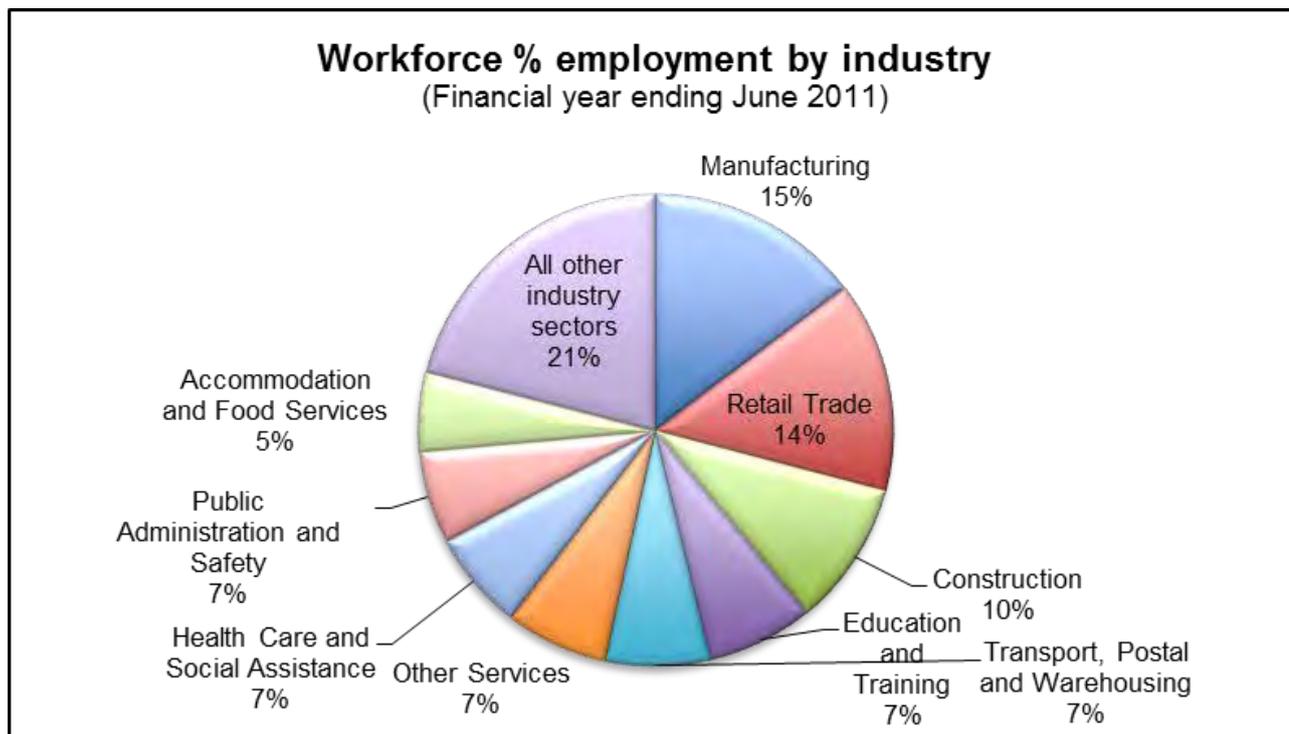
Note: LGA population, employed persons and labour force based on 'place of usual residence'. Total jobs within LGA based on 'place of work'.

3.4.7 Regional Economic Centres

Midland - Midland has the largest cluster of businesses within the City of Swan. Located 20kms north east of the Perth CBD, it is the gateway to regional Western Australia with Great Eastern Highway, Great Northern Highway and the Midland train line all leading into Midland. The catchment area for Midland is far wider than the City of Swan and includes the Perth Hills, Chittering, Gingin, the Wheat belt and the Avon Valley, giving it a large customer catchment and employee base.

The redevelopment of Midland's town centre is being undertaken by the Metropolitan Redevelopment Authority (MRA) and provides 256 hectares of land in Midland for mixed-use development, including housing and apartments, cafes/restaurants, retail shops, bulky goods shopping centre and the State's largest police complex. An independent economic impact report shows that the project will inject more than \$1.2 billion into the local economy over the next 20 years and create around 7,500 jobs. Major facilities include Western Australia's largest police complex, with a communication centre, forensics and traffic operations, a GP Super Clinic and new general hospital which opened in 2015.

Figure 28. Workforce per cent employment by industry June 2011.



Source: DEEWR

Midland has a diverse mix of land use, with the largest sector being shop/retail, followed by residential, office and business use, and small amounts of manufacturing, service, storage and distribution, primary rural, health & welfare, utilities and communications. It is home to retailing, commercial and industrial enterprises and major offices as well as a range of government, recreation and community facilities. Large format floor space within Midland has also increased significantly, with two large bulky good sites released on Clayton Street. When fully developed there will be a total floor space of 50,000 square metres of large format commercial premises.

In partnership with the MRA, the City of Swan is working to revitalise and redevelop Midland, based around the historic Midland Railway Workshops with landscaping, street furniture and public art to make Midland a more desirable place to live and increase its economic productivity. The Railway Workshops will have a focus on creative industries, education and heritage activities with dwelling units providing a rare lifestyle opportunity. The 11-hectare Midland Oval precinct in the heart of Midland has been identified as one of four key revitalisation projects.

The Eastern Enterprise precinct (along Clayton Street) will provide for retail and commercial developments and expansion. In addition, the Swan Health Campus, a 326-bed general hospital, is already built in the MRA area. It is the fourth largest hospital in Western Australia and could act as a catalyst for medical-related businesses and industries to locate nearby.

Ellenbrook - Ellenbrook is 20 kilometres in a straight line from Perth's CBD and is one of the fastest growing residential areas in Western Australia. The area has been designed and developed as a self-sufficient community, with the potential for considerable business and population growth. The town centre occupies 150 hectares and when fully developed will have a net leasable area of approximately 217,000 square metres for retail, commercial and light industrial uses. With population growth projections to 2031 almost doubling the current population of some 27,000 people, Ellenbrook will experience rapid expansion of its retail, commercial and services sectors.

Guildford / Swan Valley - Guildford is one of three towns established in 1829, when Western Australia was settled and is the only town in Perth on the Register of the National Estate. With its rich heritage, historic buildings, boutique retail sector and proximity to the Swan Valley, Guildford is a major tourism destination and supports a range of tourism-orientated businesses.

The Swan Valley and its surrounds are one of Western Australia's premier tourism regions, attracting more than 480,000 day-trippers each year. It is a renowned grape-growing region containing world-class wineries, restaurants, galleries and accommodation. The Swan Valley is a mere 16 kilometres from Perth's CBD and is in close proximity to Perth's international and domestic airports - a significant advantage over other tourism destinations. The economic future of the Swan Valley is inextricably linked with the viticulture and tourism industries and is covered in more detail in Part 2 Section 3.6.

Malaga - Malaga has been one of the fastest-growing industrial and commercial areas in the City. It covers 660 hectares and has had a significant increase in floor space available for businesses since the mid-1980s. It is the major industrial suburb for the City of Swan and is designated a Strategic Industrial Area for Western Australia.

Malaga is centrally located in the eastern suburbs, just 12 km from the Perth CBD and 15 minutes from the Kewdale interstate road/rail freight terminals and the Perth Domestic and international airports. Major transport networks nearby include the Reid and Tonkin Highways and the Mitchell Freeway, giving easy access for customers and transportation of goods. Marshall Road and Beach Roads separate Malaga from the residential suburb of Ballajura. Surrounding suburbs of Ballajura, Beechboro and suburbs within the City of Wanneroo provide a large and accessible labour pool and residential consumers.

It is estimated that in 2008, more than 10,000 people worked in Malaga and that there were more than 2000 businesses, with major industries including manufacturing, wholesale/distribution, business/professional services, trades, retail and construction/building. Of these businesses, 28 per cent were in the manufacturing sector, followed by 14 per cent in the wholesale sector and 12 per cent in the business/professional sector.

The draft Malaga Land Use Study has been completed by the City and its core objective is to identify mechanisms to generally 'free up' light industrial land in appropriate locations for retail, office and bulky goods developments. The study recommends the following:

- identifying Malaga as a Strategic Industrial Centre in LPS17;
- progressing zoning changes and land use permissibility in appropriate locations to align future land use patterns with strategic planning expectations for Malaga as identified in the Retail Needs Assessment 2011;
- cessation of Additional Uses; and
- various policy changes and new definitions added to Schedule 1 of LPS17.

3.4.8 Perth and Peel @3.5million and employment self-sufficiency

The companion document to Perth and Peel @3.5million, the North-East Sub-Regional Planning Framework states that in 2011, the North-East sub region had an employment self-sufficiency rate of 80.3% and it is projected to increase to 85.8% by 2050. This current data achieves the previous Planning Framework's (Directions 2031) employment self-sufficiency target of 75%.

Collaboration across government and with the private sector is required to facilitate economic development and improved employment self-sufficiency within the sub-region, particularly to attract strategic economic and employment land uses and maximise the use of existing infrastructure. The City aims to create employment opportunities which utilise local labour force skills to increase employment self-sufficiency.

Employment opportunities will continue to be provided in the regional economic centres and new growth areas such as the Urban Growth Corridor. The Swan Urban Growth Corridor Sub-Regional Structure Plan, released in 2009, indicates that approximately 4,300 local jobs are likely to be created in that corridor alone and as indicated earlier, the Midland centre is predicted to provide an additional 7,500 jobs over the next 20 years.

In order to increase employment self-sufficiency, the City must ensure that its local planning scheme and associated land use planning policies will facilitate the provision of future industrial and commercial areas.

3.4.9 Future Industrial and Commercial Land

Forecasting demand

The Economic and Employment Lands Strategy: non-heavy industrial (EELS, Department of Planning, Lands and Heritage 2012), was predicated on the need to identify future land for industrial use, resulting from an identified shortfall in industrial land, witnessed in the late 1990s and early 2000s. To determine how much land needs to be identified to resolve this shortfall, demand modelling was undertaken to enable forecast demand rates to be determined. A forecast model was developed based on key data considered relevant to informing future demand levels.

The forecast additional demand for industrial land in the Perth and Peel regions from 2006 until 2031 is calculated to be approximately 4726 ha based on a “business as usual” scenario, using WA Tomorrow population projections and parameter values that are considered to show consistent trends.

Based on a population driven model, the sub-region where the greatest demand for industrial land can be anticipated is in the North-west sub region where 1,646 ha of industrial will be needed by 2031.

EELS has identified locations where possible future industrial sites may be considered to accommodate future demand and economic growth. These priority and possible future industrial sites provide a land bank for industrial land supply over the short to medium term.

The future drivers for the North-east sub-region are population growth, sustained levels of economic growth and employment needs and close proximity to existing transport and freight routes. With a forecast demand of 1,646 hectares by 2031, and based on existing data on the available land supply in the pipeline, the sub-region will encounter a deficit of 117 hectares if no additional land is released to the market by 2031. Hence, it is important to identify future industrial sites to provide a land bank for industrial land supply in the sub-region.

Table 7 identifies the locations of possible future industrial land however; the timing of their release is dependent on various factors including proponents' willingness to progress the necessary planning, environmental and servicing investigations to support the rezoning process. Further studies need to be completed to investigate the adequacy, scale and location of future industrial land in the North-east sub-region and specifically, in the City of Swan.

Hazelmere

The City of Swan and the Department of Planning, Lands and Heritage have developed a Hazelmere Enterprise Area structure plan for 1241 hectares of primarily industrial land in Hazelmere, immediately north-east of Perth Airport and south of the Midland town centre. The Structure Plan will provide a strategic framework and the statutory basis to ensure landowner certainty and a mechanism for developer contributions. The structure plan was the basis of MRS amendments to zone the land as industrial that were approved by the Minister in December 2014.

Whiteman

Government owned (WAPC) and managed, the proposed Whiteman site is less likely to present land assembly issues that may inhibit early development opportunities. The area is serviced by effective transport linkages such as Gnangara Road, Alexander Drive, Beechboro Road, Hepburn Avenue, Reid Highway and the future Perth-Darwin highway. The area is also located close to the existing Malaga industrial area which will act as a strong impetus for development with opportunities for linkages and synergies with existing development. A small portion of the area is within the Gnangara Mound Priority 1 Protection Area as shown in LPS Map 5; hence the total area of unconstrained land has been calculated to be approximately 63.4ha.

Table 7: Future industrial land distribution in the North-east sub-region

Name	Zoning Status (MRS)	Stage (if relevant)	Gross Area
Future short term non-heavy industrial sites (0-4 years)			
Forrestfield (1)	Urban, Parks and Recreation	N/A	71 ha
Potential medium term non-heavy industrial sites (4-10 years)			
Hazelmere south	Rural	N/A	100 ha
Whiteman	Rural	N/A	85 ha
North Ellenbrook	Rural	N/A	2,428 ha
Forrestfield (2)	Rural	N/A	22 ha
Forrestfield (3)	Rural	N/A	108 ha
Bullsbrook south	Rural	N/A	471 ha
Potential long term non-heavy industrial sites (strategic land bank sites) (10+ years)			
Bullsbrook Townsite Precinct (north)	Rural	N/A	115 ha
Total gross area			3,400 ha

Source: EELS 2012

Note: The areas provided in this table exclude land that is already zoned "Industrial" in the MRS. Please note that the total areas of these sites are still subject to investigation.

North Ellenbrook

Comprised of approximately 75 land parcels, the site has excellent freight network linkages with freight rail to the west. It is also in close proximity to Great Northern Highway (high-wide load corridor) and the proposed Perth-Darwin highway runs through the middle of the site. The site is adjacent to the Ellenbrook town site and strategically located north of the Urban Growth Corridor areas of Brabham, Dayton and Caversham which combined, reflect a considerable future workforce. There are a number of environmental considerations such as the presence of wetlands, the Western Swamp Tortoise Habitat protection area and associated buffer zone and Bush Forever sites. Other constraints in the North Ellenbrook area are buffers associated with Basic Raw Material extraction as depicted in LPS Map 6. Although these types of buffers may not restrict future light industrial uses, they almost certainly would restrict the development of sensitive land uses such as residential.

Bullsbrook

Although traditionally a predominantly rural suburb, the release in 2008 of the Bullsbrook Commercial Centre offers great scope for expansion in the commercial and light industrial land use capability of Bullsbrook. Bullsbrook is on the Great Northern Highway, 25 kilometres north of the Midland Strategic Regional Centre. It is well serviced by several major transport networks - Great Northern Highway and Railway Parade/Brand Highway to the north, Chittering Road to the east and Neaves Road to the west. Bullsbrook is also adjacent to the State rail network, providing an opportunity for the development of an intermodal freight transport hub. The site is further strengthened by linkages to the planned Perth-Darwin National Highway via Stock Road. The City's Bullsbrook Townsite District Structure Plan and Rural Planning Strategy, will facilitate further industrial, commercial and residential growth in Bullsbrook. A portion of the south Bullsbrook future industrial area has been identified as a future Regional reserve; hence preliminary calculations by the City indicate that the area of future industrial land has been reduced from 471ha as shown in Table 7 to 424.2 ha.

3.4.10 Future Intermodal Terminal Hub

Intermodal terminals are strategic points in the transport distribution network that enable freight to be transferred from road to rail and vice-versa and if properly planned and developed, would have the characteristics of a specialised activity centre.

The north-east corridor is a strategic location for an intermodal terminal and the demand for one is driven by forecast population growth, freight origins and destinations, the continued resource project development and the location of existing and planned intermodal terminals within the Perth metropolitan area. The development of an intermodal terminal would be expected to create demand for complementary land uses such as a road train assembly area, warehousing and distribution, truck maintenance, repairs and sales and manufacturing and light industrial land uses.

In 2011, the Department of Transport undertook an assessment of site options for an intermodal terminal located in either South Bullsbrook or North Ellenbrook. The conclusion of the draft South Bullsbrook/North Ellenbrook Intermodal Terminal study is that the preferred site for the intermodal terminal would be in South Bullsbrook as the North Ellenbrook area under investigation contains a number of significant environmental constraints. Two site options were presented - one east of the railway line and one west. The City's preferred site is east of the railway line where a current amendment to the MRS proposes rezoning rural land to industrial so that a future industrial estate can be created in South Bullsbrook as recommended by EELS 2012.

The Minister for Planning has granted approval to the declaration of a planning control area (Planning Control Area No.150) for Bullsbrook Intermodal Transport Facility as shown on Western Australian Planning Commission (WAPC) plan number 3.2768. The purpose of the planning control area is to protect land that is required for the future Bullsbrook Intermodal Transport Facility. The declaration remains in effect for a period of five years from the date of publication of the notice in the Government Gazette (26 June 2020) or until revoked by the WAPC with approval by the Minister, whichever is the sooner

3.5 Retail and Commerce

3.5.1 Hierarchy of Centres

The City contains a large and diverse number of retail-based activity centres ranging from Midland which serves a higher-order role for residents and visitors, to smaller neighbourhood centres and local shops. Refer Figure 29.

Retail Needs Assessment and Local Commercial and Activity Centres Strategy (LCACS)

A Retail Needs Assessment was undertaken in 2011 and updated in 2017 for the City which has identified the demand and supply trends for retailing in the City of Swan recommends a future network of activity centres and provides the basis for strategic planning initiatives. It has outlined nine principles as having an important bearing on the future development of a viable and sustainable network of Activity Centres in the City of Swan. These are broadly described as:

- Refine the Centres hierarchy;
- Support the existing retail hierarchy;
- Maximise the retention of retail expenditure;
- Consolidate activities in centres;
- Recognise the importance of Midland Strategic Metropolitan centre;
- Encourage a wide mix of activities in activity centres;
- Consolidate the network of activity centres;
- Promote integrated development in centres; and
- Encourage well-planned clusters of showrooms.

Retail is the second largest employer in the City of Swan accounting for 12 per cent of total jobs in the municipality. According to the Retail Needs Assessment, the average per capita retail spending by residents in the City is estimated at \$11,670 in 2011 compared with \$12,020 across the Perth metropolitan area.

The size, location and ultimate growth of retail centres needs to be managed through strategic and statutory planning controls such as structure plans that are consistent with SPP 4.2. In 2011, the total retail floor space in the City was approximately 319,400 square metres comprising 89,600 square metres in food retail categories, 212,300 square metres in non-food categories and 17,500 in retail services. The Midland Regional Centre plays a vital role in this regard with a total retail floor space of approximately 134,500 square metres comprising more than 40 per cent of total retail floor space. In the same period, the retail sector generated total sales of approximately \$1,524 million of which 69 per cent was to residents of the City and the balance from non-residents of the City. This captured spending is an important contribution to the City's economy and is generated largely from Midland, the homemaker retail at Malaga as well as from tourist visitation in the Swan Valley.

Escape spending, which is the extent to which retail spending by residents in a region is directed to retail locations outside that region, was approximately 25 per cent of total retail spending or \$345 million which is a moderate degree of escape spending in the context of a metropolitan council. If no new retail development is undertaken in the City of Swan, escape spending can be expected to increase due to population increases and real growth in per capita spending. This is particularly true of areas close to the outer edges of the City as residents will increasingly choose to shop in an adjacent municipality. A reduction in the level of escape spending could be achieved through the encouragement of investment in existing centres, the provision of centres in the growth areas and the continued expansion of Midland Centre.

Trends in the Retail Sector - Retail is one of the most diverse of industries, with individual retailers ranging from single owner-operators to family businesses, medium-scale operations, national chains, large supermarket and department store corporations, big-box/bulky goods retailers, and the like. It is this variety of retail offering that makes retailing a dynamic and exciting industry, and a profitable one for those who offer the right mix of goods and services to a market that demands them. A well-functioning and efficient retail sector which meets the needs of consumers can make a substantial contribution to an area's economic strength, in addition to enhancing the general lifestyle, interests and well-being of a community.

While the diversity of retailing is likely to continue, fundamental shifts are occurring in the structure of the retail industry which need to be taken into account. In particular, a trend over the past 20 years has been for smaller operators to lose market share to the retail 'giants' such as supermarket chains, department stores, national homemaker chains, and so on. These larger operations, increasingly agglomerated under single ownership (e.g. Woolworths and Wesfarmers) do not always seek locations in the traditional shopping strip – they often prefer an enclosed shopping centre or free-standing sites with good exposure.

There are signs, however, that traditional strip and town centre centres are recapturing some market share through re-focused and improved marketing, as well as a growing preference by consumers for 'main street' style shopping compared with enclosed shopping centres.

The shopping public are continually redefining their demands for goods and services (in terms of types of goods and services demanded and the total level of expenditure on retail items), and their expectations of the way in which these are sold to them. New considerations are being applied to shopping 'decisions': for example, competition for people's disposable income from an increasing range of activities and products (travel, dining-out, gambling, mobile phones, internet access and a whole range of other activities), and higher levels of personal debt which can make shoppers more price-conscious.

The types of retail goods and services purchased by shoppers are also constantly evolving. For example, since the mid-1990s a general shift has occurred in retailing which places increased focus on entertainment and leisure merchandise and services, rather than traditional household items, clothing and the like. Consumers are also being attracted to places where retail purchases can be made in a time-efficient manner.

Retail Growth - Total retail spending in 2011 was estimated at \$1,398 million and forecast to increase to \$3,235 million by 2031. Growth in retail floor space over the next 20 years is predicted to be between 241,000 square metres and 280,700 square metres which are expected to be distributed across a hierarchy of existing and proposed new centres. This growth will be generated primarily as a result of significant population growth in infill and Greenfield areas, real growth in per capita spending as a result of income and economic growth and increases in 'captured' spending due to increased tourism and visitation. Increased captured spending could be achieved through various means such as improvements to the Midland centre, increased

tourism and visitation, continued growth in the homemaker retail sector and the continuing role of Midland as the shopping destination for the large rural hinterland. A range of local centres, small and large neighbourhood centres are planned for the Urban Growth Corridor and other Greenfield areas. The significant growth expected will mean that the functionality and designation of the various centres will need to be monitored to ensure that future residents' needs are met.

Centre-based planning - The Retail Needs Assessment recommends that the City continuously monitor key centres such as Midland, Ellenbrook and Malaga to ensure that the appropriate centre-based planning mechanisms are up-to-date as part of a strong centre-based planning policy framework. The City should also consider a comprehensive review of the current retail development framework for Ellenbrook (including Aveley and The Vines) and Bullsbrook in the short-term; the Urban Growth Corridor in the medium-term and Upper Swan and Gidgegannup in the long-term.

'Homemaker' Centres - The growth in retail floor space includes the increasingly popular homemaker centres that in a land use sense, are classified as 'showroom/bulky goods'. The current trend is for homemaker type retail development to occur in industrial estates, particularly, Malaga. Ad-hoc development of such sites has been occurring and the key issue is how to accommodate this popular form of retailing while at the same time encouraging sustainable forms of development that uses infrastructure efficiently, can be accessed by other modes of transport, has improved visual amenity and provides a net community benefit.

3.5.2 Midland - Strategic Metropolitan Centre

The Midland Strategic Metropolitan Centre serves the City of Swan, the broader North-east sub-region of Perth and a large rural hinterland. Midland will continue to be the focus for higher-order shopping and the principal location in the North-east sub-region for office and commercial activity, community and government functions such as the Swan District health campus and major cultural centres. Midland will be the focus for high density residential living which will assist in the support of a wide range of retail, commercial and social facilities.

As with all major strategic metropolitan centres, increasing retail activity will have an impact on car parking and centre accessibility. The competing needs of shoppers, workers, residents and commuters will need to be resolved in the context of the broader transport network including public transport, cycling and walking.

The Metropolitan Redevelopment Authority controls a large portion of the Midland Strategic Metropolitan Centre and has developed a planning framework to manage and facilitate development proposals in the area under its control. As mentioned earlier in 3.4.6, the redevelopment of the Midland town centre is estimated to result in an additional 7,500 jobs. The remainder of the Centre is under the control of the City with LPS17, the Midland Activity Centre Structure Plan and SPP4.2 being the primary planning documents guiding the future retail growth of the Centre.

A Midland Activity Centre Structure Plan has been prepared to guide future development in the Midland Activity Centre (Midland Strategic Metropolitan Centre) which is larger in area than the area controlled by the MRA. The number of jobs in the entire Midland Activity Centre area, inclusive of the area under the MRA's control is forecast to grow by 18,000 over at least the next 25 years. The full build-out capacity of the Midland Activity Centre indicates that there is the potential for 21,900 employees with no specific time frame stipulated.

3.5.3 Local Commercial and Activity Centres Strategy (LCACS)

Based on the above Retail Needs Assessment, the City has replaced its Commercial Centre Strategy 2004 with its new Local Commercial and Activity Centres Strategy (2017), which ensures the City's centre planning framework to be in line with the objectives of SPP 4.2 (Appendix 1 refers). A summary of the Local Commercial and Activity Centres Strategy incorporating the Retail Needs Assessment is listed in Appendix 2.

The Local Commercial and Activity Centres Strategy (LCACS) establishes the centre hierarchy which is an effective means of providing high-level guidance in terms of the location, scale and nature of investment and land uses intended for activity centres. Policy must reflect the very different role and function of various centres within the hierarchy, and create a coherent network of activity centres which meets the various needs of the community at the locations where these needs can, and should, be met. Planning the provision of transport infrastructure and other aspects of urban development will be influenced by activity centres.

The hierarchy of centres for the City of Swan contains the following typologies:

- Strategic Metropolitan Centre (SMC): The Midland SMC is the only SMC in the City of Swan and provided the higher order retail and other facilities and services to the north-east region of Perth. Midland SMC will be a focus for future development.
- Secondary Centres: Ellenbrook is a development secondary centre that will serve the higher order needs of the developing urban growth corridor.
- District Centres: Three future District Centre at Brabham, The Broadway (Ellenbrook) and Bullsbrook. These centres will firstly be developed as neighbourhood centre before expanding to serve a secondary centre role.
- Neighbourhood Centres: A total of 21 existing and future neighbourhood centres that primary provided day-to-day and weekly shopping and other services.
- Local Centres: A total of 19 local centres are located throughout the City of Swan; these centres provide a variety of day-to-day convenience services.
- Mixed Business Areas: Malaga is currently the only major Mixed Business Area in the City of Swan; however, potential may exist for a new Mixed Business Area in Bullsbrook in the future.

Core Principles for City of Swan Activity Centre Policy

The LCACS identifies five core principles for activity centres in the City of Swan:

Principle 1: Support a viable activity centres hierarchy

The activity centres hierarchy will guide future planning and development of centres, including ensuring centres are appropriately located having regard for their individual role within the hierarchy.

Principle 2: Encourage a genuine mix of uses in centres

Activity centres will be planned and designed in a manner that encourages a genuine mix of land uses, reduces the need to travel and which creates vibrant focal points for the community.

Principle 3: Drive local economic development opportunities

Activity centres will drive economic development and prosperity through the attraction of investment that delivers local employment opportunities, serves the needs of local communities and attracts spending from beyond the City of Swan.

Principle 4: Support new opportunities which complement the centre hierarchy and provide positive outcomes for the community

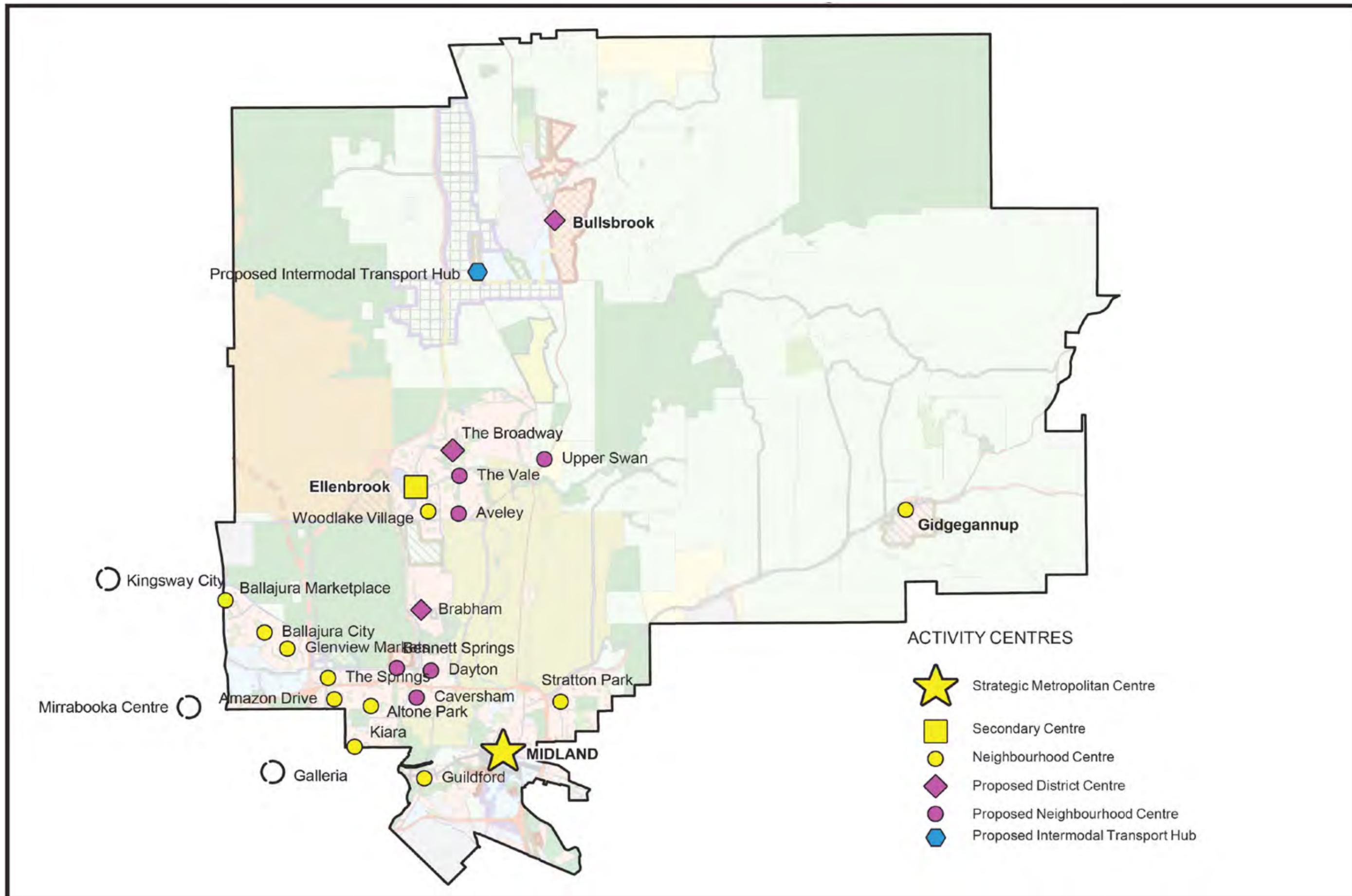
Where the activity centre hierarchy is not undermined, Council will support projects that respond to future changes in retail and commercial markets and which create positive outcomes from an economic, community, social and environmental perspective.

Principle 5: Support Midland as the Strategic Metropolitan Centre serving the region

Council will reinforce the role of Midland Strategic Metropolitan Centre as the higher-order centre serving the municipality. Policy will also reflect the importance of maximising Midland SMC's future opportunities in order to drive positive economic and social outcomes for the community.

The Strategy provides a detailed list of actions (Appendix 2) that support the above principle for activity centre policy, in addition to specific actions for each centre.

Figure 29. Hierarchy of Activity Centres in the City of Swan



3.6 Tourism and Visitors

3.6.1 Swan Valley Region

Background

The Swan Valley is the oldest and most visited food and wine tourism destination in Western Australia. It is also the closest wine region to any capital city in the southern hemisphere, located just 25 minutes from the Perth CBD and 10 minutes from the Perth Domestic Airport. It supports a diversity of industries that create an economy that contributes approximately \$161 million to gross regional product and employs approximately 2,000 people. The tourism sector in the Swan Valley is estimated to generate approximately 350,000 day visits annually and contributes 5% of the City's total gross regional product.

The landscape is rural, scattered with vineyards, equestrian properties and a number of recreational open spaces. The Swan River runs through the centre of the Valley but visitor access to it is limited. Picturesque scenery and ambient surroundings make an ideal setting to showcase the abundance of fine food and wine that the Swan Valley is renowned for. Many family run businesses operate within the Valley with over 150 places for local, interstate and international visitors to relax, discover, taste and purchase some of the highest quality food and wine offerings in the City of Swan.

The Swan Valley also boasts an award winning Food and Wine Trail which meanders for 32 kilometres through the heart of the Valley and a Heritage Cycling Trail, nominated as one of Western Australia's Top 50 trails.

The Valley showcases a wide variety of facilities, attractions and events which include breweries, wineries, cafes, fine dining restaurants, art galleries, local produce, accommodation, function centres, concert venues, and an annual event known as "Spring in the Valley" which attracts some 70,000 people each year. Other events which feature highly in the annual calendar include Taste of the Valley, Seafood and Shiraz, Sandalford Concert Series, the Swan Valley Wedding Open Day, and the Great Valley Rally just to name a few.

The Swan Valley experiences some seasonality throughout the year; however September through April would be considered its peak period along with weekends and public holidays throughout the year.





Transport

Most visitors self-drive to the Valley, however interstate and international tourists often take advantage of escorted tours. In recent years, a growing number of people have been cycling to and from the region. Additional bus and coach services are available during major events such as the “Spring in the Valley”.

Competitive Advantage

- The Swan Valley region thrives on several key factors. These include the following:
- Easily accessible
- Attractive natural assets and unique heritage
- Diverse range of attractions
- Vineyards within minutes of the City centre
- Established food and wine destination

A combination of these factors gives the Swan Valley a leading and competitive edge over other tourism destinations throughout the Perth metropolitan area.

3.6.2 City of Swan Visitor Summary

Visitation

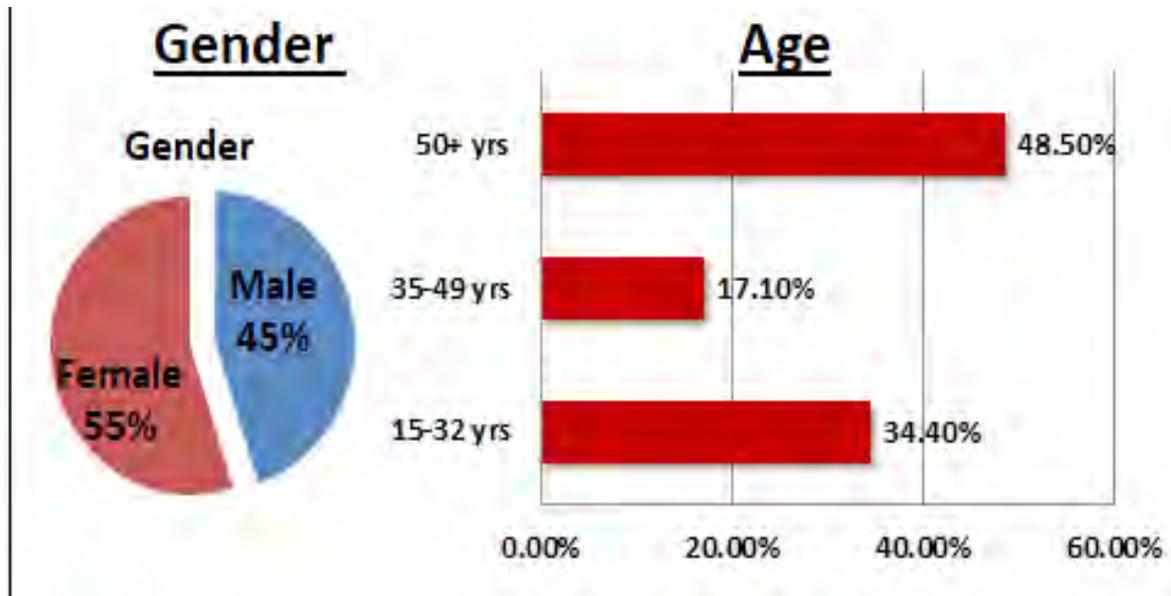
The estimated current visitation is 1.4 million people annually.

Estimated Annual Visitors	Intrastate Interstate International	86% 5% 9%	Intrastate Visitors: Northern Suburbs 52% Local Suburbs 13% Southern Suburbs 27% Other 8%
Estimated Visitor Nights	Domestic International	42% 58%	205,700 285,500
Estimated Expenditure	\$89.9 million		

(Source: Tourism WA)

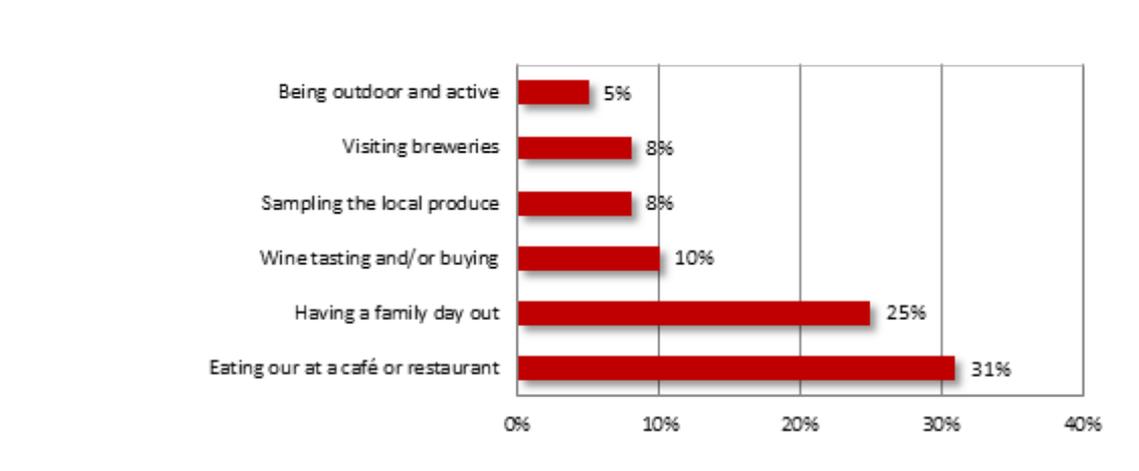
Visitor profile

Figure 30. Swan Valley visitor profile



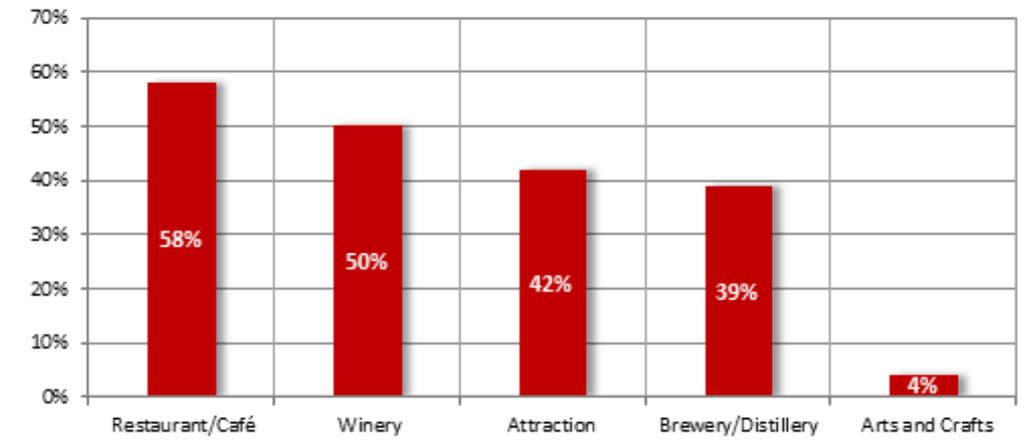
Source: Patterson Research Group – Swan Valley Visitor Survey April – May 2016

Figure 31. Main reasons for visiting the Swan Valley



Source: Tourism WA - Day Tripper Study – 2009 (Three year average 2006 + 2007 + 2008)

Figure 32. Places visited in the Swan Valley



Source: Tourism WA

Purpose of Visit	
Table 9: Purpose of visiting the Swan Valley – Years ending Dec 07, 08 and 09.	
Please note: Purpose of Visit is a multiple response question. Totals may not add up to 100%.	
Estimated Domestic Visitors	
Holidays or leisure	42%
Visiting friends and relatives	42%
Business	7%
Other	10%
Total	-
Estimated International Visitors	
Visiting friends and relatives	51%
Holiday/ pleasure	39%
Business	3%
Other	9%
Total	-
Source: Tourism WA	

Accommodation

There are 20 accommodation providers in the Swan Valley including Bed and Breakfasts, Farm Stays, Resorts, Self-Contained, Caravan Parks and Retreats. There are 253 rooms in total which enjoy 80% plus occupancy on the weekends. More than half the visitors stay with friends and relatives when visiting the City followed by hotel, resort, motel or motor inn as the next most preferred accommodation. The peak season falls generally in the months of February, March, October and November.

Estimated Domestic Visitors	
Friends or relatives property	57%
Hotel, resort, motel or motor inn	21%
Other	12%
Estimated International Visitors	
Home of friend or relative	59%
Hotel, resort, motel, motor inn	16%
Caravan	10%
Source: Tourism WA	

MONTH	2009	2010	2011
January	50.2%	41.0%	45.5%
February	63.3%	52.4%	58.6%
March	53.5%	59.3%	58.5%
April	49.6%	56.7%	48.4%
May	50.8%	51.2%	50.8%
June	47.2%	44.4%	50.6%
July	40.1%	46.6%	42.6%
August	40.5%	44.9%	56.2%
September	48.3%	57.5%	54.3%
October	50.6%	47.2%	54.7%
November	55.4%	49.1%	62.3%
December	50.1%	49.2%	44.0%
Annual Average	49.8%	49.9%	52.1%
Source: Tourism WA			

3.6.3 Planning Framework

The Swan Valley is a highly recognised and prized tourism asset in the City of Swan. It is governed by a hierarchy of planning legislation framework which affect planning and development in the Swan Valley, specifically by the Swan Valley Action Plan. Other subsidiary legislation such as those governing agricultural practices and water usage will influence the overall land use and development in the Swan Valley.

The City of Swan's development, planning and marketing of tourism is further guided by the Economic Study for the Swan Valley.

The current planning and legislative framework cannot adequately address the conflict of land use between different activities in the Swan Valley. Conflict is apparent between operators that represent different industry sectors (e.g. tourism versus agriculture) and within individual industry sectors (breweries versus wineries). The conflict reflects a dichotomy between the past and future uses and activities to be supported in the valley. This dichotomy highlights a need to clarify the relevance of the objectives under the SVPA and all subsidiary legislations affected by the Act.

The viticulture industry provides an important underpinning economic base for the tourism industry. However, there are several environmental and economic constraints and challenges faced by the industry. The main issues relate to land use, labour supply, water allocation and rights and the availability of capital. These need to be adequately addressed to secure the industry's long term growth and viability.

The Way Forward - Swan Valley Land Use and Management

In December 2013, the WAPC released The Way Forward - the Swan Valley Land Use and Management prepared by the Department of Planning, Lands and Heritage in collaboration with the City of Swan under the stewardship of the Swan Valley Planning Committee. This report aimed to clarify the desired vision for the Swan Valley, identify the factors driving or influencing its future development and provide guidance for managing land use and other matters in order to facilitate the achievement of the vision.

The report made a number of findings under the following broad headings:

- Statement of Support
- New Regulatory Framework
- Amendments to the SVPA
- Aligning the City of Swan planning scheme, plans and other statutory documents to align with the new Act
- Supporting Agricultural Production and related uses in the Swan Valley
- Transport and other essential services
- Implementation and
- Interim Actions during the transition period.

Protecting Agricultural land

With respect to supporting agricultural production and complementary economic activities in the Swan Valley, which underpin the Tourism industry, a number of key recommendations were made:

- Identifying and protecting priority agricultural land from alienation or operational constraints imposed by incompatible adjacent land uses;
- Reviewing water supply security, including groundwater allocation, use, re-use and management;
- Restricting subdivision of priority agricultural land;
- Finding innovative alternative land uses that will retain the land in agricultural production to support landholders who wish to remain in their homes but who are no longer able to willing to engage in agricultural production;
- Investigating and minimising barriers to viable agribusinesses and complementary economic activities;
- Promoting and facilitating sustainable practices to support viable agricultural production;
- Defining, planning and managing the 'retail and community service nodes';
- Developing guidelines to clarify the definition of 'acceptable' tourism activities and facilities with a focus on agritourism; and
- Developing and publicly reporting on indicators to measure the progress of the Swan Valley towards the vision.

3.6.4 The Swan Valley Development Plan (2015)

The draft Swan Valley Development Plan (2015) was produced by the Department of Planning, Lands and Heritage in response to The Way Forward report and is a key element in the development of the new Swan Valley Action Plan. It sets out the strategic planning, development and land use vision for the Swan Valley and provides policy guidance and planning controls to ensure future development and land use are aligned with the Swan Valley vision. Currently, this document is under review by the Western Australian Planning Commission (WAPC). This Plan was recently revoked by the State Government to make way for the Swan Valley Planning Review. The Minister for Planning has also recently released the Swan Planning Action Plan. The Swan Valley Action Plan provides the Government's vision and actions for retaining Swan Valley as a productive rural area into the future.

The Movement Network

There are high levels of heavy vehicle traffic on Great Northern Highway. However, with the completion of NorthLink WA project in 2019, a reduction in the volume of freight traffic on Great Northern Highway should eventuate. However, the highway will continue to carry a proportion of Over-Size-Over Mass and High-Wide Load traffic and will remain an important part of the state's freight network into the future.

A long term goal of The Way Forward report is to refocus the Swan Valley as a primary destination rather than a throughway by creative transport solutions that seek, as far as practical, to progressively separate the local and tourist traffic from through traffic, particularly heavy vehicles. To this end, the Swan Valley Planning Review has set out a strategic approach to movement and access to ensure the Swan Valley remains accessible and safe. It has identified a hierarchy of routes that can accommodate freight traffic as outlined above, commuter traffic and both the high volume weekend and event traffic and the variable nature of tourist driver behaviour. .

3.6.5 Tourism Development Strategy 2015-2020

The City of Swan Tourism Development Strategy 2015-2020 sets a strategic direction to increase visitor market share, identifies a program of actions across key service areas and specific actions for the City's diverse places. In addition to guiding the City of Swan's investment, the Strategy provides shared targets and a framework for all industry partners.

The Strategy has identified opportunities to generate an additional \$132m visitor expenditure by 2020, supporting up to 1600 new jobs, developing a 7 day visitor economy focusing investment and initiatives on developing overnight visitation (particularly mid-week) and lifting brand awareness and preference for the Swan Valley (as the City's key visitor attractor).

The Strategy also has identified 5 catalyst projects as 'game changers' for the City of Swan:

- Industry to take the lead role in branding and marketing;
- Leverage the City's partners at Experience Perth and on the emerging Destination Perth agenda to profile the City of Swan to target markets;
- Develop targeted marketing that differentiates the Swan Valley and surrounds from other tourism regions;
- Support development of new products and experiences; and
- Establish an investment attraction policy and further develop an investment support program to facilitate new boutique accommodation in the Swan Valley.

Adding Value through Tourism 2010-2013

In addition, the City has a three year Tourism Implementation Plan "Adding Value Through Tourism 2010-2013(AVTT") which underpins the programs and support services provided by the City to the industry. The AVTT is based on three key approaches in respect of Product Development, Regional Marketing and Interpretive Infrastructure. While the Swan Valley is the key tourism asset of the City, there are plans to develop other destinations within the City's vicinity.

Moving forward, the AVTT program has also been split into two key focus areas; the Swan Valley and the rest of the City of Swan (primarily Midland, Guildford, Bullsbrook and Gidgegannup) and therefore two programs will be developed for the period July 1 2010 – June 30 2013.

The areas of Midland and Guildford contain most of the City's oldest built heritage and offer the greatest scope for intensifying heritage tourism visitation. A new Swan Valley Visitor and Noongar Cultural Centre is proposed to be built on the Barker's Bridge site in Guildford. This integrated tourism and interpretative/cultural facility will be a state of the art, multi-purpose visual gateway for the Swan Valley and Wadjuk Noongar communities. The synergies between the collocation of the Visitors Centre and Cultural Centre provide significant potential for economic sustainability via cottage industries and service provision to meet the increasing tourism demands throughout the region.

3.7 Open Space and Community Facilities

Quality public open space and community facilities are an important element of a community's urban fabric and quality of life. They assist in defining a community's identity and provide social, environmental and economic benefits to residents, workers and visitors.

3.7.1 Public Open Space and Community Facilities Strategy

The City has prepared a draft Public Open Space and Community Facilities Strategy (POSCFS) to guide the planning, development and maintenance of open space and community facilities within the City of Swan. POSCFS has been based on extensive research and analysis of the existing and future community profiles and the places across the City of Swan. The research and analysis included a socio-demographic profile, a review of approaches to public open space and community facilities planning, analysis of existing supply of open space and community facilities in the City of Swan, review of State and local policy settings, and an analysis of trends in public open space and community facility use.

Generally, the community is very satisfied with the provision and quality of the recreational facilities provided by the City of Swan. A survey of 300 residents as part of the City's draft Public Open Space and Community Facilities Strategy found a majority of respondents are satisfied with the provision of facilities in the City of Swan.

The greatest satisfaction was with passive and active outdoor activities and passive indoor activities with satisfaction above 88 per cent. Furthermore, an analysis of usage levels of open spaces within the City of Swan - sporting reserves in particular - indicates that larger multi-functional spaces are well used and appreciated by the local community. However, challenges exist around the provision of smaller parks, particularly in new developments, with usage levels being significantly lower and the City facing continued pressure to maintain existing standards within ever tightening operational budgets.

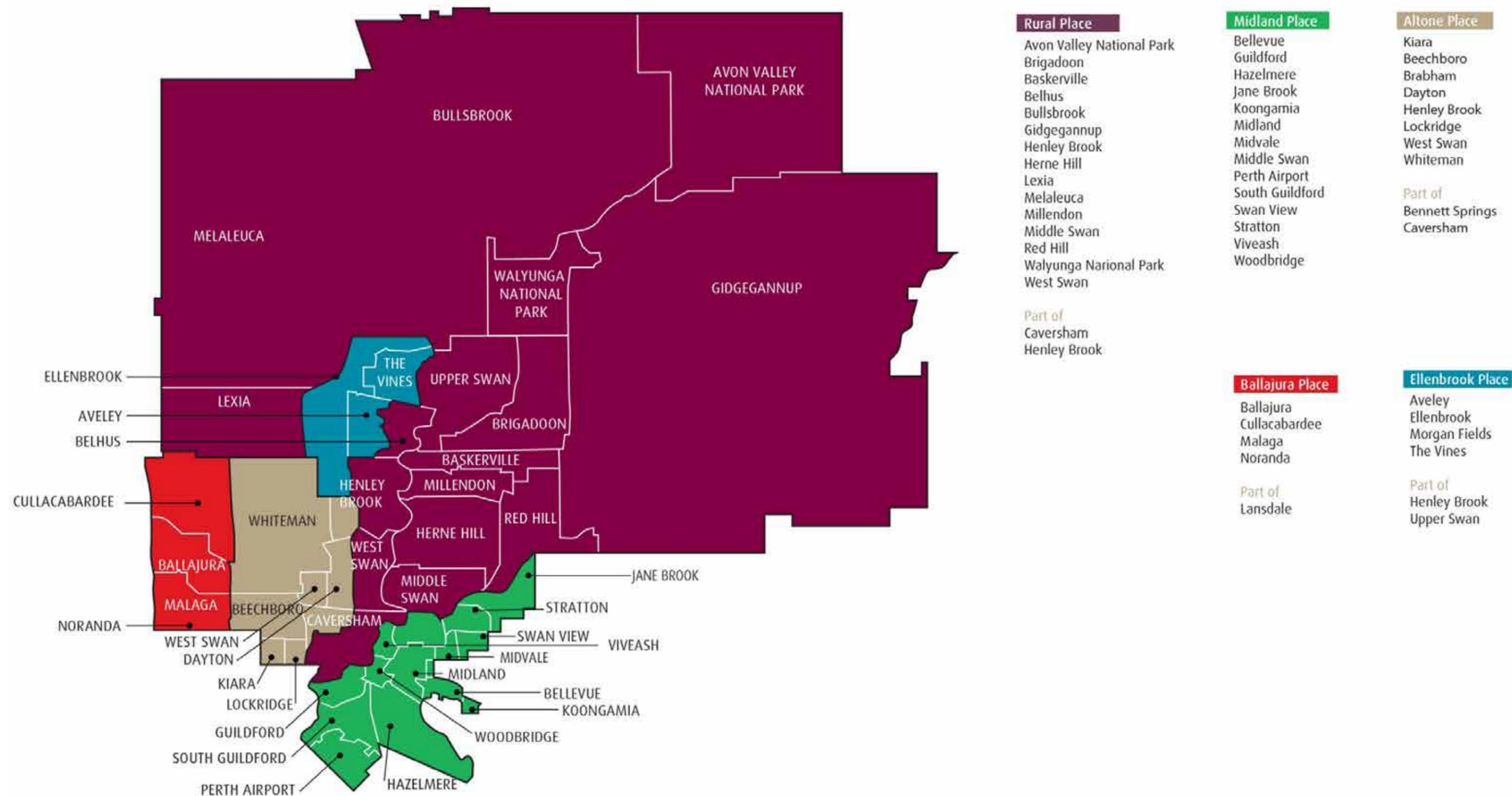
3.7.2 Quantity and Adequacy of Open Space

Liveable Neighbourhoods, has focussed on providing a network of spaces within a community, however the application of this policy has resulted in a reduction in the amount of recreational and sporting spaces provided within a community. Research commissioned by the Department of Sport and Recreation in 2010 and 2011 has shown a gradual decrease over time in the quantity of larger spaces provided principally for sporting uses. As a consequence, the City now has a greater reliance on district and regional open spaces to meet these needs, however State Government planning and provision of these areas in recent times has been inadequate to meet the growing demand within the City of Swan.

The policy of allowing smaller school sites to be collocated with POS has reduced overall provision of sporting or recreational space within new developments. As outlined in a range of research and planning documents, school sites were never intended to be included within open space calculations. The current policy of allowing schools to reduce their size when collocated with POS, has led to POS location and provision being driven by factors other than community need. Areas such as the urban growth corridor now have 'less' spaces available because all schools are collocated with adjoining playing fields. The future impact of this is yet to be determined and will require close monitoring.

The City strives to provide parks and reserves that encourage use by the broader community. Criticism of open space design in the past has focused on a belief that many parks were 'sales' items rather than functional spaces, and that designs have been too focussed on maintenance and cost factors rather than community use and functionality. On the other hand, park developments within the early stages of Ellenbrook were expensive to maintain and the City found that it did not have sufficient resources to continue to provide that level of service to the community. The City needs to balance community needs and expectations with the reality of provisioning and maintenance costs on an ongoing basis.

Figure 33. Place Planning Areas in the City of Swan



The current planning frameworks principally focus on the quantity of public open space provided within new areas of residential developments, which means that issues relating to quality, useability and functionality of public open space do not receive sufficient attention. POSCFCS recommends a minimum size of 3,000 sqm for a local park rather than the proliferation of non-functional 'pocket parks'.

It was previously believed that multi-level, apartment dwelling residents had lower requirements for open space, however, as experienced in the Eastern States, this has proven to be incorrect. It has been shown that residents appreciate and value open spaces regardless of their living arrangements. As a consequence, many higher-density areas are now reporting a shortage of functional open space and this is a factor to be taken into consideration when planning for the future recreational needs of residents in higher density areas.

Climate change has brought about reduced rainfall in many areas and this has placed additional pressure on traditional ground water supplies. Indications are that water supply will be further reduced and this will have a deleterious effect on the amount, type and quality of open spaces provided and ultimately lead to an increased use of alternative surfaces. State Government water policies and City of Swan strategies need to be focussed on the highest and best use of available water supplies.

3.7.3 Community Infrastructure Plans

The City is divided into 5 Place Planning Areas (Figure 33) in order to identify and address the specific needs of its community. To date, the City has prepared 4 Community Infrastructure Plans (CIPs) for the Place Areas of Altona, Ballajura, Ellenbrook and Midland to provide guidance on future planning, location, development and funding priorities for public open space and community facilities for each of the areas. The Rural Place CIP is expected to be focussed on rural townsites.

Development of the CIPs is based on currently available data, trends, guidelines and benchmarks and normative and perceptible needs. It reflects ongoing changes in demographic forecasts (Forecast Id) and future increase in densities, including those proposed and influenced by the Western Australian Planning Commission policies and Perth and Peel @3.5million.

The CIPs are strategically aligned with the City's Integrated Planning Framework. They will inform, and have been informed by other City strategic planning processes and policy documents, including but not limited to, the City's Strategic Community Plan, POSCFCS, the Urban Housing Strategy, and best practice planning and infrastructure guidance literature. The CIPs bring together a range of information to provide a comprehensive strategic direction for public open space and community infrastructure for the City. The CIPs involved conducting a series of assessments (structural, financial, social, land use, current usage) to determine if existing facilities within the place areas have the capacity to cater for and/or be adapted to meet current and future trends in sport, recreation and community needs. See Table 14 for the Ellenbrook Place example.

3.7.4 Infrastructure Planning Principles

The preparation of the CIPs was underpinned by the following principles:

- Balancing the current and future needs of the community, the environment and the economy.
- Sustainability principally involves ensuring appropriate use and protection of resources, including the best use, maintenance of community facilities for future generations, and appropriate use of public assets.
- Decisions made in line with these principles should continue delivering quality community infrastructure that people will safely enjoy using.
- The City recognises the diversity of places that it manages and is mindful of their importance to a sense of place. It aims to provide a diverse range of experiences and opportunities across the City. Implementation must be responsive to community needs and local issues. Therefore, a degree of flexibility must be available when assessing compliance with the provisions and classifications.
- A range of community facilities of different size and function should be accessible to all of the City's residents and visitors. There should be an equitable distribution of community facilities in terms of the amount, condition, and amenity across the City so that locations, user groups or segments of the community are not disadvantaged. There is a responsibility to consider intergenerational equity and ensure good quality community facilities are available for future generations.
- The City must be accountable and responsible for its use of public funds and assets. The provision and maintenance of community infrastructure must represent an efficient use of resources.
- Community infrastructure should be integrated with the urban and natural environment in recognition that it does not operate in isolation with other community functions. This integration can encompass the co-location of facilities, sporting buildings, or the inclusion of significant vegetation that enhances and compliments the open space/community infrastructure.
- While the City has an important role in providing community infrastructure, it does not need to be the sole provider. Wherever relevant and appropriate, the City will engage with other providers to deliver affordable and accessible community infrastructure.
- These principles are consistent with those contained in POSCFS and are fundamental to determining the most appropriate community facility development options for each of the Place Areas.

3.7.5 Sport and Physical Activity Trends

A detailed review of relevant trends from the national to local level have resulted in several key trends being identified that have helped inform the preparation of the CIPs, namely:

- In Western Australia:
 - Participation rates are highest amongst the under 35s
 - Perth has higher participation rates than other Australian capitals
 - Informal (non-organised) physical activities are most common
 - Walking is the most popular physical activity in Western Australia
- With an ageing population, lower impact activities are being sought at more convenient and flexible times on the day
- The growing level of risk awareness within the community has made potential participants more demanding in respect of health and safety concerns
- An estimated 5.2 million people aged 15 years and over reported that they were involved in organised sport and physical activity
- The regular participation rate declined between 2011/12 and 2013/14 for both males and females.
- The rate of children's participation in sport and/or dancing was 66% in 2012. The most popular organised sports for boys were soccer, swimming and Australian Rules football and netball, swimming and gymnastics for girls
- The highest percentage participation rate for both the study area and State was AFL followed by soccer. However, both sports have experienced a decline in both junior and senior participation (locally) whereas the State and National figures show significant growth
- It is widely accepted that participation in arts and cultural activity is beneficial to the health and vibrancy of community life, and that there is a link between community cultural development and community cohesion and well-being
- During the 12 months before interview in 2013/14, about 86% or 19.9 million people of the Australian population aged 15 years and over attended at least one of the cultural venues and events asked about in the survey
- 35% of children participated in at least one organised cultural activity outside of school hours
- 71% of children aged 5 to 14 years attended outside of school hours. Of this, 53% said they had visited a public library in the 12 months previously in 2012.

With regard to infrastructure design:

- There is a trend of co-locating health and fitness facilities with other leisure based activities to create multi-purpose leisure venues that facilitate improved financial performance. Co-locating community services, sport and recreation minimises administration, maintenance and operating costs
- The design of facilities has improved in relation to minimising public risk and to attract a more diverse demographic mix
- There is a need to attract secondary spends, where possible to assist in securing the financial viability of facilities
- The increasing use of facilities by family groups which require appropriate support facilities such as family change rooms, social spaces and baby change facilities. This is critical, particularly when considering the development of multi-functional facilities

3.7.6 Analysis of existing Community Infrastructure Provision

The preparation of each CIP contains an analysis of current infrastructure (recreation, community, cultural and sports facilities) through the outlined and endorsed process of investigation. An example of this analysis is in Table 14 for the Ellenbrook Place

The provision of facilities and services need to reflect community needs and provide for a range of activities and pursuits. This includes a balance between Local, Neighbourhood, District and Regional facilities, and appropriate quality and quantity of provision. Thresholds are often used to determine when the provision of infrastructure and or level (POSCFS) of that provision should occur.

Population thresholds also assist in indicating when construction should commence and where it is required. Appropriate needs are to be clarified at the planning stages of any development. Refer to Table 12 and Table 13 for POSCFS public open space and facility hierarchy and benchmarks

The hierarchy works to ensure that there is adequate provision of facilities to meet local need, while providing larger facilities to address demand at a district and regional level. Most district and regional facilities can also serve a local function for people living nearby.

In rural areas, the hierarchy differs by providing facilities for townships and their catchment, rather than local areas. This is because the dispersed nature of population in these areas means it is difficult to provide local facilities for all households. In these instances, facilities are provided in a central area to serve a larger catchment.

3.7.7 Planning for future recreation needs

The City is forecast to experience considerable growth with an expected additional 35,510 new dwellings by 2031. Peel and Peel @3.5million provides guidance on where development should be focussed and what patterns of land use and transport would best support the desired development pattern. The City's Urban Housing Strategy has been developed to respond to Perth and Peel @3.5million with both an Infill Strategy and Greenfields strategy developed to guide future population growth. The majority of the projected growth will be accommodated in the Urban Growth Corridor; however, the Infill Strategy identifies about 15,000 sites in sixteen established localities across the City for higher densities.

In the context of potential community growth and changing community needs, the City's POSCFS provides direction for the provision of public open space and community infrastructure at the local, district and regional levels.

Background research and consultation and the application of the benchmarks has identified that there is a need for a regional performance and events space. There is the opportunity for Midland to emerge on the Western Australian landscape as a "junction of arts, culture and commerce". To do so, the following elements are required:

- multi-purpose arts and cultural facility catering for visual arts exhibition space, high quality performances and conventions; and
- A 'town square' or external space for community events, festivals, markets and movies.

POSCFS recommends that the City should pursue a regional performance and events space as part of the Midland Oval Redevelopment or within the Midland Redevelopment Authority area.

3.7.8 Recommendations of the CIPs

Each CIP contains a series of recommendations that were made based on the outlined and endorsed process of consultation, analysis and identification of issues and strategies as presented. An example of the recommendations for the Ellenbrook Place is shown in Table 15.

Table 12: Open Space Hierarchy

Hierarchy	Function	Indicative Catchment	Size	Recreation	Sport	Nature
Local	Small parklands that service the recreational needs of the immediate surrounding area. They provide basic embellishment commensurate with short stays with higher levels of embellishment expected on larger spaces.	<ul style="list-style-type: none"> < 400m 5 min walk 	0.3 - 1ha	✓	✗	✓
Neighbourhood	Serves as the recreational and social focus of a community where residents are attracted by the variety of features and facilities, and opportunities to socialise. This form of open Space should be designed for longer stays	<ul style="list-style-type: none"> Up to 2kms Up to 10 mins walk 	1-5 ha Sporting > 3.2ha	✓	✓	✓
District	Principally provides for organised formal sport and recreation for multiple surrounding neighbourhoods. These are high amenity destinations suitable for regular sporting events or festivals. They provide a significant visual break in the urban environment.	<ul style="list-style-type: none"> Up to 5kms Up to 5 min drive 	5-20 ha Sporting > 15ha	✓	✓	✓
Regional	The largest provision of open space in the community, they are the focal points for organised sport, recreation, conservation and environmental features. They serve not only residents of the City of Swan but the wider region.	<ul style="list-style-type: none"> Majority of users will drive Serves the region 	Size dependant on function Sporting > 20ha	✓	✓	✓

Table 13: Open Space and Community Facility Benchmarks by Hierarchy

Regional (10+km and 100,000-300,000 people)
Regional Sporting Open Space
Regional Leisure and Recreation Centre
Regional Youth Centre
Community Arts and Cultural Facility
Performing and Visual Arts Centre
Regional Library
Festival and Event Space
District (5-10kms and 20,000-50,000 people)
District Open Space
District Community Building
District Youth Centre
Youth Space (including skate park and BMX dirt jumps)
Library
Leisure Centre *
Recreation Centre *
Neighbourhood (2kms and 6,000-10,000 people)
Neighbourhood Open Space
Neighbourhood Community Building
Local (less than 0.4kms)
Local Public Open Space
* Leisure Centres and Recreation Centres will not be provided in all Districts. Higher population and travel distance benchmarks apply. Recreation Centres require a resident population in excess of 75,000 and Leisure Centres in excess of 100,000 people. A travel distance of 10kms+ applies.

Table 14: Issue Analysis Ellenbrook Place Item	Analysis	Issue	Standard of Provision	Potential Actions
A) Sporting and Recreational Public Open Space	<ul style="list-style-type: none"> • Current provisions of sporting open space within the study area meets current demand, with immediate options for a small degree of increased usage. • Open Space facilities are generally well maintained and a number of new facilities are being developed. • Aveley Oval consists of one small AFL/ cricket field. • Current Sports provided by the City include: <ul style="list-style-type: none"> - Rugby League at Woodlake Oval - Rugby Union at Aveley (junior) - AFL at EDOS and Juniors at Aveley - Soccer at Charlottes Oval - Hockey at Gregorini Reserve and Woodlake Oval - Cricket at EDOS - Netball and Little Athletics at Coolamon Oval. 	<ul style="list-style-type: none"> • Increased amount of pocket and passive parks threatens public open space available for sporting facilities. • As sporting groups re-locate to different ovals in the place area, a consideration must be given to some grounds being unsuitable for the proposed sports. • Ellenbrook is a growth area, so it is anticipated that current open space provisions will not adequately cater for the future population of the area. 	<ul style="list-style-type: none"> • At Neighbourhood level, POSCFS suggests one (1) site for 6-10,000 population at a size of 1 - 5ha. • At the District level POSCFS states one (1) site to 20-50,000 population at a size of 5 - 20 ha (sport > 15ha), with the study area providing approximately 10ha on one (1) site for 20,000 population. A significant increase in population may see area specific ratios nearing the guiding provision. • There is no regional sporting open space within or adjacent to the study area. • PLA and SSA note for AFL to provide three (3) sites for 15,000 population and the area provides three (3) sites for 20,000 population with overflow sites for 'Auskick', this is again at the top end of adequate provision. Soccer is currently in line with PLA benchmark at one (1) site for 10,000 populations and is the case with study area's current population, albeit at top end. • At the national level, AFL and Football (Soccer) had the largest increases in total participation between 2001 and 2010. The rate for Australian Rules football in 2010 is the highest in the ten-year period. • At the local level, Winter sports including AFL and Football (Soccer) have the highest current and forecast participation rates. However both sports have experienced decline in participation from 2007. • The KidSport participation initiative through DSR has the potential to generate for significant growth, although only a small impact is evident at present in the study area. 	<ul style="list-style-type: none"> • The City must continue to monitor the amount of use of all sporting open space within the place area. This includes hours and intensity of use, club memberships, and surface quality to assess demand and inform future planning decisions. • When the UHS is endorsed, the City will need to investigate options to increase facility provision in order to cater for the future growth. • The City will continue to investigate feasibility and validity regarding sporting open space provision at Whiteman Park. • The City will investigate the rationalisation of Coolamon Oval to be re-configured for hockey. This may include the removal of the cricket wicket and upgrades to the sports floodlighting. • To expand the options of sports provided by the City, the activation of Woodlake Oval must be supported, as it has the capacity to cater for sports not adequately catered for in the City, including softball, baseball or rugby union. • If this occurs, Charlotte's Oval can then be re-configured to possibly cater for Rugby League which would also require the removal of the cricket wicket and upgrades to the sports floodlighting.

Table 14: Issue Analysis Ellenbrook Place Item	Analysis	Issue	Standard of Provision	Potential Actions
B) Youth Spaces	<ul style="list-style-type: none"> • Population projections and demographic composition indicate that there will be a substantial youth population within Ellenbrook Place. • Skate parks are located at Woodlake and Coolamon Oval. • Coolamon Youth Facility operates 2 nights per week with limited capacity. On a busy night it gets up to 70 young people over a 3 hour period using the space which would be at full capacity. • Coolamon Skate Park is well utilised, during summer it would have 60-80 young people a day and quieter days in winter it would be 20-30 young people utilising the space. • Aveley Skate Path is a new facility built in Aveley on Egerton Drive. • The dirt BMX track at Gregorini is well used, however quite rundown. • The top demands by youth include Wi-Fi, movies, events and transport connection. 	<ul style="list-style-type: none"> • Lack of diverse range of opportunities, both indoor and outdoor, and interests for young people. • Lack of opportunity to provide for youth facilities and spaces could result in youth finding themselves involved in anti-social and criminal or violent activities. • The skate park at Coolamon does not provide adequate supporting facilities, e.g. shading and water fountains, which could be affecting its usage. • Coolamon's Cool Room was not purpose built and therefore arguably not suitable for its use in the long term. 	<ul style="list-style-type: none"> • Skate and BMX facilities have the ability to provide an alternative, non-committal recreational choice to youth that can promote the benefits of physical activity such as physical, social and mental well-being. These youth spaces are to be provided in visible and safe locations, designed to meet the needs of the community and should be co-located with other community facilities. • State and National data and found that children's participation outside of school hours includes: 49% (1.3 million) had been skateboarding, rollerblading or riding a scooter. • When the population is between 20,000-50,000 people a district reserve could be considered within a Place area. • The Ellenbrook Place Youth Plan sets the priorities within the place area, which includes young people requiring access to affordable and adequate leisure and recreation spaces and facilities. 	<ul style="list-style-type: none"> • The City should encourage and plan to provide outdoor spaces for young people that are not just related to wheel sports; which can include multi-use game areas, social meeting spaces with free Wi-Fi and natural community areas. • Ensure a range of playgrounds are provided across the municipality that cater for a variety of ages, skills and abilities. Consideration must be given to infrastructure that provides sporting, recreation and nature play opportunities across the place area. • This City must ensure overall park designs incorporate areas for young people (hang out spaces) and involve these young people in planning consultation for park developments where appropriate. • The City should investigate the future use of Woodlake's Salvation Army building, as it has the potential to cater for indoor sports, or act as a youth centre or place office. • Coolamon's Cool Room will need to be expanded in order to facilitate higher usage, or a new facility would be needed. This should include the upgrade of its outside patio to be fit for purpose. • The City must plan for the improvement of landscaping at Coolamon Skate Park. One section of the park is mulched and users would like this to be skateable, as well as increasing the seating and shade areas. • The City needs to provide seating, lighting and water fountain facilities at Aveley Skate Path. • The City will need to consider improving the condition of the BMX track at Gregorini, which was noted as a priority amongst young people in the Ellenbrook area. Any major change needs to be considered once a decision's been made on the outcome of the Ellenbrook Youth Centre.

Table 14: Issue Analysis Ellenbrook Place Item	Analysis	Issue	Standard of Provision	Potential Actions
C) Community Buildings	<ul style="list-style-type: none"> Currently well provided for area in terms of Community Buildings and POS provision with recreational spaces, however potentially underused through community choice. Community Centre usage is high, but facilities are often unavailable at peak times. Woodlake Community Centre is well used (23 regular user groups identified) but is at capacity and has the perception that the meeting rooms are too small and inflexible. Charlottes Community Centre, Ellenbrook Community Library, Coolamon Pavilion, Charlottes Vineyard Pavilion, Aveley and Malvern Springs Community Centre are significant resources, but are space limited. The Grapevine Community Space and Salvation Army buildings are leased out and have limited community usage. Ellenbrook High School has a performing arts space which the City contributed to and it is available for community use. The City has a Place office established within the Library. 	<ul style="list-style-type: none"> Current meeting room space and community activity space is limited in all existing centres. Most community buildings have limited kitchen space and facilities. This is an issue as the amount of requests by community groups wanting community kitchens are in higher demand. The City will not allow smaller rooms to be booked if larger rooms are being used, e.g. Aveley Community Centre, due to a perception of risk and noise issues, which means space isn't being used efficiently. Developers continue to push to develop facilities that are not required in an attempt to beautify their areas - for sales. A site in Annies Landing has been provided to the City for the purpose of a Community Centre. At this point in time the population for the area does not trigger the need for this facility - similar to the site in Henley Brook. The current Place office does not meet the functional requirements needed for Place Service Hub provision. Charlottes Vineyard Community Centre is currently empty. 	<ul style="list-style-type: none"> Based on City of Swan Benchmarks one community facility would be provided at neighbourhood level catering for a catchment of 1-5km. The City wide 'Arts and Culture' plan findings within the feasibility plan that can relate to the ECIP include: <ul style="list-style-type: none"> Community priorities include better promotion of events and activities, more opportunities for local artists and performers to display their works and more outdoor events. Venues that are multipurpose and flexible in their design have greater capacity to accommodate creative activities such as painting, drama and music and tend to offer greater program choices and display higher participation levels. Venues that are multipurpose and flexible in their design have greater capacity to accommodate creative activities and tend to offer greater program choices. 	<ul style="list-style-type: none"> The City should review all of its exclusive usage agreements within its facilities in order to cater for the broader community. Facilities Planning will continue to provide advice on the facilities needing renewal, through the Assets Renewal Program. The City is currently developing the Ellenbrook Leisure Centre which will provide meeting spaces, and facilitate indoor sports. The Aveley Community Centre has been designed to support an extension to cater for growth. The City should continue to monitor its usage rates once the EDOS southern pavilion and the Leisure Centre are operational in order to determine when an extension is required. The City will retain the Annies Landing Community Centre site. Whilst a community centre has not been committed to on this site the City should look at creating a public space such as community garden. The City will continue to support a redevelopment of the Library Resource Centre to include the Place Service Hub, some office provision for HACC services and provide additional meeting, consultation and learning spaces for Ellenbrook. The City must advocate that Charlottes Vineyard Community Centre be used predominantly for the purpose of community services and programs.
D) Adequate Signage and activity inclusion within cycle / walk path networks within and around POS	<ul style="list-style-type: none"> Consultation identifies resident priorities to identify opportunities to develop parks as community nodes & improve connectivity, and provide improved facilities for the local community. 	<ul style="list-style-type: none"> The Ellenbrook Community still recognises the place area's accessibility and connectivity issues due to its location. Travel methods around the area are heavily dependent on motor vehicles. 	<ul style="list-style-type: none"> Walking has been identified as the number one most popular recreation, fitness or physical activity of choice for all age groups in WA aged 15 years and older. Walking is the number one ranked activity in National, State and local recreation participation data. 	<ul style="list-style-type: none"> Identify opportunities to improve/enhance informal recreation facilities and infrastructure through facility audits and the development of park specific Master Plans/Landscape Plans. Enhance signage and promotion of walking/cycling/ personal health trails and active transport routes through social media and other marketing mechanisms, e.g. a downloadable map or an app. The City will support the development of an active pedestrian route around the place area, with links connecting fitness areas placed in and around Ellenbrook Place.

Table 14: Issue Analysis Ellenbrook Place Item	Analysis	Issue	Standard of Provision	Potential Actions
E) Community and Sporting Infrastructure	<ul style="list-style-type: none"> Woodlake Oval is predominately used for training; however it does not have a built pavilion to accommodate sports outside the schools use. However it does have a toilet block, and two temporary change rooms. Valley Bowls provides a lawn bowl facility for the community which is currently being used effectively and in good condition. The Woodlake Indoor Sports Court, currently leased to the Salvation Army provides some sport opportunities in Ellenbrook. 	<ul style="list-style-type: none"> The Woodlake Indoor sports court is not well utilised and can't be accessed by the public when not in use by the Salvation Army. Coolamon change rooms and toilets do not cater adequately for female usage. 	<ul style="list-style-type: none"> No demand for provision of new facilities with current usage and populations. Activity participation rates increased between 2001 and 2010 for both males and females. At the national level, AFL and Football (Soccer) had the largest increases in total participation between 2001 and 2010. The rate for Australian Rules football in 2010 is the highest in the ten-year period. The core infrastructure provision for any community is a multi-functional facility to support the social, cultural, educational, and sporting activities of a neighbourhood or district. Provision is to be determined via a detailed planning study. In study area while peak times are at a moderate overall level, rationalisation of existing usage could lead to the provision of new opportunities, should the demand arise. Of the adolescent women (secondary school age) only approximately 10% of this target group meet national physical activity guidelines and as such are vulnerable to negative health and wellbeing consequences. Consideration is to be given to given to future social, passive spaces and physical activity opportunities in place hubs or through referral/educational services. 	<ul style="list-style-type: none"> Facilities Planning will continue to provide advice on the facilities needing renewal, through the Assets Renewal Program. When a sporting pavilion is due for renewal, the pavilion must upgrade all change rooms to cater for female sports and universal access requirements. When a sporting pavilion is due for renewal consideration must be given to improve its functionality and visual amenity in order to attract/increase community group usage. When the activation of Woodlake Oval occurs, The City will need to improve its infrastructure provision to include a local level pavilion. The City should allocate additional costs to any upgrades to Coolamon Pavilion, as part of the Assets Renewal Program, to include renovations to the change rooms to cater for females. The City should construct seating (limestone step retaining walls) outside the existing and future Coolamon Tennis Courts on its western side, as it requires upgrades to its access routes. The City is currently planning for two new tennis courts that will be developed to the north of the existing courts at Coolamon Oval.
F) Aquatic and Indoor Recreation Infrastructure	<ul style="list-style-type: none"> In 2031 there will be approximately 80,000 people living in catchment in and around Ellenbrook Place area. No City owned aquatic or recreation facility exists in this area. \$7M in funding was made available by the State and Council has assessed the cost to build a leisure centre in Ellenbrook. A feasibility study completed in 2011 determined that an indoor recreation facility was needed. The aquatic component was discounted at the time due to site limitations. The Council endorsed Aquatic Facility Strategy justifies the need for a Leisure Centre. 	<ul style="list-style-type: none"> The Ellenbrook site is quite constrained, meaning that some car parking may potentially need to be built under the proposed centre. The facility will need to incorporate some area within the Valley Bowls club area in order to meet the provision requirements. 	<ul style="list-style-type: none"> A regional sports and aquatics facility requires a large multi-functional sports facility, usually 6/7 courts, a gym, community meeting rooms and could include aquatic infrastructure. Should usually be co-located with a regional playing field to minimise management and operational costs. 	<ul style="list-style-type: none"> Assets to develop a plan to implement the recommendations outlined in the Council endorsed Aquatic Facilities Strategy – This includes the Leisure Centre expected to commence design in 2016 and opening late 2020. The City will continue to investigate feasibility and validity regarding sporting open space provision at Whiteman Park that will encompass any future needs of Ellenbrook residents for indoor sporting space.
G) Increased Library space and service provision	<ul style="list-style-type: none"> Currently the facility is at capacity, which limits the City's ability to increase service provision. Limitations to current design are that rooms are insufficient in size and flexibility to cater for programs etc. 	<ul style="list-style-type: none"> Size of library is inadequate for future population of Ellebrook Place population. No room in the current facility to expand services and collection. Lack of meeting spaces for staff and community and storage spaces are the main issues affecting the library. 	<ul style="list-style-type: none"> New approaches and recent trends around community facilities include, that community facilities are increasingly used as social facilitators, Libraries and botanic gardens are most popular in Western Australia, and arts and cultural venues are often located in central locations. Attendance at libraries is the second most popular cultural activity in WA according to national research. Libraries are significant assets for unemployed people who have the highest attendance rates. 	<ul style="list-style-type: none"> The City will continue to support planning for the Ellenbrook Place Office, Resource Centre and Library as the Place Service Hub. This will provide additional rooms and floor space to expand the current capacity.

Table 15: Recommendations from the Ellenbrook Place CIP Infrastructure Item	Item No.	Action and Recommendations	Timeframe	Incl. In CEP	Justification
Sporting and Recreational Public Open Space	ELL-1	The City must continue to monitor the amount of use of all sporting open space within the place area. This includes hours and intensity of use, club memberships, and surface quality to assess demand and inform future planning decisions.	On-going	No	This action is completed internally and does not require cost allocation or inclusion in the CEP.
	ELL-2	The City will continue to investigate feasibility and validity regarding sporting open space provision at Whiteman Park.	On-going	No	At present, no works will be undertaken into this item. However, investigation into potential continues to be done internally. Therefore not required in the CEP.
	ELL-3	The City will investigate the rationalisation of Coolamon Oval to be re-configured for hockey. This may include the removal of the cricket wicket and upgrades to the sports floodlighting.	Short term	No	This action does not require cost allocation at present or inclusion in the CEP.
	ELL-4	To expand the options of sports provided by the City, the activation of Woodlake Oval must be supported, as it has the capacity to cater for sports not adequately catered for in the City, including softball, baseball or rugby union.	Medium term	No	This action does not require cost allocation at present or inclusion in the CEP.
	ELL-5	If this occurs, Charlotte's Oval can then be re-configured to possibly cater for Rugby League which would also require the removal of the cricket wicket and upgrades to the sports floodlighting.	Medium Term	Yes	Re-configuration of the oval will require inclusion in the CEP as it needs allocations for planning and construction costs.

Table 15: Recommendations from the Ellenbrook Place CIP Infrastructure Item	Item No.	Action and Recommendations	Timeframe	Incl. In CEP	Justification
Youth Space	ELL-6	The City should encourage and plan to provide outdoor spaces for young people that are not just related to wheel sports; which can include multi-use game areas, social meeting spaces with free Wi-Fi and natural community areas.	Short term	No	This action does not require cost allocation at present or inclusion in the CEP.
	ELL-7	Ensure a range of playgrounds are provided across the municipality that cater for a variety of ages, skills and abilities. Consideration must be given to infrastructure that provides sporting, recreation and nature play opportunities across the place area.	On-going	No	This action does not require cost allocation at present or inclusion in the CEP.
	ELL-8	This City must ensure overall park designs incorporate areas for young people (hang out spaces) and involve these young people in planning consultation for park developments where appropriate.	On-going	No	This action does not require cost allocation at present or inclusion in the CEP.
	ELL-9	The City should investigate the future use of Woodlake's Salvation Army building, as it has the potential to cater for indoor sports, or act as a youth centre or place office.	Short- Medium term	No	In accordance with current population and demand, the need to develop and include this action in the CEP is not required at present.
	ELL-10	Coolamon's Cool Room will need to be expanded in order to facilitate higher usage, or a new facility would be needed. This should include the upgrade of its outside patio to be fit for purpose.	Medium-Long term	No	This will only need to be included upon completion of the investigation and confirmation of funding.
	ELL-11	The City must plan for the improvement of landscaping at Coolamon Skate Park. One section of the park is mulched and users would like this to be skateable, as well as increasing the seating and shade areas.	Short term	Yes	This will be included in the CEP as cost will need to be allocated for these skate park amenities.
	ELL-12	The City needs to provide seating, lighting and water fountain facilities at Avely Skate Path.	Short term	No	This action will not require inclusion in the CEP as construction costs are expected to be minimal.
	ELL-13	The City will need to consider improving the condition of the BMX track at Gregorini, which was noted as a priority amongst young people in the Ellenbrook area. Any major change needs to be considered once a decision's been made on the outcome of the Ellenbrook Youth Centre.	Short-Medium term	No	The upgrade of the BMX track will not be required in the CEP as this will be triggered by the outcomes of the Ellenbrook Youth Centre.

Table 15: Recommendations from the Ellenbrook Place CIP Infrastructure Item	Item No.	Action and Recommendations	Timeframe	Incl. In CEP	Justification
Community Buildings	ELL-14	The City should review all of its exclusive usage agreements within its facilities in order to cater for the broader community.	On-going	No	Inclusion of this action in the CEP is not required works will be done internally.
	ELL-15	Facilities Planning will continue to provide advice on the facilities needing renewal, through the Assets Renewal Program.	On-going	No	Inclusion of this action in the CEP is not required works will be done internally.
	ELL-16	The City is currently developing the Ellenbrook Leisure Centre which will provide meeting spaces, and facilitate indoor sports.	Short term	No	Ellenbrook Recreation Centre development has already commenced, major work are projected to begin in the 2016/17 financial year and therefore will not need to be included in the CEP.
	ELL- 17	The Aveley Community Centre has been designed to support an extension to cater for growth. The City should continue to monitor its usage rates once the EDOS southern pavilion and the Leisure Centre are operational in order to determine when an extension is required.	Medium term	No	Inclusion of this action in the CEP is not required works will be done internally.
	ELL-18	The City will retain the Annies Landing Community Centre site. Whilst a community centre has not been committed to on this site the City should look at creating a public space such as community garden.	Long Term	No	In accordance with current population and demand, the need to develop and include this action in the CEP is not required, but as population grows, this action will continue to be investigated.
	ELL-19	The City will continue to support a redevelopment of the Library Resource Centre to include the Place Service Hub, some office provision for HACC services and provide additional meeting, consultation and learning spaces for Ellenbrook.	Long Term	No	The need to develop and include this action in the CEP is not required at present. Investigation into its need will be done internally.
	ELL-20	The City must advocate that Charlottes Vineyard Community Centre be used predominantly for the purpose of community services and programs.	On-going	No	Monitoring of services and programs will be done internally by the City and does not require cost allocation.
Adequate Signage and activity inclusion within cycle / walk path networks within and around POS	ELL-21	Identify opportunities to improve/enhance informal recreation facilities and infrastructure through facility audits and the development of park specific Master Plans/Landscape Plans.	Medium term	No	This action is not required to be included in the CEP as investigation will be done internally.
	ELL-22	Enhance signage and promotion of walking/ cycling/personal health trails and active transport routes through social media and other marketing mechanisms, e.g. a downloadable map or an app.	Short-Medium term	Yes	Inclusion of this action in the CEP is required as consideration to constructing pathway networks will require significant funding.
	ELL-23	The City will support the development of an active pedestrian route around the place area, with links connecting fitness areas placed in and around Ellenbrook Place.	Medium term	Yes	Inclusion of this action in the CEP is required as consideration to constructing pathway networks will require significant funding.

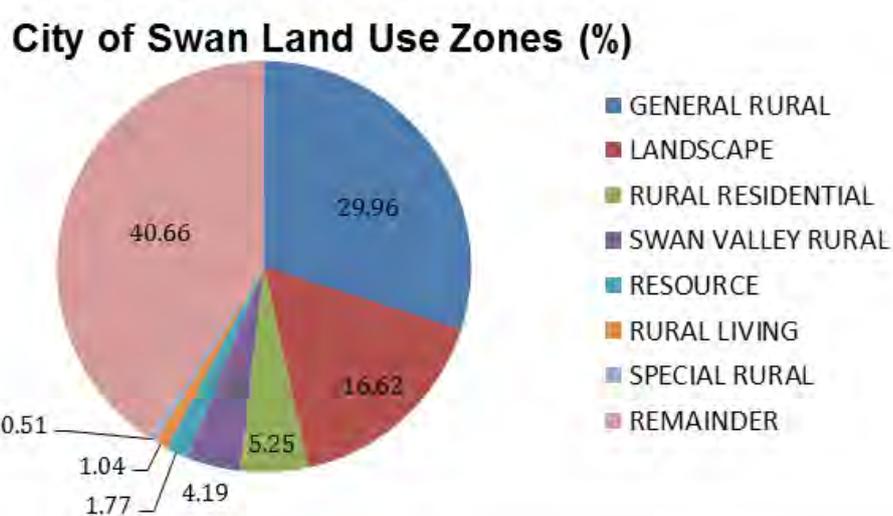
Table 15: Recommendations from the Ellenbrook Place CIP Infrastructure Item	Item No.	Action and Recommendations	Timeframe	Incl. In CEP	Justification
Community and Sporting Infrastructure	ELL-24	Facilities Planning will continue to provide advice on the facilities needing renewal, through the Assets Renewal Program.	On-going	No	Inclusion of this action in the CEP is not required works will be done internally.
	ELL-25	When a sporting pavilion is due for renewal, the pavilion must upgrade all change rooms to cater for female sports and universal access requirements.	On-going	No	Inclusion of this action in the CEP is not currently required.
	ELL-26	When the activation of Woodlake Oval occurs, The City will need to improve its infrastructure provision to include a local level pavilion.	Short term	No	This action is not required to be included in the CEP as construction is not required currently; however investigation will be considered when necessary.
	ELL-27	The City is currently planning for two new tennis courts that will be developed to the north of the existing courts at Coolamon Oval.	Short-Medium	No	This action is not required to be included in the CEP as costs have been included in the budget.
	ELL-28	The City should allocate additional costs to any upgrades to Coolamon Pavilion, as part of the Assets Renewal Program, to include renovations to the change rooms to cater for females.	Medium Term	Yes	This action is required in the CEP as additional costs will need to be added to any funds currently allocated to Coolamon Pavilion.
	ELL-29	The City should construct seating (limestone step retaining walls) outside the existing and future Coolamon Tennis Courts on its western side, as it requires upgrades to its access routes.	Short-Medium	Yes	This action is required to be included in the CEP as costs must be allocated prior to construction.
Aquatic and Recreation Facility	ELL-30	The City will continue to investigate feasibility and validity regarding sporting open space provision at Whiteman Park that will encompass any future needs of Ellenbrook residents for indoor sporting space.	Ongoing	No	In accordance with current population and demand, the need to develop and include this action in the CEP is not required. However, the City will continue efforts to investigate space opportunities as The City experiences population growth.
	ELL-31	Assets to develop a plan to implement the recommendations outlined in the Council endorsed Aquatic Facilities Strategy – This includes the Leisure Centre expected to commence design in 2016 and opening late 2020.	Medium- Long Term	No	Costs for this action has been allocated for Ellenbrook and therefore required to be included in the CEP.
Increased Library space and service provision	ELL-32	The City will continue to support planning for the Ellenbrook Place Office, Resource Centre and Library as the Place Service Hub. This will provide additional rooms and floor space to expand the current capacity.	Medium- Long term	No	This action will be developed and investigated internally and does not require inclusion into the CEP at this stage.

3.8 Rural Land Use, Subdivision and Development

3.8.1 Overview of Rural Land Uses

The City of Swan is the largest Local Government area in metropolitan Perth, covering over 1,040 square kilometres. As depicted in the figure below, it contains a variety of zones and land uses, ranging from urbanised activity centres to rural areas which support a wide range of agricultural and horticultural activities as well as offering many unique natural attributes and resources. Rural zoned lands account for 57.7 per cent of the total land area within the City of Swan, and almost one third of the land area is zoned 'General Rural'. This signifies the importance of maintaining and balancing sustainable agricultural practices and providing opportunities within the primary rural sector within the City of Swan

Figure 34. Open Space and Community Facility Benchmarks by Hierarchy



The City's rural areas have traditionally supported a wide range of traditional rural and agricultural land uses and more recently, extractive industries, poultry farms and a variety of animal agistment practices. Some of the more intensive agricultural uses include viticulture and horticulture (e.g. vegetables and olive groves).

Other uses increasing the competition for land in rural areas include tourist and lifestyle uses. Much of the land use pressure and conflict are more evident in areas where urban development encroaches on adjacent rural land such as the Swan Valley and expanding settlements such as Bullsbrook and Gidgegannup. Subdivision and development pressures have also occurred closer to activity centres such as Midland as rural land is rezoned to accommodate industrial land uses along strategic transport networks.

3.8.2 Rural Geography

In broad terms, the rural land of the City of Coastal Plain to the west, and the hills of the Darling Range to the east with the two landforms being delineated by a Swan lies to the north-east of the Perth Metropolitan Region, straddling the flat Palusplain of the Swan pronounced escarpment bisected by many small valleys. The Swan/Avon River is the third major natural feature that traverses the hills area through a steep river valley (the Avon Valley) and out onto the coastal plain.

National Parks and Environmentally Significant Areas: The foothills rural areas within Swan are heavily forested and include areas of National Park including John Forrest and Walyunga as well as numerous tributaries which feed into the upper levels of the Swan River. Bullsbrook contains an Environmental Protection and Biodiversity Conservation area for the Western Swamp Tortoise, located south of the town site, and there are also a number of wetlands distributed on rural land along the

3.8.3 Rural Precincts

The rural areas of the City of Swan can be defined as falling within three distinct rural precincts Figure 35 to Figure 37 based on geographical features and historical settlement patterns:

Swan Valley: The Swan Valley is not a topographically defined river valley but an area of the Swan Coastal Plain through which the Swan River flows. The Swan Valley has traditionally supported a large viticulture industry, which has declined significantly from its peak in the 1950s. Grape vines remain a prominent landscape feature of the valley and contribute to its unique rural character as well as support the local tourism industry.

Grape production has largely ceased east of the railway line and west of West Swan Road, where the soil types are not viable for sustainable grape production. Lots within these areas are now largely used for rural/residential lifestyle purposes and animal agistments, with no significant productive use of the land.

Bullsbrook: Bullsbrook is characterised by flat cleared pasture to the west of the Great Northern Highway and escarpment, and special rural landholdings to the east of the highway. The land is predominantly used for various agricultural purposes, the primary agricultural activity being sheep and cattle, with this use expanding throughout the area. The Bullsbrook precinct area can be defined by the applicable City of Swan Place Area boundary.

The majority of the western half of the Bullsbrook precinct is zoned for rural purposes under the General Rural zone, while the majority of the eastern half is zoned for Rural-Residential Living and Landscape Conservation. Swan Gidgegannup: The Gidgegannup precinct area is generally defined by the lands

within the City of Swan Place Area for Gidgegannup that lies east of the Darling Scarp. The landform and character of Gidgegannup comprises both large areas of cleared pasture and remnant woodland. This area is defined by the plateau of the Darling Scarp with a series of deep river valleys. The primary land use is grazing with an increasing small rural landholding (i.e. lifestyle lots) development being used mostly for residential purposes. This precinct also contains a number of gravel extractive industries because of the laterite deposits along the scarp. The Gidgegannup precinct and town site is bisected by Toodyay Road and is almost entirely comprised of rural zoned lands. Gidgegannup could experience some population growth in the future and the townsite will need to expand to cater for that growth. Coastal Plain. Pockets of remnant vegetation are distributed throughout the Palusplain and scarp areas including several Bush Forever sites that require protection in perpetuity.

3.8.4 Rural Land Uses

Rural land uses within the City of Swan have changed considerably over time and continue to change as they are influenced by an array of environmental, physical and social factors as well as economic pressures affecting production viability of particular uses. Many traditional rural land uses such as agriculture and horticulture have not been regulated by town planning schemes or require planning approval. More intensive uses that have the potential to create a nuisance to adjoining properties or impact on the natural environment require a more detailed analysis and consideration of likely land use conflicts.



3.8.5 Extensive Agriculture

In December 2016 the Western Australian Planning Commission (WAPC) produced SPP 2.5 Rural Planning which focuses on identifying and protecting highly productive agricultural land throughout the State including the Perth Metropolitan Region. As the City of Swan contains two Agricultural Priority Management Areas (in Swan Valley and Bullsbrook), the need for long-term protection and support for agriculture in these areas is reinforced.

The Swan Valley is the prime agricultural area within the City of Swan and also maintains exclusive planning protection via the SVPA. Recent reduction to the SVPA area in Caversham has seen larger transition lots created against agricultural lands to protect the viability of the adjacent farms and protect residential uses from spray drift, noise and normal agricultural pursuits. Encroachment of residential development will compromise normal farming activities unless suitable buffers are recognised.

The Swan Valley is increasingly finding viable agricultural pursuits difficult to manage and landowners are continuously seeking alternative means to supplement traditional agricultural incomes which have, to some extent, been provided for in the SVPA and the Local Planning Scheme. The eastern portion of the Swan Valley has poorer soils and a lack of water, and is experiencing declining agricultural incomes. The decreasing economic viability of grape farming in the eastern Swan Valley may see alternate crops and diversification (i.e. tourism based uses and non-traditional primary production) take place over time.

The City of Swan contains a large proportion of General Rural farming land which can support grazing of stock and other agricultural land uses such as horticultural crop raising, field crops and softwood production, however this activity has declined over the past few decades due to increasing regulatory controls and restrictions on farm land use management practices in response to increasing community demands for environmental services and health and safety standards.

Bullsbrook is situated on the Great Northern Highway, 25 kilometres north of the Midland Strategic Metropolitan Centre. It is well serviced by several major transport networks - Great Northern Highway and Railway Parade/Brand Highway to the north, Chittering Road to the east and Neaves Road to the west. Bullsbrook is also adjacent to the State rail network, providing a potential opportunity for the development of an inter-modal freight transport hub. The site is further strengthened by linkages to the planned Perth-Darwin National Highway via Stock Road.

It is unclear as to the numbers of properties that still function as sheep and cattle farms, however much of the identified agricultural land use in the eastern section of Bullsbrook (and Gidgegannup) is being developed for rural residential and lifestyle purposes. In addition to this, evidence suggests that animal agistment is increasing as land use for agricultural production decreases throughout many of these rural properties.

3.8.6 Intensive Agriculture

A number of specialist and intensive agricultural land uses exist within the City of Swan providing close access to the market of the Perth Metropolitan Area. Intensive agricultural industries by nature require high inputs of labour and capital relative to land area compared to extensive agriculture. Intensive agricultural activity often involves heavy use of technology and resources such as fertilisers, pesticides and higher water demand per area and can include animal husbandry at high stocking density (i.e. rearing or fattening pigs and poultry farms) and as such has a greater potential to conflict with sensitive areas and residential focused land uses than extensive agriculture.

There are currently a number of intensive agricultural activities distributed throughout the City of Swan that are not geographically confined to any particular zone. The distribution of these activities varies considerably as does the scale and nature of these activities.

Some active examples of intensive agricultural land uses within Swan include mushroom farming, turf-growing, aquaculture (marron and fish), grape and fruit production and commercial flower cultivation. Most of the grape production occurs within the Swan Valley on clay loam soils which are suitable for viticulture and also a number of fruit orchards have been established over time in this area.

Poultry farms are commonly located throughout the rural areas of the City including the small remaining pockets of Hazelmere, near the Bullsbrook town site and within the Swan Valley/Caversham area. Of notable interest are those poultry farms which have existed in the Caversham and West Swan areas that are now under threat from urban expansion within the growth corridor.

Continuing urban sprawl and steady industry expansion has brought urbanised residential areas within close proximity of many of the intensive agricultural uses. This has resulted in conflicts from odour, dust and noise which can often be difficult to resolve. Consideration of conflicts and resolution at the planning stage of new and expanding existing intensive agricultural pursuits will prevent problems from arising between incompatible land uses.

3.8.7 Economic Value of Rural Production

Agricultural production is not the sole activity within the rural areas of the City. The agricultural sector does directly account for 4 per cent of the City's overall economic activity but the rural areas also have manufacturing and transport sectors that supplement the City's overall economic production. It is the diverse nature of rural areas that allows for a wide range of businesses to operate. These are usually small scale commercial enterprise in addition to the primary rural activity. This additional business activity can sometimes equal or exceed the agricultural pursuit. Fragmentation of rural land into smaller landholdings does not always mean a cumulative increase in economic activity, as many lots become primarily residential and limit agricultural productivity.

3.8.8 Basic Raw Materials

The foothills of the Darling Scarp contain clay and rare earth minerals. Most of the mining potential is sterilised from mining due to the proximity of residential development. Deeper occurrences of oil and gas have been found in similar geological locations to the north of the City boundary. Active mining of hard rock, limestone, sand and gravel occurs primarily at Upper Swan, Red Hill and Bullsbrook. Potential expansion of mining opportunities within these areas is being restricted by impending or proposed residential development. Sand mining on the edge of the Gngangara water mound and clay extraction is likely to continue for many years until deposits are exhausted.

There are numerous deposits of sand, clay and schist at the base of the Darling Scarp towards the Bullsbrook town site. Many of these extractive industries have been operating for a number of years and are likely to continue in the future. Clay soils along the Swan River provide the raw material for clay brick construction and clay extraction continues at the northern end of the Valley.

SPP 2.4 identifies Priority Resource Locations, Key Extraction Areas and Extraction Areas in the Greater Perth area including the City of Swan. The relevant objectives of SPP2.4 are:

- to protect these resource-rich areas from being developed for incompatible land uses which could limit future exploitation;
- ensure that the use and development of land for the extraction of basic raw materials does not adversely affect the environment or amenity in the locality of the operation during or after extraction and
- provide a consistent planning approval process for extractive industry proposals including the early consideration of sequential land uses.

SPP2.4 requires applications for sensitive land-uses such as residential or rural-residential within 1000m of a basic raw materials extraction area to consider the following: the significance of the resource and the likely effects of vehicular traffic, noise, blasting, dust and vibration.

3.8.9 Rural Industry

Rural industries exist within the City of Swan and provide compatible support services to primary rural activities. They consist of land uses and industries which have an organic relation to their rural surroundings with regard to both labour and materials. A number of various rural industries exist within rural zoned lands of the City including stockfeed production, transport depots, farm machinery repair and manufacturing activities related to sourcing local primary materials (e.g. concrete/clay products). Rural industries are supported in many of the rural zoned lands and often cater for the agricultural and rural sectors beyond the City of Swan, servicing wider catchments such as Chittering and Toodyay.

There are a number of rural industries located in and around the Bullsbrook town site such as rural shed and rainwater tank manufacturing and sales, and numerous transport depots and workshops servicing rural plant and equipment positioned along Great Northern Highway. Other examples of similar rural industries can be found at Hazelmere. Grapes and other produce produced in the Swan Valley require processing and there are some examples of processing facilities in the Caversham and Herne Hill areas.

3.8.10 Tourism

Rural tourism focuses on the rural lifestyle and agricultural characteristics of an area and may also include eco-tourism. The City of Swan includes areas of semi-rural activity boasting traditional and hobby farming, viticultural, recreation and equestrian pursuits which are popular amongst tourists and visitors to the area. The Swan Valley is an established tourist destination which services the Perth metropolitan area offering a number of tourism focused land uses centred on the traditional winemaking and rural characteristics of the area.

3.8.11 Land Capability Assessment

A critical component of strategic planning for rural areas is determining what types of land uses are capable of being sustained on rural zoned lands. This is done through a land capability assessment. SPP 2.5 defines land capability assessment as a documented assessment of land resources to determine its natural capability to sustain a specified land use without resulting in significant on-site or off-site degradation or damage to the land resources. Land resources are defined broadly to include geology, soils, landform, hydrology, vegetation and climate. The SPP also states that the identification of land for settlement should be accompanied by a detailed site analysis and assessment, which demonstrates that the land is of fair to very high capability of sustaining the proposed use.

The Department of Planning, Lands and Heritage's Development Control Policy Guidelines for Land Capability Assessments for the preparation of Local Rural Strategies, provide for a variety of land uses (including urban uses) which may be appropriate for rural areas. The manual has been developed by the Department of Agriculture's land evaluation group with two aims:

- to inform local governments, planners, land developers and the relevant government departments of the Department of Agriculture's general methodology for land capability assessment; and
- to provide a more simplified method and appropriate guidelines for planners to undertake land capability assessment for the development of a local rural strategy.

In 2013 the City carried out an assessment into the capability of rural land uses, including agricultural land. Land capability relating to agriculture also provides assessment for viticulture as well as residential (rural residential development using on-site effluent systems) land uses. The assessment of land capability utilises information on sub-units in each land system and evaluates these against a range of land qualities to enable a capability rating. Land qualities are considered on topography, soil type, drainage, climate, flood and erosion hazards, water supply and other factors which may affect sustainable primary production activities. These site-specific land qualities, along with other planning matters also need to be considered to determine whether or not a specific area is suitable for a proposed form of agricultural land use and/or subdivision.

The identification of Primary Agriculture Areas of significance on Figure 11 have been adapted on the capability assessment, in addition to the magnitude of land use limitations that will influence development costs or environmental management requirements of the land. Where land is capable of supporting a wide range of primary production activities, it should be protected from land use impacts and fragmentation of allotments so that they are capable of supporting agriculture.

3.8.12 Existing Subdivision Pattern

Rural lots are based on the subsequent subdivisions of the Arrowsmith plan of 1830. The Swan Valley was the site of the first agricultural settlement and the Swan River was the first trade route to the interior of Western Australia. The first land grants radiated from the Swan River and many of the original homesteads still remain. Subsequent land subdivisions have resulted in landholdings between 2 and 10 hectares in the Swan Valley. Larger landholdings of 10 - 40 hectares exist in Gidgegannup and Bullsbrook. The smaller rural lots in the Swan Valley reflect the availability of water, fertile soils and flat terrain.

Lots within the Swan Valley are predominantly in the order of four hectares in area, the land being subdivided in the early 1920's for rural smallholdings as part of a post First World War soldier resettlement scheme.

State policy restricts further subdivision of rural land so as to match the agricultural capability of the local soil types and the availability of water. It would be unlikely that the City's rural land would experience further subdivision except for the creation of special rural estates, sub-regional structure planning for the Swan Urban Growth Corridor and structure planning for Bullsbrook and Gidgegannup in line with Perth and Peel @3.5million.

3.8.13 Rural Subdivision

There is a general presumption against the ad-hoc fragmentation of rural land, in order to protect rural land that has potential productivity and provides the most flexibility for agriculture. It is the view of WAPC and the City of Swan that there is an existing supply of suitably sized and located rural lots to cater for intensive and emerging primary production uses, particularly given restrictions and availability of water to support them. Creation of new rural lots through ad-hoc subdivision is considered inconsistent with the objectives of State Planning Policy No.2.5.

It is also acknowledged that loss of agricultural land does not equate to loss of agricultural industry as land productivity is irrelevant to intensive farming practices such as poultry farms, mushroom farms and animal husbandry (and other forms of rural industries). Changes to agricultural land use influenced by encroachment or urbanisation can result in the intensification of agricultural industry and new, financially viable alternative forms of agriculture. Limiting subdivision of agricultural land may also inhibit the emergence of new forms of agriculture that might contribute significantly to socio-economic development in the City's rural areas.

Land identified in this strategy as local priority agriculture should be retained for this purpose, and as such restrictions on subdivision will apply in these areas. Subdivision for agricultural purposes should only be supported where there is a demonstrable positive influence on primary productivity or to impede future urbanisation of peri urban land through controlled fragmentation of lots for identified rural living purposes.

Proposed lot sizes should be established by the land capability and the ability for land parcels to support existing and future primary production based on Department of Agriculture and Food soil mapping and factoring the availability of water to support particular primary production activities, in addition to other environmental and social considerations. Other lot sizes for Rural Living and areas without agricultural significance should be consistent with the lot ranges prescribed under State Planning Policy SPP 2.5 (2012).

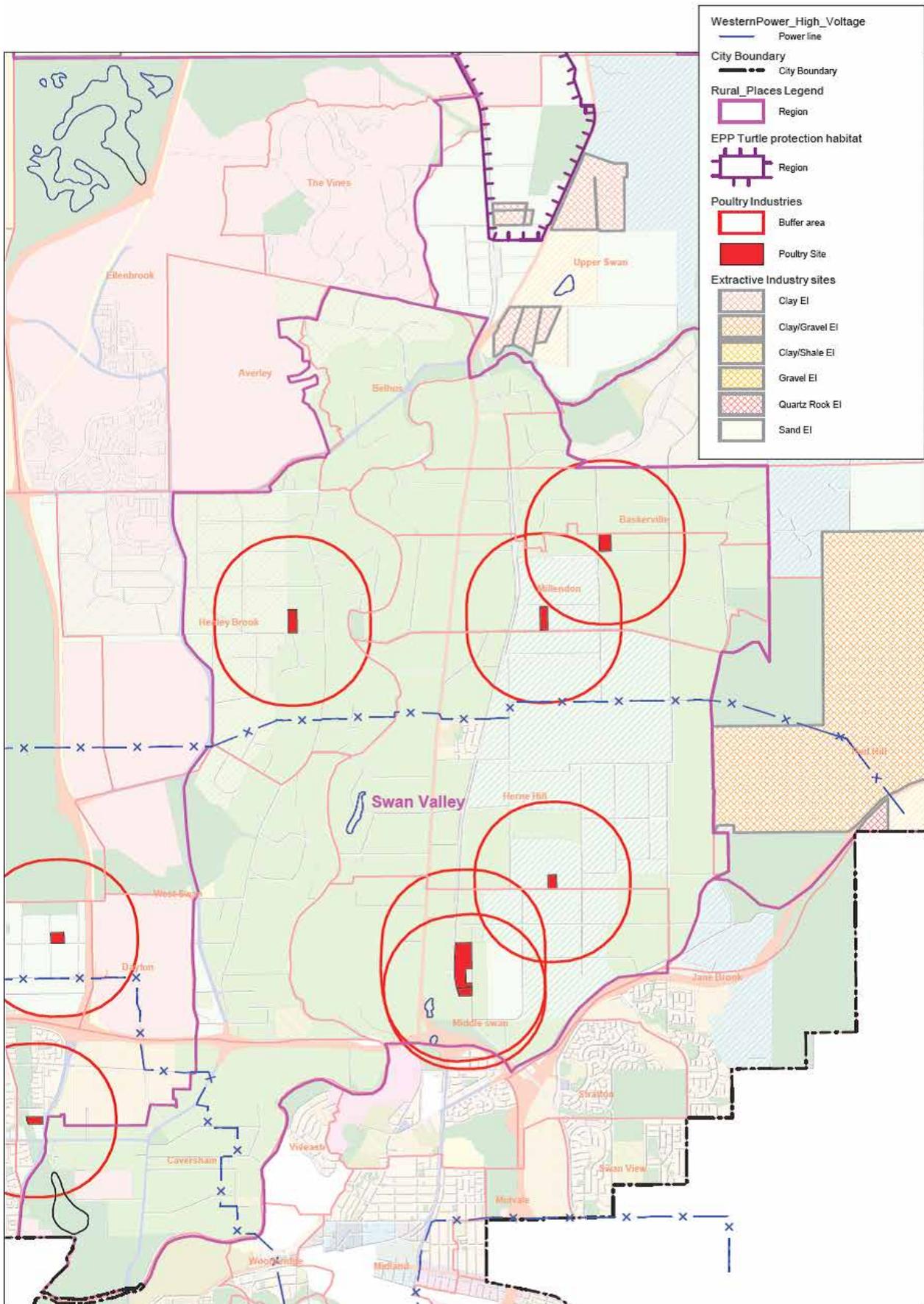
3.8.14 Henley Brook

Henley Brook is strategically placed between the Urban Growth Corridor and Ellenbrook and when urbanised, would complete the Urban Growth Corridor.

There has been a substantial investment in public infrastructure in Ellenbrook and in the foreseeable future, the same level of investment will also occur in the Urban Growth Corridor. The route of the Morley-Ellenbrook line lies on the western edge of Henley Brook. An opportunity exists to take advantage of infrastructure so that efficiencies of scale and a cohesive transport network can be realised. Furthermore, there are no environmental constraints to urbanisation as this area has the same characteristics as the Urban Growth Corridor.

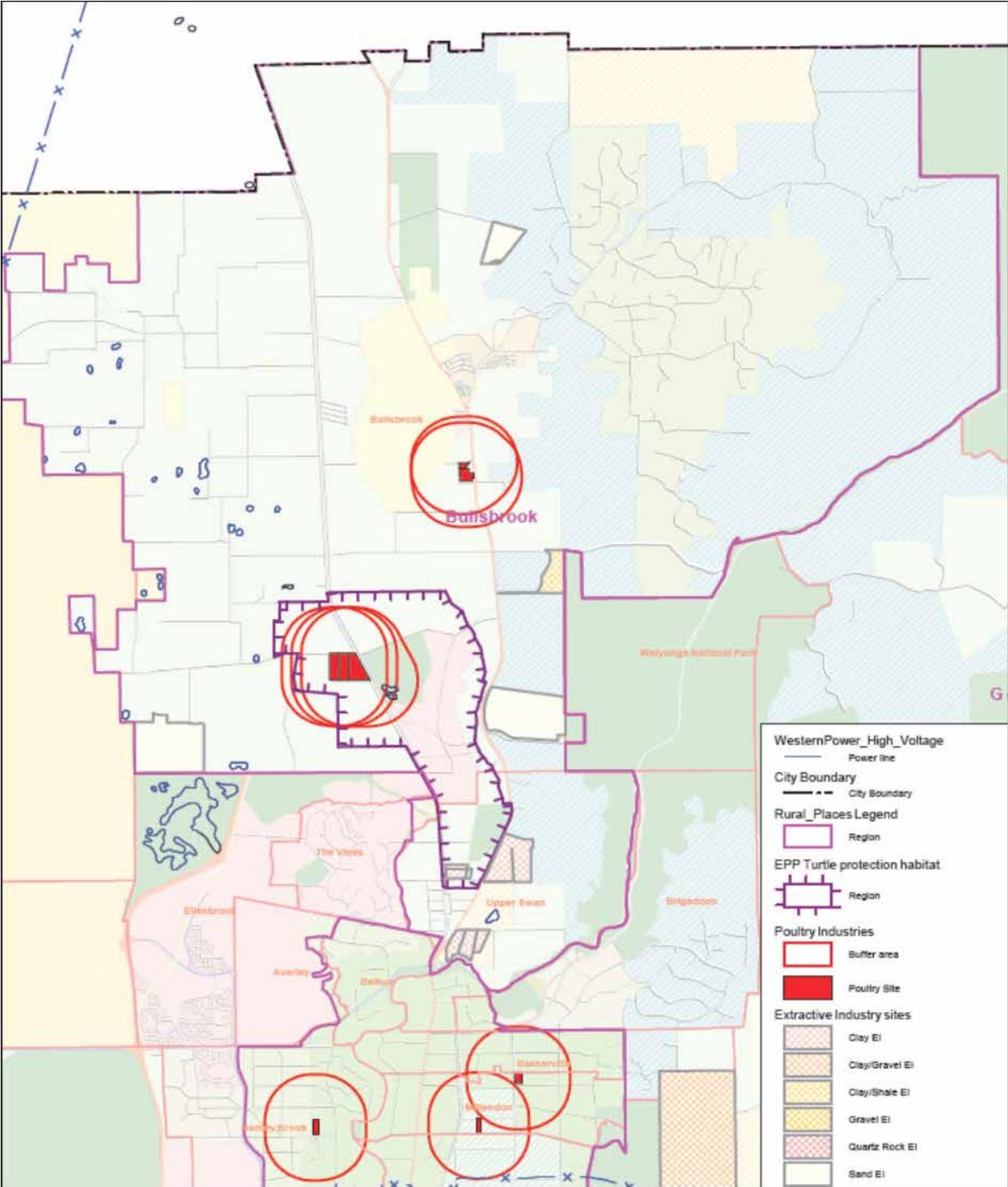
For future planning purposes, this area should be included in the LPS as a long-term investigation area with a view to ultimately including it in a future North-east sub-regional structure plan as a future urban area.

Figure 35. Swan Valley Rural Precinct



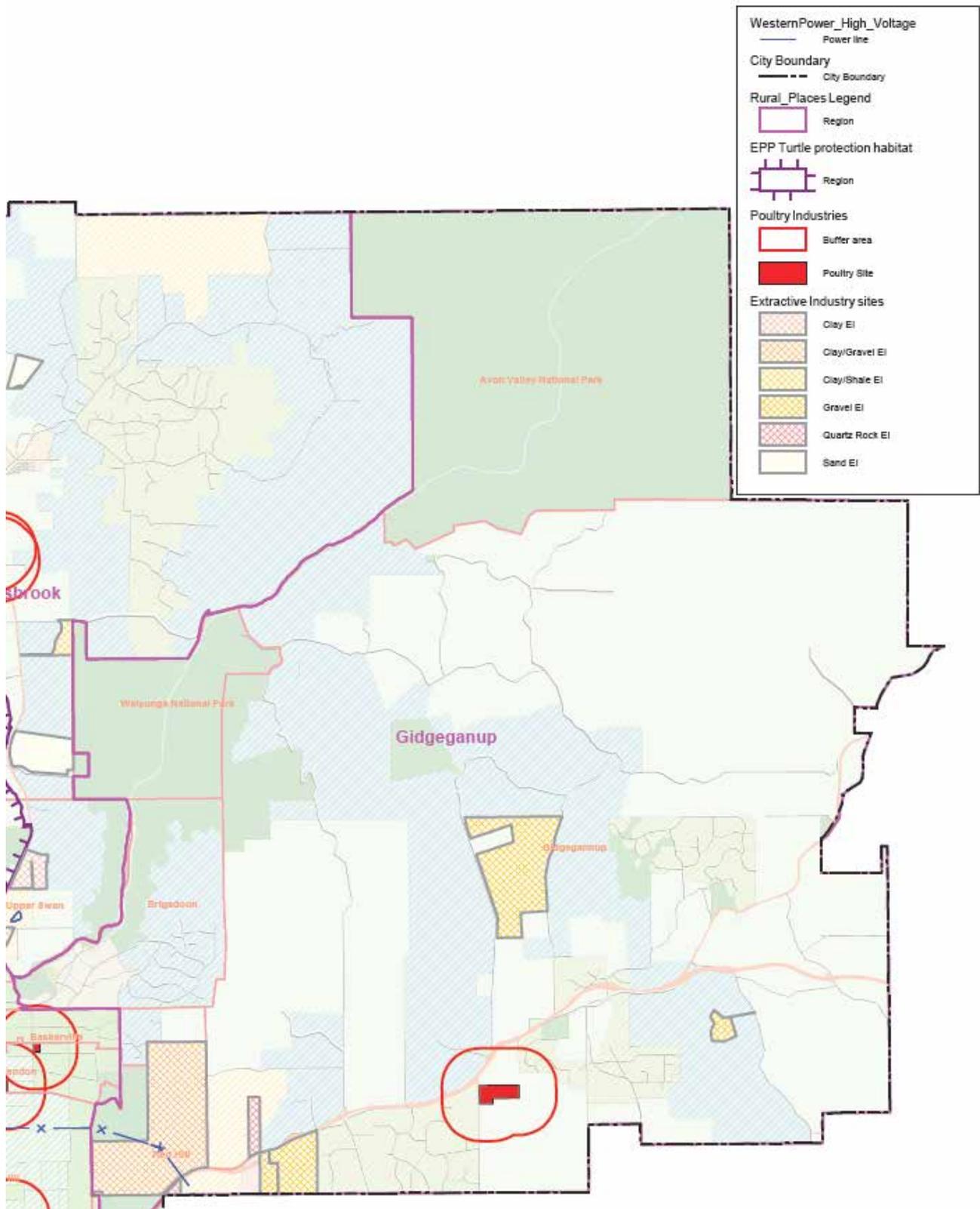
Source: City of Swan

Figure 36. Bullsbrook Rural Precinct



Source: City of Swan

Figure 37. Gidgegannup Rural Precinct



Source: City of Swan

3.9 Urban Design and Heritage

3.9.1 Subdivision patterns

The characteristics of the design of the built form of localities within the City of Swan reflect prevailing architectural forms and subdivisional design at the time of their development. The older areas of Guildford, Woodbridge, Midland, Midvale and Hazelmere are characterised by a grid pattern of streets with larger lots but have gradually been modified through increases in density of infill development, re-subdivision and the creation of new roads or cul-de-sacing of some roads. The building stock is mixed spanning from Colonial style from the 1840s and 1850s, Federation style from the turn of the century, Art Deco from the 1920s and 1930s, fibrous cement from the 1940s and 1950s and modern brick and tile from the 1960s to the present.

Figure 38. Example of 'grid' road system in Guildford



Source: Nearmaps

Stratton, Swan View, Kiara, Lockridge, Ballajura and the southern part of Beechboro incorporate elements of the “Garden City” movement characterised by extensive public open space areas and curvilinear street patterns with many loop roads and cul-de-sacs based on principles of separating pedestrian and vehicle movements and managing traffic through a traffic hierarchy of streets. The building stock is dominated by modern brick and tile single residences on lots predominantly ranging from 500 square metres to 750 square metres

Figure 39. Example of ‘Garden City’ movement road design in Ballajura



Source: Nearmaps

Designed in the early 1990s, Ellenbrook reflects a transition period from curvilinear street patterns to the adoption of “New Urbanism” design philosophies which introduces a modified grid pattern of streets but retains some use of cul-de-sac and loop roads. The building stock in Ellenbrook, while modern brick and tile, is varied by a great diversity of housing types from single residential, group housing, two storey town houses and mixed use commercial/residential. More recent subdivision developments from the mid-1990s such as the northern end of Beechboro have also reflected the trend towards “New Urbanism” philosophies of subdivision design. This style of subdivision design is being continued within new urban development areas in the Caversham, West Swan and Henley Brook localities in accordance with the design elements within the Western Australian Planning Commission’s (WAPC) Liveable Neighbourhoods (2007).

Figure 40. Example of 'New Urbanism' street design in Ellenbrook



Source: Nearthmaps

The Swan Valley is a semi urban environment characterised by lots of an average of four hectares, having been subdivided as smallholdings in the early 1900's in response to demand for small farmlets but ultimately being developed by mostly southern European migrants at that time for mostly grape production.

Industrial development is largely contained within Malaga. Malaga is characterised by relatively small lots for industrial development. An industrial area is developing in Hazelmere comprising much larger lots averaging four hectares and therefore accommodating much larger industrial enterprises, particularly in connection with road freight transportation owing to its strategic location within the regional road network and proximity to Perth airport and the Forrestfield rail marshalling yards.

3.9.2 Redevelopment

Redevelopment of an area can dramatically change the character of that area; however places naturally need to change over time to meet the changing needs of the community and therefore the City's role is to manage change. There is therefore a need to identify areas that are undergoing or likely to undergo change and to make appropriate plans to manage that change in a direction that meets the City's vision and objectives.



3.9.3 Crime Prevention through Environmental Design

There is a body of research that indicates that the way the built environment is designed can lead to a reduction in the fear and incidence of crime by reducing opportunities for offending. Crime Prevention through Environmental Design (CPTED) is founded upon the concepts of Defensible Space; Natural Access Control, Passive Surveillance, Territorial Reinforcement, Management and Maintenance and Legitimate Activity Support, detailed in the WAPC draft Designing Out Crime Planning Guidelines (WAPC, 2006). The guidelines describe principles and methods for designing and managing public and private spaces that reduce opportunities for crime and the fear of crime.

Although concepts of CPTED are embedded in subdivision design under Liveable Neighbourhoods, the City has not adopted CPTED guidelines through policy. Community engagement through the City's Place Planning activities indicates that safety is a priority for the community and should therefore underpin the City's strategies, policies, programs, practices and decision-making.

The adoption of CPTED guidelines under a local planning policy to be applied across the City would facilitate the aims of Place making but should not be relied upon in isolation to achieve those aims. A coordinated cross-functional approach is required that includes community development programs as it is ultimately people that make places safe to be in.

3.9.4 Public Art

The visual interest of public spaces can be enhanced through public art, which can also create emotions such as a sense of civic pride and a sense of identity with a place. Public art includes memorials and statues and sculpture but can also incorporate the architecture of the space and street furniture such as lighting and seating where the design process has involved an artist. The inclusion of public art has become a greater consideration in the design of public spaces and a trend has been towards more interactive and kinetic art.

The City's Provision of Public Art Policy stipulates that when an application for approval of a development over \$1 million is made, any approval will be subject to a condition which requires the development to provide, or contribute to, Public Art to a value of at least 1% of the Construction Cost of the development, together with other ancillary requirements.

The proponent of the development may elect to meet their Public Art contribution by:

- i. Establishing an appropriate piece of Public Art "on-site" as a component of their development to the value specified within the development condition; or
- ii. Providing cash-in-lieu to the amount specified within the development condition.

Place Making

The character of a place is often defined by the use that people make of its spaces. Place making is about creating spaces that meet the needs of people and that people want to be in. Place making is therefore an integral part of urban design in creating public spaces that are safe, comfortable and functional and have visual interest. Place making has relationships with CPTED principles in making cities safer places to be in by promoting public life. While opportunities for place making exist within city centres and older traditional main street commercial centres, a significant constraint for newer suburban centres has been that they are dominated by privately owned shopping centres where the management carefully manages the use of that space.

A challenge for the City is therefore to create spaces that people use and want to be in, which requires a co-ordinated multi-disciplinary approach across the organisation incorporating aspects of land use planning in creating design guidelines and the planning approval process, community development programs in encouraging people to use spaces, asset management in providing a quality streetscape and public safety.



3.9.5 Streetscaping

Street scaping is at the heart of the physical environment aspect of Place making and involves the street treatments, furniture and landscaping that the City incorporates within its streets. The street scaping undertaken will have an important influence on the comfort, safety and useability of the street and will consequently influence public behaviour and emotions in the use of the street. Effective implementation of street scaping therefore requires input from across many functional business units in order to ensure that street scaping meets all aspects of community need and does not address one aspect at the expense of other aspects.

3.9.6 Revitalisation of Midland

History of Midland Midland has been occupied by settlers since 1832. However, little development occurred until 1886, when the Midland Railway Company commenced operations. In 1891 the township of Midland Junction was established, after private land was subdivided and put up for sale by James Morrison.

True to its name, Midland Junction was a junction for the roads north and east (now Great Northern and Great Eastern Highways) and the railway system. The township's expansion was so rapid that the Municipality of Helena Vale was proclaimed in November 1895. This name was to revert to Midland Junction in 1901.

Between 1902 and 1904 the Western Australian Government Railway Workshops were relocated to Midland and they had a profound and lasting influence on the town. During World War I a large number of the Workshops' men joined the armed forces and they are commemorated by the Peace Statue on the site. As a town war memorial, the citizens of Midland placed a large four-sided clock on the dome of the Town Hall in 1923. This clock has become one of Midland's best-known landmarks.

The State Abattoirs were opened in 1914 and the Army's ordnance store in 1920. During World War II part of the Railway Workshops were converted for the repair of naval equipment and parts, and a large shell annex constructed for the manufacture of munitions.

The 1960s and 70s saw many changes. The Midland Railway Company was bought by the Western Australian Government Railways in 1964 and their land became the site of the Rapid Transit Terminal in 1967 and Centrepoint Shopping Centre in 1972. The 'Junction' part of Midland's name was dropped in 1961 and in 1970 the Town of Midland merged with the Swan-Guildford Shire to become the Shire of Swan.

During the 1980s a new Police Station and Courthouse were built, Midland Gate Shopping Centre opened and the Swan Park Leisure Centre and the Speed Dome were established. In 1993 the Department of Land Administration (now Landgate) relocated to Midland. This was followed, in 1994, by the State Government's closure of the Railway Workshops, which immediately impacted Midland's local businesses and workforces.

Midland Redevelopment Authority Since the development of the Midland Gate shopping centre in the 1970s, development in Midland has been very fragmented. This has created several nodes of development that have not effectively tied together and left no clear centre to the city. Midland became a sprawling, unwalkable centre whose centre of gravity had changed with no clear town centre as a focal point for the community.

In 2000, the Midland Redevelopment Authority was formed, providing the first genuine opportunity to revitalise parts of the Midland town centre, including the former Railway Workshops and city centre. One of the Authority's first activities was to provide a draft Concept Plan in 2000. In 2005 a review of this Concept Plan was undertaken and a new Midland Metro Concept Plan 2010 was released. The Midland Metro Concept Plan provided a vision for the revitalisation of Midland into a vibrant regional centre, bringing widespread economic, social and environmental benefits.

In 2013, the Midland Metro Concept Plan 2010 was reviewed and converted to a Midland Master Plan - a first for Midland. The Master Plan is a strategic and aspirational document that will guide the MRA in preparation of an updated statutory planning framework, including a new Redevelopment Scheme and Design Guidelines. The Master Plan also informs the preparation of other implementation packages, including a place plan, place activation strategy, commercial strategy and public art strategy. Refer Figures 41, 42 and 43.

Over the past decade, the Midland Redevelopment Authority has led the urban renewal of Midland with the development of inner city apartments, dress circle residential dwellings, a large format retail precinct, new public spaces featuring attractive landscaping, street furniture and public art and the adaptive reuse of several heritage buildings within The Workshops precinct. New development has filled the gap between the old town centre and Midland Gate shopping centre, and to a certain extent the land between the Midland Redevelopment Authority former railway workshops site and the old town centre. These and other activities have fostered the community's confidence and a strong partnership with the City of Swan.

The Midland Oval site also offers significant potential to create a community focal point and potentially a new identifiable centre in Midland which will connect people to shops, entertainment, public transport and recreational facilities such as the Swan and Helena rivers.

Connecting Midland to the Helena and Swan Rivers The Midland centre is strategically located between two of the most important environmental assets of the City. As the Swan and Helena Rivers are 1.5km and 1km respectively away from the north-west corner of Midland Gate, Midland deserves to be recognised and developed as a City Centre accessible to the two rivers. However, the two rivers are not easily reached by pedestrians or cyclists from the City centre as there no easy linkages to the two rivers nor are there many obvious visual cues as to their proximity.

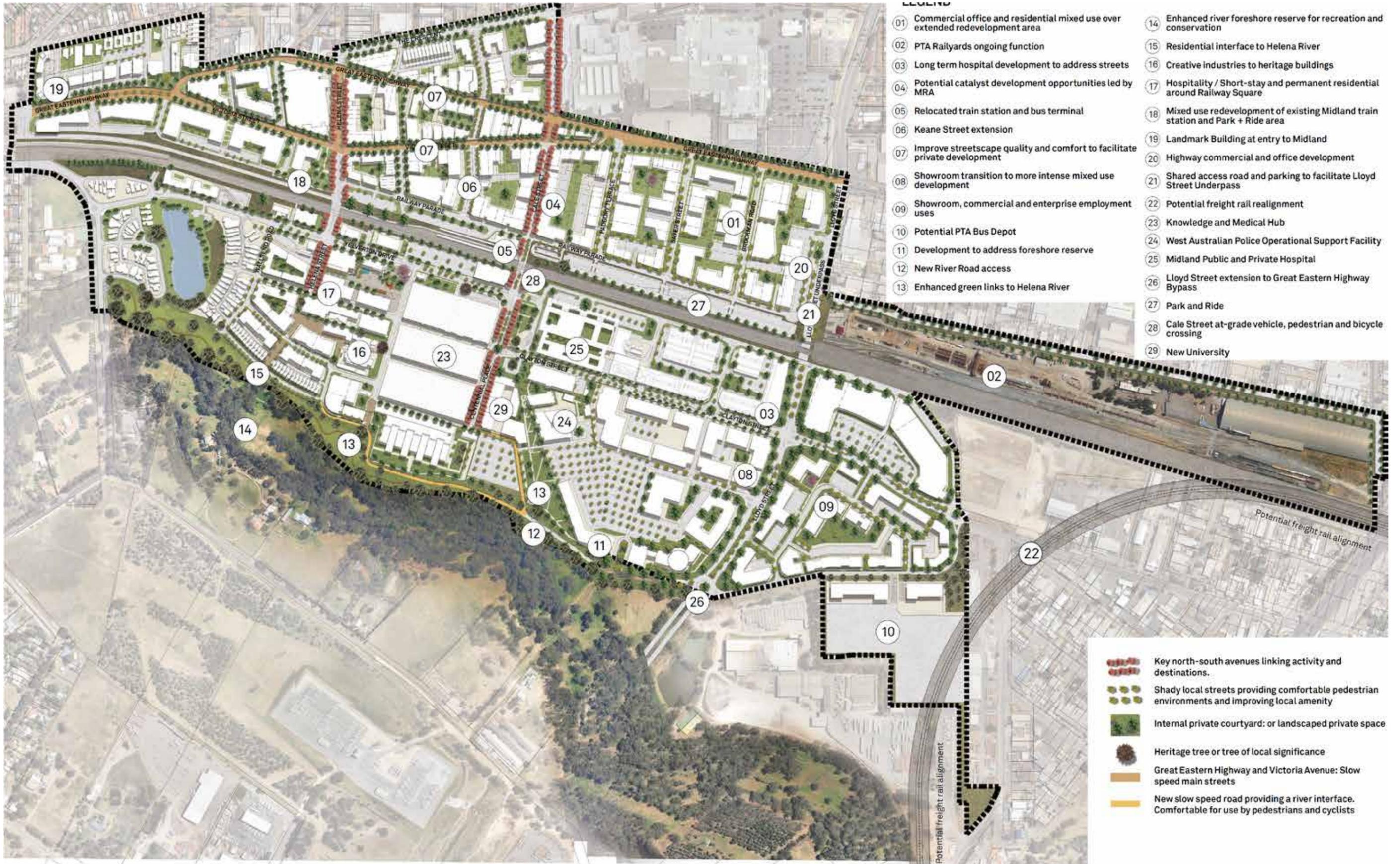
The implementation of the Swan Riverside Regional Park Plan has the potential to be the catalyst for realising Midland's true potential as a City Centre with two rivers making up its urban fabric. In 2004, the City in partnership with the Midland Redevelopment Authority and Western Australian Planning Commission, embarked on a master planning exercise for the Woodbridge Viveash Foreshore which included the revitalisation of Swan Regional Riverside Park, located on the corner of First Avenue and Bayley Street, Woodbridge. It is proposed that a play space, which caters for all ages and abilities, will be developed at this scenic riverside park and become a tourism magnet for the Swan region. The place space will contain areas which have been specially designed to inspire creative, engaging and physical play and will be themed around the people, plants, animals, culture, history and ecology of the Swan River. A recent \$2.4m grant from the Federal government will see the plan being implemented over the next few years.

Midland Activity Centre Structure Plan The Midland Activity Structure Plan was adopted by the City in 2015 and will define the direction of the Midland centre over the coming 10 to 20 years as well as influence the form of development, its character, intensity of activity and perception as a place by the community.





Figure 41. Midland Master Plan

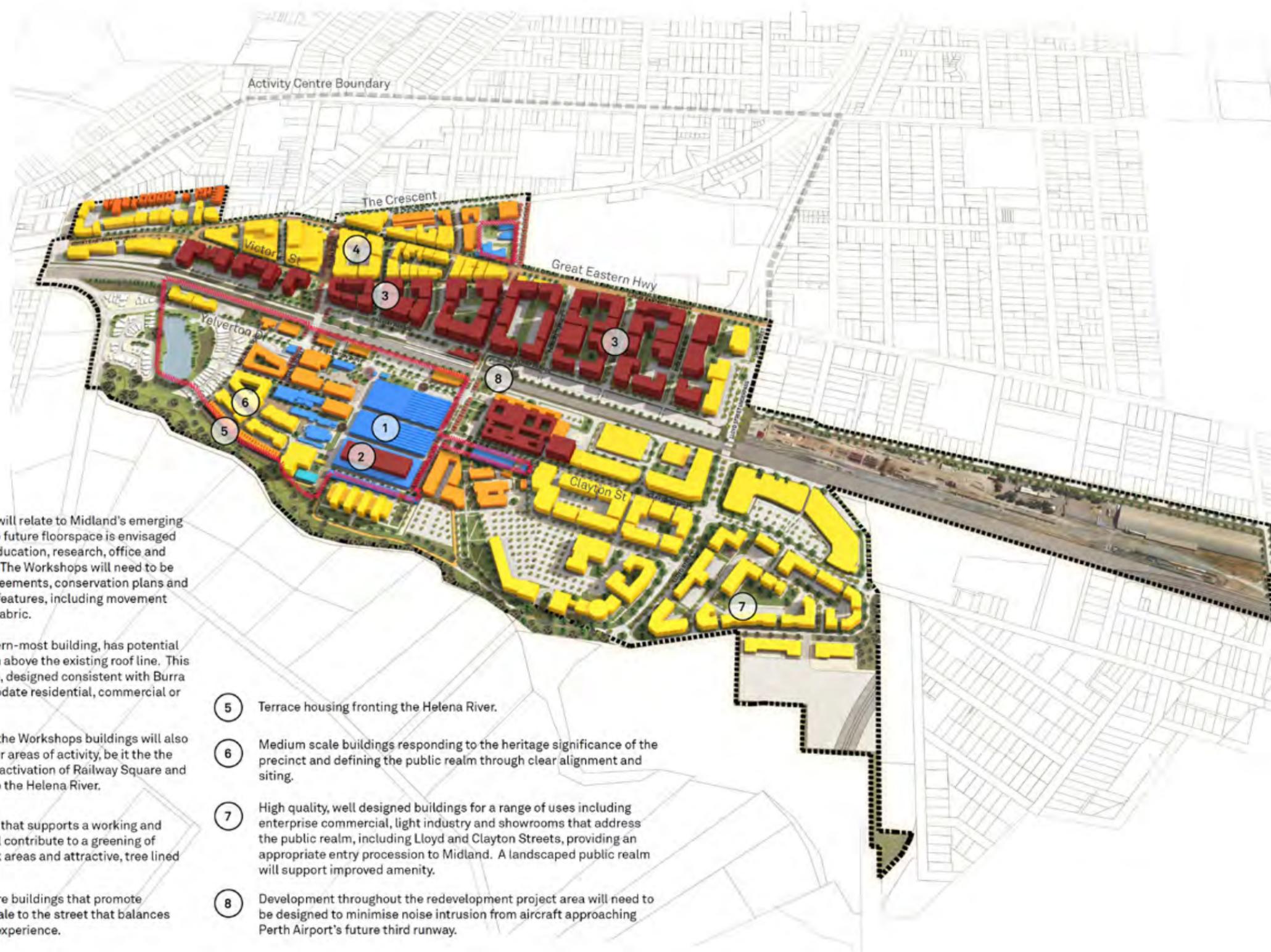


05 Functional Elements Built Form and Heights

LEGEND

- 1 - 2 Storeys
- 3 - 4 Storeys
- 5 - 8 Storeys
- 9 - 12 Storeys
- Heritage Area

Note: Lot 602 Yelverton Drive will be a maximum 5 storeys.



- ① The role of The Workshops buildings will relate to Midland's emerging health and education precinct and so future floorspace is envisaged to accommodate a range of health, education, research, office and cultural facilities. Redevelopment of The Workshops will need to be consistent with adopted heritage agreements, conservation plans and is likely required to retain important features, including movement pathways, machinery and industrial fabric.
- ② Block 3 of The Workshops, the southern-most building, has potential to accommodate landmark built form above the existing roof line. This should be contemporary architecture, designed consistent with Burra Charter principles and may accommodate residential, commercial or other supporting land uses.

Redevelopment and conservation of the Workshops buildings will also contribute to reinforcing links to other areas of activity, be it the the Midland Public and Private Hospital, activation of Railway Square and improved links from the city centre to the Helena River.
- ③ Potential for mixed use development that supports a working and living environment. Development will contribute to a greening of Midland through landscaped setback areas and attractive, tree lined streets.
- ④ Midland's traditional heart will feature buildings that promote pedestrian comfort - presenting a scale to the street that balances the need for intensity with an urban experience.

- ⑤ Terrace housing fronting the Helena River.
- ⑥ Medium scale buildings responding to the heritage significance of the precinct and defining the public realm through clear alignment and siting.
- ⑦ High quality, well designed buildings for a range of uses including enterprise commercial, light industry and showrooms that address the public realm, including Lloyd and Clayton Streets, providing an appropriate entry procession to Midland. A landscaped public realm will support improved amenity.
- ⑧ Development throughout the redevelopment project area will need to be designed to minimise noise intrusion from aircraft approaching Perth Airport's future third runway.

05 Functional Elements Activation and Place Management



3.10 Cultural and Built Heritage

The City has a significant cultural heritage built form. The Guildford town site was laid out in 1829, when the Swan River Colony was first settled by Europeans and consequently contains much of the City's oldest built heritage. The localities of Midland and Woodbridge contain the next highest concentration of significant cultural heritage places, particularly in connection with the former Midland Government Railway workshops dating from the 1890s. The City of Swan therefore has some of the most significant cultural heritage in Western Australia within its district.

3.10.1 Guildford Historic Town

On 5 July 2019, the Guildford Historic Town was officially included in the State Register of Heritage Places, the first place to be registered under the new Heritage Act 2018.

3.10.2 Local Heritage Survey

The City has prepared a Local Heritage Survey of places of local cultural heritage significance in accordance with the requirements of the Heritage Act 2018. The Survey is a record of places, which includes buildings, structures, parks and natural features, and describes what is known about each place and its cultural heritage significance.

The Survey comprises 423 places with the majority being located within Guildford and Woodbridge. The Survey applies a Management Category to each place, determined by the level of significance ascribed to the place. Places assigned to one of the two highest management categories comprise the City's Heritage List, made under Local Planning Scheme No.17. Places on the Heritage List may take advantage of development incentives aimed at conserving those places.



3.10.3 Heritage Precincts

Guildford and Woodbridge are designated as Heritage Precincts under City of Swan local planning policies because of the significance of the areas as a whole. All development within these areas requires planning approval and the City has adopted design guidelines with which new development and alterations to existing development should comply, being focused upon preserving the unique character of these areas.

3.10.4 Heritage Strategic Plan

The City has prepared a Heritage Strategic Plan which establishes a comprehensive and coordinated framework for managing all aspects of heritage within the City. The main objectives are:

- to comprehensively identify and record the places, stories and objects that represent the unique and diverse history of the district;
- to embed heritage in policy and planning to ensure that sound conservation, successful adaptation and harmonious development of the district's heritage places in a fair and consistent manner;
- to facilitate and encourage the proactive conservation and management of heritage in the district; and
- to increase the awareness and appreciation amongst all stakeholders of the district's unique and diverse heritage.

3.10.5 LPS 17 Provisions

Local Planning Scheme No. 17 provides for incentives for preserving heritage buildings through granting concessions such as density bonuses on normal development requirements to assist in the preservation of a building. The City also participates in a heritage loan subsidy scheme which is managed by the Heritage Council and WALGA. Other forms of incentives can be introduced such as grants, heritage awards, concessions on rates, waiver of development application fees, and providing free heritage information and advice to landowners.

There are a number of sites within the City of Swan that are of significance to the Aboriginal community. The proponents of development proposals are expected to liaise with the Department of Indigenous Affairs when preparing proposals in order to ensure that the impact of proposals on Aboriginal culture is taken into account.

3.11 Transport and Access

The overall transport planning function is undertaken by three State Government agencies, the Department of Planning, Lands and Heritage, the Department of Transport and Main Roads WA (MRWA) with the City providing input as a key stakeholder when required. However, in the recent past, the City has been more actively involved in canvassing Federal and State agencies for funding of the regional road network which is in dire need of upgrading, in particular Gnangara Road, Lord Street (Perth-Darwin National Highway) and the extension of Lloyd Street.

The City is mainly involved in local transport planning in through preparation of structure plans within the City which 'fills-in' the local road network within the broad regional road network, providing for local distribution and access roads, generally in accordance with the WAPC Residential Roads Policy DC 2.6, published in June 1998.

In addition, the City utilises the Community Design Code for local road planning by reference to Element 1- Community Design and Element 2-Movement Network. These elements provide an acceptable basis for the preparation of structure plans for new urban areas within the City of Swan.

3.11.1 Road Network

The existing regional road network passing through the City comprises of the following two categories of roads.

Primary Regional Road reserves which are under the responsibility of MRWA:

- Roe Highway (north - south)
- Great Northern Highway (north - south)
- Perth Darwin National Highway (PDNH) - (north - south)
- Tonkin Highway (north - south)
- Great Eastern Highway and Great Eastern Highway Bypass (east - west)
- Reid Highway/Middle Swan Road (east - west)
- Toodyay Road (east of Roe Highway)
- Guildford Road
- East Street
- James Street (Guildford)
- Johnson Street

Other Regional Road Reserves which are under the responsibility of the City are:

- Henley Brook Avenue (north-south)
- Alexander Drive (north - south)
- Malaga Drive (north - south)
- Lord Street (north - south)
- West Swan Road (north - south)
- The Broadway (north - south)
- Abernathy Road (north - south)
- Lloyd Street (north-south)
- Toodyay Road (east -west)
- Hepburn Avenue (east - west)
- Marangaroo Drive (east -west)
- Beach Road (east - west)
- Benara Road (east - west)
- Morley Drive (east - west)
- Youle Dean Road (east - west)
- Gnangara Road (east - west)
- The Promenade (east - west)

The City's local road network comprising of Local Distributor and Access Roads have resulted from the structure planning and sub division design and is an ongoing process. The local road network within the City, especially within the Swan Urban Growth Corridor, is forecast to expand significantly. It is during the structure planning and subdivision stages that the design of road reservations, infrastructure such as shared and bicycle paths and road intersections are finalised. Figure 44 illustrates the current and future regional road projects within the City.

It is clear from Figure 44 that North Ellenbrook lacks a legible east-west and north-south road network. Population growth in Bullsbrook and future major industrial development in Bullsbrook (north and south) and North Ellenbrook justifies the provision of suitable road linkages. Local structure planning in this area must identify the appropriate road reserves to complete those road connections.

3.11.2 Car dependency

An increased population will demand greater use of both private and public transport services and facilities. An increased number of cars on the road will result in a need for increased road maintenance and improved traffic management to avoid potential for traffic congestion. More private transport will also increase the need for car parking spaces which is already proving a challenge within the City.

At the 2011 Census, of the people using one method of travel to work, a significantly large percentage of residents (66.4 per cent - an increase from 65.6 per cent in 2006) drove to work in their own car. This compares with 62.2 per cent in 2011 and 63.0 per cent in 2006 for Greater Perth. A further 6.1 per cent (down from 6.5 per cent in 2006) of the City's residents were passengers in cars. Public transport usage by train or bus increased from 5.9 per cent in 2006 to 6.4 per cent in 2011; compared to 8.2 per cent in 2006 and 10.4 per cent in 2011 for Greater Perth. Walking and cycling increased only slightly.

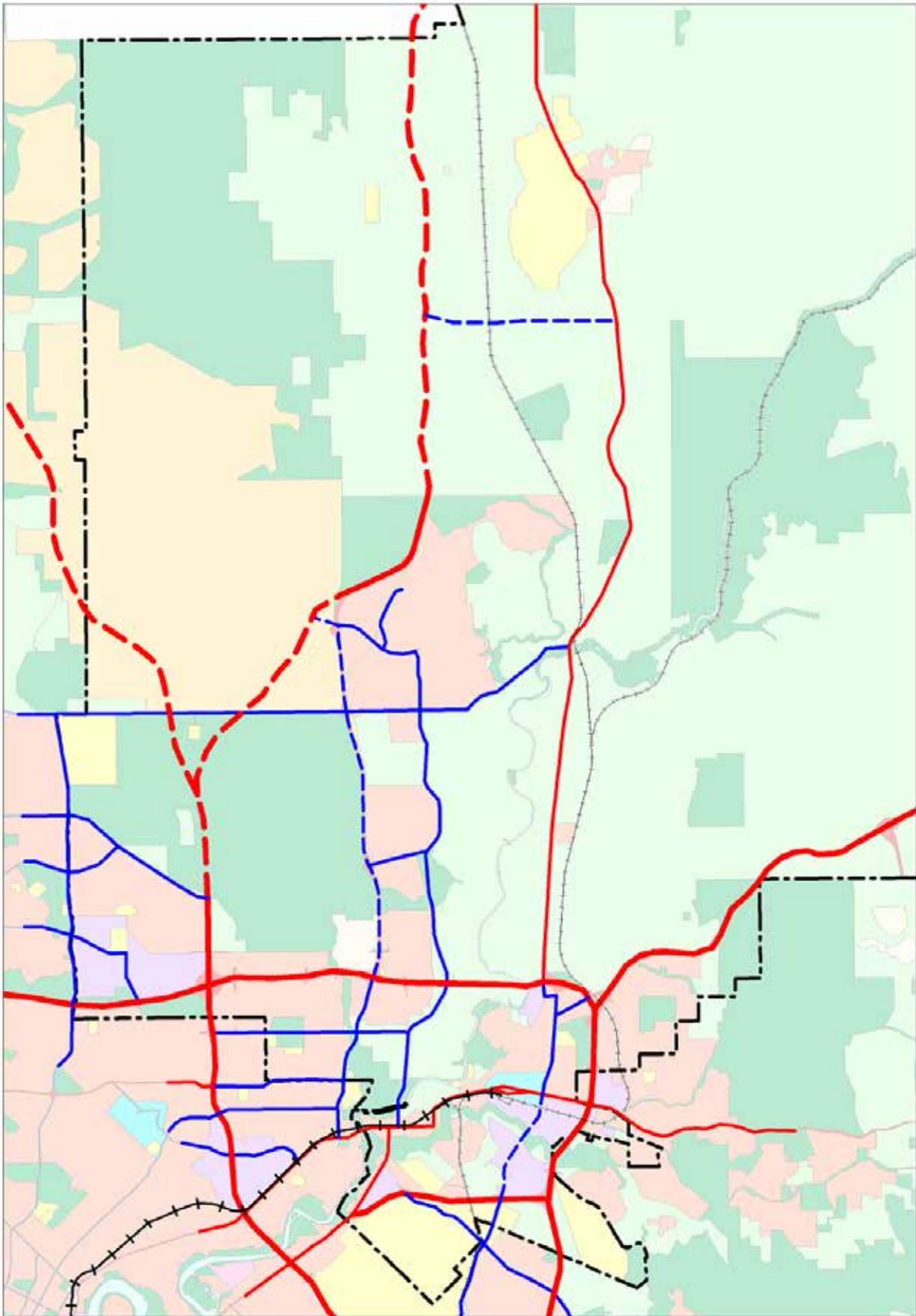
The increase in the use of the private car for the journey to work is not sustainable as it exacerbates existing road congestion and increases travel time and petrol consumption. Significant improvements to the public transport system are required to encourage people to change their mode of travel from the private car to public transport.

Table 16: Method of Travel to Work of City of Swan Residents in 2016 and 2011

City of Swan - Employed persons (Usual residence)	2016			2011			Change
	Number	%	Greater Perth%	Number	%	Greater Perth%	
Main method of travel							2011 to 2016
Train	2,605	4.2	6.1	2,145	4.1	6.5	+460
Bus	1,780	2.8	4.1	1,437	2.7	4.0	+343
Tram or Ferry	15	0.0	0.0	24	0.0	0.0	-9
Taxi	121	0.2	0.2	74	0.1	0.2	+47
Car - as driver	42,805	68.2	64.1	34,455	65.5	61.5	+8,350
Car - as passenger	3,083	4.9	4.6	3,269	6.2	5.4	-186
Truck	610	1.0	0.7	632	1.2	0.9	-22
Motorbike	286	0.5	0.5	272	0.5	0.6	+14
Bicycle	300	0.5	1.0	292	0.6	1.1	+8
Walked only	987	1.6	2.1	933	1.8	2.3	+54
Other	1,222	1.9	1.9	944	1.8	1.8	+278
Worked at home	2,103	3.4	3.9	1,715	3.3	3.4	+388
Did not go to work	6,149	9.8	9.9	5,603	10.6	11.0	+546
Not stated	652	1.0	1.0	837	1.6	1.3	-185
Total employed persons aged 15+	62,718	100.0	100.0	52,632	100.0	100.0	+10,086

(Source: ABS 2016 Census)

Figure 44. Current and Future Regional Road Projects



Source: City of Swan

Road and Intersection Capacity

The City of Swan has prepared a draft Transport Strategy. A review of data from the Regional Operations Model (ROM) supplied by Main Roads Western Australia (MRWA) was undertaken with an aim of identifying road links within the study area that have potential capacity constraints. A number of intersections were identified that would require capacity improvements in the medium to long term namely -

- Caversham - West Swan Road and Benara Road;
- West Swan - West Swan Road and Harrow Street; and Lord Street and Harrow Street;
- Belhus - Great Northern Highway and West Swan Road; and West Swan Road and Millhouse Road;
- Beechboro - Marshall Road and Altone Road; and Marshall Road and Beechboro Road North;
- Guildford - Meadow Street and Swan Street;
- Jane Brook- Toodyay Road and Talbot Road;
- Henley Brook- West Swan Road and Gngangara Road;
- Midvale- Morrison Road and Farrall Road; and
- Middle Swan - Great Northern Highway and Bishop Road

Midland and the impact of Midland Health Campus and Railway Workshops Precinct

A study for the Midland Health Campus (MHC) and Railway Workshops Precinct has previously been undertaken. Peak hour analysis of the study area road network has identified that with the forecast traffic increases, all traffic signal intersections in the study area will require attention. The timing of any upgrades will depend on district traffic growth, but it is expected that full development of the Workshops Precinct and MHC will require works to the following:

- Construction of the Lloyd Street underpass (required prior to MHC opening)
- Clayton Street / Lloyd Street
- Great Eastern Highway / Lloyd Street
- Centennial Place link to Lloyd Street (south of Police precinct).
- Saleyards Road Lloyd Street link to Clayton Street east.
- Roundabout on Lloyd Street at Centennial Place / Saleyards Road.
- Cowie Close link from Clayton Street to MHC parking

3.11.3 Current Public Transport Network in the City of Swan

Responsibility for public transport services rests with the Public Transport Authority. The City is served by a series of public transport modes centred primarily on Midland but extending well beyond the boundaries of the City.

Passenger services are provided from Midland Station to Perth City on a high frequency electric passenger train service (Transperth). Other passenger train services are provided by TransWa to Kalgoorlie, Merredin and Northam. An infrequent long distance train service operates between Perth and Sydney (Indian Pacific).

The City of Swan has two distinct bus networks provided by Transperth. The western network is focused towards Morley and the eastern network is focused on Midland. Figure 45 shows the service frequencies of the bus services into and out of the City of Swan, land uses and importantly, the infill areas identified in the Urban Housing Strategy.

Transperth provides linkages well beyond the city boundary and Midland Station is the largest interchange facility. Long distance buses are provided by TransWa. These services travel to the mid-west, wheat belt and south east regions of WA. Private bus operators have services departing from Midland Station that service a number of remote and regional areas of the State.

Improvements to the public transport network and services within the City are outside the control of the City. 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.

3.11.4 Perth and Peel @3.5 Million: Transport Network

In March 2018, the State Government released Perth and Peel@3.5million, a strategic suite of documents (including Perth and Peel@3.5million: Transport Network) which present a long-term growth strategy for land use and infrastructure provision for the Perth and Peel regions.

The North-East transport network provides not only a valuable link to the greater Perth and Peel regions but nationally too. It needs to build on this advantage as a gateway to national markets by upgrading the existing road network, through the proposed Perth-Darwin National Highway and the Perth-Adelaide National Highway, with a potential intermodal terminal at Bullsbrook.

Passenger rail infrastructure proposed for the subregion includes the following proposals as part of METRONET Stage One:

- Completing the Forrestfield-Airport Link – an 8.5 km railway spur from Forrestfield to the Perth CBD with three new stations: Redcliffe, Airport Central and Forrestfield.
- The 14.5 km extension of the Thornlie Line to Cockburn Central with two new stations proposed at Nicholson Road and Ranford Road.
- A new rail line from the existing Midland Line to the Ellenbrook town centre with additional stations at Morley, Malaga and Ellenbrook.
- Extending the Midland Line to a new station at Bellevue and relocating the existing Midland Station (rail and bus).

The key public transport initiatives are shown in Figure 45.

Figure 45. North-East sub-region 2050 Public Transport Network

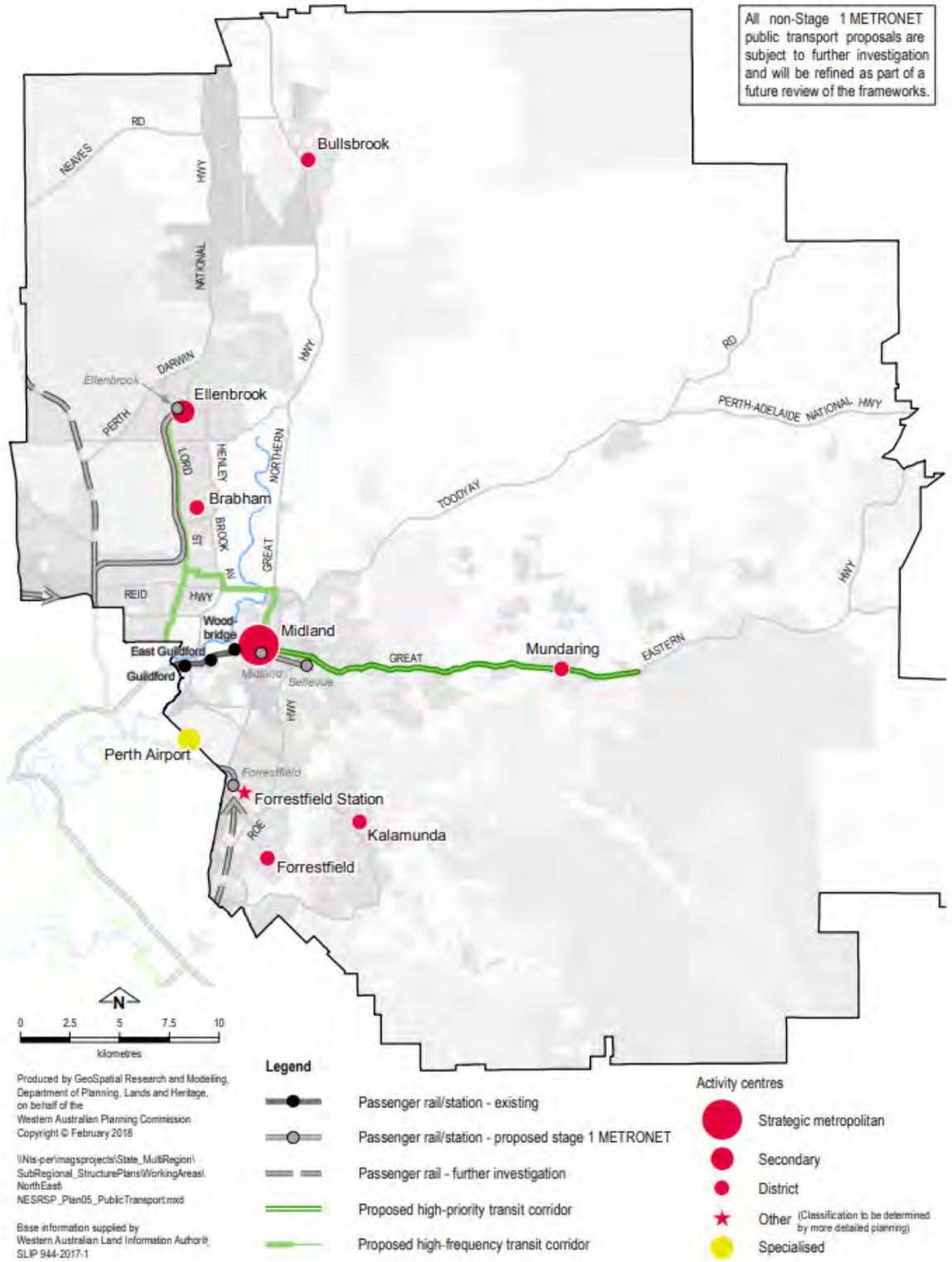


Figure 46. Metronet Stage 1 Plan



(Source: Metronet, WA Government)

3.11.5 Cycling

A hierarchy of bicycle routes exist across the City. The hierarchy consists of on-road bike lanes or a sealed shoulder either side of the road, shared paths, local bike friendly streets to a Perth Bicycle Network path and a continuous signed route often referred to as a Principal Shared Path. Main Roads WA is responsible for bike lanes on Regional Road Network designated roads. Bikewest at the Department of Transport is responsible for paths in the Perth Bicycle Network. The Perth Bicycle Network connects the City of Swan to Perth with a continuous cycle route although a gap in the Principle Shared Path between Midland Station and Bassendean Station is yet to be designed and constructed. The Swan Valley Heritage Cycle Trail is 12km long cycle trail that starts in Guildford and follows West Swan Road on a shared use path through the Swan Valley.

Cycle Connect Strategy In 2012, the City adopted the Cycle Connect Strategy. The Strategy has identified a safe and efficient cycling network to connect between residential areas, key trip generators and future growth areas. The Strategy also examines connectivity with neighbouring Local Government Authorities to encourage integrated cycle routes. The network is shown in Figure 47.

The Strategy has also been developed to assist in the achievement of the following vision for cycling in the City of Swan:

“Develop an efficient and connected cycling network that supports cycling as a safe and viable transport alternative for residents, workers and visitors to the City.”

In order to assist the City and its partners in working toward this vision, the following objectives have been identified:

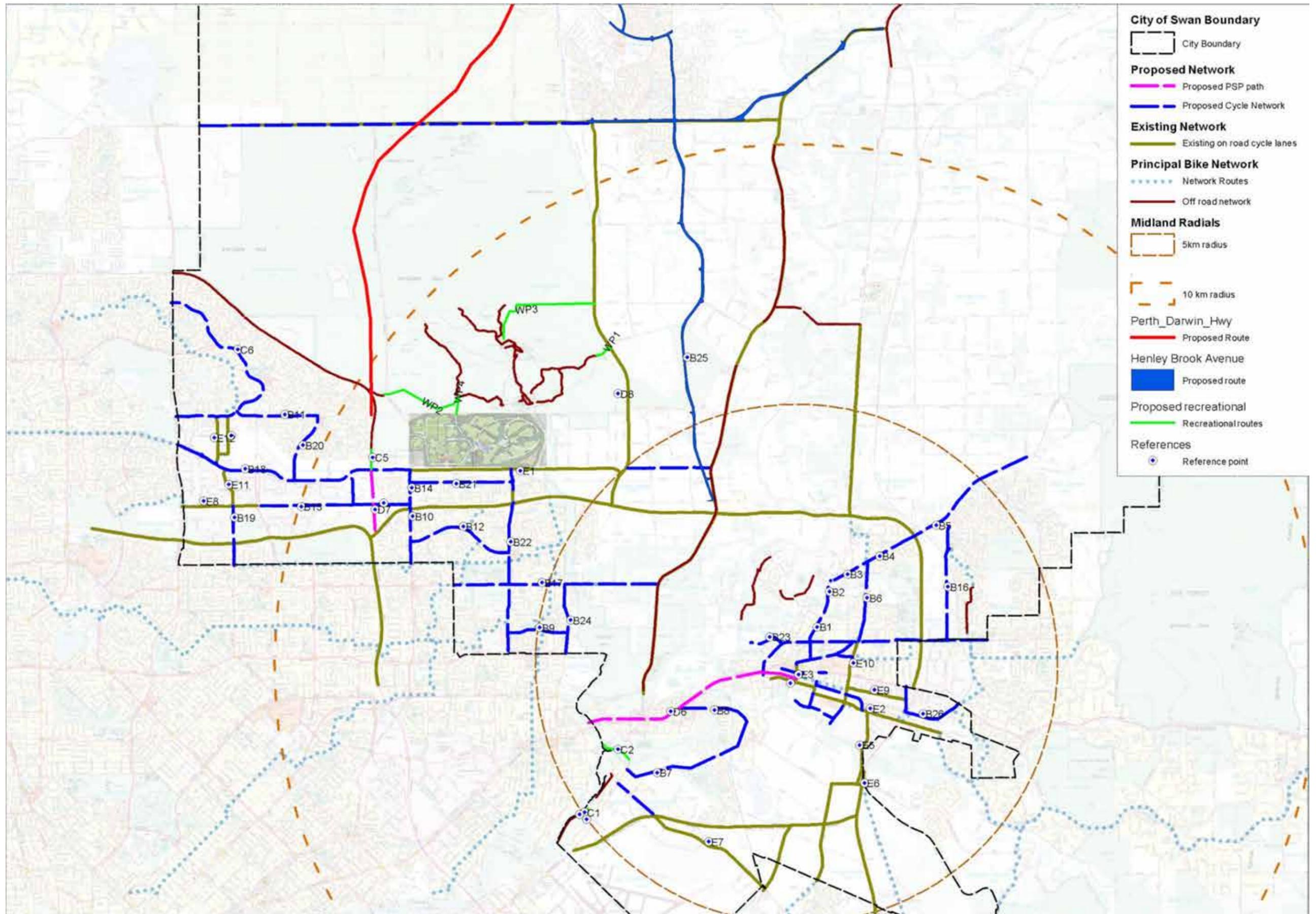
- Identify a safe and efficient cycle network that utilises an appropriate level of service to connect between the residential areas, key trip generators and future growth areas of the City;
- Identify an implementation plan and description of works to be undertaken with indicative costings and design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

To meet these objectives specific infrastructure implementation, maintenance and complementary encouragement and education initiatives have been identified. Infrastructure improvements include the provision of additional cycle routes in the cycle network as well as spot improvements.

In order to coordinate the development of cycle infrastructure, an implementation program has been prepared. The focus of the implementation program is to prioritise the recommended infrastructure projects such that these priorities can be integrated into future internal business planning. It also provides a valuable platform from which to apply for external funding opportunities. As such, the implementation program provides a hierarchy of importance to guide project implementation.

Many of the proposed actions set down within the document require input and commitment from other organisations including, but not limited to the Department of Transport, Main Roads WA, and WA Police. The City should also investigate opportunities to require developers and employers within the City to provide facilities for cyclists and cycling such as End-of-trip facilities.

Figure 47. Swan Cycle Connect Strategy Map



3.11.6 Freight Transport Planning - Road and Rail

Efficient freight movement is essential to Western Australia's economy and well-designed transport networks with good access to major terminals and depots are essential for the freight industry. At the same time, community severance, damage to wetlands, noise, pollution, safety and the devaluing of property are major concerns for the community and often a point of conflict between the public and industry.

The City has significant issues with the interaction between freight and commuter traffic and between transport corridors and sensitive land uses. Residential areas with proximity to major road and rail freight corridors are impacted in terms of noise and vibration and freight corridors are impacted by the encroachment of sensitive uses on their operation and competition for road capacity by commuter traffic.

The three major road freight projects within the City's boundaries are NorthLink, Great Northern Highway and Great Eastern Highway which currently compete with local and commuter traffic for road space. Intersection safety and congestion through areas such as the Midland CBD and Guildford are major concerns. The centre of Midland is divided by the east-west freight rail line and the inherent conflict between rail freight and sensitive land uses is well demonstrated in the Midland City Centre.

NorthLink

NorthLink WA provides a new transport link between Morley and Muchea, in the City's north region. This project combines two adjacent Infrastructure Investment Program projects - the Central and Northern Sections (Swan Valley Bypass) and the Southern Section (Tonkin Highway Grade Separations).

The Central and Northern Sections involve the construction of a new 37km highway from the intersection of the Tonkin and Reid Highways in Malaga to the Great Northern Highway at Muchea. The Central Section will run from Reid Highway to Ellenbrook, and the Northern Section will continue on from Ellenbrook to Muchea. This new route replaces the Great Northern Highway as the main freight route through the Swan Valley.

NorthLink WA will result in a better flow of traffic in the region, both on and off the new bypass route, boosting productivity and creating strong connections, with economic and social benefits. It will reduce travel times and congestion, and provide significant productivity benefits to the economy, industry, motorists and local communities. In particular, the project will improve Western Australia's freight efficiency by introducing an alternative north-south freight route connection, relieving pressure on the Great Northern Highway through the Swan Valley. This project will provide a continuous connection from the Perth International Airport area to Muchea on the Great Northern Highway.

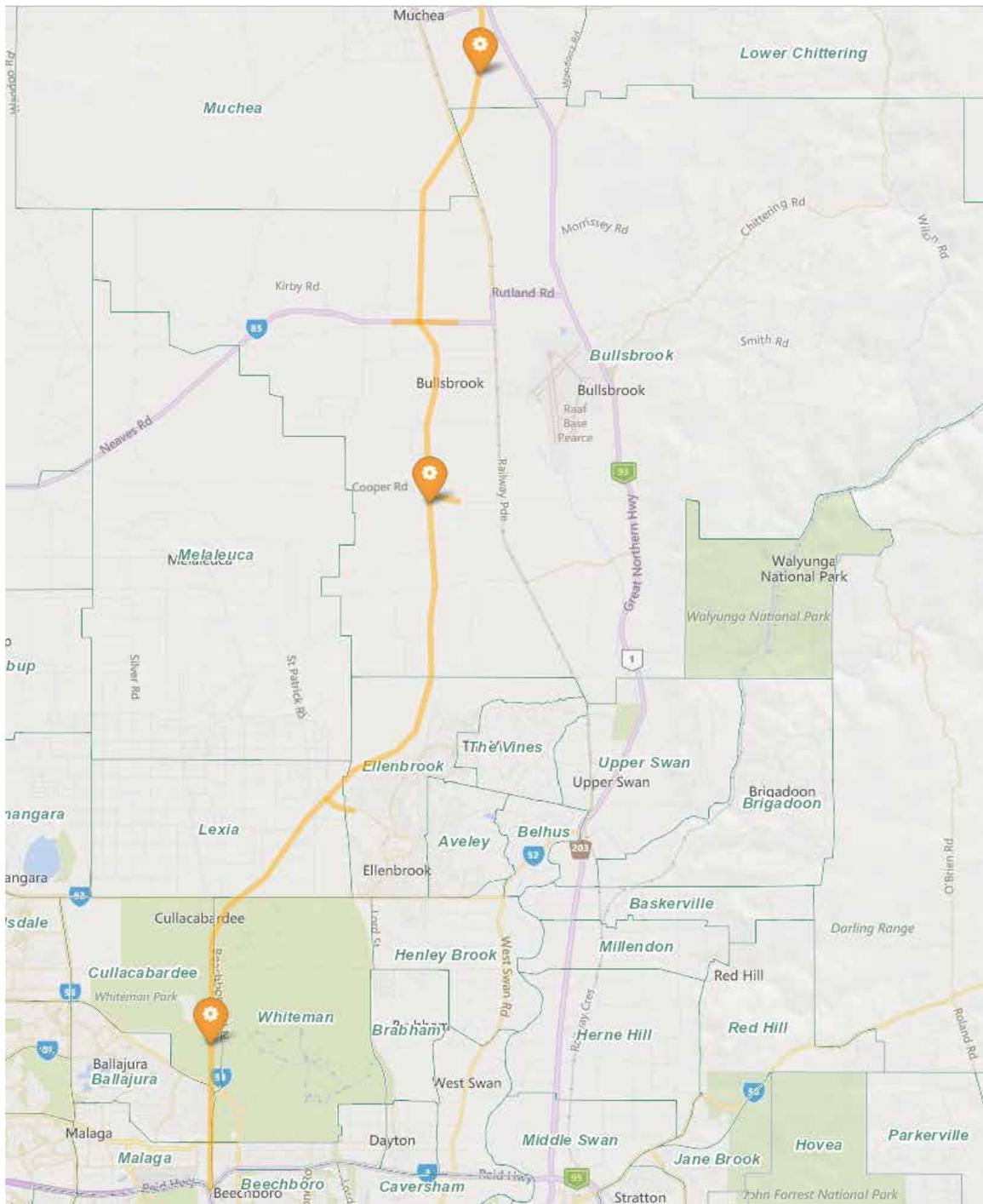
The Central Section was completed in August 2019 and the Northern Section is expected to be completed in early 2020.

Great Northern Highway

The Great Northern Highway (GNH) is a key trade and commercial link to Perth which services the road transport needs of the northern regions of WA and the Northern Territory, forming part of the Perth-Darwin National Highway Auslink Network. It is also the key route into Bullsbrook, Muchea and many parts of the Swan Valley. The significance of this route is continuing to increase with demands for freight servicing the northern parts of WA expected to grow considerably in the near future. There are growing traffic safety issues given the number of uncontrolled access points along the length of the highway, the expectations of future growth of urban land uses in Bullsbrook and potential conflict with heavy haulage traffic.

With Perth and Peel @3.5million identifying North Ellenbrook, Upper Swan, South Bullsbrook and east of Bullsbrook Townsite as future development locations, this conflict is set to continue if no action is taken. This has necessitated the development of an access strategy aimed at guiding future planning decisions to allow development of the area to proceed without compromising the function, safety and efficiency of GNH.

Figure 48. NorthLink WA



Source: Australian Government - Department of Infrastructure, Transport, Cities and Regional Development

Great Eastern Highway (Perth-Adelaide National Highway)

The main road link connecting WA to the eastern states, Great Eastern Highway crosses the municipality from east to west. This road forms part of the Perth-Adelaide National Highway and has a key role in supporting export-oriented industry and the social and economic integration of the eastern states. Current and future interstate and intrastate heavy haulage routes on this eastern approach to the Perth metropolitan region have inadequate capacity and/or conflict with surrounding uses with resultant inefficiencies in transport of goods and significant social impacts on residents and local industries.

A Great Eastern Highway Primary Road reservation has been in place in the MRS for over ten years and also includes a new intersection at Red Hill. The changes to the current road alignment are primarily to address safety, reliability and efficiency issues. The future funding of this project is of great importance to road freight operators, the community of Gidgegannup and eastern wheat belt areas such as Toodyay and Goomalling who are seeking an improved safe access to and from the Perth metropolitan area.

Lloyd Street extension

The Lloyd Street Southern Extension was identified in 1995 and is recognised as an important north south link into Midland. The extension will connect Lloyd Street from Coppershop Road in Midland to the Great Eastern Highway Bypass in Hazelmere. The road is to include two lanes in each direction, a Principal Shared Path and a bridge over the Helena River. The construction of Lloyd St is anticipated to reduce travel times for residents living in High Wycombe, Helena Valley and surrounds wishing to come to Midland, which will further enhance Midland as a central hub.

The construction of Lloyd Street also provides a vital link for the traffic between Hazelmere Industrial Area and High Wycombe/Welshpool Industrial Areas. As well as responding to an increase in industrial traffic in the area, Lloyd Street will also optimise access to the proposed Midland Health Campus. To date, the alignment has been protected by a Planning Control Area No.84 introduced in November 2005 under the Planning and Development Act 2005.

As at November 2015, construction is still ongoing on the section between Stirling Crescent and Bushmead Road and earthworks and clearing has commenced on the section between Bushmead Road and Lakes Road.

Design and approvals for the intersection at GEHB were finalised with MRWA and the ultimate design for the bridge over the Helena River is currently being developed and approvals for the bridge are currently being progressed.

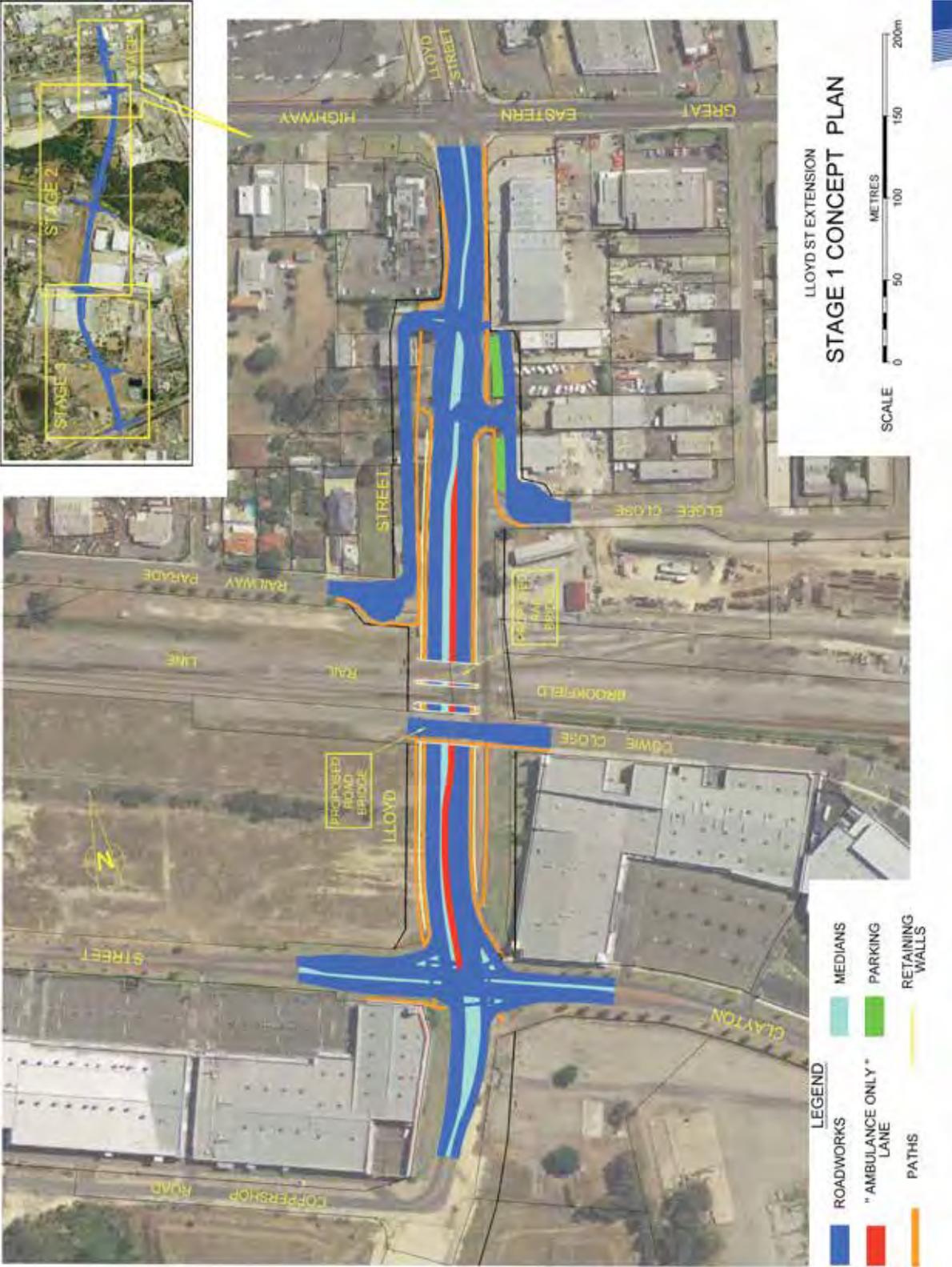
Rail freight through the Midland City Centre

The main east-west freight rail line in the Perth metropolitan region passes through the City of Swan and directly through Midland, effectively bisecting the Midland City Centre. All freight rail from Perth that is bound for the eastern states, central west and WA wheat belt travels along this line. In 2008, movements of freight trains through Midland stood at 200 trains on average per week and predicted to grow to 350 per week in the next 20 years. The noise and vibration of the freight rail has significant impact on amenity within Midland City Centre and the residential areas of Woodbridge, Guildford and Hazelmere to the west through which the alignment also travels. All road crossings of the freight rail in Midland are currently "at grade" causing significant delays to north-south vehicle and pedestrian movements.

The City, in conjunction with the MRA and the Department of Planning, Lands and Heritage has identified an alternative alignment as a strategic long term planning initiative in the WAPC-endorsed Hazelmere Enterprise Area Structure Plan. The next steps required are to undertake planning and concept design for the proposed freight rail realignment to confirm the preferred route alignment and identify land requirements prior to pursuing an amendment to the MRS to reserve the required land as 'Railways'.

Source: <https://www.mainroads.wa.gov.au/Documents/Lloyd%20Street%20Grade%20Separation%20Newsletter%20-%20September%202013.RCN-D13%5E23509416.PDF>

Figure 49. Lloyd Street extension Stage 1



Freight traffic through the Swan Valley

There are high levels of heavy vehicle traffic on Great Northern Highway and heavy tourism traffic on both West Swan Road and Great Northern Highway. These competing uses mean that a strategic approach to movement and access is necessary to ensure the Swan Valley remains accessible and the potential for conflict between competing user groups is minimised.

Completion of the NorthLink WA project (Perth-Darwin National Highway) in 2019 will result in a reduction in the volume of freight traffic on Great Northern Highway in the short to medium term. Great Northern Highway will continue to carry a proportion of Over Size-Over Mass and High-Wide Load traffic and will remain an important part of WA's freight network into the future. The Swan Valley Planning Review acknowledges this continuing function of Great Northern Highway and restricts the further incremental development of active land uses along the Highway to identified nodes, in particular to the Herne Hill townsite. Other recommendations of the plan are to introduce traffic lights at the intersection of Great Northern Highway and McDonald Street and a reduced speed zone from Argyle Street to McDonald Street.

Future Intermodal Terminal Hub

Intermodal terminals are strategic points in the transport distribution network that enable freight to be transferred from road to rail and vice-versa. The north-east corridor is a strategic location for an intermodal terminal and the demand for one is driven by forecast population growth, freight origins and destinations, the continued resource project development and the location of existing and planned intermodal terminals within the Perth metropolitan area.

In 2011, the Department of Transport undertook an assessment of site options for an intermodal terminal located in either South Bullsbrook or North Ellenbrook. The conclusion of the draft South Bullsbrook/North Ellenbrook Intermodal Terminal study is that the preferred site for the intermodal terminal would be in South Bullsbrook as the North Ellenbrook area under investigation contains a number of significant environmental constraints. Two site options were presented - one east of the railway line and one west. The preferred site is west of the railway line where a current amendment to the MRS proposes rezoning rural land to industrial so that a future industrial estate can be created in South Bullsbrook as recommended by EELS 2012.

The development of an intermodal terminal would be expected to create demand for complementary land uses such as a road train assembly area, warehousing and distribution, truck maintenance, repairs and sales and manufacturing and light industrial land uses. The intermodal terminal would have the characteristics of a specialised activity centre.

3.11.7 Parking

The key strategic need by people is access to services, facilities, work and goods. Increasing the supply of car parking as a stand-alone solution cannot fully meet this need. Increasing development intensity in Midland and other activity centres warrants a new emphasis on access ahead of parking capacity. This includes solutions that encourage a better balance between public transport, personal motor vehicle use, cycling and walking. Such a paradigm shift is at the centre of State strategy and is also evident in the latest parking strategy discussions here and abroad.

The City has developed individual parking strategies for the Midland and Ellenbrook activity centres and the Malaga Industrial Centre. The draft Midland Access and Parking Strategy 2012 is discussed in 3.12.8. The Ellenbrook Town Centre (ETC) Parking Strategy provides a framework for decisions about development application assessments within the ETC in respect to the provision of parking bays. The Strategy has identified parking ratios appropriate for the broad land use categories within the ETC, requirements for the provision of 75 per cent public parking and 25 per cent private parking to be controlled via the City of Swan approved Detailed Area Plans, reciprocal arrangements for shared public parking, locations for short-term and long-term parking, bicycle parking and future considerations of paid parking.

The Malaga Parking Implementation Strategy provides a framework to address parking and traffic congestion issues in the Malaga industrial area. The Strategy has identified the following: areas where public parking can be provided in accordance with the cash-in-lieu system, a future public transport node in support of public transport improvements, the ongoing need for compliance controls and the dissemination of information to businesses and workers about appropriate parking usage.

3.11.8 Access

Even though Midland is well serviced by major transport routes, intra Midland transit is embryonic and public transport between Midland and the urban growth centres remains limited. In addition commuter rail services are only from the west and public transport into the eastern arc is limited. Improvement in public transport between residential communities and intense industrial / commercial areas will become a critical planning consideration.

Access must gradually replace parking as the predominant consideration. This will require new policy approaches, changed parking management, integration between parking and public transport, improved intra City public transport and improved support for cycling or walking options.

3.11.9 The Growth of Midland

Midland is a Strategic Metropolitan Activity Centre. As such it is a hub for transport, commerce and services for resident and hinterland populations. The scale of transition that Midland will continue to experience will require expanded parking infrastructure and new public transit services beyond the City's capacity to fund. The completion of a new health campus complex and expansion of Midland Gate could add 3,000 to 4,000 jobs in Midland. Demand for parking and public transit will increase particularly for the population catchment to the east that is not well served by public transport. Midland is not yet recognised as a congested or highly developed location however it is fast becoming one.

Parking capacity in Midland in 2012 is approximately 12,000 bays. This includes all parking on streets and in all private and public premises and car parks. The larger parking facilities are at major shopping centres and the railway station. Midland Gate currently has over 3200 bays, the rail station about 550 and Centrepoint over 430. Supply is increasing at a rate of about 300 bays per year.

The City of Swan operates 18 parking stations for public and specific needs with over 685 bays. Four of these stations provide for commuter and short term parking totaling 530 bays. Two contain 60 reserved bays. Three more contain 60 short term (shopper) bays. The remainder is special purpose bays that are not available for casual parking. In addition, there are about 1000 bays on streets in Midland. Recent studies have shown there is seldom a shortage of bays and management adjustments will be sufficient for the short term.

Future parking supply increases will depend on the completion of the major projects which have been flagged and the additional business activity that follows as a consequence. The City of Swan will seek cooperative arrangements with all developers whether public or private. Key locations have a potential capacity for multi deck car parks that could yield up to 3000 -5000 bays. Other peripheral multi deck sites such as the north western corner of the Midland Oval area potentially add hundreds more bays.

Major development sites in the Midland centre include the Health Campus located between the railway line and Clayton Road, west of Lloyd Street and a future tertiary education institution on the Railway Workshops site south of Yelverton Street. These will add another level of demand for access above current supply capacity and almost certainly well above the car parking capacity on the sites. Therefore this access will need to be met in part by public transport options and integration with major parking areas such as the PTA land along Railway Parade between Lloyd and Cale Streets will be essential.

In response to these development pressures, the City has prepared a draft Midland Access and Parking Strategy 2012 to provide a strategic basis for access and parking improvements as and when the density and intensity of development in the Midland City Centre increases in the future. Future success will mean involving all development parties in:

- new approaches to funding;
- collocating and developing new parking infrastructure including multi-deck parking;
- integration of infrastructure with alternative access mechanisms such as CAT buses,
- cycling and walking infrastructure;
- defining and developing cycle routes including connections to public transport nodes and end of trip facilities; improvements to pedestrian way-finding and footpaths; and
- encouraging lower vehicle to resident ratios in inner City housing.

In 1998, the City initiated a Bellevue 'charrette' planning exercise. The initial study proposed a train station with park and ride facilities around the old Bellevue train station. Both the Midland Redevelopment Authority (MRA) and the City of Swan were of the view that this initiative should be incorporated into the City's strategic planning framework. The MRA's Midland 2041 document promotes the re-opening of Bellevue train station together with a new park 'n' ride facility in order to reduce traffic congestion within the Midland CBD and free up parking land in the CBD for more intense and economically productive uses. The City supports this initiative and will include it in future strategic documents.

3.11.10 Other activity centres

Land use development in all activity centres will be affected by the balance of access and parking however each location's solution will be different. Each centre has a different challenge and each will have a separate planning base that reflects the catchments, public transport and priorities of the area. Ellenbrook Town Centre and Malaga have already been discussed in 3.12.6.

Older centres are not able to be managed in the same way as Ellenbrook and Malaga. For example, Guildford is a historic town that has limited space available for parking. Hazelmere is a developing industrial area but with relatively poor public transport and no areas set aside for parking development. In the future, centres like these will very likely require detailed access and parking planning that could include making provision for parking/ transit hubs for CAT bus services.

Urban growth in the residential corridor south of Ellenbrook is unlikely to require any major parking infrastructure need in the short term but will require considerations for sporting and commercial activity nodes in the medium term.

3.11.11 Future Integration with Public Transport

It is very likely in the future that caps will be placed on parking provided at development sites and the residual need aggregated at important key nodes that can be strongly serviced by public transport. This emerging system will encourage public transit, cycling and walking access to key shopping and commercial destinations.

Integrated parking and intra-Midland transit services such as CAT buses will enable parking at the larger peripheral locations and maximize access to the whole of the City centre, similar to the way the Perth CAT bus operates. Without this combination Midland could experience traffic gridlock from about 2030.

In Midland, it is expected that the mixture of solutions will involve State Government agencies, commercial interests and the City of Swan working together to provide, fund and manage the supply of parking and associated services.

Public transport service between centres varies greatly in capacity and frequency. The City continues to seek improved connections between its urban growth area to the north and its strategic activity centre of Midland. This will be critical for people's access to work without placing larger burdens on car parking need in either Midland or Ellenbrook or causing excessive traffic congestion on roads.

3.12 Infrastructure Services

3.12.1 Water Supply and Wastewater

Protecting water quality and quantity is an important objective for the City. Access to water for personal, recreational and industrial uses is an intrinsic part of life within the City of Swan. With two major river systems and a significant proportion of Perth's groundwater resources with the Gnangara Aquifer within its boundaries, the need to protect these systems in collaboration with the community and other partners is clear.

The State Government established a vision for water resource management with the State Water Plan 2007. The plan, a whole-of-government initiative with 11 agencies, provides a strategic policy and planning framework for meeting the State's water demands to the year 2030.

Planning for additional water infrastructure is well under-way in the North-east sub-region and includes the provision of new water tanks west of Ellenbrook, with the Ellenbrook reservoir being the primary water storage facility to support future urban and industrial development in the northern parts. Bullsbrook will also require several new water tank sites positioned in elevated areas, to be staged over time as the town site expands.

There are two small wastewater treatment plants at Bullsbrook and Mundaring. The Bullsbrook Wastewater plant is approaching capacity and will be decommissioned once capacity is reached. Wastewater from Bullsbrook will then be pumped southwards to discharge into the Ellenbrook sewer district. Wastewater from the Ellenbrook and surrounding urban areas is discharged through a transfer main to the Beenyup Wastewater treatment plant.

Wastewater from parts of Midland, Greenmount Helena Valley, Hazelmere and Maida Vale is also transferred to the Beenyup treatment plant. This is an interim arrangement until the Maida Vale Main Sewer is extended from Welshpool northwards to allow wastewater discharge from the Midland area to be diverted to the Woodman Point Wastewater Treatment Plant.

City of Swan's role in improving water quality The Department of Water and Environmental Regulation protects and manages drinking water supplies in Western Australia using powers provided by the Metropolitan Water Supply Sewerage and Drainage Act, 1909. The City currently has compliance requirements arising from State water legislation. This involves ensuring that it maintains groundwater usage within its licensed allocation. The City has developed a Water Operating Strategy to guide irrigation practice and ensure compliance. The City and its community also have obligations in relation to water under legislation such as the Public Health Act (1911) and the Rights in Water and Irrigation Act (1914).

The City has adopted a Sustainable Environment Policy which defines improvement in water efficiency and quality as a policy objective for the City to pursue. The actions the City may take to achieve these objectives are defined in the City's Sustainable Environment Strategy. It is intended that the Draft Sustainable Environment Strategy will start the development of specific water efficiency and quality approaches to ensure compliance and efficient use of water as a valuable natural resource. The City's current projects and programs around water efficiency/quality include:

- Involvement in catchment management planning;
- Development of a water operating strategy;
- Metering of all water abstraction bores;
- Following water conservation principles in new irrigation design;
- Investigation of synthetic turf opportunities; and
- Investigation of wastewater treatment opportunities.

The following are opportunities and possibilities to be considered to address water efficiency/quality in the future:

- Reducing impacts on water quality;
- Investigation of alternative water supplies;
- Addressing soil impacts arising from drying wetland environments;
- Encouragement of water efficient behaviours
- Assess development applications in Public Drinking Water Source Areas in accordance with State Planning Policy 2.2 – Gnaragara Groundwater Protection and State Planning Policy 2.7 – Public Drinking Water Source Protection; and
- Using planning controls to encourage the development of water efficient communities.

The Water Corporation is the main sewerage service provider in the City. However, under Water Service Act 2012, other licenced providers may provide sewerage services. All new housing estates are required to be provided with reticulated sewerage where the lot size is less than 2000 square metres. Selected areas of the City have been retrofitted with sewerage services but large areas of the City remain unconnected. These areas use self-contained septic disposal methods.

All of the major settlements within the city have access to sewerage but communities at Herne Hill, Bullsbrook, Upper Swan and Gidgegannup will eventually require connection. Most industrial land uses require reticulated sewerage however, dry industries such as truck depots do not require that service.

Onsite sewage disposal has resulted in significant health, environmental and amenity issues in the City. The City contains significant areas that are environmentally sensitive to contaminants (nutrient and non-nutrient) contained in sewage. Where reticulated sewerage is not available, the City is responsible for ensuring that on-site sewage systems are operating effectively. Reticulated sewerage represents the lowest risk to public health, environment and amenity and supports the widest variety of land uses. It is to be provided for subdivision and development in accordance with the Government Sewerage Policy.

3.12.2 Electricity Supply

Electricity is distributed to the north-east sub region by Western Power through a network of 132kV and 330 kV bulk transmission power lines that connect to the local power distribution network via transition terminals and sub-stations. To service the growing population and future industrial areas in the entire North-east sub-region, the existing electricity network including extensions to transmission lines and construction of new terminals and sub-stations will need to be upgraded. The proposed transmission corridors and terminal and sub-station sites are yet to be defined however, the Department of Planning, Lands and Heritage and Western Power have developed a Network Capacity Mapping Tool that shows electricity capacity and utilisation as a result of land/building development and the future planning capacity of electricity infrastructure. This will assist with strategic planning for future Greenfield areas that are subject to investigations by the City and the relevant State Government agencies.

3.12.3 District Drainage

The City has recently commissioned two drainage study reports; the 'Guildford Drainage Study' and the 'South Guildford Stormwater Drainage Study'. The recommendations contained in the two reports are currently being implemented within the annual Drainage Improvement Program.

Areas identified for future urban and industrial development will be required to address the management of drainage systems to ensure that ecological functions and water quality of wetlands and river systems are maintained. This will require the incorporation of best practice water-sensitive design and nutrient management and could include the use of detention basins and nutrient stripping zones.

Drainage in new sub division developments is planned and controlled through the structure planning process and implemented accordingly.

4. KEY ISSUES

Following are some of the key issues that have been identified in the analysis of the State and Regional Planning Framework, the City Profile and issues in Parts 2 to 4 of the Local Planning Strategy: Background Document. This is not an exhaustive list of the issues identified in the background document, but represents an attempt to identify those of most significance.

4.1 State and Regional Planning Context

4.1.1 Planning Direction:

There is a comprehensive and complex range of strategic and statutory planning direction for local government at a State and Regionalevel.

4.2 Natural Resource Management and Environmental Protection

4.2.1 Climate adaptation:

With expected changes in sea-levels, temperature, rainfall and storm events, the need to address bushfire management in high risk bushfire areas and potential flooding in flood-prone areas is an imperative. The Strategic Bushfire Risk analysis provides additional information about Bushfire Prone Areas where a range of land use planning matters intersect with a bushfire hazard to influence the level of risk to life and property from bushfire. This information should be addressed as part of strategic land use and settlement planning at all levels.

4.2.2 Water management:

To alleviate the pressure on waterways, planning actions and policy implementation are required to protect biodiversity, water quality and volume within current and future settlements. There is also a need to manage groundwater dependant ecosystems and groundwater abstraction in relation to water levels and water quality to protect these ecosystems.

4.2.4 Biodiversity protection: Human settlement directly impacts on biodiversity and significant growth is forecast for the City in the next 20 years which will place considerable pressure on its environment. The protection of biodiversity is important in order to retain a healthy ecosystem which in turn, provides many services which are taken for granted such as drinkable water, clean air and fertile soils. There are environmentally sensitive areas within the City's boundaries that are protected by legislation that could curtail future urban development.

4.2.3 Basic Raw Materials:

The existence of numerous extractive industries and their associated buffers within the City's boundaries, could constrain future urban development in areas such as Bullsbrook.

4.2.4 Airport noise:

The Perth Airport and Pearce RAAF air force base have associated noise contours which encroach into urban and rural areas and restrict sensitive land uses including residential uses.

4.3 Population and Housing

4.3.1 Population increase:

Over the next 20 years, the City is expected to grow from a population of 137,020 in 2016 to 205,515 by 2031. Adequate residential land must be made available for an increased population and future Greenfields areas must be identified so that planning can commence to deliver future urban areas in a timely manner.

4.3.2 Ageing population:

The City of Swan is planning for an expected increase in all demographic groups with the largest proportional increase (relative to its population size) being the 70 – 74 year age group forecast to grow 164.4 per cent by 2021. There is currently a shortage across the City of appropriate accommodation, including single bedroom dwellings, for older persons. Without changes in policy, this problem could be exacerbated.

4.3.3 Affordable housing and housing diversity:

To address housing affordability issues, a greater diversity of affordable housing in suitable locations needs to be planned for.

While the expected population growth can be accommodated in the Urban Growth Corridor, the provision of a greater range of housing products in existing areas will provide much-needed housing diversity in established areas close to existing services and address issues of housing affordability and affordable living

4.4 Economy and Employment

4.4.1 Midland Strategic Metropolitan Centre:

The Midland Centre plays a vital role in the economy of the City and in the provision of employment. It will continue to be the principal location in the North-east sub-region for office and commercial activity, community and government functions such as the new health campus. It provides 40 per cent of the total retail floor space in the City and its continued expansion will assist in reducing retail escape spending and increasing retail capture.

4.4.2 Swan Valley/Viticulture/Tourism/Urban development:

Constraints on factors of production such as labour, capital, water and land issues increase the risk associated with the medium to long term economic sustainability of the Valley.

The Swan Valley Planning Act (SVPA) relates primarily to protecting the viticulture industry but does not adequately recognise the importance of development and expansion of tourism industries that would support the on-going viability of the viticulture industry.

The continued economic development and growth of the Swan Valley may be bolstered by taking up opportunities to integrate and feed into mining and commercial opportunities which require infrastructure investments (e.g. the Perth-Darwin National Highway). Statutory provisions for new industrial and commercial developments to capture these opportunities should be pursued to ensure the long-term economic growth of the Valley.

4.4.3 Small business:

Small business is a key success factor of the local Swan economy. It is estimated that 48 per cent of registered businesses in the City of Swan are sole-traders and most are achieving less than \$100,000 in annual turnover. However, small businesses are also highly vulnerable to business cycles and a more flexible approach is needed to encourage small businesses to locate in activity centres. Home based businesses are a subset of the sole trader sector and play an important role in decentralising employment to the suburbs and reducing car dependency.

4.4.4 Industrial land supply:

There is a need to review the capacity of Malaga, Hazelmere, Bullsbrook and other potential industrial land supplies (e.g. Whiteman – a priority industrial site identified in the State’s Industrial Land Strategy) to ensure that there is an adequate supply of industrial land and more local employment for an increased population.

4.4.5 Future intermodal terminal hub:

There is currently no intermodal terminal in the north west or north eastern regions of Perth. South Bullsbrook has been identified as being the preferred location for the intermodal terminal, located in the future Bullsbrook industrial area. It will improve the efficiency of the entire freight transport chain, add value to the industrial area, create a specialised activity centre and provide future employment. The final site should be identified in the Bullsbrook Master Plan.

4.4.6 Access to education and training:

Nearly half (49.1 per cent) of workers in the City of Swan do not have a qualification, while 22 per cent have a certificate and 11 per cent have a bachelor’s degree. To move towards a knowledge-based economy and to provide opportunities for better paid jobs either locally or outside the City, access to education and training facilities is critical for a productive labour force.

4.4.7 Employment:

An additional 42,000 jobs will need to be provided in the North-east sub-region over the next 20 years and 53,000 to 64,000 jobs over the next 25 years if the sub-region is to achieve a self-sufficiency target of 75 per cent. The Swan Urban Growth corridor is expected to provide around 4,300 jobs. Other areas capable of accommodating significantly more employment over the next 20 years are Midland, Malaga, Hazelmere and future industrial areas.

4.5 Retail and Activity Centres

4.5.1 Midland Strategic Metropolitan Centre:

Ongoing attention will need to be given to Midland to ensure that the centre maintains its primary role in the North-east sub-region as the prime location for shopping, business activity, community service delivery, entertainment and high density living. Accessibility issues will need to be resolved. This can be driven through the adoption of a Midland Activity Centre Structure Plan.

4.5.2 Ellenbrook Secondary Centre:

Ellenbrook Centre is the next major Activity Centre after Midland. A review of the Ellenbrook Centre Structure Plan is warranted to ensure that the current centre-based planning mechanisms are appropriate and can respond to industry, economic and other changes over the next 20 years and that the function and role of the Ellenbrook Centre as a secondary centre can be fully achieved.

4.5.3 Viability of activity centres in general:

Successful activity centres are characterised by a wide ranges of uses that assist in attracting people and deliver a range of services. The ability to achieve this is greater at higher levels in the retail hierarchy and appropriate planning policy mechanisms should be identified. Conversely, a distributed network of centres (comprising a large number of small neighbourhood centres) has much less opportunity to attract this range of uses and consideration should be given to their consolidation.

4.5.4 Retail needs in growth areas:

Retail spending will increase significantly in the newly-developing suburbs such as Ellenbrook, Urban Growth Corridor and Bullsbrook. The City's Retail Needs Assessment proposes a number of new neighbourhood centres in these areas as well as new district centres namely Brabham, The Broadway and Bullsbrook. It will be important to monitor developments in the approved retail hierarchy to ensure community needs are being met and to avoid the over-supply of small, potentially under-performing, neighbourhood centres.

4.5.5 Retail escape spending:

The level of retail escape spending experienced in the City is estimated to be 25 per cent which is within reasonable expectations for a metropolitan council but some reduction in escape spending should be an objective of retail and centre planning policy. The Retail Needs Assessment recommends that the retail hierarchy in the City be refined. In particular, a number of existing small and medium neighbourhood centres should be re-designated as large neighbourhood centres (Amazon Drive, The Springs, Glenview, Ballajura Marketplace, Woodlake and Stratton). Increases in retail floor space allocation should also provide a catalyst for expansion and improvements to these centres.

4.6 Tourism and Visitors

4.6.1 Swan Valley:

In the Swan Valley, the current planning and legislative framework cannot adequately address the conflict of land use between different activities. Conflict is apparent between operators that represent different industry sectors (e.g. tourism versus agriculture) and within individual industry sectors (breweries versus wineries). The conflict reflects a dichotomy between the past and future uses and activities to be supported in the Valley.

The Minister for Planning has also recently released the Swan Valley Action Plan. The Swan Valley Action Plan provides the Government's vision and actions for retaining Swan Valley as a productive rural area into the future whilst minimising conflict with tourism.

4.6.2 Viticulture:

The viticulture industry in the Swan Valley provides an important underpinning component for the tourism industry. However, there are several environmental and economic constraints and challenges faced by the industry. The main issues relate to land use, labour supply, water allocation and rights and the illiquidity of capital. These need to be adequately addressed to secure the industry's long term growth and viability.

4.6.3 Heritage tourism:

Guildford and Midland contain some of the City's and Western Australia's oldest heritage buildings and places. There is considerable scope to increase tourism visitation to these localities based on their heritage values alone. The proximity of these centres to the Swan and Helena rivers is also a feature that should be taken advantage of when considering pedestrian and cycling linkages to bolster visitation numbers.

4.6.4 Rural Tourism:

There is potential for tourism to conflict with agricultural land uses particularly where there is an expected level of amenity. Impacts such as spray drift, dust, odour, noise and traffic are accepted to a certain degree in rural areas as they are characteristic of the regular rural operations, but may not be appropriate in a tourist related setting.

4.7 Open Space and Community Facilities

4.7.1 Inadequate public open space to meet community expectations:

- The application of Liveable Neighbourhoods has resulted in a reduction in the amount of recreational or sporting spaces provided within a community. The policy of allowing smaller school sites to be collocated with POS has reduced overall provision of active space within new developments. Recreational trends show that junior membership and usage generally of active sporting clubs is increasing.
- Smaller parks in new developments are reportedly being under-utilised which may be an indication of the need in future Greenfield areas, to provide larger open space sites and fewer 'pocket' parks.
- There is a concern that adequate and appropriate levels of public open space (POS) and type of POS in high density/high rise development areas are not being provided.

4.7.2 Provision of suitable sporting district and regional open space:

- A number of government policies have allowed the use of POS (provided under the 10 per cent POS contributions arrangement) for other purposes. Open spaces are now expected to perform a range of functions such as providing wildlife and biodiversity corridors that were traditionally met in other ways.
- It is a challenge for land developers and the City to manage a range of competing uses to provide sufficient active open space for the future.
- There is a concern that many parks were developed as 'sales' items rather than functional spaces, and that designs have been too focussed on maintenance and cost factors rather than community use and functionality.
- The expected population growth across all age groups will greatly influence the future provision and location of a diverse range of public open space.

4.7.3 Water allocation for public open space grassed areas:

Climate change has brought about reduced rainfall in many areas and this has placed additional pressure on traditional ground water supplies. State Government water policies and City of Swan strategies need to be focussed on the highest and best use of available water supplies.

4.7.4 Planning for future growth

Considerable growth is forecast and the provision of public open space and community infrastructure at the local, regional and district level must be guided by POSDFS and Community Infrastructure Plans.

4.7.5 Increased costs of developing/redeveloping facilities:

The City needs to explore a range of new funding sources and manage community expectations in order to remain sustainable into the future. At this stage, it is not in the City's interest to pursue developer contributions for new/upgraded recreational facilities. When SPP 3.6 is updated to address identified legal issues, the City may reconsider its position.

4.7.6 Procurement of suitable sites for co-location of facilities and services:

- The movement away from single purpose facilities to community hubs/precincts has been generally accepted as a reality for modern facility provision but continues to provide challenges for community groups and residents.
- It is vital that the provision of community facilities needs to be considered at an early stage of the planning process so that adequate provision levels can be reached and opportunities for successful collocation realised. Successful facilities are located in well used, highly visible locations such as town centres and high traffic areas.

4.8 Rural Land Use, Subdivision and Development

4.8.1 Urban sprawl and agricultural land uses:

Continuing urban sprawl and steady industry expansion has brought urbanised residential areas within close proximity of many of the intensive agricultural uses. This has resulted in conflicts from odour, dust and noise which can often be difficult to resolve. Of notable interest are those poultry farms which have existed in the Caversham and West Swan areas but are now under threat from urban expansion within the growth corridor.

SPP 2.5 requires local governments to be cognisant of the need to protect highly productive agricultural land from the incompatibility issues related to urban expansion. Consideration of conflicts and resolution at the planning stage of new and expanding existing intensive agricultural pursuits will prevent problems associated with incompatible land uses from arising.

4.8.2 Protection of productive agricultural land:

Where land is capable of supporting a wide range of primary production activities or has dryland farming capabilities, it is considered to be highly versatile and should be protected from land use impacts and fragmentation of allotments through subdivision. It is critical to avoid ad hoc fragmentation of primary production areas and that rural allotments are capable of supporting agriculture.

4.8.3 Agricultural Diversification:

Diversification of farming systems can provide a buffer against market **fluctuations in mainstream farming products.**

It indicated that the major areas of new agricultural activity at that time were aquaculture, tree farming (agroforestry), alpaca farming and worm farming, with farm-stay (tourist accommodation) a popular choice for future diversification. Prospects for diversification and intensification of agriculture are commonly linked with the potential to obtain water supplies for irrigation. Although specific requirements of particular 'new' crops will vary, the main 'generic' soil or land requirements for intensive agriculture (forms of irrigated horticulture, viticulture, floriculture and tree cropping) are;

- a low risk of water logging and soil salinity build-up;
- favourable soil acidity or alkalinity;
- suitable plant rooting conditions;
- moderate or better nutrient retention ability, and
- flat to gently sloping topography

These requirements are considered as part of land capability assessment for perennial forms of horticulture, which has been undertaken by the City. The farming of alpacas, ostriches or emus on small rural holdings, are examples of semi-intensive livestock enterprises. Although generally compatible with other farming activities on land capable of supporting grazing activities, they require a range of skills in animal husbandry and stock management.

4.8.4 Basic raw materials:

The application of SPP 2.4 may impede rural-residential development or the urbanisation of rural areas in certain locations in the City. For example, the future development of parts of Bullsbrook is subject to the application of SPP 2.4 with respect to development encroaching on buffer areas around quarries.

4.8.5 Swan Valley:

The encroachment of residential uses through the use of transition lots abutting agricultural lands may compromise normal farming activities and care must be taken to recognise existing buffers. Soil types east of the railway line have been identified as not being suitable for sustainable long-term grape production. Urban development may be a more desirable outcome for this area and should be explored in the forthcoming Swan Valley Land Use and Management Study currently being prepared by the City with assistance from the Department of Planning, Lands and Heritage.

4.8.6 Gidgegannup townsite:

The scale and variety of retail and commercial businesses in the townsite may not be adequate to cater for future population growth. The revitalisation and consolidation of the townsite, including the possibility of more housing, will be important for Gidgegannup's future viability. The issues are whether the City should plan for limited residential infill as well as a slighter bigger commercial centre with more retail floor space and at what point in the future that increase should be considered.

4.8.7 Land capability assessment:

Land capability is related to, but separate from, the concept of land suitability. Land capability assessment is a form of environmental impact assessment based on a consideration of the physical characteristics of the land (landform and soil conditions) and the requirements of a proposed form of land use. Land suitability is a broader form of land use evaluation based on a consideration of planning and socioeconomic factors, as well as land capability.

In 2013 the City completed an assessment into the capability of rural land uses and primary production.

The assessment of land capability utilises information on sub-units in each land system and evaluates these against a range of land qualities to enable a capability rating. Land qualities are considered on topography, soil type, drainage, climate, flood and erosion hazards, water supply and other factors which may affect sustainable primary production activities. These site-specific land qualities, along with other planning matters also need to be considered to determine whether or not a specific area is suitable for a proposed form of agricultural land use and/or subdivision.

4.8.8 Henley Brook:

Henley Brook lies between the Urban Growth Corridor and Ellenbrook was rezoned to Urban under the Metropolitan Region Scheme (MRS Amendment 1329/57).

4.8.9 Planning for bushfire emergencies:

Any development or rezoning in the City's rural lands should take advantage of existing bushfire fighting infrastructure such as strategic firebreaks and firefighting water supply, with preference given to 'infill' locations of existing rural living rather than creation of new estates. It is inefficient and costly to provide individual firefighting appliances for each dispersed development and cost of providing firefighting equipment is in many cases borne by the community and not developers who benefit from the sale of the development.

There are some rural areas in the City that regardless of whatever bush fire mitigation measures are taken, a loss of buildings in the event of a bush fire will result. The major factor in any bush fire event is the prevention of loss of life and the fact remains that in some cases loss of buildings will occur. Whilst local fire fighters cannot be expected to risk their lives attempting to fight fires in such high risk areas, there may be some retrospective building modifications that can increase the survivability of dwellings and buildings in these locations. During the assessment of proposed developments in areas within moderate and extreme bushfire hazard, it should be acknowledged that bushfires are just one issue in the broader planning context and should be considered alongside other factors such as biodiversity protection, visual landscape and maintaining rural character, land capability, natural resource availability and servicing/infrastructure constraints.

4.8.10 Sustainable rural settlements:

Demand for rural residential and 'lifestyle' lots exists within the rural areas of Swan. The City often receives requests for amendments in the rural area to allow for the development of lifestyle lots outside of the core townsite areas. Currently this development is proceeding in a manner not well co-ordinated which could impact the proper provision of services and cohesion with various fire management strategies. These issues are prevalent mostly in Gidgegannup and surrounds, as well as rural residential estates to the east of the Bullsbrook townsite.

Services normally provided in urban areas, including community facilities, are usually limited in rural settlements. In some instances, primary production can still occur on rural living properties due to larger lot configurations and adequate management of land, however most of these activities are of a non-commercial (i.e. hobby farming) scale and nature or are incidental income generators. Rural settlement should be supported where it can be adequately or reasonably capable of being serviced with reliable potable water supply and that offers appropriate defence against bushfire occurrences.

Sustainable rural settlement should be responsive to the needs of the rural community and be appropriately located within close proximity to established townsites, where access to community infrastructure and other social facilities are available.

4.9 Urban Design and Heritage

4.9.1 Managing redevelopment in established areas:

Many inner city suburbs in Perth have experienced significant infill development over the past 20 years with some level of community concern about their impacts. This highlights the importance of preserving residential amenity and character of neighbourhoods and streetscapes in the draft Urban Housing Strategy.

4.9.2 Crime Prevention through Environmental Design:

The creation of safe public spaces such as streets, car-parks and parks is a priority for the community. It is not feasible to have law enforcement agencies present at all times in the public realm. Through good design of public spaces and buildings abutting public spaces, passive surveillance of the public domain can increase and lead to a greater sense of security for the community.

4.9.3 Heritage:

The City of Swan contains some of the State's most significant heritage buildings and places. Their continued protection is vital to the fabric of the built form of the City as is the protection and recognition of places that are of significance to the Aboriginal community. Currently the City has a range of measures and incentives within the current heritage statutory and policy framework that it may use to help preserve built cultural heritage of the district. However, there are a range of other measures that could be implemented to further assist the City manage heritage issues.

4.9.4 Streetscaping:

Streetscaping is an important element of Place making and a co-ordinated approach is required to ensure the physical environment of the City is enhanced to improve the enjoyment, comfort and useability of its streets.

4.9.5 Proximity of Midland to Swan and Helena Rivers:

The Midland Centre is disconnected from two of its prime environmental assets. Improving walkability, cycle access and wayfinding are important transformational projects to embrace in view of the significant population growth expected for the City as a whole and the City Centre in particular.

4.10 Transport, Traffic and Access

4.10.1 Public transport and integration with land uses:

The State Government has committed to delivering the METRONET Stage 1 projects including the Morley-Ellenbrook Line and Midland project both situated in the City. These key transport projects will provide significant opportunities to support existing and emerging station precincts. In August 2020, the Minister for Planning granted approval to the declaration of planning control areas 144-149 and 151 for the Morley-Ellenbrook Line.

4.10.2 Extension of future transport corridor:

The Bullsbrook Townsite District Structure Plan (endorsed by WAPC in April 2018) recommends for Bullsbrook to be connected by a rapid transport service and identifies a route for this corridor within the structure plan area.

4.10.3 Car dependency:

The increase in the use of the private car for the journey to work is not sustainable as it exacerbates existing road congestion and increases travel time and petrol consumption. Significant improvements to the public transport system are required to encourage people to change their mode of travel from the private car to public transport.

4.10.4 Midland Regional Centre:

The scale of transition that Midland will continue to experience will require expanded parking infrastructure and new public transit services beyond the City's funding capacity. Future success will mean involving all development parties in:

- new approaches to funding;
- collocating and developing new parking infrastructure;
- integration of infrastructure with alternative access mechanisms such as CAT buses cycling and walking infrastructure;
- defining and developing cycle routes including connections to public transport nodes and end of trip facilities;
- improvement to pedestrian way-finding and footpaths; and
- encouraging lower vehicle to resident ratios in inner City housing.

4.10.5 NorthLink:

NorthLink WA provides a new transport link between Morley and Muchea, in the City's north region. This project combines two adjacent Infrastructure Investment Program projects - the Central and Northern Sections (Swan Valley Bypass) and the Southern Section (Tonkin Highway Grade Separations). The Central and Northern Sections involve the construction of a new 37km highway from the intersection of the Tonkin and Reid Highways in Malaga to the Great Northern Highway at Muchea. The Central Section will run from Reid Highway to Ellenbrook, and the Northern Section will continue on from Ellenbrook to Muchea. This new route replaces the Great Northern Highway as the main freight route through the Swan Valley.

4.10.6 Great Northern Highway:

Great Northern Highway, a heavy haulage route which services the Swan Valley and heads north through Bullsbrook, has been the subject of a separate study to determine the nature and location of intersection upgrades to improve safety. The recommendations will need to be implemented and funding commitments secured.

4.10.7 Perth-Adelaide National Highway:

The Primary Road reservation in the MRS to modify the current Great Eastern Highway alignment has been in place for over ten years. Without State and Federal government funding, the safety, reliability and efficiency of road freight transport and improvements to the amenity of Gidgegannup cannot be achieved.

4.10.8 Midland centre freight rail re-alignment:

A preferred freight rail re-alignment that would bypass the Midland Centre has been identified as a strategic long term planning initiative. In August 2020, the Minister of Planning granted approval to the declaration of planning control area 152 over the land identified for the proposed Midland Freight Rail Realignment. Construction would require State and Federal funding commitments.

4.10.9 Cycleways and footpaths:

Commuter cyclists and recreational cyclists have different requirements and these need to be recognised and planned for. The City is preparing a Bike Plan which will identify where cycling infrastructure is needed as well gaps in cycle routes that need completion. The City also needs to identify upgrades to existing walking infrastructure such as footpaths and walking trails and plan for an integrated network of footpaths in new urban growth areas.

4.10.10 Parking and Access:

The growth of Midland, Ellenbrook and Malaga activity centres has led to more traffic congestion and increased pressures on parking infrastructure. Suitable strategies to address these issues should be developed and implemented.

4.10.11 Connecting people and places:

The City has the largest land area of all metropolitan councils and the provision of linkages between different parts of the City is challenging. The local and district road network is forecast to expand significantly to service the new urban growth areas and it will be important to ensure these roads have the capacity to accommodate the increases in vehicular and commercial traffic and provide capacity for improved public transport services. The timing of the upgrading of regional roads in particular Gnangara Road, the Perth-Darwin National Highway and the extension of Lloyd Street are dependent on Federal and State Government funding.

4.10.12 North Ellenbrook:

This area lacks a comprehensive, legible east-west and north-south road network. In light of significant growth expected in the new industrial and residential areas to the north of Ellenbrook (in Bullsbrook and north Ellenbrook), future local structure plans must address this issue of connectivity.

4.11 Infrastructure Services

4.11.1 Sewerage:

The lack of sewerage infrastructure is a major impediment to future urban development in places such as Gidgegannup, Bullsbrook and Upper Swan.

4.11.2 Water supply:

The timing of urban development is dependent on additional water infrastructure being provided by the Water Corporation with plans to expand existing wastewater treatment plants at Mundaring and Bullsbrook and establish new water storage and water treatment plants throughout the North-east sub-region.



4.11.3 Urban Water Management:

Most of the water used in the region, including POS and rural areas, is self-supplied by the City of Swan, schools, farmers and other businesses, which use their own groundwater bores and irrigation infrastructure. With no groundwater to support future growth in the area, alternative and affordable non-potable water infrastructure is needed to supply the water needed to maintain the liveability and productivity of the region.

4.11.4 Power:

Additional energy infrastructure will be required to service the growing population and future industrial areas in the entire North-east sub-region. The timing of the roll-out of this infrastructure can be determined by the Department of Planning, Lands and Heritage and Western Power through their Network Capacity Mapping Tool. This will assist with strategic planning for future Greenfield areas that are subject to investigations by the City and the relevant State Government agencies.



APPENDIX 1 - POLICY CONTEXT

1. STATE POLICIES

1.1 State Planning Strategy 2050 “Planning for sustained Growth and Prosperity”

The State Planning Strategy 2050 (SPS) provides the basis for long-term State and Regional land use planning and coordinates a whole-of-government approach to planning. The Strategy is published in two key parts:

‘The Strategy’ provides an overview of the Challenges facing the State and outlines appropriate strategic directions. It sets out the key principles which should guide the way in which future planning decisions are made.

‘Action Planning’ provides a comprehensive list of actions for Government to improve the environment, community, economy and infrastructure.

1.2 Perth and Peel @3.5million

Perth and Peel @3.5million provides a framework which recognises the benefits of a more consolidated City while working from historic patterns of urban growth. Importantly, the framework sets achievable goals that will promote housing affordability over the longer term. Perth and Peel @3.5million addresses urban growth needs and also takes into consideration the need to protect natural ecosystems.

The framework provides for different lifestyle choices, vibrant nodes for economic and social activity and a more sustainable urban transport network. The framework also encourages a long-term approach to the provision of infrastructure in an economically sustainable way.

1.3 Perth and Peel Green Growth Plan for 3.5million

The Perth and Peel regions are projected to grow to 3.5 million people by 2050 – an increase of almost 70 per cent on the current population. Supporting this growth and delivering an efficient and liveable city while protecting our unique natural environment is a significant challenge. The State Government has prepared the draft Perth and Peel Green Growth Plan for 3.5 million (Green Growth Plan) to meet this challenge.

In this context the draft Green Growth Plan delivers two critical outcomes:

- Cutting red tape by securing upfront Commonwealth environmental approvals and streamlining State environmental approvals for the development required to support growth to 3.5 million people; and
- Unprecedented protection of our bushland, rivers, wildlife and wetlands through implementation of a comprehensive plan to protect our environment.

It is important to note that the Green Growth Plan has not yet been endorsed.

1.4 Swan Valley Action Plan

The Swan Valley Action Plan establishes four planning areas within the Swan Valley, each with specific planning objectives in order to provide a framework to consider development and planning in the Swan Valley region.

1.5 The Heritage Act 2018

The *Heritage Act 2018* provides the State's legislative framework for the conservation of places which have significance to the cultural heritage of the State. The Act:

- Establishes the Heritage Council of Western Australia and details its powers and functions;
- Provides for the making of Heritage Agreements and application of incentives for the conservation of places;
- Provides for the issue of Conservation Orders to provide interim protection to a place at risk;
- Provides for the creation of the State Register of Heritage Places; and
- Requires all local governments to prepare a Local Heritage Survey of places of local cultural heritage significance.

The Local Heritage Survey itself offers no statutory protection to a place recorded on the survey and is merely a record that provides a resource to assist with the development of heritage policies and guidelines and development of a Heritage List.

1.6 State Planning Policies (SPP)

SPP 2.1 State Planning Framework

The Statement of Planning Policy No.1 brings together existing State and Regional policies and plans which apply to land use and development in Western Australia into a State Planning Framework (SPF). It also restates and expands upon the key principles of the State Planning Strategy in planning for sustainable land use and development (SPF 2006).

SPP 2 Environment and Natural Resources

The environment and natural resources policy defines the principles and considerations that represent good and responsible planning in terms of environment and natural resource issues within the framework of the State Planning Strategy.

SPP 2.2 Gngangara Groundwater Protection

The main purpose of the policy is to prevent, control or manage development and land use changes in the policy area that are likely to cause detrimental effects to the groundwater resource.

SPP 2.4 Basic Raw Materials

The policy sets out the matters which are to be taken into account and given effect to by the WAPC and local governments in considering zoning, subdivision and development applications for extractive industries (for extraction of basic raw materials) and zoning, subdivision and development applications in the vicinity of identified basic raw materials resource areas. The City of Swan falls within the Policy area for SPP 2.4 as it has a number of Extraction Areas, Key Extraction Areas and Priority Resource Locations. It is important that all level of planning including zoning, subdivision and development applications will need to take into account of the policy measures.

SPP 2.5 - Rural Planning

The policy focuses on the identification and appropriate zoning of highly productive agricultural land throughout the State. It also outlines the requirements for local government in the preparation of town planning schemes and local planning strategies and is to be applied to all rural land in the State.

SPP 2.7 - Public Drinking Water Source

The objective of this policy is to ensure that land use and development within Public Drinking Water Source Areas (PDWSA) is compatible with the protection and long-term management of water resources for public water supply. Portion of land in the north-west area of the City of Swan falls into the PDWSA, and this requires all the planning proposals to be consistent with SPP 2.7, and consequently SPP 2.2 and SPP 2.3.

SPP 2.8 - Bushland Policy for the Perth Metropolitan Region

SPP 2.8 is 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. This will secure long-term protection of biodiversity and associated environmental values. The City has got a lot of bushland within its jurisdiction and appropriate protection is required. The City has prepared its Biodiversity Strategy which identifies significant bushlands in the Local Nature Area Plan that need to be protected, being consistent with SPP 2.8.

SPP 2.9 - Water Resources

The objectives of SPP 2.9 are to:

1. Protect, conserve and enhance water resources that are identified as having significant economic, social, cultural and/or environmental values;
2. Assist in ensuring the availability of suitable water resources to maintain essential requirements for human and all other biological life with attention to maintaining or improving the quality and quantity of water resources; and
3. Promote and assist in the management and sustainable use of water resources.

The City has been working closely with the Department of Water and Environmental Regulation in implementing the above objectives through a range of measures, such as ensuring water sensitive urban design, protection of wetlands, stormwater recycling, protection of groundwater aquifers etc.

SPP 2.10 Swan and Canning River Systems

The State Government has recognised the importance of the Swan-Canning river system by legislating specifically for its planning, protection and management by the Swan River Trust Act 1988. This Act established the Swan River Trust management area and set up a specific administrative process for decision-making.

The City of Swan is covered by management areas within this policy that generally relate to the protection of the Swan River system and supporting environments. All applications for development that are within the sphere of influence of the Swan River Trust Act require approval by the Swan River Trust.

SPP 3.0 Urban Growth and Settlement

This policy sets out the principles and considerations which apply to planning for urban growth and settlements in Western Australia. The objectives of this policy are:

- To promote a sustainable and well planned pattern of settlement across the State, with sufficient and suitable land to provide for a wide variety of housing, employment, recreation facilities and open space.
- To build on existing communities with established local and regional economies, concentrate investment in the improvement of services and infrastructure and enhance the quality of life in those communities.
- To manage the growth and development of urban areas in response to the social and economic needs of the community and in recognition of relevant climatic, environmental, heritage and community values and constraints.
- To promote the development of a sustainable and liveable neighbourhood form which reduces energy, water and travel demand while ensuring safe and convenient access to employment and services by all modes, provides choice and affordability of housing and creates an identifiable sense of place for each community.
- To coordinate new development with the efficient, economic and timely provision of infrastructure and services.

SPP 3.1 Residential Design Codes

- The Residential Design Codes (R-Codes) form the basis for controlling residential development throughout Western Australia in a consistent manner and are therefore a major influence upon the design and character of urban spaces. The R Codes are adopted by reference in their local planning scheme.

SPP 3.4 Natural Hazards and Disasters

This policy relates to the requirements of giving due regard to the natural elements within the City that may create a hazard to development. These generally relate to climate, geology, soils, vegetation, land form and hydrology. Where a known hazard exists, planning must address that hazard when assessing strategies, structure plans, schemes, subdivisions and strata developments.

SPP 3.5 Historic Heritage Conservation

This policy sets out the principles of sound and responsible planning for the conservation and protection of Western Australia's historic heritage. This policy applies principally to historic cultural heritage including heritage areas, buildings and structures, historic cemeteries and gardens, man-made landscapes and historic or archaeological sites with or without built features.

SPP 3.6 Development Contributions for Infrastructure

The objectives of SPP 3.6 are to:

- Promote the efficient and effective provision of public infrastructure and facilities to meet the demands arising from new growth and development;
- Ensure that development contributions are necessary and relevant to the development to be permitted and are charged equitably among those benefiting from the infrastructure and facilities to be provided;
- Ensure consistency and transparency in the system for apportioning, collecting and spending development contributions;
- Ensure the social- well-being of communities caring from, or affected by, development.

The City of Swan has some Development Contribution Plans (DCP) in place which fulfils the above objectives, and there will be more DCPs prepared for the new structure planning areas for cost sharing.

SPP 3.7 Planning in Bushfire Prone Areas

The intent of SPP 3.7 is to implement effective, risk-based land use planning and development to preserve life and reduce the impact of bushfire on property and infrastructure.

The Guidelines for Planning in Bushfire Prone Areas (2015) is the supporting Guidelines. SPP 3.7 should also be read in conjunction with:

- The Deemed Provisions contained in the Planning and Development (Local Planning Schemes) Regulations 2015, which form part of the City's Local Planning Scheme;
- Where relevant, any supplementary provisions of a Scheme provisions of a Scheme; and
- Australian Standard 3959: Construction of buildings in bushfire-prone areas.

SPP 4.1 State Industrial Buffer Policy

This policy relates to a consistent approach to protecting industrial land uses from the encroachment of other non-compatible land uses as well as to provide for the safety and amenity of land uses surrounding industry, infrastructure and special use sites.

Encroachment into these buffer areas can only be entertained when it can be demonstrated that industrial uses would not be constrained by residential encroachment and the reduction in buffer areas can be done within accepted environmental guidelines. The City of Swan has many locations such as Malaga, Middle Swan, Viveash, South Guildford and East Bellevue where industry is in close proximity to existing residential areas.

SPP 4.2 Activity Centres for Perth and Peel

The Activity Centres Policy is a State planning policy for the planning and development of activity centres throughout Perth and Peel.

The main purpose of this policy is to specify broad planning requirements for the planning and development of new activity centres and the redevelopment and renewal of existing centres in Perth and Peel. It is mainly concerned with the distribution, function, broad land use and urban design criteria of activity centres, and with coordinating their land use and infrastructure planning.

SPP 4.2 recommends residential densities:

- A residential density target of 25 dwellings per gross hectare should be achieved within 200 metres of local and neighbourhood centres;
- A residential density target of 30 dwellings per gross hectare should be achieved within 400 metres of district centres (this applies to the potential district centres such as Brabham, Broadway and Bullsbrook centres);
- A residential density target of 35 dwellings per gross hectare should be achieved within 400 metres of secondary centres (this applies to the Ellenbrook Centre which is the only Secondary Centre within the City); and
- A residential density target of 45 dwellings per gross hectare should be achieved within 800 metres of the strategic metropolitan centre (this applies to the Midland Strategic Metropolitan Centre).

SPP 5.1 Land Use Planning in the Vicinity of Perth Airport

This policy relates to the planning land use consideration and cooperation that is required to maintain the strategic importance of Perth Airport. Planning should not prejudice operations or efficiencies of Perth Airport. The key indicator of influence outside the boundaries of Perth Airport is the Australian Noise Exposure Forecasts (ANEF) contours. Lands within the ANEF contours are restricted in what type of land use is permitted as shown in the Appendix 1 of that policy. The greater the noise impact, the less likely that sensitive land uses will be permitted.

SPP 5.2 Telecommunications Infrastructure

The objectives of SPP5.2 are to:

- Facilitate the provision of telecommunications infrastructure in as effective and environmentally responsible manner to meet community needs;
- Manage the environmental, cultural heritage, visual and social impacts of telecommunications infrastructure;
- Ensure that the telecommunications infrastructure is included in relevant planning processes as essential infrastructure for business, personal and emergency reasons; and
- Promote a consistent approach in the preparation, assessment and determination of planning decisions for telecommunications infrastructure.

SPP 5.4 Road and Rail Noise

This policy identifies the need to protect development that may be noise sensitive from the impacts of being situated in close proximity to road and rail infrastructure. Primarily this relates to strategic transport corridors that are used for the movement of freight. This policy requires land use planning to consider the need to protect existing and proposed transport corridors from encroaching upon incompatible land uses.

The aim of the policy is to assess development for its noise sensitivity and mitigation when in proximity to one of the transport corridors within the City. As a result, development of increased residential density that is within the sphere of influence of this policy will require individual assessment based upon their unique situation.

SPP 7 Design of the Built Environment (Draft)

This policy is still in draft version currently. It addresses the design quality of the built environment across all planning and development types, in order to deliver broad economic, environmental, social and cultural benefits. It is also intended to improve the consistency and rigour of design review and assessment processes across the State.

1.7 State Operational Policies

The following is a list of the key operational policies relevant to the preparation of this Local Planning Strategy:

Development Control Policy (DC) 1.1 Subdivision of Land - General Principles

This policy sets out the general principles which will be used by the WAPC in determining applications for the subdivision of land.

It indicates the WAPC's basic requirements for the creation of new lots as well as the procedures it will follow in processing subdivision applications.

DC 1.6 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. In this regard, the policy recommended that residential development at a minimum of 25 dwellings per hectare should be achieved within the walkable catchments of rail stations, bus interchanges and high frequency bus routes.

The policy applies to all areas of the State, within transit precincts as defined under the policy, and is intended to inform government agencies, local government, landowners and prospective developers of the policy approach that will be applied by the WAPC.

DC 2.2 Residential Subdivision

This policy establishes the WAPC's position regarding residential subdivision. The policy has been developed and refined over many years taking into account the adoption and subsequent amendments to the Residential Design Codes and the Government's policies on sewerage and underground power.

DC 2.3: Public Open Space in Residential Areas

This policy sets out the WAPC's requirements for creation of Public Open Space in the subdivision of land for residential purposes. The policy indicates the WAPC's normal requirement is that for residential subdivisions, where practicable, 10 per cent of the gross subdivisible area be given up free of cost and ceded to the Crown as Public Open Space (POS).

The policy also addresses foreshore reserves, regional open space, public utility uses, development of open space and cash-in lieu of open space.

DC 3.4 Subdivision of Rural Land

This policy sets out the principles which will be used by the WAPC in determining applications for the subdivision of rural land.

This operational policy guides the subdivision of rural land to achieve the key objectives of State Planning Policy 2.5 Rural Planning to protect agricultural land, plan for rural settlement, minimise land use conflict and manage natural resources.

Liveable Neighbourhoods

"Liveable Neighbourhoods" (WAPC, 2009) is an operational policy of the Western Australian Planning Commission (WAPC) for assessment of structure plans and subdivisions for new urban development and redevelopment, which sets objectives for identified design elements and is therefore a significant influence upon the design and character of new urban areas. In particular, "Liveable Neighbourhoods" enshrines the concept of the "Neighbourhood Unit" into the planning for new urban areas and redevelopment of older areas.

2. REGIONAL CONTEXT

The following is a list of the key Regional Strategies relevant to the preparation of this Local Planning Strategy:

2.1 Metropolitan Region Scheme

The MRS defines the future use of land, dividing it into broad zones and reservations. It requires local government town planning schemes to provide detailed plans for their part of the region. These schemes must be consistent with the MRS.

The MRS uses a set of maps and a scheme text. The scheme text provides planning rules for zones and reservations which are shown on the maps in different colours and patterns.

2.2 Perth and Peel @3.5million -

Within the Perth and Peel @3.5million report, the North East sector is identified and direction is set for the provision and location of new Greenfield estates. This report sets the expected dwelling outcomes per geographical location and refines the density targets for new estates. There is reference to infill development in selected locations and the role that the Midland Redevelopment Authority is playing within the Midland City Centre.

2.3 North-East Sub-regional Planning Framework

The North-East Sub-regional Planning Framework represents a whole-of-State Government approach to managing future urban form within the sub-region. It aims to ensure that there will be sufficient suitable land identified for future housing and employment to accommodate population growth.

2.4 North-East Corridor Extension Strategy

The Strategy looks forward to 2029 and provides a context in which planning decisions can be made. The Strategy aims to safe-guard the rural character and amenity of the study area: a major attractor that draws people to live in the area.

Since the early 1990s, the north-east corridor of the Perth metropolitan region has been identified in planning documents as an area with the potential for urban growth. The State Planning Strategy, released in 1997, proposed an extension to the north-east corridor with the intention of providing for increased urbanisation and employment opportunities. Development interest in the area north of Ellenbrook has been increasing since the late 1990s and it became apparent that a more detailed planning strategy was required.

2.5 North Eastern Hills Settlement Pattern Plan

The settlement pattern plan aims to protect the area's environment, industry and lifestyle, while allowing for its potential population doubling over the next 20 years.

The plan covers parts of the Shire of Mundaring including Chidlow, Mount Helena, Mundaring, Parkerville, Stoneville, and Wooroloo, and parts of the City of Swan including Gidgegannup.

2.6 Industrial Land Strategy 2009 Perth and Peel

The Strategy focuses on the identification and de-constraining of land suitable for industrial activity for the long term to facilitate an industrial land bank.

The preparation of the Industrial Land Strategy (ILS) was initiated by the State Government in October 2007. Its purpose was to address the notable shortfall in industrial land supply in both the Perth and Peel regions that became apparent during the resource boom experienced in the late 1990s and early 2000s.

In identifying land for future industrial development, it will ensure that the economic growth of the WA economy will not be compromised because of a lack of available industrial land to support new and emerging industries and will provide the State with a much needed industrial land bank. The ILS was prepared collaboratively by the Department of Planning, Lands and Heritage, LandCorp and the Department of State Development.

The Industrial Land Strategy identifies two priority industrial sites within the City of Swan, at Bullsbrook townsite precinct (south) and Whiteman; two possible future industrial sites (land bank), at Bullsbrook townsite precinct (north) and North Ellenbrook; and one extension industrial site at Hazelmere south.

2.7 Kewdale - Hazelmere Integrated Masterplan

Kewdale-Hazelmere is a major strategic area for the freight industry in Perth and Western Australia. The area has extensive road/rail intermodal freight infrastructure networks and overlaps three levels of government jurisdictions. There is also the challenge to facilitate the rapid expansion and change occurring in the freight industry and accommodate the existing population of residents within the area.

The Masterplan guides State and Local Government decision making for the provision of road and rail transport infrastructure and identifies potential strategic areas considered suitable for industrial and more intensive residential development.

2.8 Hazelmere Enterprise Area Structure Plan

The HEA Structure Plan lays out a structure for future land uses within the Structure Plan area. The Structure Plan has been designed to maximise the potential for industrial land uses within the study area.

The main objectives for the Structure Plan are to facilitate business growth in Hazelmere by:

- Creating land use interfaces that safe guards the quality of life for landowners and surrounding residents;
- Creating a vibrant, dynamic business focused location; and
- Minimising environmental impacts and strengthening ecological links through the locality.

2.9 Swan Urban Growth Corridor Sub-Regional Structure Plan

The sub-regional structure plan is a strategic document that seeks to achieve proper and orderly planning and development of land and infrastructure consistently across the study area.

The sub-regional structure plan provides a set of policy principles to guide future development in the corridor in a coordinated manner, commensurate with the needs of the community. It takes into account factors such as economic development, road networks, transit stations, community facilities, district open space, urban densities, activity corridors and neighbourhood centres.

2.10 Swan Valley Action Plan

Prepared by the Department of Planning, Lands and Heritage as a requirement of the proposed new Swan Valley legislation, the plan sets out the strategic planning, development and land use vision for the Swan Valley and provides both policy guidance and development controls to ensure future development and land use are aligned with that vision.

2.11 Perth and Peel Transport Plan - For 3.5 Million People and Beyond

The Perth and Peel Transport Plan is the State Government's vision for improved and expanded public transport in Perth. The Plan identifies the public transport network needed to support Perth's growing population and links to and between strategic centres. It also proposes the preferred type of public transport service (mode) and the priorities for infrastructure investment across the network.

2.12 Great Northern Highway (GNH) Access Strategy

The Great Northern Highway (West Swan to Muchea) Access Strategy was produced jointly by Main Roads WA, the Department of Planning, Lands and Heritage (DPLH), the Department of Transport (DoT) and the City of Swan. The study details future access to the GNH between West Swan Road and Rutland Road, including the town sites of Upper Swan and Bullsbrook. The GNH Access Strategy considers technical provisions, such as appropriate spacing of accesses, speed zoning and use of signalised intersections, as well as examining the state, regional and local planning framework, and planned future land uses. The report also considers the constraints and opportunities within the study area, and provides recommendations relating to road access, that will inform future planning decisions.

2.13 Perth-Darwin National Highway Study

A strategic road network review to investigate the preferred long term alignment and network configuration for the Perth Darwin National Highway between Reid Highway and Muchea. The highway will serve the growing mining and gas projects located off the north-west coast which is a major source of revenue for State and Federal Governments. The Study recommends a new alignment between Reid Highway and Muchea which differs significantly from the current alignment of Lord Street.

2.14 Perth-Adelaide Corridor Strategy

The Strategy was prepared by AusLink to ensure the links between Western Australia and the eastern states support safe, reliable and efficient long-distance freight and passenger connectivity. Priorities that affect the City of Swan are finding long term solutions to safety and amenity issues with the freight rail system (Lloyd Street) and addressing safety, efficiency and amenity issues relating to Great Eastern Highway.

2.15 Guidelines, Forecast and Reports

The following is a list of the key guidelines, forecasts and reports relevant to the preparation of this Local Planning Strategy:

Planning for Bush Fire Protection (Edition 2)

The guidelines set out a range of matters that need to be addressed at various stages of the planning process, to provide an appropriate level of protection to life and property from bush fires and avoid inappropriately located or designed land use, subdivision and development on land where a bush fire risk is identified.

Planning for Acid Sulphate Soils 2008

The WAPC and DEC have prepared the acid sulphate soils guideline series to assist agencies, developers and individuals to manage development in areas where acid sulphate soils may or will be impacted on.

Land Supply and Housing Activity

The Land Supply and Housing Activity documents keep government informed on the movement of indicators that measure land supply and housing activity.

These bulletins bring together various measures that enable policy makers to understand the supply and demand factors of the land and housing market. The bulletins cover measures of housing finance, dwelling construction, lot sale prices and volumes, rental vacancy rates, and the full range of measures in the land subdivision process - including conditional and final lot approvals, and the developer's stock of lots with current conditional approval.

Urban Growth Monitor

The Urban Growth Monitor demonstrates the dynamics of land supply through a comprehensive analysis of the stocks of urban land throughout the various stages of the planning, approval and development process in Perth, Peel and Greater Bunbury.

3. LOCAL CONTEXT

3.1 Strategic Community Plan 2017 – 2027

The City of Swan's Strategic Community Plan 2017 – 2027 is the highest level of plan within the City's integrated planning framework. The Strategic Community Plan sets out the vision, aspirations and objectives for the swan community over the next ten years and is the City's principal planning and strategy document.

The Strategic Community Plan is a legislative requirement to ensure that the City provides good governance and appropriately plan for the future of the Swan region.

The vision for the City of Swan is 'One City – Diverse Places'.

The City's reflects the diversity of its people, industry, environment and heritage, providing an unique place where people want to live, work and recreate.

The Strategic Community identifies clear themes were that need to be considered so that the City can achieve its strategic objectives. The themes guide the work that is delivered to the community. The themes are:

Place based

The place based theme commits the city to building and supporting its diverse places, providing access to services close to communities of interest through local vibrant community hubs.

Partnerships

The partnership theme reflects the City's aim to work in collaboration with government, the private sector, not-for-profit agencies and the community to provide inclusive and accessible services and assets in the most efficient way.

Sustainable growth

The sustainable growth theme commits the city to economic growth and diversity balanced with natural environment and heritage to ensure the City provides local services, industry access, local employment and diverse places to live.

3.2 City of Swan Local Planning Scheme 17

Local Planning Scheme No.17 (LPS 17) is the City's District Zoning Scheme that classifies land into different classes of zones and reservation for different land uses and as such is the main tool used for assessment of development proposals. Part 4 of the Scheme sets objectives for each zone and Table 1 of the Scheme specifies the uses that are permissible within each zone. The main purpose of these elements of the Scheme is to minimise the potential for conflict between incompatible land uses, but it also has the effect of defining the character of areas by the uses that are permitted. A restrictive use of permissibility will create less potential for conflict between land uses but will create a very uniform built form and land use that has the potential to diminish the potential value of places. Land use zoning is a particularly blunt instrument in managing land use conflicts, which can still be managed through the planning approval process on an individual merits basis. A more limited palette of zones with a wider permissibility of land uses increases the potential for land use conflicts but offers the opportunity for increased vibrancy and adaptability of places.

Consideration may therefore be given to reducing the number of zones and widening the mix of permissible uses within those zones in order to facilitate more adaptive and vibrant urban spaces that would facilitate places to develop their own unique character.

Transition from TPS 9 to LPS 17

Under the Town Planning and Development Act, a review of all local government town planning schemes is required every five years. Town Planning Scheme No. 9 (TPS 9) came into operation in December 1985. On 25 June 2003, Council resolved to adopt Local Planning Scheme 17 (LPS 17) for the purpose of advertising. On 12 April 2006, LPS 17 was adopted by Council for final approval. LPS 17 was approved by the WAPC and gazetted on 18 February 2008.

Scheme Maps

The Scheme maps mainly reflect changes to the Metropolitan Region Scheme (MRS), in particular, land in the North-East Corridor recently zoned 'Urban' under the MRS zoned from 'General Rural' to 'Residential Deferred' under LPS 17, pending detailed structure planning for the subject areas.

A number of TPS 9 amendments and an MRS amendment were finalised subsequent to advertising of LPS 17 and the Scheme maps were modified to reflect those amendments.

Scheme Text

The Scheme text primarily brings the format and content of the text into line with the WAPC Model Scheme Text (MST). The significant effective difference from TPS 9 was the rationalisation of Use Classes and their definitions in accordance with the MST, reducing the number of Use Classes from 134 to 85. The other significant aspect of the Scheme was the removal of the Scheme provisions relating to building and development standards and incorporating them into Local Planning Policies.

Heritage matters

Part 7 of the City of Swan Local Planning Scheme No.17, in accordance with the Western Australian Planning Commission's (WAPC) Model Scheme Text (MST), deals with heritage matters. Part 7 of the Scheme:

- Requires a local government to establish and maintain a Heritage List;
- Provides for the creation of Heritage Areas;
- Provides for the making of Heritage Agreements;
- Provides for the City to apply Conservation Incentives such as density bonuses, transfer of development rights and variations to normal Scheme requirements;
- Requires submission of a development application where a development would otherwise be exempt from requiring planning approval where a place is on the Heritage List or within a Heritage Area.

Local Heritage Survey and Heritage List

The *Heritage Act 2018* requires all local governments to compile and maintain a Local Heritage Survey of buildings within its district which are or may become, of heritage significance. The Local Heritage Survey has recently been revised with 424 place records being created.

A separate Heritage List created from places based on the top two management categories of the survey has also been compiled and comprises 95 place records. This has removed the requirement for development applications from many properties and now concentrates on those properties that are of the greatest significance.

3.3 Local Planning Policies

The following is a list of the key Local Planning Policies relevant to the preparation of this Local Planning Strategy:

POL-C-102 - Urban Growth

The Urban Growth Policy sets out the City's expectations and guidelines for development in urban growth areas to ensure that population growth in the Swan region contributes to sustainable urban communities.

POL-C-103 - Neighbourhood Planning

The purpose of this Policy is to set out the City's expectation for neighbourhood urban form and infrastructure planning in urban growth areas to ensure that population growth and development in the Swan region contributes to sustainable urban communities.

POL -C-104 - Environmental Planning

The purpose of this Policy is to clearly articulate and set out the City's expectations for the management of the natural environment especially relating to urban growth areas.

POL-C-105 - Community and Economic Planning

The purpose of this Policy is to clearly articulate and set out the policy requirements and processes for community and economic development planning to be carried out in conjunction with the preparation of Structure Plans, Development Plans and/or major development proposals.

POL-C-106 - Guildford Conservation Precinct

The policy defines the area of the Guildford Conservation Precinct and contains policy guidance and detailed design guidelines.

POL-C-111 - Woodbridge Conservation Precinct

The policy defines the area of the Woodbridge Conservation Precinct and contains policy guidance and detailed design guidelines.

3.4 Other strategies, plans and policies

Local Biodiversity Strategy

The Local Biodiversity Strategy aims to define the task of conserving biodiversity at a local government level in the City of Swan.

The document outlines a framework for considering biodiversity in all City decision making and suggests ways of conserving important local natural areas and biodiversity into the future.

Pol-E9.2 Floodplain Management and Development

The Floodplain Management and Development Policy sets out the criteria used by Council in determining planning proposals in the floodplain where Council has the overall development control responsibility. The objectives of this policy are:

- To conserve the environmental features of the floodplain.
- To ensure that development is compatible with flood management in order to minimise the risks and effects of flooding.
- To encourage development which maintains or enhances the physical and visual amenity of the floodplain.
- To provide guidelines for the use and development of the floodplain.

Swan and Helena Rivers Flood Study and Floodplain Management Plan

This study and plan summarises the analysis, modelling and results of the Swan and Helena Rivers Flood Study, which was commissioned by the Eastern Metropolitan Regional Council (EMRC) in August 2015 and completed in April 2016. The report summarises and explains the wider flood study process, the input spatial and hydrologic data used to undertake the investigation, analysis of the data and development, calibration and verification of the hydrological model. The modelling results, and modelled flood hydrographs for a range of design floods are also documented.

City of Swan Economic Vision and Strategy

The City of Swan Economic Vision and Strategy provides a framework to guide the City's business focussed activities towards building a vibrant, diverse and sustainable local economy. It provides a clear direction for the future by identifying priorities for action to promote opportunities for investment and employment growth in the City while ensuring that local attributes are protected, nurtured and capitalised upon for the benefit of all segments of the Swan community.

Economic Study for the Swan Valley 2009

The Study was a joint project by the City of Swan and the Swan Valley Planning Committee and its objective was to investigate the economic performance of the Swan Valley and provide recommendations to guide the future positioning or role of the Valley in the context of the "general objectives" of the SVPA. One of the significant recommendations of the Study with respect to implementation is the preparation of a Master Plan for the Swan Valley area.

Heritage Strategic Plan 2013

The plan aims to achieve significant benefits at an environmental, social and historical level by providing a quality framework for the careful management of the City's heritage assets to protect, support and promote its unique characteristics.

Retail Needs Assessment

The Retail Needs Assessment identifies the demand and supply trends for retailing in the City of Swan, recommends a future network of activity centres and provides the basis for strategic planning initiatives.

Public Open Space and Community Facility Strategy (POSCFS)(draft)

The draft POSCFS provides a comprehensive strategic direction for the planning of public open space and community infrastructure in the City of Swan. The draft POSCFS summarise the relevant background information and details the approach to the planning for public open space and community facilities, including a hierarchy of provision and benchmarks. It identifies two current regional-level gaps: a regional performance and events space; and a regional sporting open space. The adoption of the Policy under the provisions of the Scheme will give the matters included greater weight in determination of structure plans and subdivisions.

Swan CycleConnect Strategy

Swan CycleConnect Strategy provides the strategic direction for the future provision of cycle facilities in all areas of the City taking national, state and local policies and strategies into account to ensure a consistent and connected approach to the

provision of cycling infrastructure. The Strategy will assist the City to achieve its vision for cycling in the City of Swan: "Develop an efficient and connected cycling network that supports cycling as a safe and viable transport alternative for residents, workers and visitors to the City."

Swan Valley Bike Plan

Identified a network of bike paths in the Swan Valley and identified options for future connections to existing and planned bike networks in the region recognising that connections can only be made once development occurs particularly in the urban growth corridor.

Swan Riverside Regional Park Plan

Managed by the City of Swan, the Swan Riverside regional park project, with the assistance of Federal funding, aims to deliver a great environment with historical and cultural significance for the Swan region. The Park will become a magnet for tourism, recreational, social and cultural activity. The regional park will include:

- An all-abilities eco-cultural discovery play space for families and children;
- Dual-use paths to connect the park to the Swan Valley tourism precinct;
- Creation of the Blackadder Creek Wetland to reduce salt-water incursion into the area, which will help to improve the health of the site.

Tourism Development Strategy

Tourism Development Strategy provides a blueprint for delivering the City's ambition to become one of Western Australia's premier visitor destinations.

Strategic Bushfire Risk Analysis

The purpose of this document is to assist the appropriate application of SPP 3.2 "Natural Hazards and Disasters" and the WAPC/FESA document "Planning for Bushfire Protection Guidelines" and also provides strategic guidance to the development and subdivision processes and allocation of appropriate landuses within bushfire prone rural land. The BRA also identifies the constraints and potential opportunities relating to bushfire hazard for certain landuses and development in particular 'lifestyle' allotments in rural zones and uses which may be impacted by bushfire hazard.

Ellenbrook Town Centre (ETC) Parking Strategy 2009

The ETC Parking Strategy provides a strategic framework which the City can use as a guide when assessing individual development applications in respect of the provision of car parking bays. The Strategy is based on the principle that in a town centre, a great variety of uses are clustered together and so each land use does not generate the need for a separate parking bay.

Malaga Parking Implementation Strategy 2011

The Malaga Parking Implementation Strategy provides a framework to address issues such as lack of sufficient parking, traffic congestion due to illegal parking, lack of alternate transport options namely public transport and cycling/walking and land use conflict and limitations in the current zoning for Malaga.

Draft Malaga Land Use Study

The draft Malaga Land Use Study has been prepared to identify amendments to LPS 17 and relevant policies that are needed to provide a greater range of permissible land uses in Malaga such as offices, retail and bulky good showrooms centres.

Midland 2017 - The Challenge

In 2007, the Midland Redevelopment Authority (MRA) and the City of Swan undertook a joint planning initiative known as Midland 2017 - The Challenge. An Enquiry by Design process was chosen to assist in developing the plan. The aim of the

initiative was to develop a plan to pull together past planning for Midland and to prepare a comprehensive action plan for Midland's continued revitalisation over the next ten years. The plan enables community, business and government to have a clear picture of how the City Centre will develop and grow over the forthcoming years.

Draft Midland Access and Parking Strategy 2012

The draft Midland Access and Parking Strategy 2012 has identified a suite of measures to assist the City in planning for the growth of the Midland Centre including identification of multi-deck car-parking sites, better parking management, improvements to public transport, supporting cycling and walking alternatives and using differential parking fees for on street parking to change commuter behaviour.

Draft Transport Strategy

The City of Swan has prepared a draft Transport Strategy, accommodating the existing and future transport requirements of the locality across all transport modes. This strategy is generally consistent with the process described in the Department of Planning, Lands and Heritage 'Guidelines for Preparation of Integrated Transport Plans' and focuses on an integrated transport model which includes land-use decisions, parking, public transport, road and pedestrian/cycling infrastructure.

The transport provision has been assessed at the neighbourhood, district and regional level to ensure that it addresses the residential, employment and recreational needs of the population.

The results of the Transport Assessment have been used to define realistic, clear and measurable goals for an integrated transport system throughout the municipality, providing a list of general principles and priority recommendations to be considered in a later Phase 2 of the overall project.

Swan Valley Planning Review

Mr Kobelke was appointed in August 2017 to independently review the planning framework for the Swan Valley. The recommendations detailed in Mr Kobelke's report extend beyond the planning portfolio to focus on potential measures to protect and promote the Swan Valley as a unique place for viticulture and tourism. The draft Swan Valley Planning Review makes recommendations to achieve the following objectives:

- Provide a clear long term vision for the Swan Valley.
- Recommend a planning framework for the Swan Valley to help achieve the vision.
- Propose decision making processes that are streamlined, transparent and better engage the people of the Swan Valley.
- Provide options to support the retention and enhancement of the unique rural character of the Swan Valley and compatible interests.
- Identify other State government agency tasks, external to the Department of Planning, Lands and Heritage, that may assist in achieving the vision for the Swan Valley.
- Provide a framework that creates the confidence people need to invest in viticulture, horticulture and tourism related projects which will further the vision for the Swan Valley.

Once adopted, the Swan Valley Planning Review will supersede the Swan Valley Development Plan. The Minister for Planning has also recently released the Swan Planning Action Plan. The Swan Valley Action Plan provides the Government's vision and actions for retaining Swan Valley as a productive rural area into the future.

Draft East-Wanneroo District Structure Plan

The draft East-Wanneroo District Structure Plan provides guidance on future land uses, coordination of major infrastructure, activity centres, regional open space distribution and the protection of environmental assets in East Wanneroo and a portion of Lexia. It identifies the obligations to be addressed by subsequent planning stages and provides the basis for the preparation of local structure plans. At its Ordinary Council Meeting on 11 December 2019 (Item No. 3.1), the Council supported the draft District Structure Plan subject to minor variations which are currently being considered by the Department of Planning, Lands and Heritage.

APPENDIX 2 - SUMMARY OF CITY OF SWAN LOCAL COMMERCIAL AND ACTIVITY CENTRES STRATEGY & RETAIL NEEDS ASSESSMENT

The following provides a set of action plans that will assist in implementing the core principles for activity centre policy in the City of Swan. For each underlying principle, a supporting rationale is provided, together with detailed actions identifying key roles and responsibilities.

The following conventions have been adopted in identifying the suggested timing for implementation:

- Short-term: Within 12 months
- Medium-term: From 1 year to 3 years
- Long-term: From 3 years to 5 years or beyond
- On-going: An existing or new action that continues into the future

These actions relate to activity centre policy; centre-specific action plans are provided in Chapter 8 and 9 of the Local Commercial and Activity Centres Strategy (LCACS).

Principle 1: Support a viable activity centres hierarchy

The activity centres hierarchy will guide future planning and development of centres, including ensuring centres are appropriately located having regard for their individual role within the hierarchy.

Activity centres form part of a 'hierarchy' of centres, with different levels of the hierarchy performing different roles and functions – the larger centres perform higher-order functions in the delivery of regional and sub-regional services, while smaller centres perform functions that are typically focused at the neighbourhood or local level. Combined, these activity centres across the hierarchy provide residents and visitors with access to essential services and facilities.

New retail and commercial development should be directed to existing centres in the activity centre hierarchy (refer Chapter 5). One of the key roles of the hierarchy is to provide a level of certainty regarding future investment within and surrounding centres. Allowing inappropriate out-of-centre development has the potential to disrupt the hierarchy and impact the provision of services and facilities to communities. This can in turn have negative implications for the broader urban planning principles upon which SPP 4.2 is based (i.e. undermining reduced travel times).

It will be important that the City of Swan activity centre hierarchy encourages the following:

- Activity centres in appropriate locations that provide residents with readily accessible facilities and services
- Commercial viable activity centres which are locations for employment and investment
- Continued re-investment in activity centres, ensuring that centres are places where people like to shop, conduct business, socialise, etc.

Principle 1: Support a Viable Activity Centres Hierarchy - Action Plan

No.	Action Description
1.1	<p>Adopt the activity centre hierarchy (refer Chapter 5) as a planning tool to guide the location, type and volume of new and/or expanded retail, commercial and other development. Ensure this hierarchy is referenced when considering development applications and determining Council land use policies.</p> <p>Timeframe: Short-term Responsibility: Council (planning) Partnerships: n/a</p>
1.2	<p>Resolve current proposals for neighbourhood shopping centre facilities in the 'Midvale Neighbourhood Centre Investigation Area'.</p> <p>Timeframe: Short-term Responsibility: Council (planning) Partnerships: Land owners, Developers, Joint Development Assessment Panel, Shire of Mundaring</p>
1.3	<p>Support the future development of potential future District Centres at 'The Broadway (Ellenbrook)', Brabham and Bullsbrook when market demand warrants.</p> <p>Timeframe: Long-term Responsibility: Council (planning) Partnerships: Land owners, Developers</p>
1.4	<p>Facilitate redevelopments and expansions of existing centres provided that they adhere to the principles identified in this Strategy, contribute to a net community benefit, and do not adversely affect the operation of the activity centre hierarchy.</p> <p>Timeframe: On-going Responsibility: Council (planning) Partnerships: Land owners, Developers, other relevant planning authorities</p>
1.5	<p>Adopt the Planning and Development Assessment Criteria outlined in Chapter 10 as a tool for assessing retail and activity centre proposals.</p> <p>Timeframe: Short-term Responsibility: Council (planning) Partnerships: n/a</p>
1.6	<p>Restrict out-of-centre development proposals to those that are consistent with the achievement of a net community benefit without undermining the activity centre hierarchy (refer Action 4.1).</p> <p>Timeframe: On-going Responsibility: Council (planning) Partnerships: Land owners, Developers</p>
1.7	<p>Restrict non-confirming land uses in the Highway Service Zone and Industrial Zones by enforcing the rules outlined in the LPS 17.</p> <p>Timeframe: On-going Responsibility: Council (planning/regulations) Partnerships: Land owners</p>
1.8	<p>Support, where possible, re-investment into existing centres, particularly those that may be under-performing.</p> <p>Timeframe: On-going Responsibility: Council (planning) Partnerships: Land owners</p>

Principle 2: Encourage a genuine mix of uses in centres

Activity centres will be planned and designed in a manner that encourages a genuine mix of land uses, reduces the need to travel and which creates vibrant focal points for the community.

Significant benefits can be gained from providing a genuine mix of activities in activity centres, including:

- Economic benefits associated with clustering activities that have a similar customer base, the efficient allocation of infrastructure and the creation of vibrant centres
- Environmental benefits associated with a reduction of vehicle uses and the integration of public transport
- Social benefits associated with the creation of key focal points for the community to integrate, socialise and access essential community services.

SPP 4.2 (refer Section 5.2 of SPP 4.2) specifically encourages diversity and intensity of activities in centres. In particular, the policy encourages a mix of retail, commercial, health, education, entertainment, cultural, recreational and community facilities, and higher density residential uses.

Principle 2: Encourage a Genuine Mix of Uses in Centres - Action Plan

No.	Action Description
2.1	<p>Consider the inclusion of 'residential uses' within selected commercial zones located within residential communities as described in the City of Swan Local Planning Scheme (LPS) and which is applied to neighbourhood level centres and above. This would require rezoning of selected centres, and therefore necessary Scheme amendments will need to be undertaken. Allowing residential uses within centres will provide an opportunity to attract investment to the centre that may otherwise not occur. In this context, Action 2.1 also contributes to 'Principle 1: Support a viable activity centre hierarchy'.</p> <p>Consideration of the treatment of ground-floor uses should take into consideration the need to promote active street frontages.</p> <p>Timeframe: Medium-term Responsibility: Council (planning) Partnerships: Department of Planning, Lands and Heritage</p>
2.2	<p>Encourage a mix of land uses in centres within the City of Swan by applying the principles outlined in 'Section 5.2 – Activity' in the SPP 4.2 to centres within the City of Swan. This may require amendments to the LPS. SPP 4.2 is provided at https://www.planning.wa.gov.au/publications/1178.asp</p> <p>Timeframe: On-going Responsibility: Council (planning) Partnerships: Department of Planning, Lands and Heritage</p>

Principle 3: Drive local economic development opportunities

Activity centres will drive economic development and prosperity through the attraction of investment that delivers local employment opportunities, serves the needs of local communities and attracts spending from beyond the City of Swan.

Activity centres are a major source of investment, employment and economic activity. In addition, activity centres contribute to the provision of goods and services to the community and are a focus for interaction between individuals, businesses and the general public.

For many people, activity centres represent the 'face of their community'. As a result, the success or otherwise of activity centres is important in influencing perceptions of a community to the outside world. This has implications for the City of Swan in seeking to attract investment, new residents and tourism.

For this reason, activity centres are a particularly important part of the economy, both in terms of their direct contribution to employment and activity, and through indirect influences on a wide range of economic and social outcomes.

Principle 3: Drive Local Economic Development Opportunities - Action Plan

No.	Action Description
3.1	Encourage development within activity centres where a demonstrable need for additional services/facilities is evident, and a net community benefit can be demonstrated. Timeframe: On-going Responsibility: Council (planning) Partnerships: Land owners, Developers
3.2	Complete structure planning for neighbourhood and district centres, with these plans to build on the centre-specific recommendations presented in this Strategy. Timeframe: Medium-term Responsibility: Council (planning) Partnerships: Land owners, Developers, other relevant planning authorities
3.3	Continue to promote the City of Swan's activity centres as locations for investment. Timeframe: On-going Responsibility: Council (economic development) Partnerships: n/a

Principle 4: Support new opportunities which complement the centre hierarchy and provide positive outcomes for the community

Where the activity centre hierarchy is not undermined, Council will support projects that respond to future changes in retail and commercial markets and which create positive outcomes from an economic, community, social and environmental perspective.

New forms of retailing and market entrants have become evident in Australia over the past two decades, and these activities are of relevance in planning for activity centres in the City of Swan.

For instance, the success of ALDI in the eastern states in Australia, and now also in metropolitan Perth, is an example of a new market entrant that will have an impact on retailing and activity centres in the City of Swan. The continued popularity of large-format retailing in sectors such as hardware (Bunnings), liquor (Dan Murphy's and 1st Choice Liquor), and bulky goods (Harvey Norman etc) will also have influence retail development trends in the future, particularly in locations that possess high levels of exposure and accessibility. In addition, new retail formats and market entrants are likely to express an interest in locating in the City of Swan over the life of this Strategy.

While the activity centre hierarchy is the focus for developing retail, commercial and other functions, in some individual circumstances it may be appropriate for these to operate at locations outside the hierarchy for a particular purpose.

Council must ensure that the integrity of the activity centre hierarchy is maintained. Nonetheless, out-of-centre development of an appropriate scale and nature may be considered where it can be demonstrated that it does not impact the activity centre hierarchy, there is a demand for such as development, and a net community benefit will be achieved.

Therefore, activity centre policy for the City of Swan will recognise the ever-evolving nature of activity centre planning and development and will support new opportunities where they complement the centre hierarchy and provide economic, social, community and environment benefits for the City of Swan communities.

Principle 4: Support New Opportunities - Action Plan

No.	Action Description
4.1	<p>Assess 'out-of-centre' proposals on a case-by-case basis to ensure that such development occurs in a manner consistent with the achievement of a net community benefit without undermining the activity centres hierarchy. This assessment should include consideration of:</p> <ul style="list-style-type: none"> • Locational Framework: The applicant must demonstrate why the proposed out-of-centre location is being considered for retail or commercial development, including identifying why an in-centre or edge-of-centre location is not appropriate. • Accessibility Framework: The proposal should demonstrate equitable access by ensuring the provision of convenient pedestrian links, access to public transport (as relevant), bicycle access and convenient motor vehicle access and parking. • Urban Design Framework: The proposal must demonstrate a high-quality urban design that is attractive and provides a high degree of amenity for users of the facility and the general community. • Economic Justification: The proposal must be supported (subject to Council discretion) by a suitably detailed economic or commercial assessment of the reasons for, and implications of, approval of the out-of-centre development (refer Chapter 10 – Planning and Development Assessment Criteria). • Net community benefit: The planning application must provide an indication of the development proposal's contribution to Net Community Benefit in terms of relevant aspects such as employment generation, impact on overall levels of vibrancy and sustainability of the locality, and contribution to liveability, social interaction, and other community-related goals. <p>Timeframe: On-going Responsibility: Council (planning) Partnerships: Land owners, developers</p>
4.2	<p>Remain abreast of relevant trends in the retail and activity centre development industry. This may involve the relevant Council staff attending industry events, conferences and seminars; or the organisation of regular consultation with retail and commercial development stakeholders.</p> <p>Timeframe: On-going Responsibility: Council (planning) Partnerships: Land owners, developers</p>
Other supporting actions	Refer Action 1.5 and 1.6

Principle 5: Support Midland as the Strategic Metropolitan Centre serving the region

Council will reinforce the role of Midland Strategic Metropolitan Centre as the higher-order centre serving the municipality. Policy will also reflect the importance of maximising Midland SMC's future opportunities in order to drive positive economic and social outcomes for the community.

Midland is the Strategic Metropolitan Centre serving the City of Swan and beyond, and is a key driver of the local economy, supporting jobs and attracting investment. Midland is also important in providing regional level health, education, cultural and entertainment facilities and services.

The success of Midland as a regional level provider of services will be integral to creating economic prosperity for the region. Being the only Strategic Metropolitan Centre in the City of Swan, it provides opportunities to attract investment from beyond the City which will provide flow-benefits for the local business community and supports local job growth. The strategic importance of Midland from a State Government perspective is highlighted by the presence of land controlled by the Metropolitan Redevelopment Authority (MRA) within and adjoining the centre.

The Midland Activity Centre Masterplan (2013) outlines the vision for the centre and provides an implementation plan in order to realise this vision.

A specific Action Plan for Midland is provided in the next section which recognises the important role to be performed by the centre. The Action Plan supports and builds upon the actions outlined in the Midland Activity Centre Masterplan (2013).

Midland Strategic Metropolitan Centre Action Plan

Midland plays an important role as the Strategic Metropolitan Centre (SMC) serving the City of Swan, the broader north-east region of metropolitan Perth and a large rural hinterland. The centre contains a wide range of shops and services not found elsewhere in the region, and is one of the most important activity centres in the north-eastern metropolitan Perth area.

According to the City of Swan Retail Needs Assessment (2011), which was reviewed in the Background Report to the Local Commercial and Activity Centres Strategy, significant opportunities exist for Midland to accommodate additional retail floorspace over the next 15 to 20 years. By 2031, potential exists for Midland to accommodate in the order of 200,000m² of retail floorspace, which is some 65,500m² above the estimated retail floorspace in 2011. In addition to retail floorspace,

Strategic Metropolitan Centre	Current Retail Floorspace	Indicative Retail Floorspace - 2031
Midland Strategic Metropolitan Centre	134,480m ²	200,000m ²

Midland should be encouraged to provide a wide-range of other land uses, including commercial office, health, entertainment, community, civic and residential. SPP 4.2 (Table 3) provides a 'diversity' target of 50% for SMCs the size of Midland.

The recent development of the Midland Public Hospital (opened in November 2015), the continued development of the MRA development area for education and residential uses, the proposed development of the Curtin University Medical School and the proposed redevelopment of the Midland Oval site all indicate significant interest in Midland as a genuine mixed use centre.

The Midland Activity Centre Master Plan was prepared and adopted by the City of Swan in 2013. The Masterplan is the document that guides the future development of Midland Activity Centre, providing a vision and set of actions aimed at achieving the vision. The Midland Activity Centre Masterplan (2013) outlines the following vision for Midland:

"Midland has the opportunity and the ability to become a thriving city in its own right, serving Perth's eastern region, Perth Hills, the Avon Arc and beyond. Midland can deliver an attractive, affordable, productive and sustainable city living environment beside the rivers in the eastern corridor."

This Strategy supports the continued implementation of the actions outlined in the Masterplan. The Masterplan for the Midland Activity Centre is shown in Figure 6 on page 42, while a full version of the Masterplan can be found at <https://www.swan.wa.gov.au/City-Council/Projects-initiatives/City-plans-strategies#Midland-Activity-Centre-Master-Plan-12>.

The MRA will perform a significant role in the future development of Midland. Constant communication between Council and the MRA is considered essential. The MRA have developed the Midland Masterplan (2015) for the land they control and this should also be used as a reference document for guiding the future development of the centre.

No.	Action Description
8.1	Continue to implement the Midland Activity Centre Masterplan that was adopted by Council in 2013. Timeframe: On-going Responsibility: Council (planning) Partnerships: Land owners, developers, MRA
8.2	Continue to implement the Midland Oval Redevelopment Masterplan that was adopted by Council in November 2015. Timeframe: On-going Responsibility: Council (planning) Partnerships: Land owners, developers
8.3	Continue to work closely with MRA in order to maximise development opportunities in Midland and consider the MRA's objectives outlined in the Midland Master Plan (2015). Timeframe: On-going Responsibility: Council (planning) Partnerships: MRA
8.4	Encourage high-density residential development that is appropriately located and designed in accordance with TOD principles. Timeframe: On-going Responsibility: Council (planning) Partnerships: Land owners, developers, MRA
8.5	Continue to support the regional role of Midland by facilitating additional higher-order retail development in Midland to ensure retail provision is sufficient to meet the needs of the local community, wider north-east metropolitan region, and rural hinterland. The provision of additional commercial office, community, entertainment, and cultural facilities will also be supported to sufficiently serve the centre's regional catchment. Timeframe: On-going Responsibility: Council (planning) Partnerships: Land owners, developers, MRA
8.6	Continue to support re-investment and improvements in amenity and appearance in Midland as the building stock ages, particularly in the traditional town centre precinct. Timeframe: On-going Responsibility: Council (planning) Partnerships: Land owners, developers
8.7	Consider the development of a Great Eastern Highway Access Strategy, as recommended in the Midland Activity Centre Master Plan. The Access Strategy should consider the future role of land to the east of Midland SMC as an employment location, as a key transport corridor and as a major 'gateway' to the SMC. Timeframe: Medium-term Responsibility: Council (planning) Partnerships: Public Transport Authority, MRA, Main Roads Western Australia, Shire of Mundaring
8.8	Restrict the provision of Highway Service Zone land located to the immediate east of the Midland SMC to lots that have direct access to the Great Eastern Highway. Timeframe: On-going Responsibility: Council (planning) Partnerships: Land owners

Centre-Specific Directions and Actions

The following provides an overview of the future directions and specific actions for centres within the City of Swan activity centre hierarchy.

Secondary Centres

Ellenbrook is the only Secondary Centre located in the City of Swan (Figure A refers) and should continue to play an important role as the main sub-regional centre for grocery and higher-order comparison shopping, including large format retailing. The centre will evolve to include non-retail activities, including social and community facilities, entertainment and leisure activities, and cafes and restaurants. The provision of government services at, or adjacent to, the centre is encouraged.

Actions:

1. Support the development of Ellenbrook as a mixed-use centre.
2. Ensure Ellenbrook retains its secondary centre role serving the northern parts of the City of Swan.
3. Continue to support the opportunity for a train service to Ellenbrook.

According to the City of Swan Retail Needs Assessment, Ellenbrook's current and indicative future retail floorspace is shown in the following table:

Strategic Metropolitan Centre	Current Retail Floorspace	Indicative Retail Floorspace - 2031
Ellenbrook Centre	35,200m ²	60,000m ²

District Centres

District Centres are intended to have a retail mix that is focussed on convenience and grocery shopping (although often with a limited range of non-food traders) and provide a range of community services to the surrounding communities. Usually, these centres have one or two full-line supermarkets as the main anchor tenant, and may include a major non-food anchor tenant such as a Discount Department Store. The future scale and mix of emerging District Centres will be determined by site specific Retail Needs and Sustainability Assessments, and associated activity centre planning processes.

The City of Swan does not currently have a district centre; however, three district centres are planned to serve the future residents in the urban growth corridor and Bullsbrook (Figure A refers).

Actions

In the first instance, support the future development of centres that serve a neighbourhood role at The Broadway (Ellenbrook), Bullsbrook and Brabham.

4. Retain the opportunity for the expansion of The Broadway (Ellenbrook), Bullsbrook and Brabham to district centres at a time when market demand warrants.
5. Seek to maximise exposure for the future Bullsbrook district centre to the Great Northern Highway and the 'activity corridor' identified in the Bullsbrook Masterplan that connects Chittering Road and the Great Northern Highway.
6. Support a mix of land uses in district centres including:
7. medium and higher density residential - civic
8. entertainment - commercial
9. cultural - recreation

According to the City of Swan Retail Needs Assessment, there will be three District Centres in the City of Swan: The Broadway (potential district centre), Brabham Centre (potential district centre), and Bullsbrook Town Centre (emerging district centre). The current and indicative future retail floorspaces for these centres are shown in the following table:

Strategic Metropolitan Centre	Current Retail Floorspace	Indicative Retail Floorspace - 2031
Bullsbrook Town Centre	1,900m2	10,000m2
Brabham Centre	0	15,000m2
The Broadway	0	15,000m2

Neighbourhood Centres

Neighbourhood Centres are an integral part of the activity centre hierarchy as they provide the day-to-day and weekly shopping and other services to their surrounding communities. It is important that the level of access to neighbourhood centres is maximised as neighbourhood centres provide a wide-range of essential services. A network of easily accessible neighbourhood centres supports the broader land use planning principles outlined by the State Government (e.g. reduce car travel).

The following provides an overview of the future direction and specific actions (where required) for the City of Swan's neighbourhood centres:

8 Retain existing General Commercial Zone and encourage private and public sector investment that would improve the amenity and appearance of the following neighbourhood centres:

- Kiara Shopping Centre - Stratton Park
- Ballajura Central - Ballajura City
- Ballajura Marketplace - Altone Park
- Amazon Drive - The Springs
- Gidgegannup

In addition, approximately 1.5ha of General Commercial Zone is located at the intersection of Toodyay Road and the Great Northern Highway. This land is currently under-utilised and not serving the role of a Neighbourhood Centre. Retaining the General Commercial Zone will provide for future opportunities to intensify land uses permitted under the zone.

9 Continue to support the neighbourhood centre role of the following local centres, which are located on Special Use/ Residential Development Zoned land but which a neighbourhood centre is supported by an accompanying Structure Plan:

- Egerton Drive, Aveley - Waterhall Shopping Centre
- Woodlake Village - Caversham.

10 Support the future development of neighbourhood centres at the following locations:

- Millhouse Road, Aveley - Dayton
- Bennett Springs - Bullsbrook North
- Bullsbrook South

11 Retain the opportunity for a potential future neighbourhood centre in Upper Swan (exact location to be determined), subject to extent of future residential development in this locality.

- 12 Guildford Neighbourhood Centre: Guildford is an important centre not only for its role in providing local convenience retailing and services, but also for its role as a historic tourism centre/destination. Actions:
- Support the niche role of the Guildford centre as a focus for tourist and visitor spending. Encourage shoppers to spend more time and money in the centre by protecting and enhancing the precinct's heritage assets.
 - Encourage additional retail/commercial development at the Guildford centre, where appropriate, to continue to meet the needs of a growing local population.
 - Investigate opportunities to better integrate commercial areas on James Street and Swan Street.
- 13 Horace Street (future centre): The Bellevue East Land Use Study (BELUS), which was adopted by Council in 2013, identifies the opportunity for a neighbourhood centre at Horace Street. Actions:
- Support the development of a 'neighbourhood' or 'local' centre at Horace Street
 - Support increased residential densities in the Bellevue East locality.
- 14 Jane Brook (future centre): Development approval exists for a 2,615m² neighbourhood centre at Jane Brook. Building permission for the Jane Brook centre expired in July 2016; however, Council have granted an extension of time for the construction of the centre. The surrounding area is generally under-serviced with neighbourhood and local shopping facilities. Actions:
- Support the development of a neighbourhood centre as proposed in Jane Brook.
 - Should the development of a neighbourhood centre not eventuate, support the development of a 'local' centre in Jane Brook.
- 15 Stratton Park: Stratton Park is an under-performing centre that will require re-investment in the future if it is going to continue to serve its intended neighbourhood centre role. Although Stratton Park has previously successfully served the role of a neighbourhood centre, it no longer meets the standards expected of a modern neighbourhood centre; nor does it meet the expectations of today's consumers. Action:
- Provide opportunity for the Stratton Park centre to be redeveloped as a mixed use centre, containing residential, retail and commercial uses, while retaining its neighbourhood centre role.
- 16 Midvale Neighbourhood Centre Investigation Area (Figure A refers): Currently, residents in the Swan View Local Planning Area (which includes Jane Brook, Stratton Park and future residents in the Farrall Road Structure Plan Area) are under-serviced in regard to the provision of quality neighbourhood centres, in particular, the provision of a full-line supermarket. Potential exists for the development of additional neighbourhood centre facilities in the Midvale Neighbourhood Centre Investigation Area in order to improve access to major supermarket facilities for nearby residents. Actions:
- Consider opportunities for neighbourhood centre development in the Midvale Neighbourhood Centre Investigation Area. Any future development should be supported by a Retail Needs and Sustainability Assessment that ensures the City of Swan Activity Centre Hierarchy is not undermined.

Strategic Metropolitan Centre	Current Retail Floorspace	Indicative Retail Floorspace - 2031
1. Altone Park Centre	6,280m ²	7,500m ²
2. The Springs	5,100m ²	6,500m ²
3. Amazon Drive	1,600m ²	2,000m ²
4. Ballajura Marketplace	1,700m ²	2,000m ²
5. Ballajura City	5,500m ²	6,500m ²
6. Ballajura Central	3,500m ²	4,000m ²
7. Bullsbrook North (Future NC)	0	7,500m ²
8. Bullsbrook South (Future NC)	0	7,500m ²
9. Upper Swan (current local centre)	900m ²	6,000m ²
10. Millhouse Road, Aveley	5,700m ²	7,500m ²
11. Egerton Dr, Aveley	3,500m ²	4,500m ²
12. Woodlake village	2,600m ²	3,000m ²
13. Gidgegannup Town Centre	800m ²	2,000m ²
14. Guildford	9,950m ²	11,000m ²
15. Stratton Park	1,700m ²	5,000m ²
16. Dayton (West Swan East)	0	6,000m ²
17. Bennett Springs (West Swan West)	0	4,500m ²
18. Kiara Shopping Centre	1,645m ²	2,500m ²
19. Caversham	5,000m ²	6,500m ²
20. Waterhall Shopping Centre	2,700m ²	6,000m ²
21. Horace Street (Future NC)	2,500m ²	6,000m ²
22. Jane Brook (Future NC)	0	2,615m ²
23. Midvale Neighbourhood Centre Investigation Area	NA	NA

Local Centres

Local centres serve important roles within the activity centre hierarchy, including the provision of day-to-day convenience retailing and services for the surrounding residential and working populations. Under SPP4.2, Local Centres are centres with a shop-retail floorspace under 1500m² NLA. In addition, local centres often provide opportunities for small businesses that require low cost business accommodation, and in this sense, can act as incubators for local businesses and support local employment opportunities.

Therefore, where possible, the retention of local centres and their existing commercial zones should be encouraged. In addition, Council should encourage both public and private sector investment in existing local centres in order to contribute to their future viability and role within the hierarchy. Where opportunities for new local centres become apparent due to nearby population or employment growth, these should be supported as long as they don't impact the broader activity centre hierarchy. As such, it is not necessary for the Retail Needs Assessment to provide any indicative future floorspace for local centres.

However, it is acknowledged that local centres have been subject to an increasingly competitive environment, with many centres struggling to attract the required investment to remain commercially viable. In cases where the retention of a commercial viable local centre is no longer a realistic opportunity, these centres may be considered for an alternative use.

The following provides an overview of the future direction and specific actions (where required) for the City of Swan's local centres:

17 Midland North Local Strip Centre (LC6): LC6 is a 'strip-based' local centre located on the Great Northern Highway between Morrison Road in the south to Margaret Street in the north. Commercial and retail uses along this part of the Great Northern Highway are a legacy of the historical use of this corridor as a connection to the Midland SMC. The centre contains General Commercial Zoned land and residential zoned land of which a number of properties have commercial/retail uses as permissible uses. Actions:

- Support the 'local' centre role (i.e. restrict supermarket development of a scale that would elevate it to a neighbourhood centre)
- Consider opportunities for mixed-use development, or a mixed-use zone, while retaining ground-floor commercial / retail uses
- Consider undertaking a structure planning exercise for land along Great Northern Highway between Morrison Street and Muriel Street in order to identify the future role and opportunities for the land.

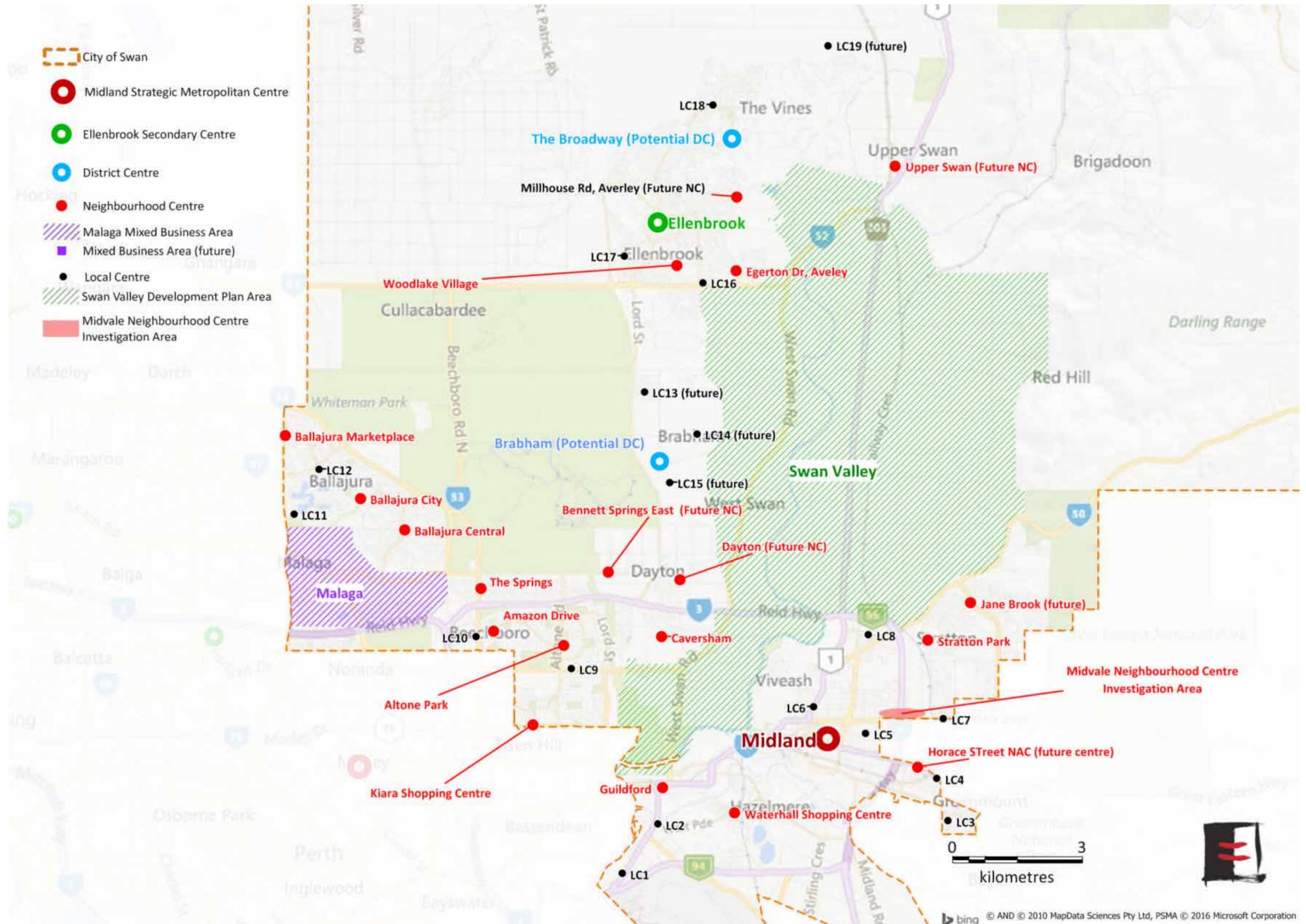
18 Encourage private and public sector investment that would improve the amenity and appearance of the centre. This may involve consideration of the appropriate land use zone for local centres, and/or encouraging mixed-use development with ground floor retail/commercial uses (subject to Action 2.1) for the following local centres:

- Beverley Terrace (LC1) - Vellgrove Park (LC8)
- South Guilford (LC2) - Timberland Crescent (LC10)
- Koongamia Local Centre (LC3) - Paradise Quays (LC11)
- Hackett Street (LC4) - Bridges Local Centre (LC17)
- Midvale Shops (LC5).

19 Continue to support the local centre role of the following local centres, which are not located on General Commercial Zone. Consideration of may be given to rezoning these centres to an appropriate commercial zone in the future, should the existing zone restrict the ability of the centre to continue to serve their role in the hierarchy:

- Morrison Road Local Centre (LC7) - Residential Development Zone
- Beechboro Business Centre (LC9) - Residential Zone (AU38)
- Summer Lakes (LC12) - Residential Zone (AU63)

Figure A: City of Swan Activity Centre Hierarchy



- Aveley Local Centre (LC16) – Special Use Zone 4 (Ellenbrook)
- Elmridge Parkway Local Centre (LC18) – Special Use Zone 4 (Ellenbrook)
- Annies Landing Local Centre (LC19) – Special Use Zone 4 (Ellenbrook).

20 Brabham Local Centres (LC13, LC14, LC15): The Albion District Structure Plan (2010) is the strategic land use plan guiding development in the Brabham area. Based on the Structure Plan, potential exists for approximately 5,500 residential lots; however, it is understood residential densities above that envisaged in the Structure Plan are currently being achieved. Consequently, the Brabham area has the potential to accommodate between 15,000 and 20,000 residents at capacity. The Brabham District Centre will provide weekly and higher order shopping and services to these residents; however, a network of local centres in the area should also be encouraged. The Structure Plan identifies the opportunity for three local centres, subject to market demand. Actions:

- Support the development of local centres in Brabham in appropriate locations
- Retain the opportunity for three local centres, as envisaged in the Structure Plan, until the area is fully developed.

Mixed Business Areas

Malaga (refer Figure 7 of LCACS) is a mixed business area and employment hub, serving a regional catchment extending across northern metropolitan Perth. The area contains a substantial provision of large-format homemaker retailing, which is predominantly located along Beach Road/Marshall Road.

A number of small convenience retail stores serve the growing number of workers in Malaga, while the need for office uses (e.g. banks and professional services) to support industrial businesses in the area has been identified. Demand for additional homemaker retailing has also been identified.

Malaga is the only current major Mixed Business Area in the City of Swan. Other areas of ‘mixed business’, typically situated in the Highway Service Zone adjoining activity centres (e.g. Great Eastern Highway), are considered in activity centre policy somewhat different from the ‘out-of-centre’ Mixed Business Areas such as Malaga. In addition to Malaga, significant future industrial land is planned for Bullsbrook, which gives rise to the future opportunity for a Bullsbrook Mixed Business Area in the future.

Strategic Metropolitan Centre	Current Retail Floorspace	Indicative Retail Floorspace - 2031
Malaga	89,000m ²	150,000m ²

Actions Mixed Business Areas:

- 21 Ensure that the role and function of retail and commercial uses in Malaga are complementary to the operation of the activity centres hierarchy and does not include uses more appropriate for an activity centre location (e.g. supermarkets, major office developments, traditional retailing, etc).
- 22 Support the continued growth of appropriate retail and commercial uses in Malaga in a manner that consolidates its role as a major employment hub and destination for homemaker retailing of metropolitan significance.
- 23 Support the Planning Scheme Amendment No. 138 that proposes to change the designation to 'Highway Service Zone' from those 'General Industrial' and 'Light Industrial' lots with direct frontage along Malaga Drive and along Alexander Drive (refer Figure 7). The rezoning seeks to resolve minor zoning irregularities and provide a suitable area for complimentary, low-intensity commercial land uses taking advantage of improved commercial exposure along those roads. An increase in Highway Service Zoned land will provide an opportunity to accommodate future demand for bulky goods retailing.
- 24 Consider the introduction of planning mechanisms that would allow for the provision of limited office floorspace in order to provide a range business services to the Malaga Mixed Business Area. Examples of potential planning mechanisms are provided below:
- a) Allow office uses to occupy a share of Gross Lease Area (GLA) on sites within the Highway Service Zone. This share may be in the order of 25% of a site's GLA and would permit the development of stand-alone office suites providing industrial uses are also accommodated on the site.
 - b) Identify specific locations within the Malaga Business Area where the development of office and limited convenience retail can be concentrated. These locations may be classified as 'Local Centres' in the centres hierarchy.
- Pros and cons exist for both of the above approaches and these should be considered in further detail, in order to support the metropolitan significance of the Malaga Mixed Business Area.
- 25 Consider the future opportunities for a 'Bullsbrook Mixed Business Area' fronting the Great Northern Highway.

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