

City of Swan

Upper Swan Local Area Plan

Including Walyunga,
Upper Swan, Brigadoon
and parts of Baskerville
and Bullsbrook

August 2017



one city diverse places



COVER PAGE FROM LEFT: Bells Rapids
Bridge; Apple Street Road Train
Assembly; Home in Upper Swan;
Agriculture in Upper Swan.



FROM LEFT: Upper Swan Primary School
Students, 1909; East Swan Volunteer Fire
Brigade; Bells Rapids with Swan River



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Table of Contents

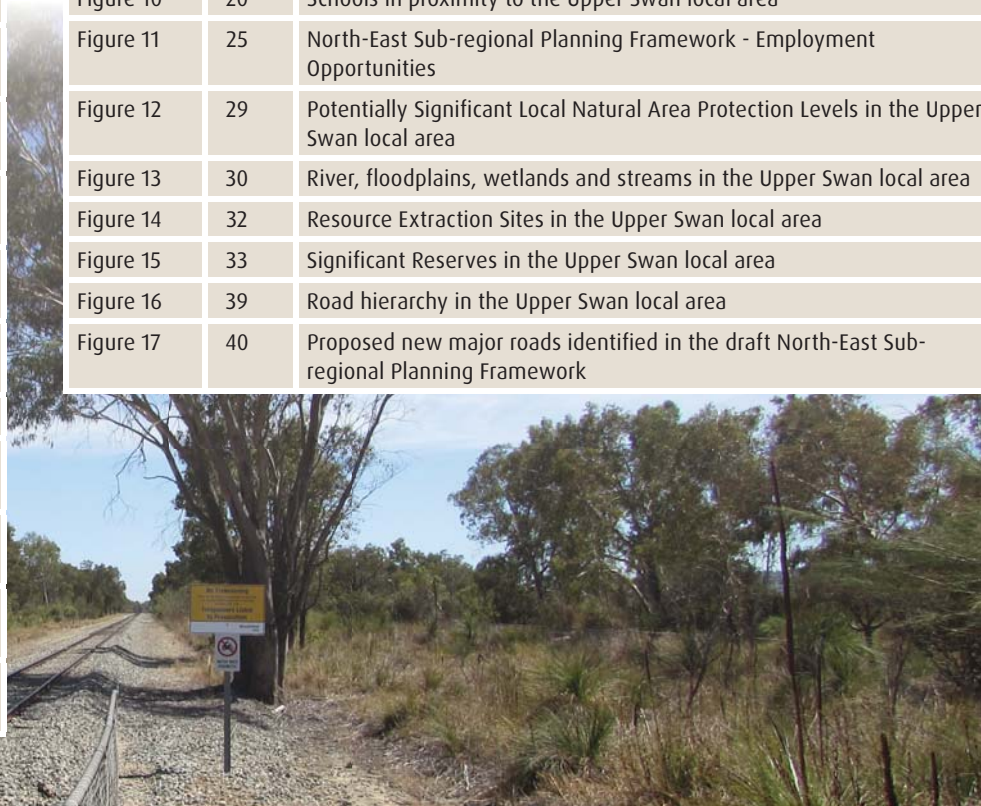
MAYOR'S MESSAGE	4	6.0 NATURAL ENVIRONMENT	28
1.0 INTRODUCTION	5	6.1 Natural Resource Management and Environmental Protection	28
1.1 What is Local Area Planning?	5	7.0 BUILT ENVIRONMENT	35
1.2 The Local Area Plan Model	6	7.1 Aboriginal Heritage	35
1.3 Guiding Principles	7	7.2 European Heritage	35
PART 1 – THE UPPER SWAN LOCAL AREA	10	7.3 Built Form	36
2.0 CONTEXT	10	7.4 Community Facilities and Open Space	36
2.1 The Upper Swan Local Area Plan	10	7.5 Infrastructure Services	37
2.2 History	12	7.6 Basic Raw Materials	38
2.3 Socio-economic Profile	14	7.7 Transport and Access	39
3.0 GOVERNANCE	15	REFERENCES	42
3.1 State Planning Policies	15	PART 2 – COMMUNITY ENGAGEMENT	43
3.2 Regional Planning	16	8.0 COMMUNITY WORKSHOP	43
3.2 Local Planning	17	8.1 Background	43
3.3 Decision Making	17	8.2 Purpose	43
4.0 SOCIAL ENVIRONMENT	18	8.3 Conduct	44
4.1 Population	18	PART 3 - LOCAL AREA PLAN	50
4.2 Social Services	20	9.0 LOCAL AREA PLAN	50
4.3 Community Safety	23	9.1 A Vision for the Future	50
5.0 ECONOMIC ENVIRONMENT	24	9.2 Objectives	50
5.1 Economy and Employment	25	9.3 Strategies	51
5.2 Tourism	27		

LIST OF TABLES

TABLE NO.	PAGE	DESCRIPTION
Table 1	17	Actions and Strategies relating to the governance framework applicable to the Upper Swan local area
Table 2	19	Actions and Strategies relating to the population applicable to the Upper Swan local area
Table 3	22	Actions and Strategies relating to the social services applicable to the Upper Swan local area
Table 4	23	Actions and Strategies relating to the community safety applicable to the Upper Swan local area
Table 5	27	Actions and Strategies relating to the economic environment applicable to the Upper Swan local area
Table 6	35	Actions and Strategies relating to the natural environment applicable to the Upper Swan local area
Table 7	38	Actions and Strategies relating to the built environment applicable to the Upper Swan local area
Table 8	41	Actions and Strategies relating to the transport applicable to the Upper Swan local area
Table 9	45	Results from the Community Engagement in Upper Swan local area - Likes
Table 10	47	Results from the Community Engagement in Upper Swan local area - Concerns
Table 11	49	Results from the Community Engagement in Upper Swan local area - Suggestions
Table 12	52	GOVERNANCE: The Upper Swan Local Area Plan Strategies and Actions
Table 13	54	SOCIAL ENVIRONMENT: The Upper Swan Local Area Plan Strategies and Actions
Table 14	56	ECONOMIC ENVIRONMENT: The Upper Swan Local Area Plan Strategies and Actions
Table 15	58	NATURAL ENVIRONMENT: The Upper Swan Local Area Plan Strategies and Actions
Table 16	61	BUILT ENVIRONMENT: The Upper Swan Local Area Plan Strategies and Actions

LIST OF FIGURES AND DIAGRAMS

FIGURE NO.	PAGE	DESCRIPTION
Figure 1	5	Integrated Planning Framework Model
Figure 2	6	Local Area Planning Model
Figure 3	8	Upper Swan local area street map
Figure 4	9	City of Swan Local Planning Scheme No.17 Zoning Plan for the Upper Swan local area
Figure 5	10	City of Swan Local Area Plan areas
Figure 6	11	Upper Swan local area suburb breakdown
Figure 7	13	Upper Swan local area aerial and key sites
Figure 8	14	Upper Swan local areas socio-economic statistics
Figure 9	15	The Planning Framework
Figure 10	20	Schools in proximity to the Upper Swan local area
Figure 11	25	North-East Sub-regional Planning Framework - Employment Opportunities
Figure 12	29	Potentially Significant Local Natural Area Protection Levels in the Upper Swan local area
Figure 13	30	River, floodplains, wetlands and streams in the Upper Swan local area
Figure 14	32	Resource Extraction Sites in the Upper Swan local area
Figure 15	33	Significant Reserves in the Upper Swan local area
Figure 16	39	Road hierarchy in the Upper Swan local area
Figure 17	40	Proposed new major roads identified in the draft North-East Sub-regional Planning Framework



ABOVE: Railway Line Upper Swan



NOTE: The Introduction and Part 1 of this document are the Discussion Paper, which is released early in the LAP process prior to community consultation. At the release of the full draft Local Area Plan for final community consultation, and at adoption, the discussion paper is not updated to be current.

FROM TOP: Horses in Bullsbrook;
Almeida Park, Upper Swan; Swan Valley
tourism street signage.

Mayor's Message

The City of Swan comprises a **large land area** with **diverse communities**. Planning for such a diverse area requires **creative solutions**.

Local Area Plans provide the opportunity to recognise the **unique character** and needs of these **diverse communities**.

Local Area Planning involves local community members working together with the City to identify the specific issues affecting their community and, to produce a plan that provides solutions to meet the **specific needs of their local area** and to support its unique character. This Local Area Plan is therefore an important document for the City to **plan for infrastructure and services** and **manage change** at a local level.

The City appreciates the tremendous support and contribution made by community members and other stakeholders in developing this Local Area Plan.



Mayor Mick Wainwright

1.0 Introduction

The City's Place Management approach to service delivery recognises that the City is made up of **many communities** (Places) which may have very **different needs and aspirations**. Documents such as the City's Strategic Community Plan and Local Planning Strategy guide the City's business planning by identifying future land use, strategies and actions at the district level but do not necessarily identify the **particular needs and aspirations of individual communities**.

1.1 What is Local Area Planning?

Local Area Planning (formerly Place Planning) has been adopted by Council under its Integrated Planning Framework (Figure 1) and provides a mechanism for local communities to address issues through a consultative process. The process establishes a vision and objectives for each local area and identifies strategies and actions to achieve the vision and objectives that, together with strategies and actions identified in the Strategic Community Plan and the Local Planning Strategy, informs the City's business planning process.

City of Swan Integrated Planning Framework Model

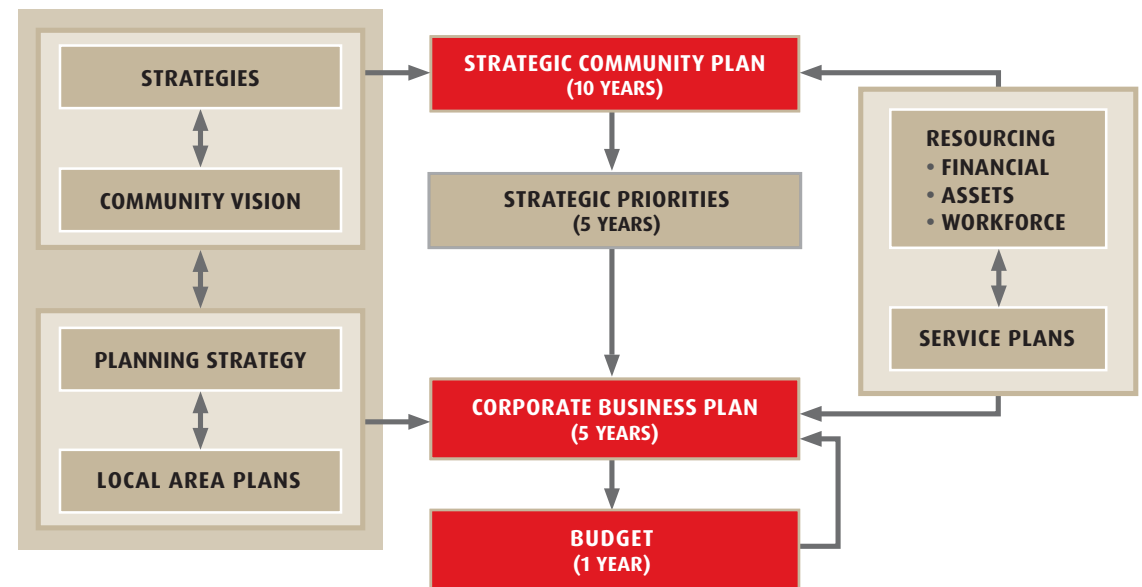


Figure 1. Integrated Planning Framework Model

1.2 The Local Area Plan Model

The Local Area Planning Model (Figure 2) indicates how Local Area Planning integrates with the Strategic Community Plan (SCP) and the Local Planning Strategy (LPS) in order to inform corporate business planning to achieve place based planning and service delivery. Each 'ring' of the model informs the next ring in a two way process. The results of annual monitoring of the service delivery will in turn provide input into the other rings, thereby closing the loop.

1.2.1 Strategic Community Plan

At the centre of the model is the Strategic Community Plan 2012-2022 (SCP), which is a document mandated by the Department for Local Government at the core of business planning by local governments under the Integrated Planning Framework. The SCP sets out a vision, aspirations and objectives for the City of Swan over the next 10 years and includes five key result areas, being; Economic Environment, Natural Environment, Built Environment, Social Environment and Governance Framework.

Each result area has a number of outcomes with objectives, strategies and measures for each. The themes for each Local Area Plan are therefore aligned to the key result areas under the SCP in order to ensure direct alignment between the two (refer to Figure 2).

1.2.2 Local Planning Strategy

The Local Planning Strategy (LPS) is a land use planning tool prescribed under the *Planning and Development Act 2005*. The LPS examines key land use planning issues and defines strategies and actions to respond to those issues at the district level. These issues flow into each other and cross the key result areas under the SCP. The LPS does not, however, consider differences between Places, in particular differing community priorities. Strategies and actions under the LPS will therefore be carried forward to the Local Area Plans under relevant result area themes but further refined and prioritised relevant to the local area as a result of the Local Area Plan community workshops.

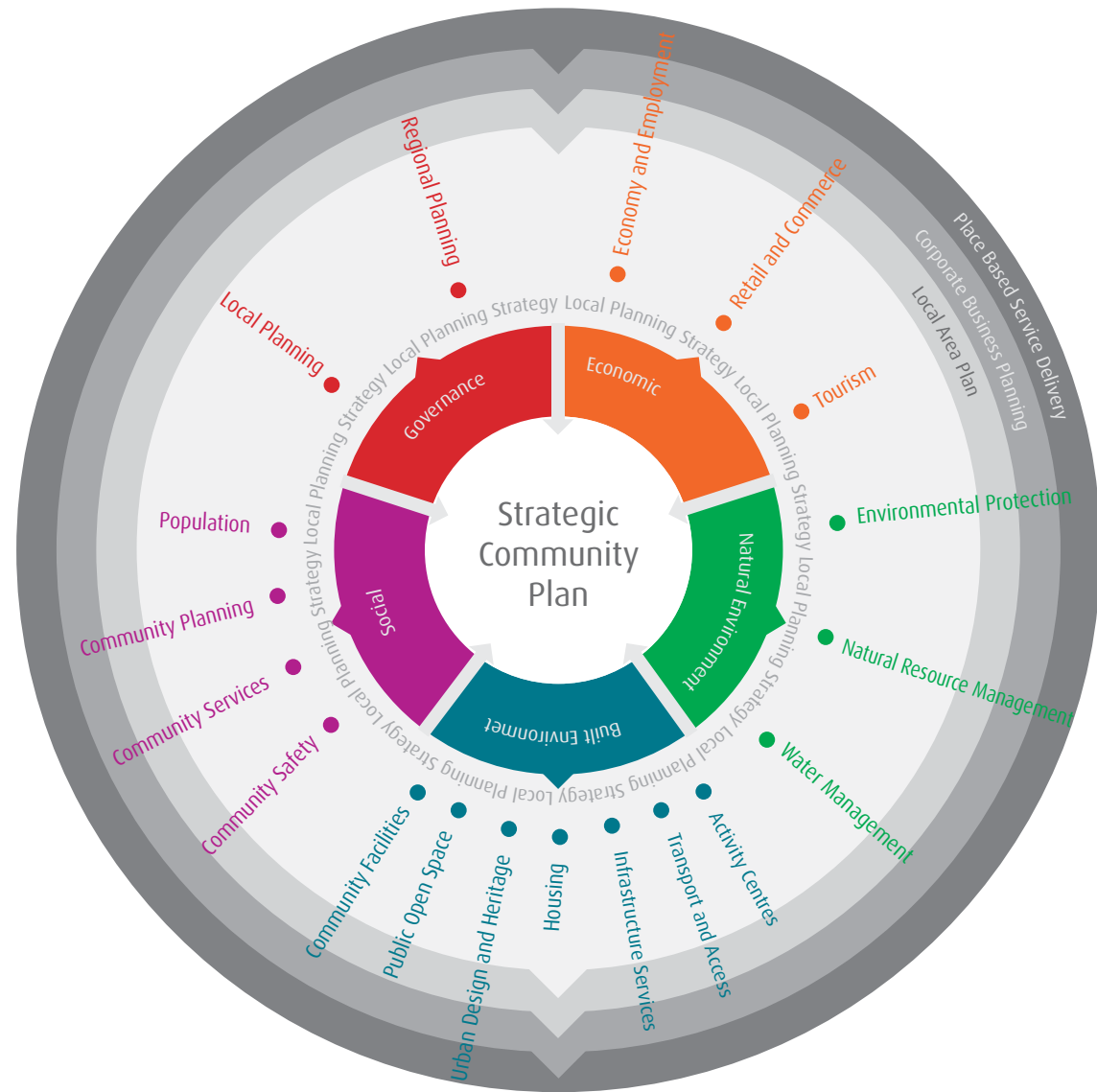


Figure 2. Local Area Planning Model

1.2.3 Local Area Plans

The Local Area Plans (LAPs) consolidate the outcomes and objectives from the SCP and the strategies and actions from the LPS and further develop these specific to the relevant local area and prioritise them. This will be guided by a vision and objectives for the local area, established from a community workshop/s to be conducted for each local area. Outcomes of the LAPs, importantly, also provide feedback to the LPS and the SCP. Dependent upon the point within the cycle of review of the SCP and the LPS, LAPs therefore also inform the SCP and LPS.

1.2.4 Place Based Service Delivery

The outcome of the model is Place based delivery of services in accordance with adopted strategies and actions detailed in the LAPs and integrated through the City of Swan's Corporate Business Planning process. It is the responsibility of the relevant Place Leader to liaise with Business Unit Managers on the delivery of those services and to report on issues in this regard to the Executive as well as through the quarterly reporting process.

1.2.5 Format of a Local Area Plan

The format of this Local Area Plan is as follows:

- Part 1 – The Upper Swan Local Area (Discussion Paper);
- Part 2 – Community Engagement: Findings from the workshop and survey; and
- Part 3 – Local Area Plan: Strategies and actions.

1.3 Guiding Principles

1.3.1 Sustainability

Create communities that are economically, socially and environmentally sustainable by:

- Supporting opportunities for business and local employment;
- Promoting alternative transport modes;
- Respecting the natural environment; and
- Building active and connected communities.

1.3.2 Access and equity

Create communities where services and facilities are accessible to people with disabilities and provide opportunities that meet the needs of all sectors of the local community.

1.3.3 Safety

Create communities where people feel safe to live, work and recreate.

1.3.4 Identity

Maintain and enhance the unique identity of each Place created by its natural and built form landscape character.

1.3.5 Participation

Local Area Plans are developed in co-operation with local communities.

1.3.6 Prioritisation

Local strategies and actions are prioritised by the local community.

1.3.7 Integration

The strategies and actions of local area plans are integrated with the strategies and actions of other strategies of the City and the City's business planning processes.

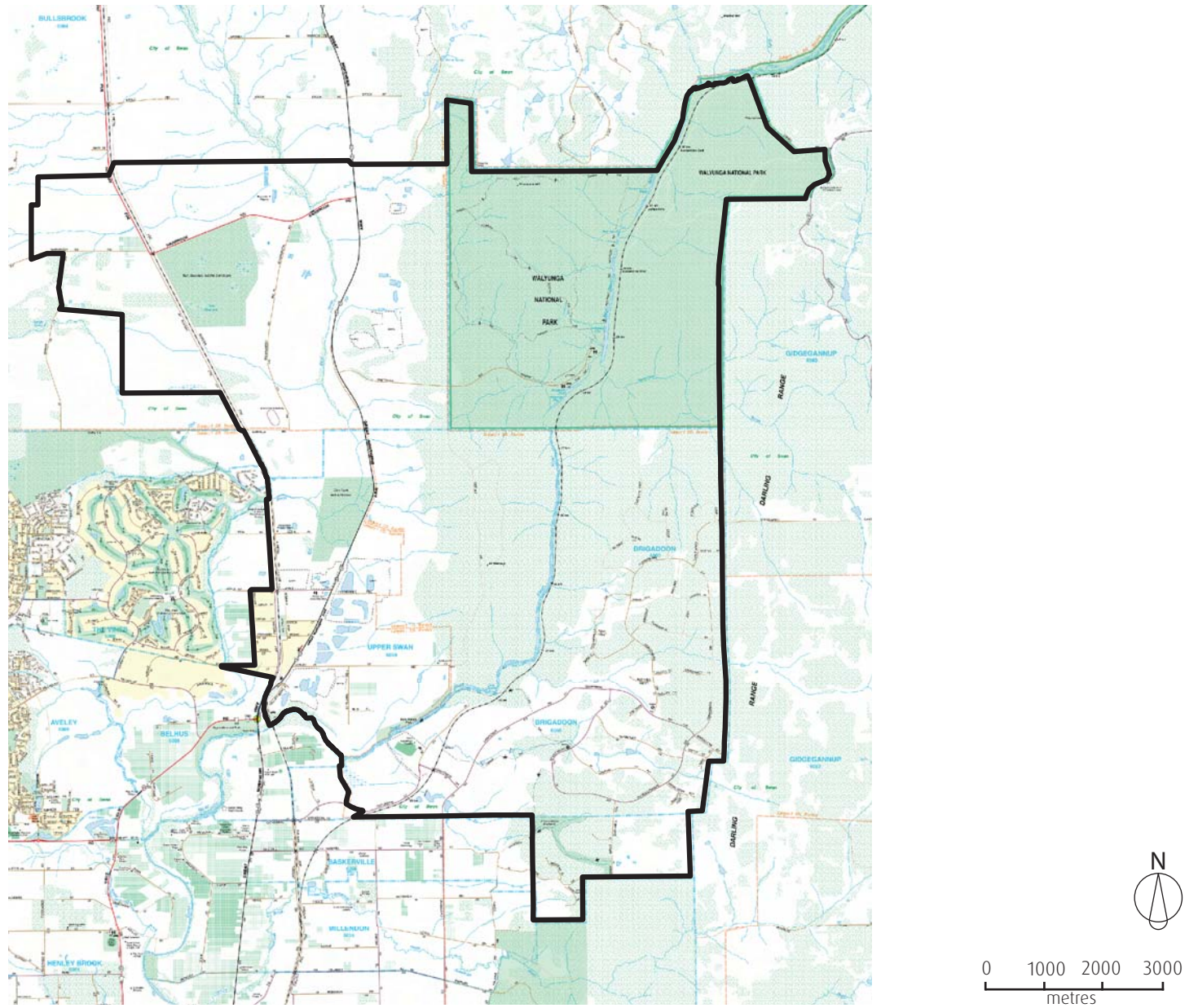


Figure 3. Upper Swan local area street map

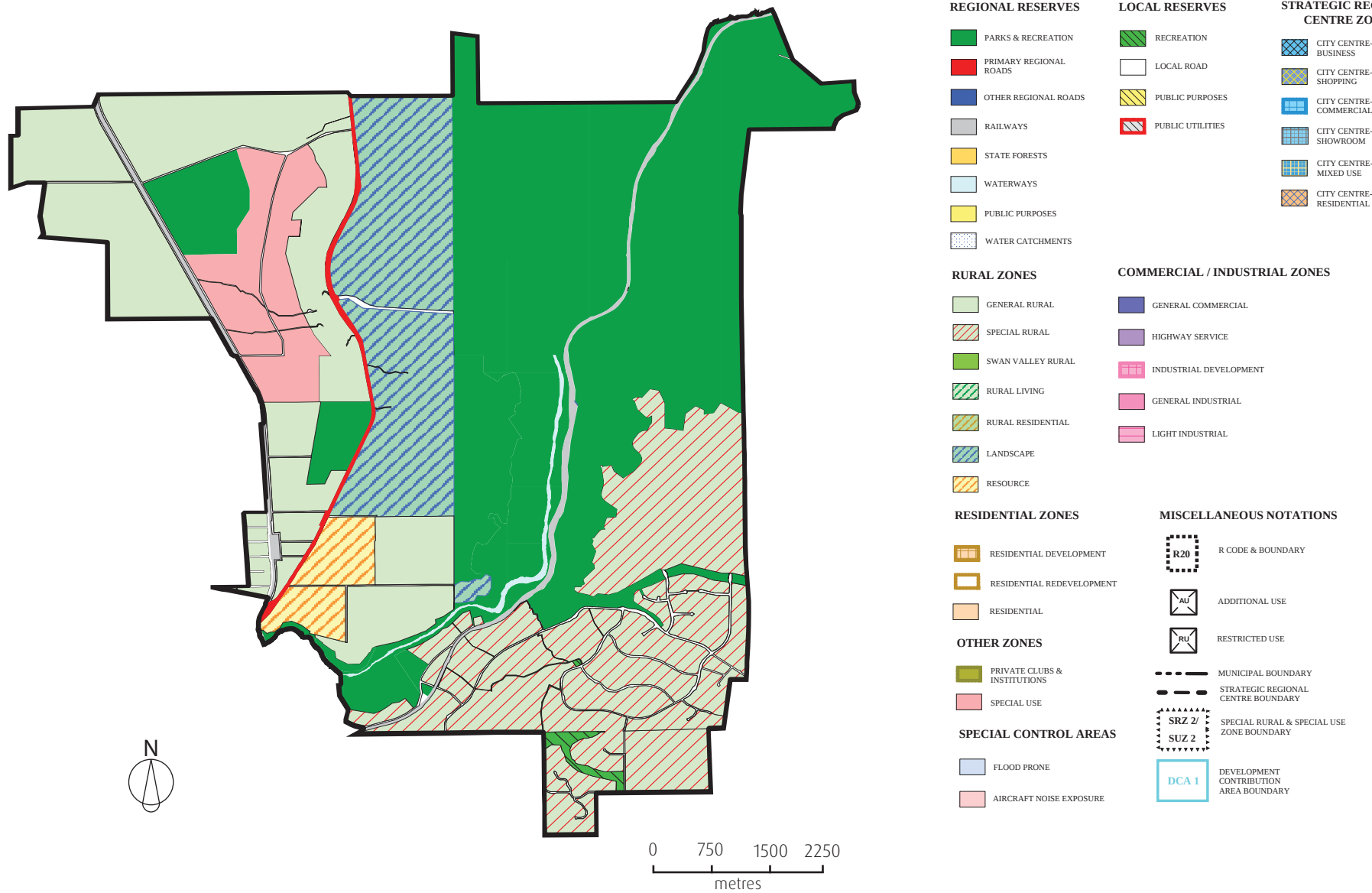


Figure 4. City of Swan Local Planning Scheme No. 17 Zoning Plan for Upper Swan local area

Part 1 – The Upper Swan Local Area

2.0 Context

2.1 The Upper Swan Local Area Plan

The Upper Swan local area is located 32 kilometres north east of the Perth CBD and six kilometres east of the Ellenbrook Town Centre. The Upper Swan local area encompasses the suburbs of Upper Swan, Brigadoon, the southern portion of Bullsbrook, a small portion of Baskerville on the eastern side and the entirety of Walyunga National Park. Refer to Figure 6.

Upper Swan local area was settled in the 1850s but the population remained small until the late 1800s. Population growth has been evident from the early 1990s with new dwellings in the area.

Upper Swan is connected to other parts of the Perth Metropolitan Region by Great Northern Highway.

Upper Swan is notable for its Rural and Rural-Residential land uses, quarries and significant conservation reserves; its major features include:

- Walyunga National Park (Boongarup and Bungaruh Pools);
- Ellenbrook Speedway;
- Bells Rapids Park;
- Joshua Mews Bushland;
- Ellenbrook Nature Reserve;
- Twin Swamps Nature Reserve;
- Almenia Park;
- Jumbuck Hill Park;
- Pullman Park;
- State Equestrian Centre; and
- Falabella and Orlov Bridle Trails.

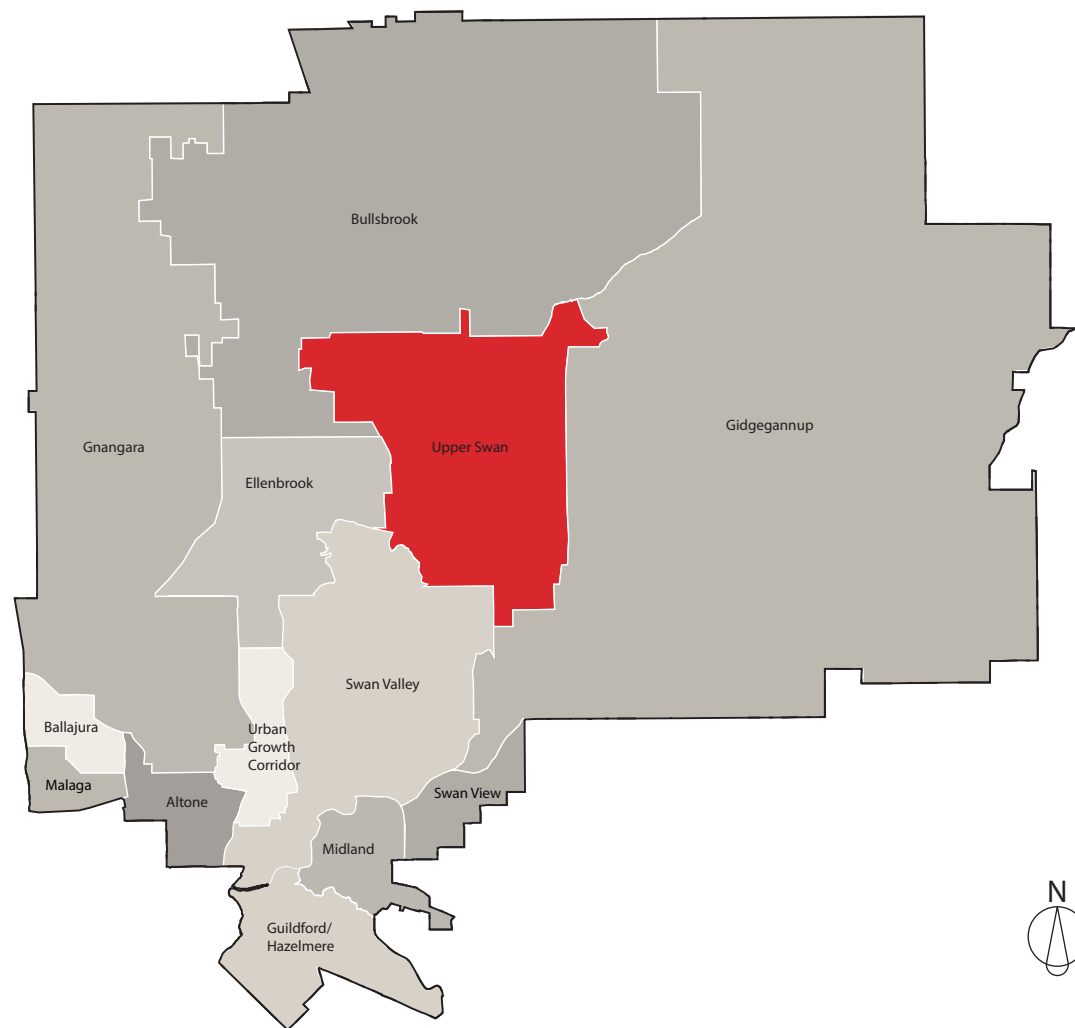


Figure 5. City of Swan Local Area Plan areas

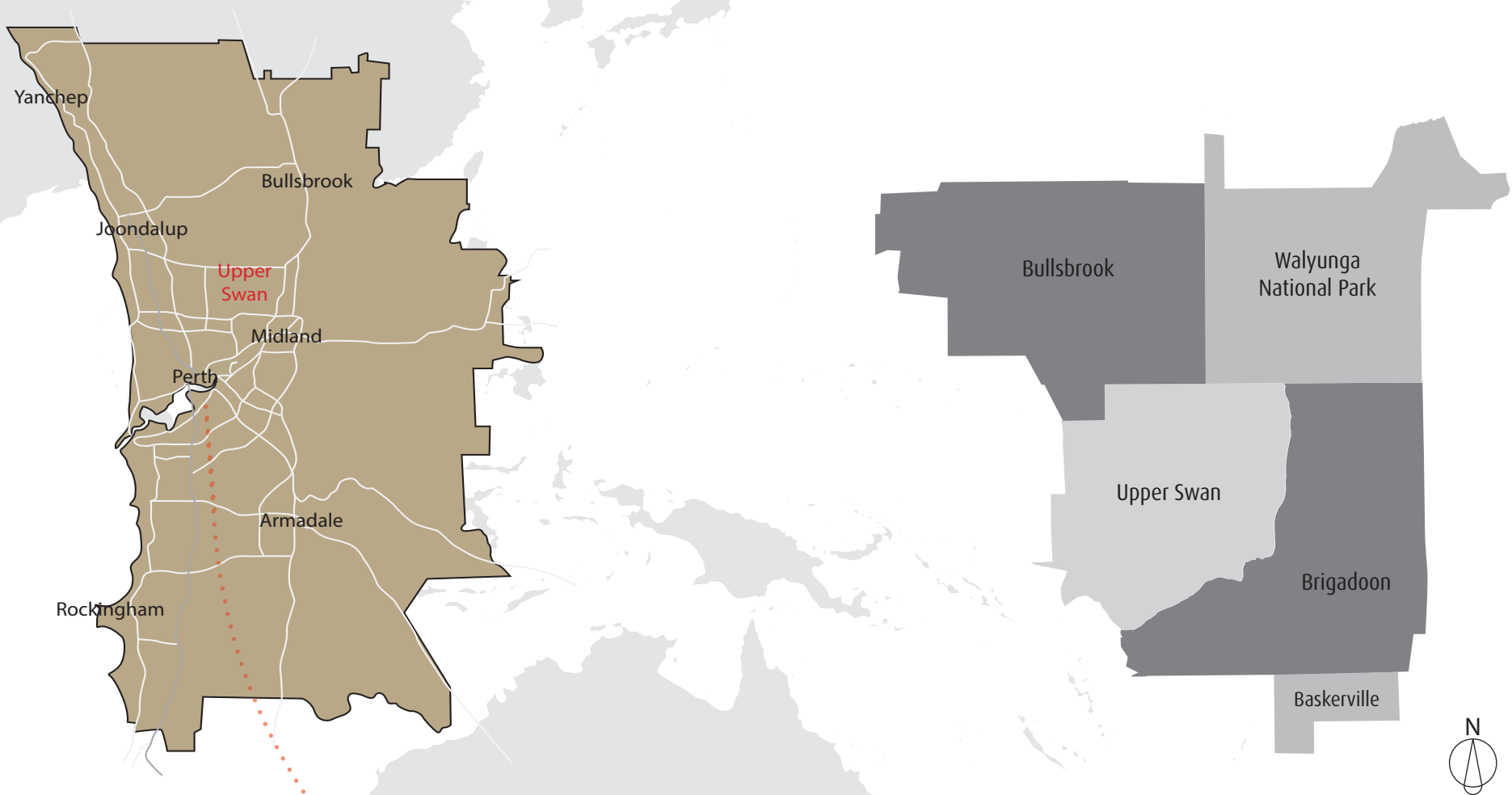


Figure 6. Upper Swan local area suburb breakdown

2.2 History

Noongar Aboriginal people have inhabited the southwest of Western Australia for over 40,000 years. The Whadjuk dialectal group of Noongar country occupy the Perth region, the Swan River and the Swan Valley. These have been important places for Noongar people to hunt, meet, and live over this time.

The Upper Swan area, particularly along the Swan River, has always been an important source of food, shelter, tools and gathering for the Whadjuk people from the coastal plains and the surrounding areas. In Walyunga National Park, the four main groups that used the area came from the York-Toodyay area, Moore River, Darling Ranges and the Mundaring area. The abundant food in the area made it an ideal common

ground for meetings and settling disputes amongst the groups. The groups would feed off grey kangaroo, frogs, snakes, freshwater crayfish, goannas, ducks and witchetty grubs (Department of Parks and Wildlife).

However, the most valuable asset within this area is the chert and quartz which was used for tool making. Dreaming tells how the rainbow serpent travelled through along the river and left behind these stones for making tools.

An article by Simon Forrest (2011) suggests that material from the Upper Swan bridge area was carbon dated in 1980 at 38,000 years before present. At the time of dating it was the oldest evidence of humans in Australia. These artefacts validate the antiquity and continuity of Aboriginal people in Australia.

European settlers arrived in the area in 1829, housing many of the colony's most important inhabitants. The area was in demand mainly due to the quality of the land. Some notable people living in the area were John Septimus Roe, whose estate later became Sandalford winery and Dr John Ferguson who founded Houghton wines. The area also became the setting for two of Western Australia's folk heroes; bushranger Moondyne Joe and the prominent aboriginal leader Yagan.

Economically the area was of considerable importance as it was home to one of the colony's first flour mills, supplying the majority of the colony's grain and flour output. In the early decades of the twentieth century, grapes became a significant export for the state.

On 27 July 1905, the Upper Swan Primary School was opened. It educated children from the surrounding areas including the many prominent grape growing families in the area. Student numbers grew after increased building activity in Belhus and Brigadoon enabling many families to move to the area.

There are several bridges within the area, used as major and minor roads plus the railway line for crossing the river. Most notable is the Upper Swan Bridge. During European history, this bridge collapsed during a major flood in 1926. It was later rebuilt and with upgrades is still a vital access point for people and vehicles.

Oral history from local aboriginal elders tells of the local children walking to the Upper Swan and Caversham Primary School. Later, these children along with their family would work in the vineyards of the Swan Valley and surrounding area; they were mostly paid through rations such as food, clothing, tobacco etc. These vines were originally grown for dried fruit and only later were for wine.

Most of the land within the Upper Swan and Brigadoon area consists of rural residential lots in a variety of sizes. Many of these lots are also used for small agriculture, horses, hobby farms and people wanting to live in a rural setting without being too isolated from the City and other regional centres. These days the area is a source of blue metal for road making, clay for bricks, and sheep.

In 1986, Bond Corporation submitted the original subdivision plan for Brigadoon before it was taken over by Peet Limited. The Avon Ridge Estate, further to the east, will consist of 214 rural residential lots, many of which have already been sold and developed.

This area is set to grow in importance as there are land parcels west of Upper Swan, as well as Bullsbrook, which are planned for urban/industrial development. This new residential growth area to the west will link the existing Upper Swan residents with the retail and services available in Ellenbrook. This will improve connectivity, transport, retail needs, and access to schools as well as increase employment opportunities. This plan will consider the impacts and opportunities caused by this growth and how the local population will be affected.



ABOVE: Currant and sultana drying, Beus vineyard, Baskerville 1946; Stone's residence on Nolan Avenue, Upper Swan, c1988; RIGHT: All Saints Church, Upper Swan 1914



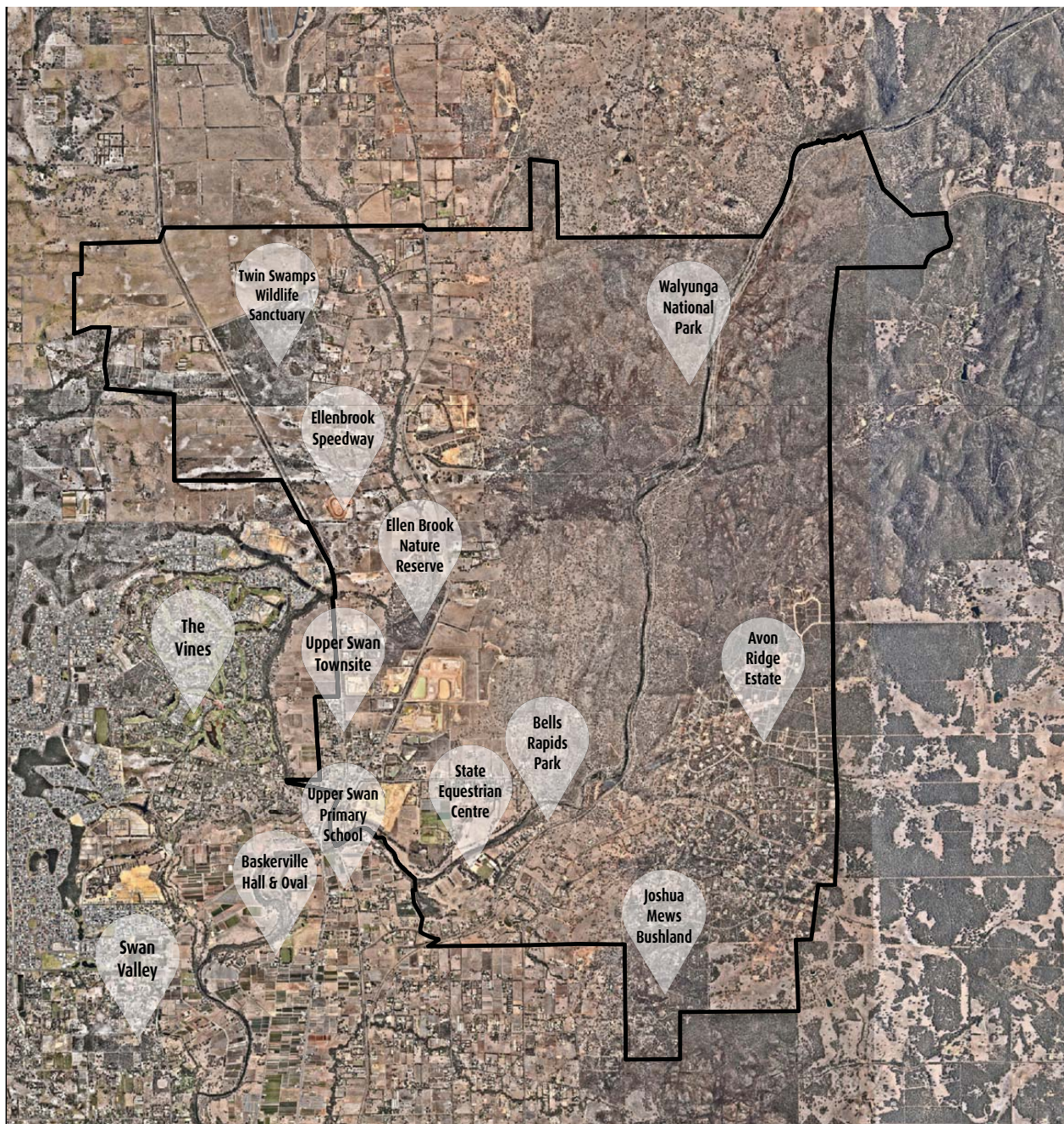
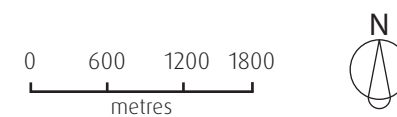


Figure 7. Upper Swan local area aerial and key sites (2016)



2.3 Socio-economic Profile

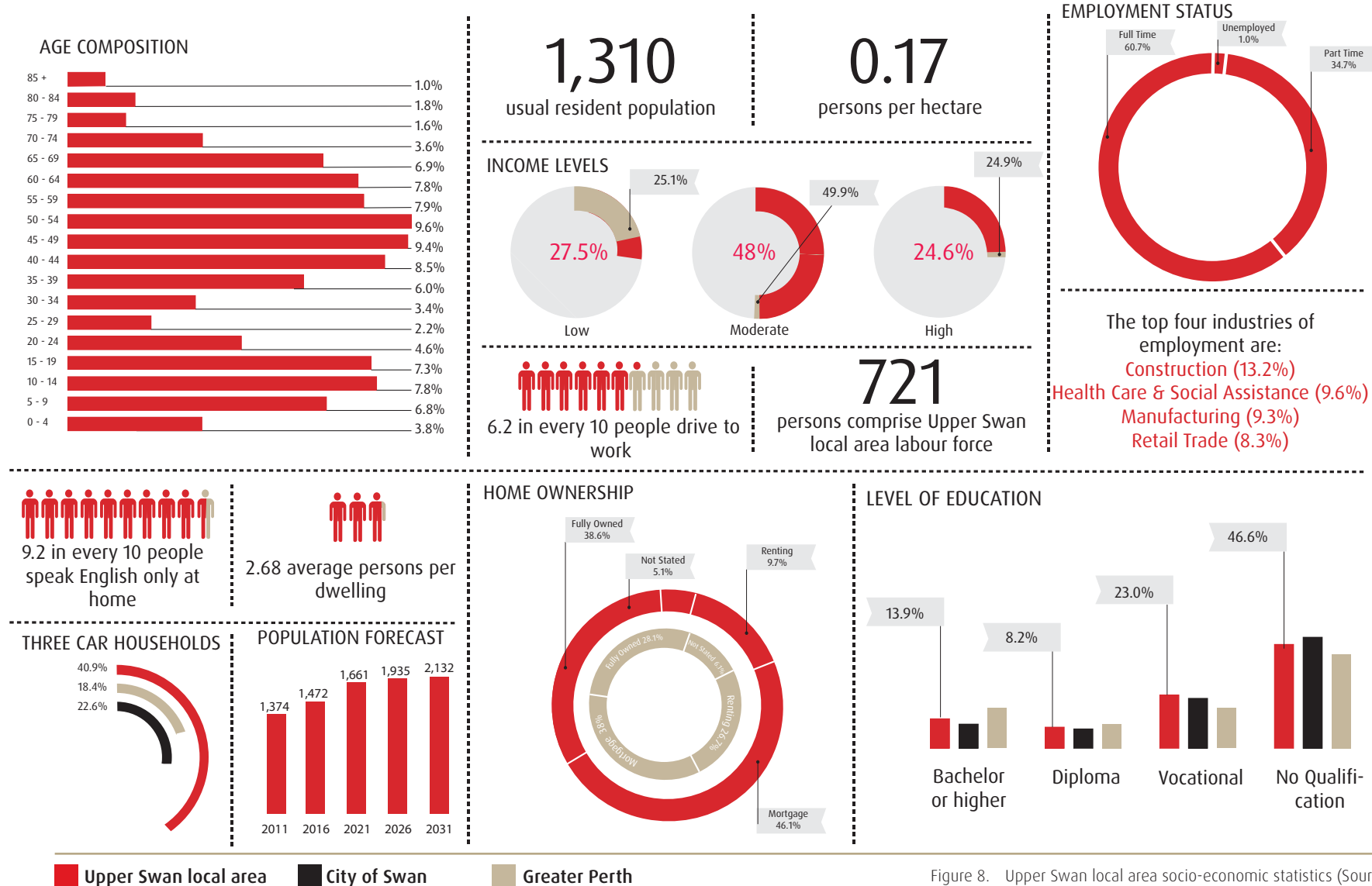


Figure 8. Upper Swan local area socio-economic statistics (Source: ABS 2015)

3.0 Governance

Governance is the framework of **laws, policies, strategies, resources and processes** that enable decision making.

Local Area Plans sit within a framework of strategic and statutory instruments produced by the Western Australian Planning Commission at the regional level, and local strategic and statutory instruments produced by the City. Regional planning provides the broad framework within which planning at the local level is required to be consistent. Similarly, the local area plan is required to be consistent with the City's local planning framework of policies, strategies and structure plans. The principal documents that directly influence the direction of the Upper Swan Local Area Plan are outlined as follows.

3.1 State Planning Policies

3.1.1 SPP 2 – Environment and Natural Resources

This SPP guides the relationship between planning and sustainable development. The main objectives of the policy are to integrate environment and natural resource management; to protect, conserve and enhance the natural environment; and to promote and assist in the wise and sustainable use and management of natural resources.

3.1.2 SPP 2.4 – Basic Raw Materials

This SPP sets out matters which should be taken into account when considering zoning, subdivision and development applications for, or nearby extractive industries. It protects priority resource locations from being developed for incompatible uses which could limit future exploitations, as well as ensuring that this potential land use does not adversely affect the environment or amenity in the locality of the operation during or after extraction

3.1.3 SPP 2.5 – Land Use Planning in Rural Areas

This policy provides guidance to protect rural land from incompatible uses, mandates regional development through provisions of ongoing economic opportunities on rural land, promotes sustainable settlements in proximity to existing urban areas, as well as protecting and improving environmental and landscape assets.

3.1.4 SPP 2.8 – Bushland Policy for the Perth Metropolitan Region

This policy aims to ensure bushland protection and management is adequately

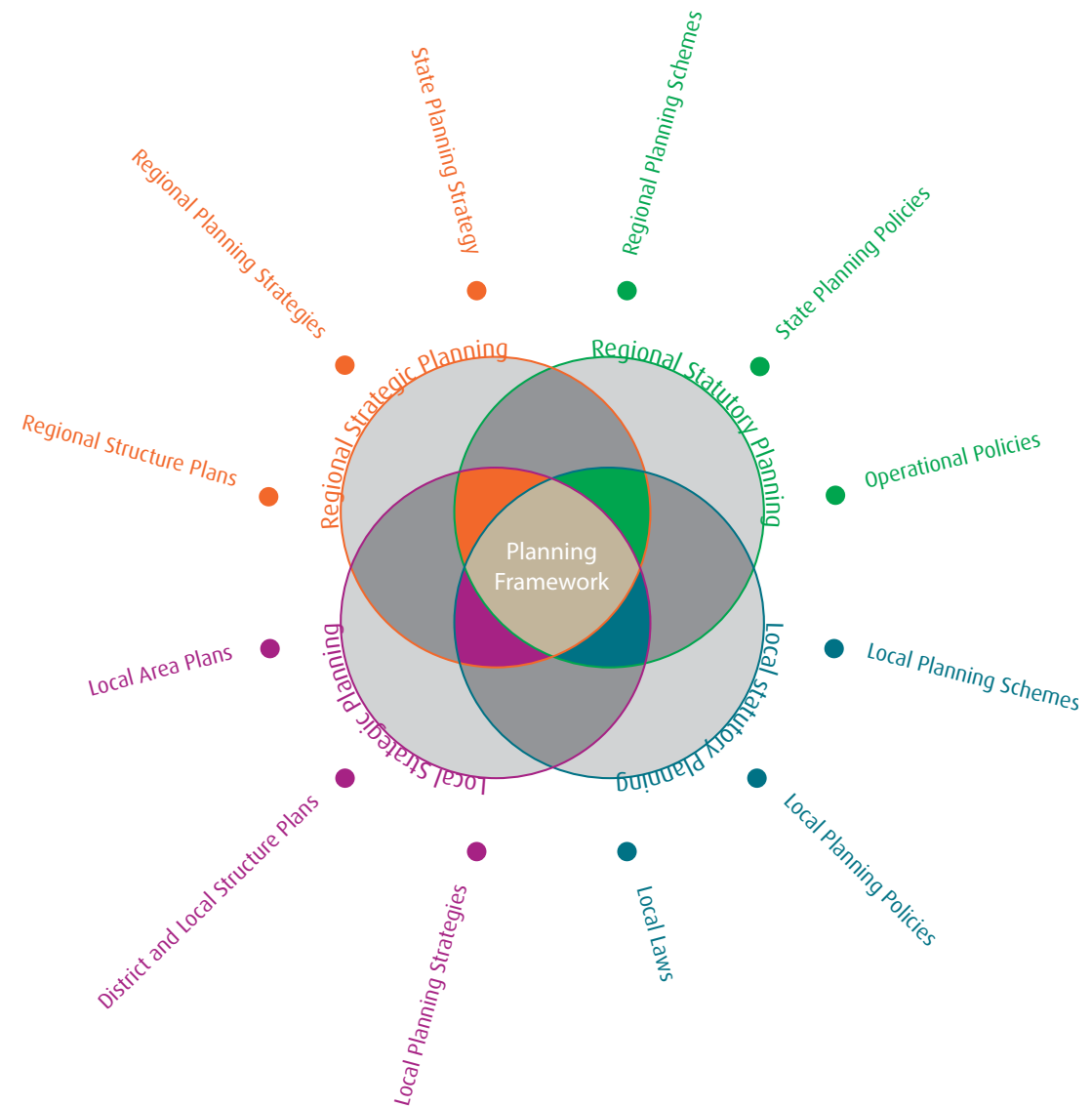


Figure 9. The Planning Framework

addressed through planning, securing the long term protection of biodiversity in the region.

3.1.5 SPP 2.9 – Water Resources

This policy aims to protect, conserve and enhance water resources that are identified as having significant economic, social, cultural and/or environmental values. It assists 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.

3.1.6 SPP 3.7 – Planning in Bush Fire Prone Areas

This Policy was revised in December 2015 and intends to implement effective, risk-based land use planning and development to preserve life and reduce the impact of bushfire on property and infrastructure. Impacted areas are identified under the Fire and Emergency Services Act on the Map of Bush Fire Prone Areas.

3.1.7 Environmental Protection (Western Swamp Tortoise Habitat) Policy 2011

The Western Swamp Tortoise is one of the most endangered tortoises on earth and one of Australia's most endangered species. The Environmental Protection Authority (EPA) have a specific policy relating to the land surrounding the Twin Swamps and Ellen Brook Reserves which declares beneficial uses that are to be protected and aims to ensure management activities within the policy area do not adversely impact on the habitat or these beneficial uses. This policy outlines a program of protection for landowners, local government and the State government to implement (Environmental Protection Authority, 2012).

3.2 Regional Planning

3.2.1 Metropolitan Region Scheme (MRS)

The MRS is the state government's broad-brush land use zoning of land for the Perth Metropolitan Region and which zoning under local planning schemes is required to be consistent.

3.2.2 Liveable Neighbourhoods

Liveable Neighbourhoods is an operational policy for the design and assessment of regional, district, and local structure plans, and subdivision for new residential areas. This document is relied on to provide guidance in assessing the structure plans and subdivision applications that are submitted within the Upper Swan local area.

3.2.3 Directions 2031 and Beyond

Directions 2031 and Beyond is the State's blueprint for managing the growth of the Perth metropolitan region, looking at planning and delivery of housing, infrastructure and services necessary to accommodate anticipated population growth.

3.2.4 Draft Perth and Peel@3.5Million

This land use planning document aims to accommodate development for growth to 3.5 million people within the Perth metro area by 2050 while addressing conservation matters and streamlining State and Federal development approval processes. This document also includes the draft North-East Sub-regional Planning Framework (NESRPF) to realise the vision encapsulated in Directions 2031 and Beyond and also the State Planning Strategy 2050.

3.2.5 Draft Perth and Peel Green Growth Plan for 3.5 million

The Green Growth Plan aims to cut 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. It allows unprecedented protection of bushland, rivers, wildlife and wetlands through implementation of a comprehensive plan to protect the environment.

It integrates environmental protection and land use planning. It provides certainty in relation to the environmental outcomes that will be delivered, the areas where development can be contemplated and the environmental obligations that will apply in terms of avoidance, mitigation and conservation actions.

Importantly for this local area, this document impacts on the Environmental Protection Area noted in Section 3.1.7 to help protect the critically endangered Western Swamp Tortoise. Impacts to this species is likely to be limited and effectively mitigated by the provisions in the Strategic Conservation Plan in this document. Most of the species are largely avoided by proposed development, and most conservation commitments relate to the management of indirect impacts and maintenance of habitat connectivity.

3.2.6 Draft North-East Sub-regional Planning Framework

The Draft North-East Sub-regional Planning Framework (NESRPF) is one of four frameworks prepared for the outer sub-regions of Perth and Peel, developed as part of PP@3.5m. The NESRPF establishes a long term and integrated planning framework for land use and infrastructure provision as it builds on principles of Directions 2031 and Beyond. It is a key instrument for achieving a more consolidated urban form that will reduce dependence on new urban greenfield developments to accommodate

the anticipated population growth by increasing residential density and urban infill development targets. The document does not have any specific comments or actions relating to land within this local area, but does identify the portion of land west of the Upper Swan townsite as an area of urban expansion with expected delivery within the short term (2015-2021).

3.3 Local Planning Policies

3.3.1 City of Swan Local Planning Scheme No.17

The City of Swan Local Planning Scheme No. 17 (LPS 17) sets the land use zones, the uses permitted within those zones and the requirements for development of land. Zoning across the Upper Swan local area is currently residential, landscape, resource, regional reserve, local reserve, rural residential, and general rural.

3.3.2 Draft Local Planning Strategy 2014

The draft Local Planning Strategy 2014 is a strategic plan for the entire City of Swan district, required under the Planning and Development Act 2005 and providing the strategic direction for the City that informs the Local Planning Scheme, through which it is implemented. The City is currently working with the Western Australian Planning Commission to prepare this document for public consultation. This document identifies this local area into several land uses, mainly regional reserve, rural and resource and development is impacted by environmental and extractive industry buffers.

3.3.3 Draft Local Rural Planning Strategy 2015

The City of Swan's draft Local Rural Planning Strategy 2015

(LRPS) was developed to inform the City of Swan's draft Local Planning Strategy 2014 and will guide the future land use planning direction of rural areas within the City over the next 10 to 15 years. The LRPS consolidates the place specific rural strategies which the City has as well as the WAPC's State Policy 2.5 on Land Use Planning in Rural Areas. Refer 7.3.3 for further information.

3.4 Decision Making

The process of decision making for local area plans sits within the local area planning model described in Part 1.1, which ultimately leads to place based service delivery. The decision making process in the development of the local area plan also includes community engagement processes including request for submissions on the plan, community workshops, and online engagement. Community workshops were held in the development of the Strategic Community Plan (2012-2022), which sets the over arching strategies for development and service delivery in the City of Swan.

Table 1. Actions and strategies relating to the governance framework applicable to the Upper Swan local area

City of Swan Strategic Community Plan 2012-2022	
	- Manage future local government reforms - Develop successful and collaborative partnerships - Advocate for infrastructure and access to services - Strengthen Place based delivery model - Improve organisational systems - Use resources efficiently and effectively

Key issues

- Need to identify community composition and relationship with other areas to guide place service delivery within the City's governance context.
- Must ensure that impacts from changes to areas outside the study area are well planned with minimal negative impacts.
- Ensure that the City is well informed by other levels of government regarding major issues impacting on resources, transport, water and biodiversity.



RIGHT: Walyunga National Park

4.0 Social Environment

4.1 Population

'Place' is more than a location, it is not just a geographical space identified by a set of co-ordinates (Hague et al 2005). Place is in fact geographical space identified by meanings, sentiment, and stories; an interpretation and narrative of space (Hague et al 2005). Places are 'places' because they have identity.

The key to forming that identity is the people that live in a place. The Upper Swan Local Area Plan seeks to strengthen its place based approach to planning by building on the uniqueness and diversity of the community.

The Upper Swan local area is a semi-rural region located north of the Swan Valley containing mainly rural-residential properties, plus some developed areas either side of the railway line south of the Upper Swan locality. This rural lifestyle is very attractive to a variety of people due to its natural landscape without being too isolated from urban amenities.

The population of the Upper Swan local area in 2015 based on 2011 census, was forecast to be 1,443 people and the population is expected to increase to 2,171 by 2036 (Community.id). A small portion of this projected growth comes from natural increase but the majority of the population growth comes from several land developments and infill assumptions, listed below:

- Barcelona Drive Rural Residential 26 dwellings (2012-2020)
- Avon Ridge Brigadoon 214 dwellings (2013-2034)
- Joshua Mews Subdivision 54 dwellings (2017-2030)
- Campersic Road Rural Residential 28 dwellings (2021-2028)
- Low level of infill development (1-4 dwellings per annum)

Unlike many areas within the City, this local area does not currently have any large amounts of land earmarked for residential growth. Therefore, the population and residential

development growth rate within this area is very low.

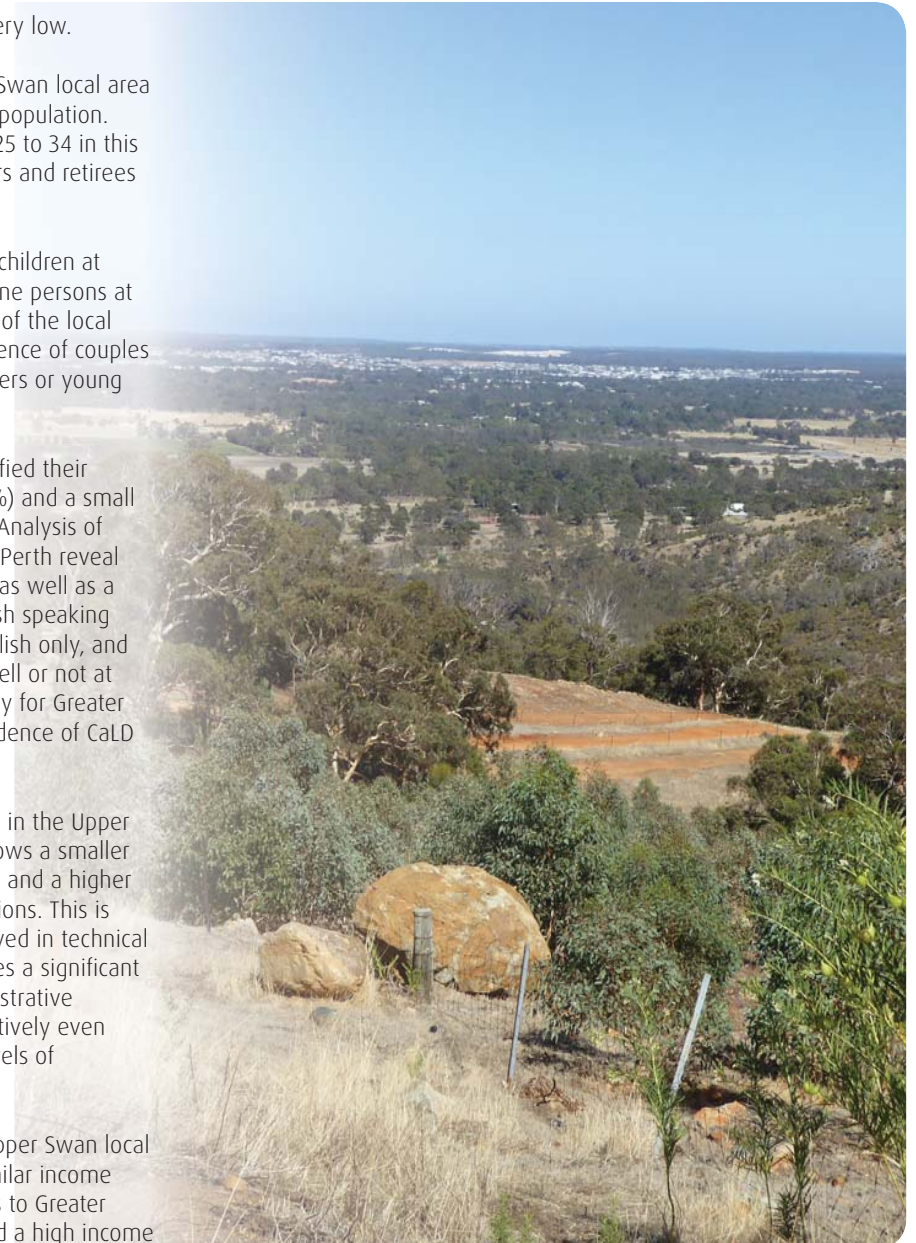
In 2011, the dominant age group in the Upper Swan local area was ages 50 to 54, accounting for 9.6% of the population. There are a lower percentage of people aged 25 to 34 in this area than the Greater Perth area. Empty nesters and retirees are the largest emerging age groups.

The dominant household type is couples with children at 36.6%, couples without children at 34% and lone persons at 12.7%. This is reflective of the age distribution of the local area. The highest change has been the emergence of couples without children – these are either empty nesters or young couples.

In 2011, Upper Swan local area residents identified their dominant ancestry as Anglo descent (over 90%) and a small portion of Italian, Dutch and German descent. Analysis of country of birth statistics compared to Greater Perth reveal a smaller proportion of people born overseas, as well as a smaller proportion of people from a non-English speaking background. Overall, 92% of people spoke English only, and 3% spoke another language and English not well or not at all, compared with 77.8% and 2.4% respectively for Greater Perth. This indicates a lower than average incidence of CaLD migrants in the local area.

Analysis of the level of educational attainment in the Upper Swan local area compared to Greater Perth shows a smaller proportion of people with formal qualifications and a higher proportion of people with vocational qualifications. This is reflected in the high number of people employed in technical and trade, but the local population also includes a significant portion of managers, professionals and administrative workers. As a result income distribution is relatively even throughout the area, and the area has high levels of employment.

Analysis of 2011 household income levels in Upper Swan local area compared to Greater Perth show very similar income distribution throughout the different pay levels to Greater Perth. Overall, 22.9% of the households earned a high income



ABOVE: View from Brigadoon

and 13.2% were low income households, compared with 23.1% and 17.9% respectively for Greater Perth.

The Socio-Economic Index of Disadvantage (SEIFA) measures the relative level of socio-economic disadvantage based on a range of census characteristics such as income, educational attainment, employment and occupations. A higher score on the index means a lower level of disadvantage and likewise a lower score on the index means a higher level of disadvantage. The SEIFA index number for the City of Swan is 1,010.6, whilst Greater Perth attains an index of 1,033.4. This indicates that as a whole, the residents of the City of Swan are at a greater disadvantage than the average Perth resident.

This being said, residents of the Upper Swan local area achieve an index of 1,070.9 which is the second highest within the City of Swan and above the Greater Perth average representing a stronger level of disadvantage.

Table 2. Actions and Strategies relating to population applicable to the Upper Swan local area

City of Swan Strategic Community Plan 2012-2022	
	• S1.1.1 Develop acceptable service levels and service delivery models • S1.1.3 Strengthen advocacy role on behalf of our community • S2.1.2 Create a sense of place and culture and belonging through inclusive community interaction and participation • S2.1.3 Advocate and continue to strengthen relationships with our diverse cultural community
City of Swan Draft Local Planning Strategy 2014	
	• Implement the draft Rural Planning Strategy • Implement City of Swan’s draft Strategy for an Ageing Population



ABOVE: Equestrian property, Brigadoon

4.2 Social Services

Social services required by a community vary depending on several factors, including age group, cultural background, and even income level. The range of services that can be provided include child health, aged care, youth development, community development, recreation, organised sport, libraries, and cultural experiences (City of Swan). The City provides access to a wide range of services, predominately through the City's Lifespan Services business unit, using City owned and managed assets such as Youth Centres or other multi-use shared facilities, and also by the private sector such as privately run child care centres and public transport providers.

The City is committed to facilitate the provision of these assets and facilities, along with playing fields, open space, and other community facilities such as pavilions in order to offer the opportunity for services, clubs and groups to use City owned space for their activities. The residents within the local area use the community and sports facilities located at the Baskerville Oval which lies just outside the southern boundary of this plan. While the use of these assets is referenced throughout this section, their provision is discussed in more detail under Section 7.5.

The City's Community Development Coordinator is actively working with community groups in this local area and basing them in the Baskerville Community Centre. Several events have been initiated by the Council in partnership with groups as an avenue to connect the local community with existing City services and community groups. With the growth in population in this area, particularly the residents of Avon Ridge, it is important to create connections between the new and the existing residents.

4.2.1 Early (0-8 years) & Middle Years (9-14 years)

Young people do not comprise the majority in the Upper Swan local area but still hold a strong portion of residents, with babies and pre-schoolers (0 to 4 year olds) accounting for one of the smallest of any age groups in the Upper Swan local area. Primary school (5-11) and secondary schoolers (12-17) are slightly over represented in the community when compared to Greater Perth statistics. Even with the numbers stated they are still low and insufficient to require a large number of schools in the area.

At present, Upper Swan Primary School is the only school in close proximity to the Upper Swan local area. Most of the students to this school come from outside the area (Refer Figure 10) such as Aveley, Ellenbrook and the Chittering Valley (Upper Swan Primary School, 2016). There are however, a number of schools in the wider area including Bullsbrook Primary School and College, Middle Swan Primary School, Ellenbrook Christian College, Governor Stirling Senior High School, Swan Christian College and the many schools in Ellenbrook. There are no childcare facilities in the immediate local area, but the area is well serviced in Ellenbrook and other surrounding more urbanised areas.

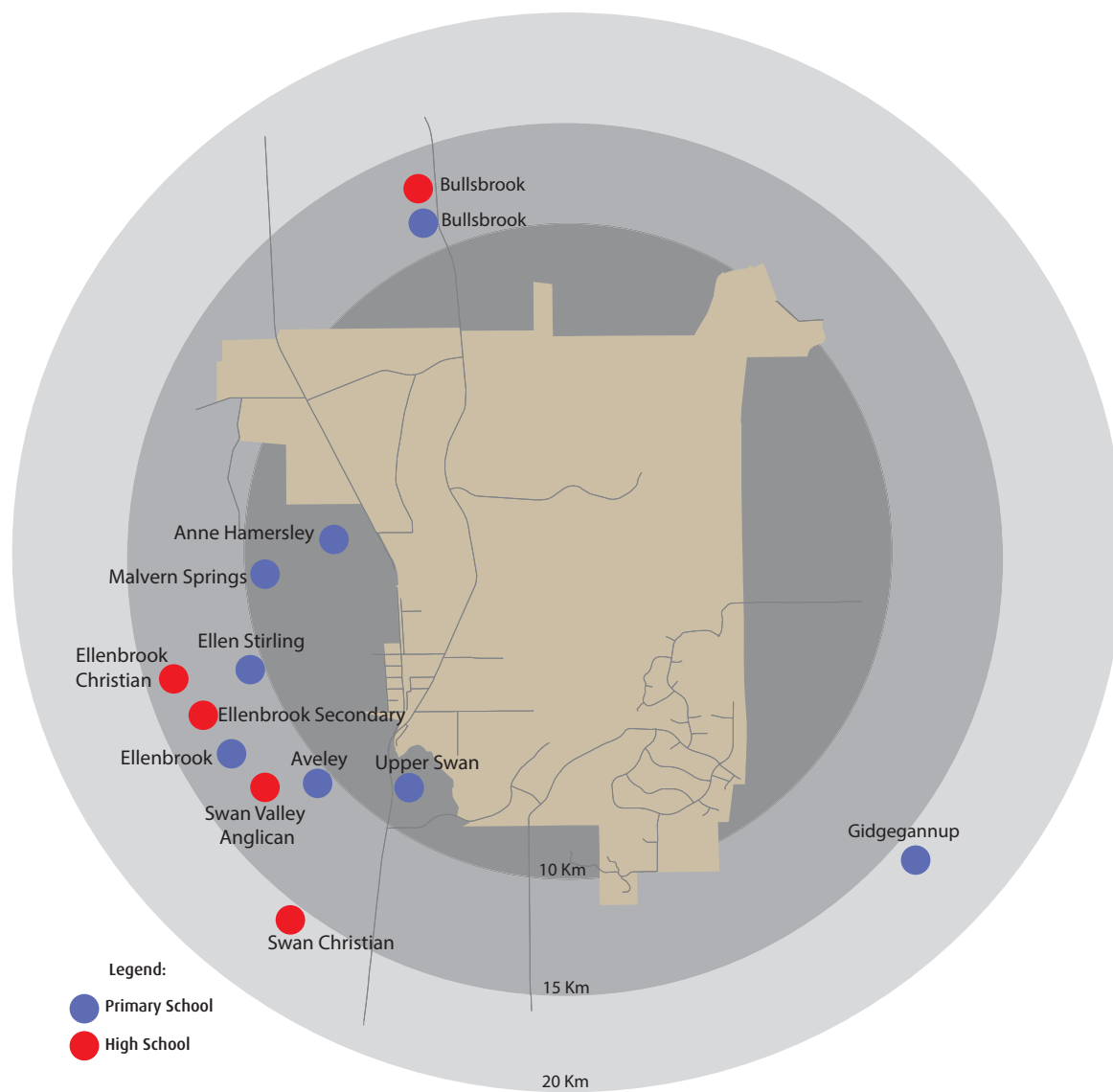


Figure 10. Schools in proximity to Upper Swan local area



ABOVE: Upper Swan Primary School

Schools are funded and determined by Department of Education and therefore supplied when the department deems it appropriate. A structure plan is currently being prepared for the land to the west of the Upper Swan townsite and the east of The Vines. The population projection for this area should trigger the requirement for a primary school as per the state's Development Control Policy 2.4 which sets the requirement for a primary school per 1500 residents. This future school may cater to the existing Upper Swan and surrounding population.

4.2.2 Young People (12-25 years)

The closest tertiary education establishments are located at Polytechnic West Midland Campus and Curtin University which has plans to develop a third Western Australian medical school at their Midland campus by 2017.

Youth services currently occur outside of the Upper Swan area such as a Youth drop-in service at Stratton Youth Space available two days per week. In addition to this, a Youth Centre is currently under construction at the Bullsbrook Community Learning Centre which will contribute to the services required the local young people. It can be assumed that people from the Upper Swan local area will also be using this facility.

Youth in the local area can also utilise services at the Swan View Youth Centre, a purpose built youth facility in the Shire of Mundaring, the Swan City Youth Service in Midland and the youth services available in Ellenbrook. The City is currently preparing a Youth Strategy, to establish a strategic, coordinated approach for the supply and advocacy of youth services in local communities into the future.

The City of Swan's Youth Development team work with young people and the community to promote participation, improve relationships and support youth services within the local

Place areas of the City. The team also delivers a range of programs across the City from Youth Out Loud - public speaking competition, Hyper Music and Art festivals to smaller local events such as skate, recreational and community programs. The team can assist young people and services with leadership opportunities, community projects and events, promoting a youth voice and provide support, information, and referral for a range of youth related needs.

The City is currently working on a Service Gap Analysis for the Rural Place management area which includes this local area. It aims to determine gaps in community and social services and facilities.

4.2.2 Aged Care

City provided services have been focused on the ageing population in recent years to enable residents to 'age in place'. This refers to the provision of appropriate housing and services within the community for elderly persons to down size from family sized homes to smaller accommodation with universal design features, to enable their ongoing usability as residents needs change. In addition to impacts on housing, the changing demographics associated with an ageing population also impact on health and community services, sport and recreation services, and community support and social inclusion.

The City's Strategy for the Ageing Population adopted in 2015 recognises the increased health needs, reduced income and the condensed working aged population and how these cause impacts on economic and social issues in communities. The Strategy identifies several mechanisms for encouraging universally designed, affordable housing options, and the role of the City in enabling these mechanisms to work. Some of these initiatives will be identified in the Strategies and Actions developed in Part 3 of the Upper Swan Local Area Plan after community consultation. Some of the criteria for universally designed housing have already been incorporated into the Building Codes of Australia.

Current statistics show the largest growth in age structure between 2011 and 2016 are the 60 - 69 age group, classified as empty nesters and retirees (Community.id). This area is generally showing an ageing population and therefore access to aged care facilities will need to be explored. As these residents age, they may retire from work and their mobility may decrease, and therefore in light of the correlations between land use planning and health outcomes, it is important that access to services and opportunities for social interaction are maintained.

Similar to the needs of young people in the area, the City will need to determine whether this is a priority area due to the low population figures. Although there currently are no aged care facilities, the area is in proximity to the new St John of God Midland Public Hospital and St John of God Midland Private Hospital. The City provides eligible residents transport services to attend medical appointments as well as the local area being connected by a TransPerth public transport service.

The City's Urban Housing Strategy may also provide incentives for a more diverse range of housing options to accommodate persons to 'age in place'. The Strategy identifies mainly

already developed areas as well as greenfield sites within the City’s growth areas. It is anticipated that the already established and well serviced areas will accommodate the majority of aged persons within the City of Swan. Analysis shows there is a large supply of residential aged care beds in Midland but a current under supply of beds in the broader Ellenbrook/Swan Valley area.

4.3 Social Representation

The main community groups in the local area are the Brigadoon Progress Association, Swan Valley Rotary Club, East Swan Bushfire Brigade, the State Equestrian Centre and several clubs who are associated with this centre.

Another important and valuable community group is the Friends of the Western Swamp Tortoise who provide education, fieldwork, source grants, fundraise and work with the Western Swamp Tortoise located in Upper Swan.

Key Issues

- Connectivity to community facilities
- Access to employment opportunities
- Connectivity to local amenities and facilities
- Housing for ageing population

Table 3. Actions and strategies relating to social services applicable to the Upper Swan local area

City of Swan Strategic Community Plan 2012-2022	
	• S2.1.2 Create a sense of place and culture and belonging through inclusive community interaction and participation • S2.1.3 Advocate and continue to strengthen relationships with our diverse cultural community
City of Swan Draft Local Planning Strategy 2014	
	• 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 • Implement City of Swan’s draft Strategy for an Ageing Population



RIGHT: Swan Caring service

4.3 Community safety

The City of Swan's Community Safety Plan 2014-2018 was developed to prioritise actions and reporting on community safety matters across the City. The following key priority areas were identified as the focus for improving community safety across the City:

- Measures to detect and deter crime.
- Measures to address the underlying causes of crime.
- Addressing safety issues related to personal and community responsibility in local neighbourhoods.
- Increased coordination and responsiveness of agencies to address community safety.
- Bushfire readiness.

4.3.1 Crime

In regards to crime in the Upper Swan local area, the City's Community Safety team has advised that there is relatively low major crime issues in the area. The main cause of problems which the City is responsible for dealing with relates to off-road vehicles damaging fire breaks, gates, bridle trails and bushland, as well as causing unwanted noise. Other issues include antisocial behaviour, illegal camping and property damage at Bells Rapids, as well as arson.

The local area is serviced by the City's Community Safety Advocates who provide a range of community services including enforcing legislation related to dogs, cats and other livestock, illegal dumping investigations, abandoned and off-road vehicles. The WA Police service works closely with City staff to ensure a safe environment for our residents.

4.3.2 Fire

The Upper Swan local area is serviced by the metropolitan service as well as the Volunteer Brigades of East Swan, West Swan and Bullsbrook.

The Upper Swan local area has a number of bushfire prone areas, particularly along the Darling Scarp, National Park and the nature reserves.

New dwellings in bushfire prone areas are required to be built to Australian Standard 3959 Construction of Buildings in Bushfire-Prone Areas and is enforced by the Building Code of Australia (BCA).

The City has prepared a Strategic Bushfire Risk Analysis in March 2014 which conducted a detailed investigation of the mapping and issues regarding bushfire affected landuse which provides the basis for strategic land use planning in bushfire prone area. This document provides strategic guidance influencing formulation of the City's planning strategies. This document impacts on the type and level of development within the Upper Swan local area.



Table 4. Actions and strategies relating to community safety applicable to the Upper Swan local area

City of Swan Strategic Community Plan 2012-2022	
	• S1.1.1 Develop acceptable service levels and service delivery models. • S1.1.3 Strengthen advocacy role on behalf of our community. • S2.1.2 Create a sense of place and culture and belonging through inclusive community interaction and participation. • S2.1.3 Advocate and continue to strengthen relationships with our diverse cultural community.
City of Swan Community Safety Plan 2014-2018	
	• Reflect the strong support from the community for detection measures through the City undertaking community crime prevention measures. • Support the Local Emergency Management Committee and its work regarding planning, prevention, response and recovery planning in the City of Swan. • Ensure close engagement with local communities on bushfire safety is maintained throughout the year. • Create responsible residents initiatives including those focused on responsibilities in the areas of fire safety, animal management and off-road vehicles especially in semi-rural neighbourhoods. • Undertake periodic specific operations between the City of Swan and other responsible agencies targeting hotspots for misuse of Off-Road Vehicles such as trail bikes.

5.0 Economic Environment

Economic development is concerned with increasing the **level of income** and the **capital wealth** of an area, and **distributing that wealth to the community** through local expenditure and jobs.

The City's Economic Vision and Strategy (SGC, 2009) is the over arching strategic document for developing the economic capabilities of the City of Swan, and developing the area as a prosperous, self-sufficient and sustainable area of economic development.

The Strategy notes that along with traditional business activities such as industry, manufacturing, commercial, and retailing; the emergence of the 'knowledge worker' has enabled the workforce to 'work in place'. This has been further assisted by advances in technology, enabling greater mobility of workers and an ability to work remotely (including from home) if desired.

The Economic Vision and Strategy sets out several elements considered to be part of the City's 'Preferred Economic Future' position statement, of which the following are directly relevant to the land uses and planned development of the Upper Swan local area:

- The City will continue to grow and diversify its traditional export-oriented 'driver sector' industries in ceramic product manufacturing, textiles, food product manufacturing, transport and storage providing meaningful employment for the community.
- The City will enhance its spatial economic structure through 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 will establish itself locally, nationally and internationally as a premier tourism destination based on the City's natural and heritage assets including food and wine in the Swan Valley and the quality of its facilities for major festivals and events, the Perth Hills and the town of Guildford.

The City's Strategic Community Plan 2012 (SCP) states that local employment opportunities will attract and sustain the communities of Swan, who will have access to local services, shopping, health and education. Through the SCP process, key economic outcomes were developed across all communities to achieve this sustained economic growth, and high level strategies developed to achieve this economic vision.

As part of the Economic Visions and Strategy, the City developed an Economic Development Action Plan to implement this Strategy and achieve an optimal outcome for the City, its residents and local businesses. Key outcomes from this plan are:

- Actively market the region.
- Provide good service.
- Build on existing interpretive services.
- Develop products aimed at increasing tourism.
- Ascertain which other tourism precincts in the City to promote, and take steps to do.
- Provide for sufficient industrial land in appropriate locations.



ABOVE: Stock Feed Processing Plant, Upper Swan

5.1 Economy and Employment

Employment opportunities are a product of economic activity that has been able to establish and grow and cannot be provided through planning policies and controls. The location and distribution of employment centres is dependent on planning controls; however it is the success of the businesses operating in these areas that will dictate how much employment is generated in the area.

Upper Swan local area is predominately a rural-residential area and does not contain any major retail or employment centres. There are however some smaller commercial and employment industries such as the two roadhouses along Great Northern Highway, several resource-extraction sites, semi-industrial and agricultural land uses, and a stock-feed processing facility.

Gingers Roadhouse and Coles Express service passing traffic and the local area for their fuel and convenience needs. The main retail needs are met in Ellenbrook, Midland and Bullsbrook. The area's closest employment centres being in Bullsbrook, Ellenbrook, Midland and the Swan Valley (Refer Figure 11).

'Employment self-sufficiency' can be defined as a measure of the quantity of jobs available in a given area as a proportion of an area's labour force. The Western Australian Planning Commission's (WAPC) Directions 2031 and Beyond, sets an employment self-sufficiency target of 75% for the north east sub-region of the Perth metropolitan region. The City of Swan already reached this target with its current resident labour force of 63,821 workers and 53,350 total jobs, achieving a self-sufficiency of 86.8%. The City of Swan will show a stronger growth in its population over the next 35 years than other local government areas within the north east sub-region, with an increasing importance on providing sufficient land zoned to enable employment as well as appropriate infrastructure.

A high proportion of employment generated in the City of Swan is in manufacturing (16.2%) retail (12.2%) and construction (9.8%) industries. Similarly, in the Upper Swan local area, of the 721 person workforce, construction accounts for 13.2% of employees, followed by health care and social assistance (9.6%), manufacturing (9.3%) and retail trade (8.3%) (Profile.id, 2016). The representation of employees both in construction and manufacturing is significantly greater than the respective percentages for the Greater Perth area.

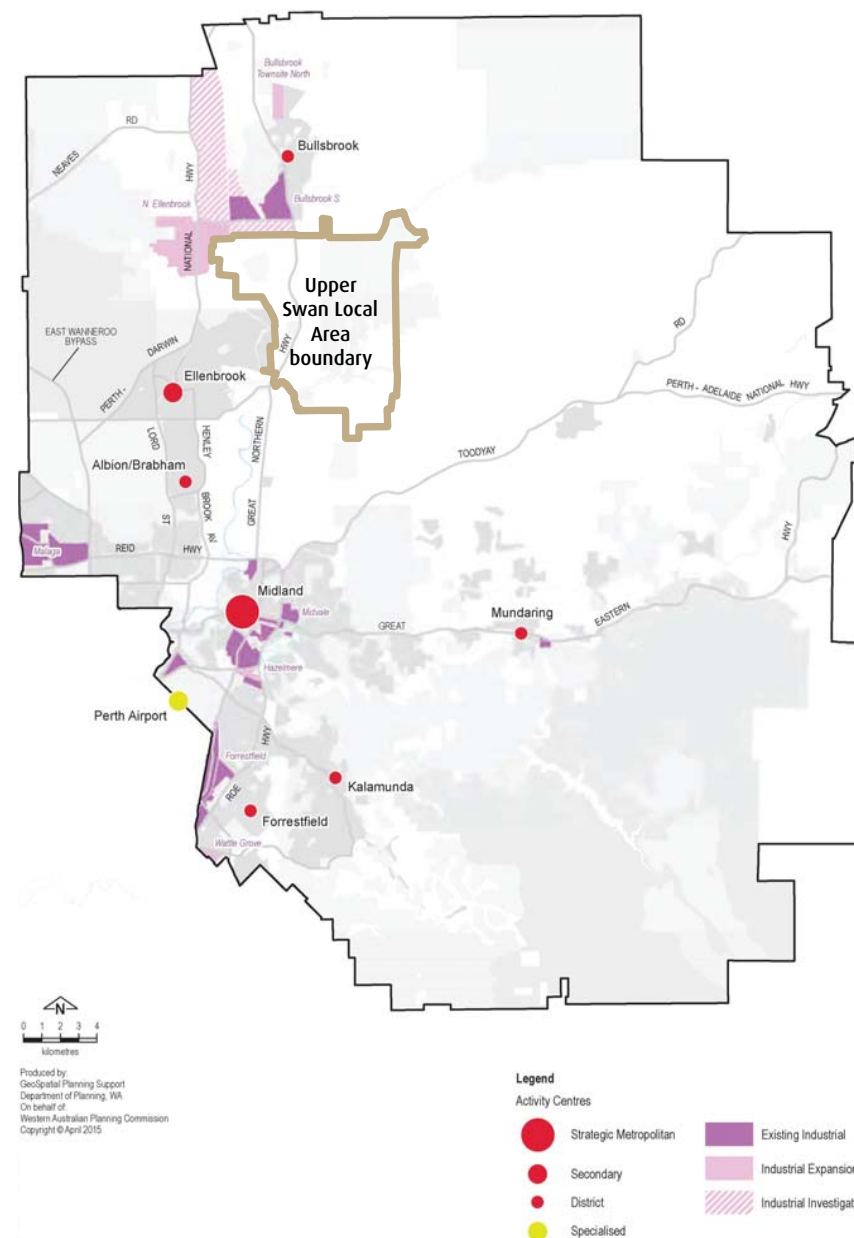


Figure 11. Draft North-East Sub-regional Planning Framework - Employment Opportunities (Source: WAPC)

Established employment areas which support this region are:

- Primary Centre – Midland
- Secondary Centre – Ellenbrook and Bullsbrook
- Industrial Centres – Malaga, Hazelmere and Forrestfield
- Attractors – Swan Valley and Avon Valley
- Employment node linkages to - Perth Airport, Kewdale, Morley and Cannington.

The number of jobs for the sub-region will increase from 82,379 in 2011 to 188,000 by 2050 according to the NESRPF (WAPC, 2015). As the City of Swan contains significant employment hubs, its current workforce population has enabled it to reach employment self-sufficiency. Its task is to ensure that this sufficiency continues as the population grows. All levels of government are required to work together to ensure that there is sufficient land reserved for growth of employment based land as well as the required infrastructure to ensure its efficiency.

Although there is no additional land earmarked for employment use within the Upper Swan local area boundary, there is land in proximity to this small resident population that is earmarked for expansion, in particular land north of Ellenbrook and south of Bullsbrook. The Economic and Employment Lands Strategy (WAPC, 2012) as well as in the NESRPF (See Figure 11) identifies potential future non-heavy industrial sites in Bullsbrook South with a gross area of 471 hectares and land north of Ellenbrook of 2428 hectares which includes a portion of the Western Swamp Tortoise buffer zone. These two significant employment hubs would create an impact on the Upper Swan area such as increasing residential demand in the area, increasing heavy and light vehicle traffic through the area and putting pressure on existing infrastructure and services.

The new or expanded employment nodes within the north east sub-region are expected to increase employment in the construction, healthcare and social assistance, manufacturing, transport, distribution and warehousing and retail sectors (WAPC, 2015) and will help to add to the area's employment

self-sufficiency. These sectors will show growth based on the sub-region's proximity to key road and rail transport infrastructure, proximity to the Perth Airport, and other important linkages. This employment growth will lead to improved livability and desirability for residents to move into the area.

Approximately 135 hectares of land to the west of the Upper Swan townsite was rezoned in the Metropolitan Region Scheme to 'Urban' in 2013. As a result, the land has been sold to a private developer who is currently preparing a Structure Plan anticipated to be submitted to the City mid-2016.

According to anticipated development rates and the City's Retail Needs Assessment Report (Essential Economics, 2011) a neighbourhood activity centre in the order of 6000m² will be operating in the Upper Swan townsite by 2031, in order to meet the basic retail needs of current and future residents. A minimum of one primary school will also be required within this site. The services, infrastructure and facilities required for this development will also benefit the existing Upper Swan and surrounding local residents. This development will lead to more jobs during the construction phase as well as the ongoing employment generated from the new neighbourhood centre, school and other facilities.

Key Issues

- Long-term outcome of future employment projects



FROM LEFT. Stock Feed Processing Plant;
Coles Express Upper Swan; Gingers Roadhouse

5.2 Tourism

Tourism expenditure supports employment in a variety of economic sectors including accommodation, food services, transport, retail, arts, recreation, travel and training. Tourism is an important source of diversification and employment in rural parts of City of Swan and is a key driver in sustaining the viticulture industry.

The local area already features some tourism products such as Walyunga National Park, the Swan River, Ellenbrook Speedway, Bells Rapids and events such as the Avon Descent, the Western Mudd Rush, as well as some equestrian competitions at the State Equestrian Centre.

There are many opportunities for new tourism products with focus on the natural environment and aboriginal heritage. These forms of tourism have been recognised as growth areas from Tourism Western Australia, whom are the lead agency for advice, development and promotion of new opportunities.

The tourism market could be a useful way to diversify the employment market, promote sustainability and environmental protection, educate people on the area's culture and heritage as well as showcase the area's unique features.

Table 5. Actions and strategies relating to the economic environment applicable to Upper Swan Local Area Plan

City of Swan Strategic Community Plan 2012-2022	
	• E1.1.1 Identify extent and type of industry growth and address our economic vulnerability • E1.1.2 Provide prioritised industrial and commercial land through land use planning • E1.1.3 Accelerate the development of future industrial areas • E1.1.4 Target and attract identified industries to capitalise on the power economy of Western Australia • E2.1.1 Lobby for technological infrastructure necessary to support commercial and business growth • E2.1.2 Create business and community partnerships • E2.1.3 Review and align land use and infrastructure plans • E3.1.1 Develop partnerships to actively support visitor growth • E3.1.2 Support our heritage tourism hubs for future generations
City of Swan's Vision and Economic Strategy (SGS Economics and Planning, September 2009)	
	• Opportunities will include a new demand for existing and new retail, business services, restaurants and other services • Implementation of the City of Swan events strategy that will support the ongoing provision of community events • Maintain a regularly updated register of commercial land and floorspace by local area • Advocate for improvements to local public transport services across the City • Develop career pathway opportunities for local students and encourage a 'whole of life' learning culture in the City of Swan • Establish gaps in the labour supply chain • Support local education service providers to deliver programs relevant to local economic and skills requirements
City of Swan Tourism Development Strategy 2015-2020	
	• Communicate the benefits of tourism to City of Swan communities to raise awareness of tourism and leisure opportunities for local people, and in the longer term, developing the capacity of our people as ambassadors and advocates for tourism • Implement a multi-layered marketing approach with targeted messaging, focusing on; Perth residents and the VFR market, day visitors and overnight stays • Establish an experience development framework, which identifies signature City of Swan experiences - implementation will need to incorporate a mix of marketing and product development • Elevate Indigenous stories via; encouraging Aboriginal operators to engage in partnerships with existing attractions to extend length of stay and yield, supporting existing Aboriginal businesses to grow, and working with Indigenous stakeholders to assess new business opportunities • Pursue development and attraction of event opportunities • Review effectiveness of the Swan Valley Food and Wine Trail and conduct a review of the trail with a view to improving effectiveness, including; gateway signing and reassurance signing along the route • Pursue development and attraction of event opportunities

6.0 Natural Environment

6.1 Natural Resource Management & Environmental Protection

6.1.1 Environment

The Upper Swan local area is notable for its proximity to many highly valued environmental assets including the Swan and Avon Rivers, Bells Rapids, the Twin Swamps and Ellen Brook Nature Reserves. Upper Swan is also ideally located between two high-value amenity landscapes, the Darling Scarp and the Swan Coastal Plain and contains significant areas of bushland including Walyunga National Park.

This area is relatively unique within the City of Swan as it transitions between the developed areas of Ellenbrook, Swan Valley and Midland into the natural environment, linking up to the national park and the rural residential areas of Brigadoon. This positioning makes it attractive as a place to live and appreciate the local natural environment.

6.1.2 Human Settlement

The area surrounding the Darling Ranges and the river contain many significant Aboriginal Dreamtime stories as well as more recent stories of local camps, meeting areas and sacred sites. The land was inhabited by many Noongar groups who had abundant supplies of food, water and shelter as a result of the fertile soils surrounding the many wetlands and creeks.

Mass clearances and intensive farming activities in the area did not occur until European arrival as a result of the Swan Valley being used for horticulture and agriculture.

6.1.3 Biodiversity

The City's draft Local Biodiversity Strategy (LBS) vision is to "protect, retain and manage a network of natural areas within the City of Swan that supports the diversity of local indigenous biodiversity in our region for the future" (City of

Swan, 2015). It is noted that without proper consideration of biodiversity impacts, land use planning and development is the biggest threat to biodiversity, through clearing of land, and interruption of ecological linkages.

The City of Swan is located in the South-West Botanical Province, internationally recognised as one of the world's 34 international biodiversity hotspots. Biodiversity hotspots are defined as the richest and most threatened reservoirs of plant and animal life on Earth (City of Swan, 2015).

The area is dominated by several native vegetation complexes such as the Darling Scarp complex which covers the scarp area which is visible across Perth, the Yanga complex which covers the western portion of Twin Swamps Nature Reserve and some wetlands areas to the south, the Guildford complex which covers the majority of the Ellen Brook Nature Reserve, plus small portions of Forrestfield complex on the eastern portion of Twin Swamps and along the river.

The Upper Swan local area contains a significant amount of land identified for protection within the draft LBS, particularly with Biodiversity Protection Levels of 'conservation', 'protection' and 'retention' (Refer Figure 12). The varying levels of protection refer to the development restrictions of land and may prevent clearing of vegetation. This may call for a developer to compile a conservation management plan, conduct regular monitoring of natural areas, as well as the creation of buffer zones between development, including parks and open space and the environmental area in need of protection.

The areas which require the most protection from development within this plan are generally already reserved for conservation purposes either through land use zoning, management under the Department of Parks and Wildlife, or other government authority (i.e. City of Swan, Department of Lands, Environmental Protection Authority, Department of Aboriginal Affairs etc) or under an environmental policy. This being said there still remains some areas of land which currently have no protection from development and clearing; these are being addressed through the draft Local Biodiversity Strategy.

BELOW. Walyunga National Park



The draft LBS proposes to introduce within the Local Planning Scheme the opportunity for private landholders to apply for a 'conservation zone' creating private conservation areas with incentives to maintain and protect biodiversity values on their properties. This is particularly important in areas with Forrestfield and Guildford complexes as these complexes are increasingly less represented within the City. Some of this land is associated with the Darling Scarp Complex and will therefore impact on some landowners within this local area.

To achieve some of the objectives of this strategy, a greater level of protection could be sought for City of Swan managed reserves with significant biodiversity values which are currently reserved for the purpose of public recreation. Within this local area, Joshua Mews Bushland at Baskerville has been identified as a priority natural area reserve. To achieve this protection, "Conservation" should be listed as an additional purpose for these reserves within the Local Planning Scheme as well as with Landgate.

The City's Local Rural Planning Strategy (LRPS) specifically states actions which ultimately aim to continue to provide rural living, agricultural land and retaining the natural environment and protection of local biodiversity. The document sets out specific recommendations to enable actions relating specifically to Upper Swan, Gidgegannup, Bullsbrook and the Swan Valley local areas.

In regards to environment protection, the strategy:

- Encourages rural settlement and land uses in areas of existing cleared land and where there will be limited effect on high conservation areas;
- Ensures that the protection and conservation of the environment and biodiversity is addressed at all levels of planning;
- Requires the City to promote and investigate mechanisms which maintain biodiversity in perpetuity on private land containing significant native vegetation, such as conservation zones, environmental management and conservation covenants (LRPS, 2015).

The main threats to the City's natural area reserves include:

- Fire
- Unauthorized vehicle access
- Weeds
- Disease and pathogens including *Phytophthora* dieback
- Feral animals
- Rubbish dumping
- Erosion
- Eutrophication
- Loss of habitat connectivity
- Vandalism
- Salinization
- Acidification
- Climate change

6.1.4 Water

Since 1975, Perth and the southwest of Western Australia have experienced a 12% drop in average annual rainfall. This has contributed to an overall decline in surface water sources over time and this trend is predicted to continue by the Commonwealth Scientific and Industrial Research Organisation (CSIRO). Declining rainfall and surface water has forced Perth to increase the use of groundwater as a means to increase its water sources (City of Swan, 2013). The City acknowledges that the availability of water resources is slowly declining and for this reason has committed to improving its own corporate water management.

In response to the declining availability of water resources, the City of Swan Water Action

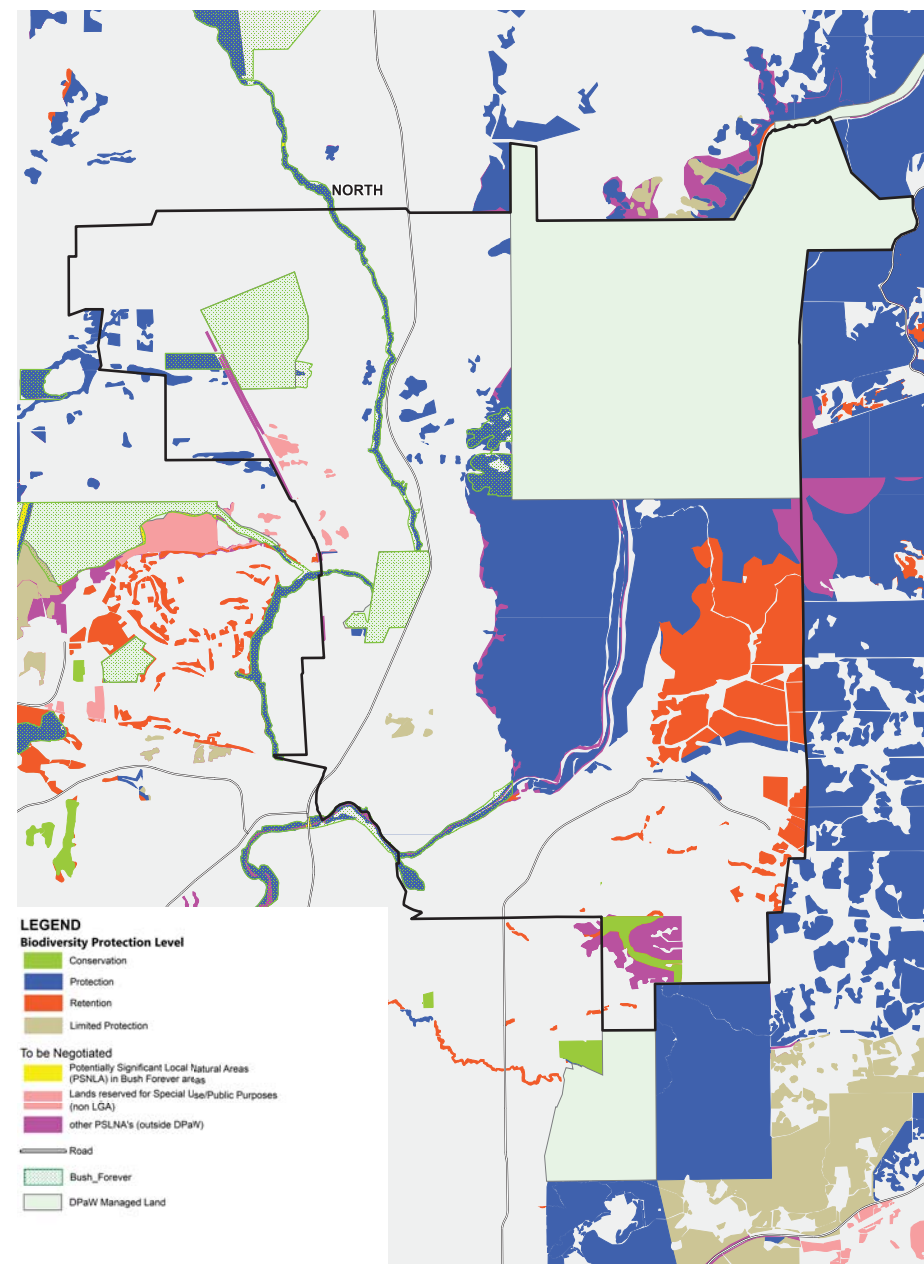


Figure 12. Potentially Significant Local Natural Areas Protection Levels in the Upper Swan local area

Plan 2013, sets out the City's water management goals including reducing community water consumption to below 125 kL per person, in alignment with the Water Corporation's goal of reducing water per capita consumption, from 147 kL per year in 2007/2008 to 125 kL by 2030. This is undertaken by the City through education and appropriate pricing regimes and the City has already reached the 125 kL per person per year water use level.

In terms of water management, the City of Swan is committed to:

- Preserve and protect the ecology and biodiversity of our natural ecosystems.
- Implement 'best practice' in the management of ground and surface water quality and quantity.
- Prevent and/or manage contamination of developed land and other inappropriate land management practices (POL-C-084 City of Swan's Sustainable Environmental Policy 2014).

As part of the Structure Planning process, Local Water Management Strategies are required to be produced. These strategies look at existing water patterns and ground water depths, and include sensitive urban design, infiltration, and use of existing overland flow paths.

6.1.5 Streams and Wetlands

According to the North East Corridor Urban Water Management Strategy (Department of Water, 2007) the area includes several watercourses of high conservation value and environmental significance, including Ellen Brook, Avon River, Brockman River, Woooloo Brook and the Swan River. There is a need to protect these waterways and to include in land and water planning the requirements for the restoration, revegetation and reservation of appropriate riparian buffers.

These waterways are both vital as major waterways for the North-East Corridor and the greater Perth region. They also provide a vital landscape for flora and fauna as well as recreation space for both locals and visitors to the area.

A major concern for the portion of Swan River running through this local area is the high levels of blue algae blooms, particularly in the Bells Rapids area. Such occurrence causes many detrimental impacts on the ecosystem causing fish deaths, illness to stock and a health risk to humans and animals. The City is working with the former Swan River Trust (now part of the Department of Parks and Wildlife) and other stakeholders to help reduce this contamination.

Undulating dunes have formed over deeper sands in the area which contain the Gnangara Groundwater Mound. This has created surface penetrations of the water table within these dunes and created many wetlands. (Department of Water, 2007). The wetlands are made up of sumplands which are seasonally inundated basins (represented by the 'floodplains' in Figure 13) and dumplands which are seasonally waterlogged basins (represented by the 'wetlands').

Water drainage is a very important consideration regarding any changes or intensification of

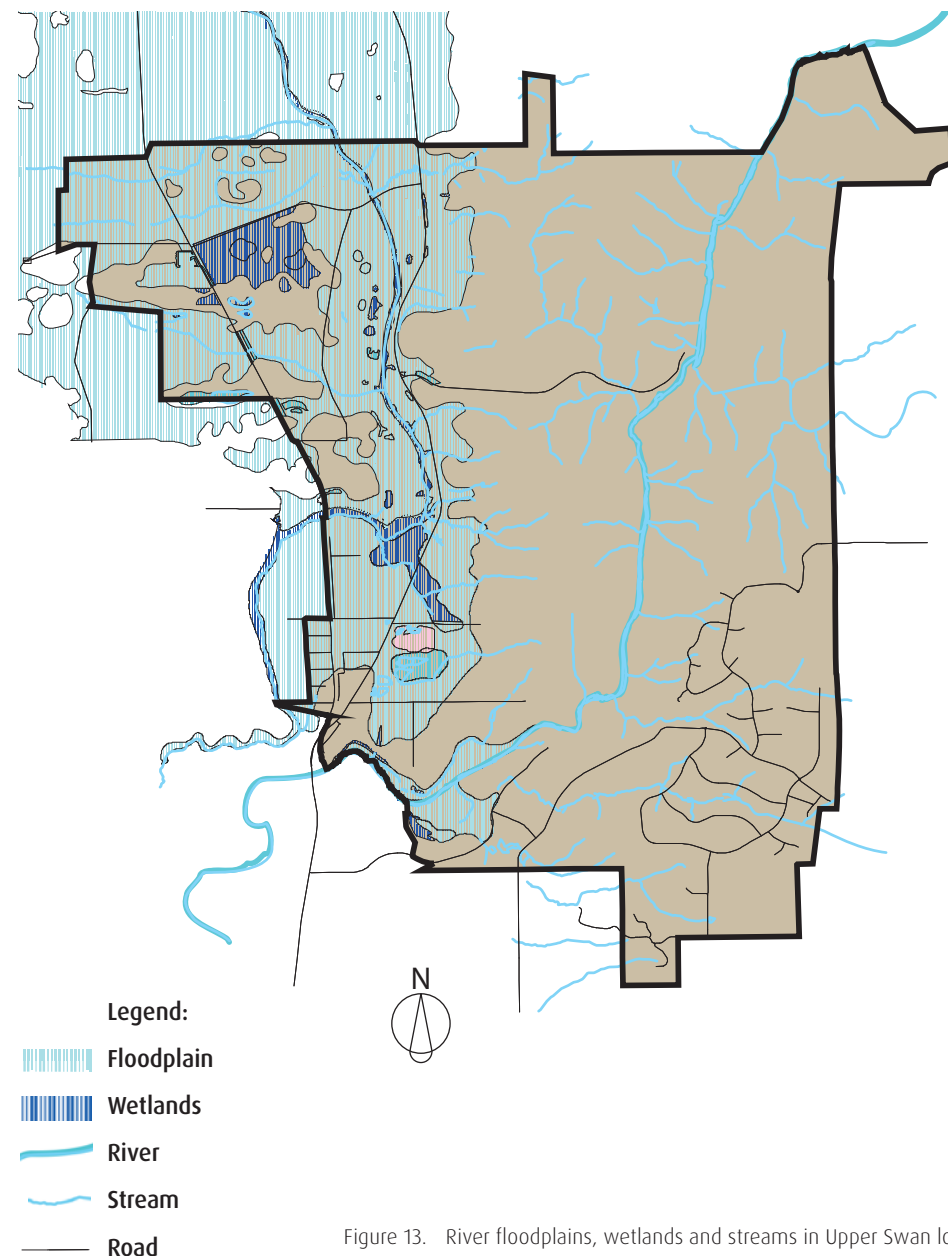


Figure 13. River floodplains, wetlands and streams in Upper Swan local area

land use in a developing area as it can contaminate and/or alter the water table. This in turn can result in localised mounding of the water table, alter the hydrological regime of the wetland, alter salinity, acidity and other mineral and levels of metal contaminants. This is particularly important in this area due to the presence and conservation program for the Western Swamp Tortoise at the two nature reserves.

The Department of Water had stated in their Urban Water Strategy that the change of land use from active rural to urban uses may lead to improvements in water quality of surface run-off which flows into waterways (Department of Water, 2007). The reduction of fertiliser, nutrients and other contaminants would reduce and over time the water quality could change and improve.

6.1.6 Waste

Since 2012/13, the City has increased its collection of general household waste from 38,966 tonnes to 41,150 tonnes in 2014/15, and from 9,968 tonnes recycled materials, from residents and businesses through its kerb side recycling, to its current 10,780 tonnes. Waste is taken to the Red Hill Waste Management Facility that is operated by the Eastern Metropolitan Regional Council (EMRC) on behalf of its six member councils.

Recyclables are transported to the Cleanaway Recycling Facility (under contract), Hazelmere Timber Recycling Centre and private construction and demolition recycling companies as per Operations annual contractors book. Every year more than of 15,000 tonnes of timber from commercial and industrial wood waste are recycled at Hazelmere Timber Recycling Centre. Through the City "Recycled Goods Drop Off Days" over 1750 tonnes are contributed to this. Wood products are shredded and screened into wood chip and wood fines and used for animal bedding, compost, mulch, and feedstock for bio-filters (EMRC).

The City currently is in the final stages of a planning process to develop a Materials Recovery Centre in Bullsbrook. This will deal with clean recyclable bulk materials both from bulk verge collections carried out by the City and also the general public.

With the expected increase in its population and commercial and industrial activities, especially within expected growth areas, the City is continually reviewing the requirements and options for new infrastructure to provide the community and local businesses with possibilities for recycling and to minimise waste (SES, 2013).

6.1.7 Air

The main cause of any air quality issues impacting on this area are the poultry farms; primarily caused by the odour generated from this use. There are existing poultry buffers to the north east of this local area and to date have caused little interference with existing residents as State Planning Policy 4.3 (Poultry Farms) establish buffers to set urban residential development 500m and rural-residential 400m from these farms. Any specific issues are dealt with a case by case basis with the City's Health Officers.

6.1.8 Noise

Issues of noise pollution are more likely to increase as housing densities increase, as a result of people living in closer proximity to their neighbours. This may become apparent in areas included in the City of Swan's Urban Housing Strategy. Noise attenuation measures are commonly implemented in subdivisions across the metropolitan area and are not an impediment to development. Measures can include noise barriers and quiet house design techniques such as thick glazing, door seals and roof insulation.

Noise as a result of traffic increases along Great Northern Highway, Northlink WA and rail noise from the freight line have the potential to impact on the quality of life for some residents. With careful planning, community consultation and noise attenuation measures the City hopes to ensure that these impacts are minimal.

6.1.9 Climate Change

The City is continually running programs for the community

and businesses on reducing carbon dependence, and changing lifestyle habits for a more environmentally friendly outcome. These workshops are conducted at each Place Library and focus on sustainable living practices such as worm farming, small farm holdings, sustainable gardening etc. The City is also currently preparing a Carbon Management Plan which will also address these issues.



FROM LEFT Bells Rapids;
Walyunga National Park

6.1.10 Bushfire

Bushfire risk management has become a significant issue in the urban fringes of Perth. Updated bushfire mapping by the Department of Fire and Emergency Services demonstrates the Upper Swan local area is highly exposed to bushfire prone areas and if proper management techniques are not followed, the risk of detrimental impacts on the natural and built environment, endangering lives and property can increase.

State Planning Policy 3.7 Planning in Bushfire Prone Areas and the *Guidelines for Planning in Bushfire Prone Areas* have been jointly created by the Departments of Planning and Fire and Emergency Services in December 2015. These documents guide the implementation of effective risk-based land use planning and development to preserve life and reduce the impact of bushfire on property and infrastructure. The Policy and associated Guidelines apply to all strategic planning documents, strategic planning proposals, subdivisions and development applications located in designated prone areas (Department of Planning, 2015). Part of this set of controls includes bushfire mapping designated by the Fire and Emergency Services Commissioner highlighting the bushfire prone areas and where these guidelines should be enforced. The Upper Swan local area has significant amounts of bushland and therefore these guidelines impact on a substantial amount of properties in the area.

6.1.10 Basic Raw Materials

Based on *State Planning Policy 2.4 Basic Raw Materials*, several of the Resources zoned lots are identified as 'Key Extractions Areas' under the Resource Protection Map (refer Figure 14). This helps to ensure the protection of existing extraction sites due to their proximity to the City and access to major freight routes which enables reduced time and cost of movement. It also facilitates self-sufficiency and the use of local materials in the construction industry.

Perth is one of the few capitals across Australia which has accessible raw materials in proximity to the City. The City of Swan contains several of these extraction sites with the majority being located within rural areas. These sites create implications on the surrounding national environment as it destructs habitat, alters drainage and impacts on water levels.

The other major impacts is when these sites have exhausted their allocation and these quarries are required to be rehabilitated. This can take several years and the future use of the site can be restricted.

Some of the 'Resource' zoned sites in Upper Swan, primarily along Great Northern Highway are already closed or will close in the short-medium term. Once these sites are closed, site remediation and rehabilitation works are required to be undertaken on site. One of the draft LRPS (2015, pg 23) actions is to "ensure appropriate staging and rehabilitation of extractive industry operations, to ensure post-extraction areas are restored to accommodate viable agriculture and rural land uses, post extraction".

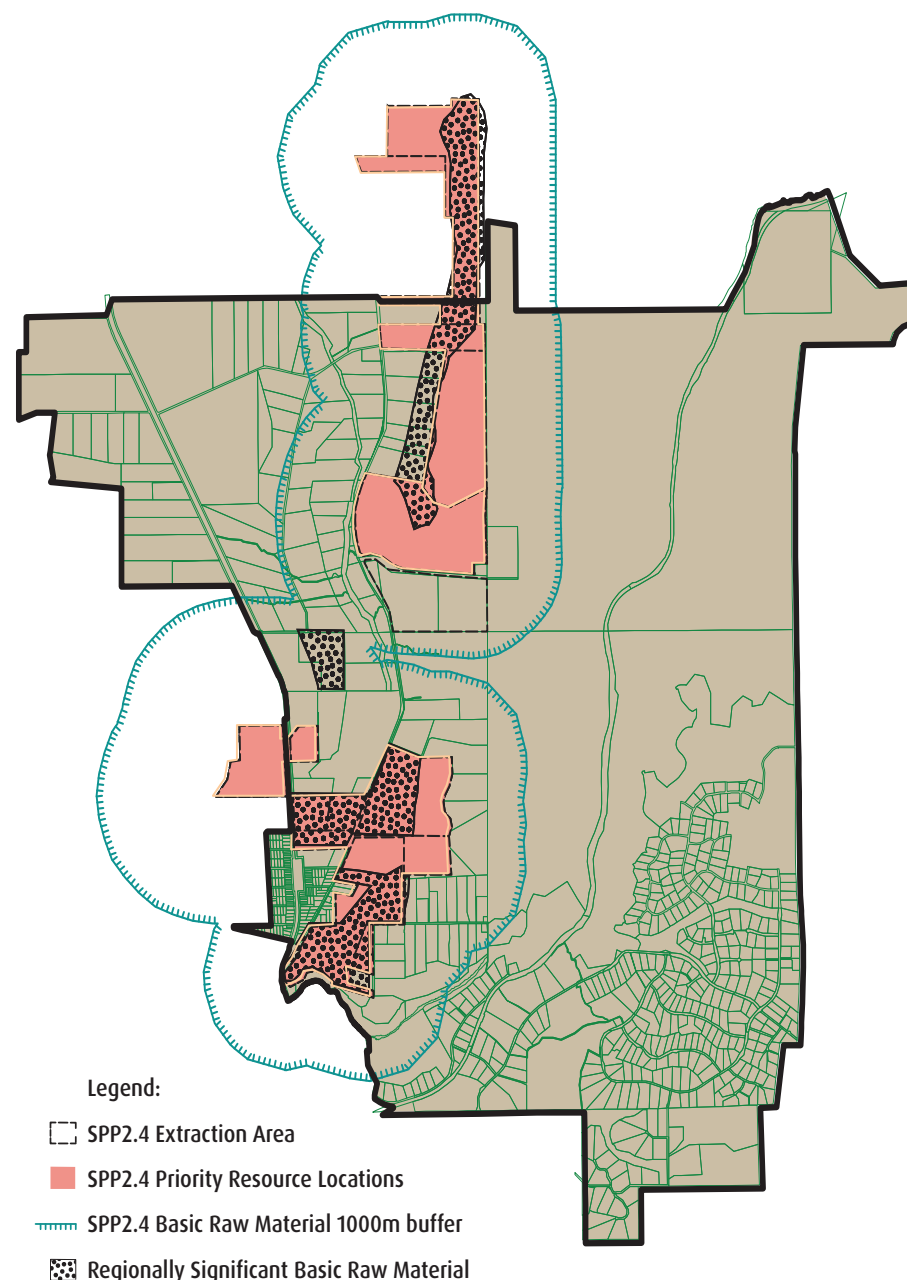


Figure 14. Resource Extraction Sites in the Upper Swan local area

6.2 Significant Reserves

6.2.1 Walyunga National Park

Walyunga National Park is one of three National Parks within the City of Swan. It forms part of the Darling Range covering 1,800 hectares and is located only 30 kilometres north east of Perth. As mentioned in the area's history (refer page 12), Walyunga has a strong connection and is a key component of the history of the local aboriginal people. It was a place for gathering, hunting, tool making and for ceremonies. The local people believe that the Swan River was carved by the Waigal and formed this important landscape.

The Park connects to the Avon Valley National Park to the east via the Avon River and the surrounding bushland. Within the Park, the Avon River becomes the Swan River at the confluence with the Wooroloo Brook forming its key feature. In the winter months, this part of the river thunders through and creates Bells Rapids, whereas in the drier months the area is characterised by exposed smooth granite boulders as well as at Walyunga and Boongarup Pools. These pools, the surrounding walk trails, picnic areas and the wildflowers in the spring are very popular for visitors creating many opportunities to showcase this natural environment. The flora ranges from flooded gums at the valley floor to wandoo woodlands on the slopes of the valley and extending to marri, powderbark, wandoo and jarrah on the ridges (Department of Parks and Wildlife, 2016).

The Department of Parks and Wildlife who manage the National Park are currently and actively acquiring land to enable an extension of the park. The extension to the south will meet the northern and western boundary of the Avon Ridge estate through Jumbuck Hill, as well as to the western boundaries of the Swan River. This land has already been reserved for the purpose of future conservation but has not yet been completely acquired. To the east of the park, the boundary will extend over the scarp through the western portion of Gidgegannup and has also been reserved for conservation purpose. This expansion of the National Park will help to preserve this natural landscape for future generations and aid in the retention of biodiversity of the area.

6.2.2 Darling Scarp

Many of the nature reserves within the Upper Swan local area form part of the Darling Range Regional Park System which includes land owned by state government, local government and private landowners. The Parks of the Darling Range Community Advisory Committee allows a forum for the

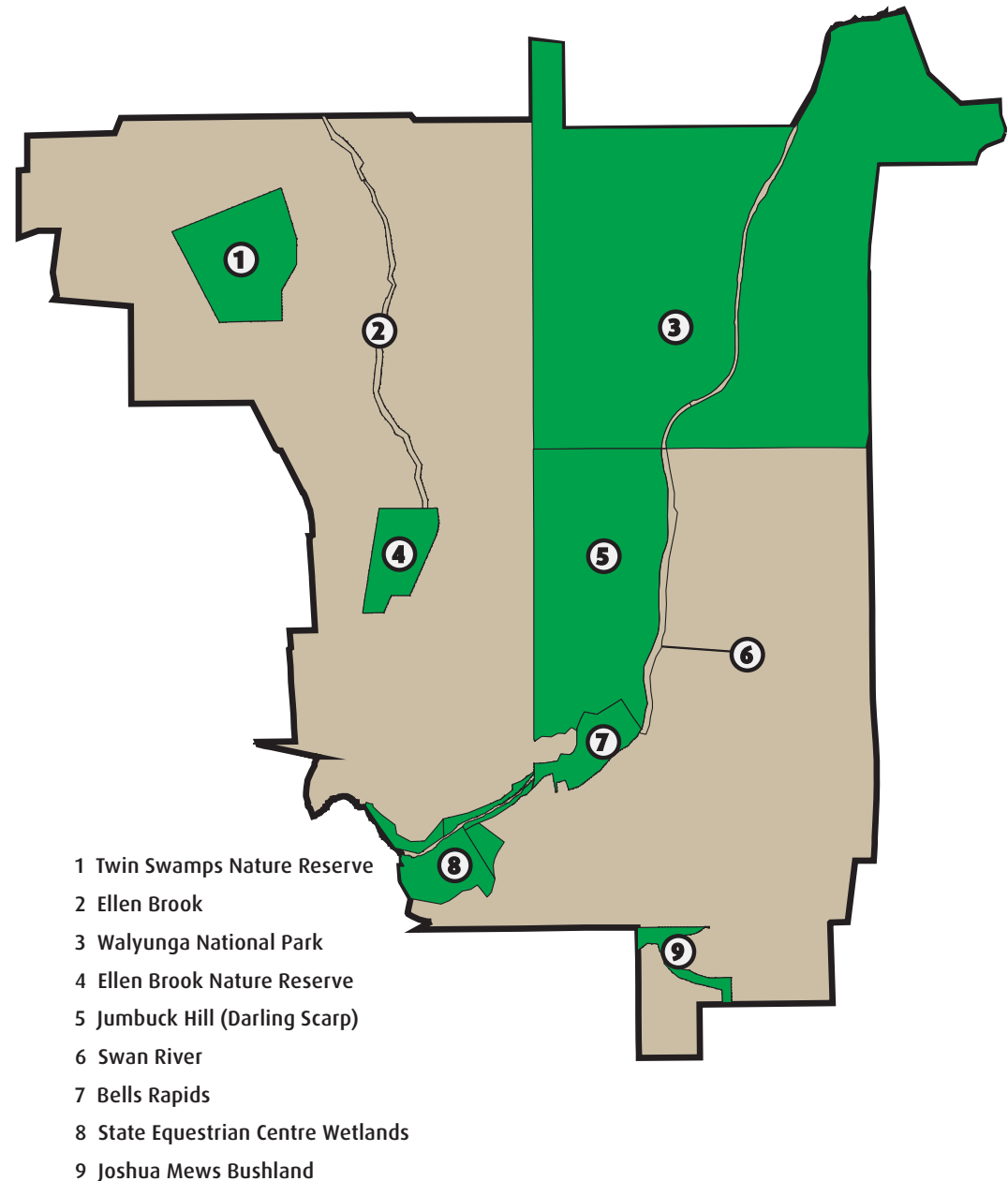


Figure 15. Significant Reserves in Upper Swan local area

community to provide input to the Department of Parks and Wildlife regarding the management and planning of the national and regional parks in the Darling Range. This committee also includes representatives from the relevant state and local government departments including the City of Swan.

The Upper Swan local area encompasses the foothills of the Darling Scarp, which is an important landmark creating the Swan Coastal Plain in the Perth metropolitan region. Over the past 100 years, this area has been exploited for clay extraction, stone quarries, forestry and bauxite mining. Some of these activities no longer occur and the environmental attributes of the area are being protected to enhance and regenerate the area's native flora and fauna.

The geology of the scarp is characterised as the Darling Scarp Complex which is dominated by granite outcrops, dolerite areas with the tops of the hills being capped with laterite.

The City's Local Planning Scheme mapping zones the majority of the scarp as 'Landscape zone' which, although still allows development on both private and publicly owned land; it does ensure that the environment and landscape is not compromised. This also helps to maintain the rural feel of the area and promotes rehabilitation of degraded areas.

6.2.3 Bells Rapids & State Equestrian Wetlands

Bells Rapids forms part of the Swan River and is of high value to the local and regional community based on its visitor facilities and is a popular viewing point for the annual Avon Descent Race. The park was once part of the Millendon Station, a property used for the agistment of sheep for sale as part of the live sheep export trade. A bridge was constructed over the river at Bells Rapids to move animals from one side to the other. The original bridge has since been demolished and replaced by a footbridge for pedestrians (Maunsell & Partners, 1988).

The conservation value to this area is highly regarded by the City as a previous botanical survey has assessed the

bushland from completely degraded to excellent. This offers opportunities for the City to investigate the need for a management plan on the area with a focus on the natural vegetation but also enhanced visitor facilities.

The wetlands in the State Equestrian Centre are classified as a Bushforever site, a Conservation Category Wetland and a registered Aboriginal site. A management plan is currently being developed by the City, Department of Parks and Wildlife (DPaW) and World Wildlife Fund (WWF) to undertake restoration works.



Key issues

- Loss of biodiversity
- Alteration of existing hydrology
- Protection of Western Swamp Tortoise
- Degradation of natural environment
- Waste management
- Bushfire risk management
- Management of resource extraction



FROM LEFT Bells Rapids; Revegetation and replanting at Twin Swamps and Ellen Brook Nature Reserves (Source: Friends of the WST, June 2016)

This local government owned land offers many possible opportunities to create further visitor facilities and add to the tourism value of the area and its proximity to the Swan Valley. The City has received comments from the public regarding the maintenance of this area and the illegal use of off-road vehicles using the space. This is causing several negative impacts on the reserve and opportunities to minimise these impacts may be investigated.

6.2.4 Twin Swamps and Ellen Brook Nature Reserves

The Twin Swamps and Ellen Brook Nature Reserves are located in Upper Swan adjacent to Great Northern Highway. They are class A reserves and are vested in the Conservation Commission of Western Australia (EPA, 2016). These reserves are extremely significant being the habitat of the extremely endangered Western Swamp Tortoise. These tortoises are only found in two other reserves in the state but nowhere else in the world.

The Australian Government's Natural Heritage Trust and the Western Australian Government, is implementing a number of recovery actions for the tortoise, including reintroducing the tortoises through Perth Zoo's captive breeding program (Department for Environment, 2003).

Through the Threatened Species Network which is managed by the WWF, the 'Friends of the Western Swamp Tortoise' was formed. This group consists of volunteer community members who actively conduct fieldwork on the reserves, fundraise, and educate schools and other members of the community, source grant funding as well as release of captive-bred tortoises (FoWST, 2016).

These tortoises are protected under the *Environmental Protection (Western Swamp Tortoise Habitat) Policy 2011* under the *Environmental Protection Act 1986*. The purpose of this policy is to protect habitat suitable for the long term survival of wild populations of the Western Swamp Tortoise. The policy area follows cadastral boundaries to encompass immediate surface water and groundwater catchments and protect the reserves from adverse impacts from land use change (GHD,

2007). As a result, this policy creates restrictions on land use, type and extent of development within the policy area and therefore creates concerns for landowners. The reserves also include Threatened Ecological Communities (TECs) which also impact on use of the adjacent land.

These reserves are also impacted by the Classes of Action which are identified in the Draft Perth and Peel Green Growth Plan for 3.5 million. Refer to section 3.2.5 more information.

6.2.5 Joshua Mews Bushland

Joshua Mews bushland forms part of its surrounding landscape owned by the Crown but managed by the City for the purpose of conservation due to the creek and the man-made dams which are used for fire fighting purposes. The firebreaks throughout this area are used as a formal bridle trail for local residents and therefore is important from a social point of view. The bushland represents vegetation which range from good to very good conditions. The firebreaks are affected by surface water runoff and cause erosion.

FROM LEFT: Breeding Program at Perth Zoo, Tortoise at Perth Zoo.

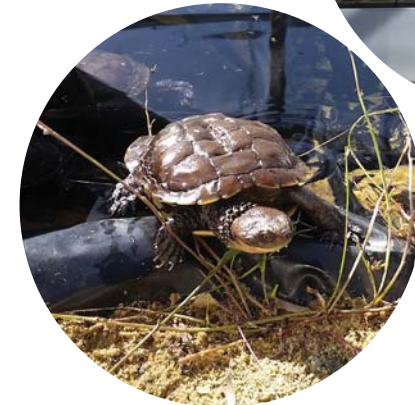


Table 6. Actions and strategies relating to the natural environment within the Upper Swan local area

City of Swan's Draft Local Planning Strategy	
	- Promote the protection of biodiversity. - Promote the sustainable management and protection of water resources through land use management and development controls. - Ensure an acceptable level of performance for industry and/or separation from sensitive land uses - Promote planning measures that encourage climate change adaption and mitigation.
City of Swan's Strategic Community Plan 2012-2022	
	- N1.2 Adapt to the effects of climate change - N2.1 Preserve and protect local ecology and biodiversity of natural ecosystems - N2.2 Reduce adverse impacts on biodiversity
City of Swan's Draft Local Biodiversity Strategy 2014	
	- Protect identified reserves with a high conservation value. - Undertake a detailed analysis to determine exactly where the 'critical' vegetation complexes (Guildford and Swan) and 'priority' vegetation complexes (Beermullah and Forrestfield) remain within the City of Swan and recommend opportunities and processes to protect them. - Require environmental management plans for all new natural area reserves as a condition of subdivision, or development.

7.0 Built Environment

The built form of a place helps to create character through its physical built infrastructure. It helps to create a story of the area's history, charm, sense of place and reflects the community.

The current built form within the Upper Swan local area has low level development and is characterised by rural residential properties, many used for equestrian purposes. As a result the area is home to many stud farms, high amenity landscape and bridle trails. A structure plan is due to be submitted to the Council immediately west of the local area, will have a significant impact on the Upper Swan townscape, increasing population and facilities.



7.1 Aboriginal Heritage

Aboriginal heritage places provide Aboriginal people with an important link to their present and past culture and are an important element of heritage for the whole community. The significance of Aboriginal heritage within a development site is important to recognise, protect and include within any new proposal.

The Upper Swan local area has a number of registered archaeological sites of significance. These sites are publicly recorded Registered Aboriginal Sites with the Department of Aboriginal Affairs, mapping of these sites are available at the Departments website (www.daa.wa.gov.au). This local area consists of many registered sites, particularly because the river was used for hunting, gathering, ceremonies and camping. Most of the sites are registered for artefacts, mythological significance, camping grounds etc. Sites located at Yagan Bridge and Walyunga National Park includes some of the oldest archaeological artefacts of Aboriginal history in Australia. These sites have been retained within public open



space reserves along the rivers, creeks, wetlands and National Park.

Approval is required under the Aboriginal Heritage Act 1972 for any development on land where sites of significance are registered. This may require consultation with local Aboriginal people, a heritage survey and a full inventory of heritage values, or other requirements from the Department of Aboriginal Affairs. In some instances further archaeological investigations will be required, along with Cultural Heritage Management Plans required to be submitted by developers.

The City's draft Local Rural Planning Strategy (LRPS) addresses the protection of heritage in its strategy to "ensure local indigenous heritage significance is respected, valued and recognised in the City's rural area" (2015, pg 27). This reflects the recognition by the City to address and acknowledge Aboriginal heritage from a variety of perspectives including through development.

7.2 European Heritage

Development of the Upper Swan local area can be traced back to 1829 when John Septimus Roe surveyed land along the Swan River. The area does not contain any sites of European Heritage significance but the development of agriculture in the area, particularly along the Swan River and within the Swan Valley has made quite an impact on the areas more recent history and future. Upper Swan was used as a base for explorers who were travelling to areas such as York and Toodyay.

Brigadoon was home to one of the Colony's first flour mills and therefore was of considerable importance to the Colony's early years. Later grapes and other agriculture became a significant export commodity for the area as well as the state. The area continues to be of importance to the development of the whole state, as several lots along Great Northern Highway are used for extraction of blue metal for road making and clay for brick making.

ABOVE: Cruse's Mill; All Saints Church

7.3 Built Form

7.3.1 Residential

The majority of residential properties within this local area are characterised as rural-residential. These properties are located on large parcels of land and has an emphasis on the natural environment and/or agriculture. Residents enjoy the benefits of rural living within relative proximity to essential services.

In 1986, Bond Corporation submitted the original subdivision for Brigadoon and by 1994 the plan was set to include 493 lots. In 1990, the Bond Corporation built the East Swan Bush Fire Brigade located on Cathedral Avenue. More recently land developer, Peet Limited has released 214 rural-residential lots in Brigadoon called Avon Ridge which has added to the area's population and growth.

The townsite at Upper Swan is mainly inhabited by workers in the logistics industry and the railway as a result of its location. When the area was developed, the minimum lot sizes could not exceed 2000m² due to the area not being connected to reticulated sewerage.

In more recent times, Satterley Group has purchased land west of Orange Avenue (beyond the boundary of this local area plan) earmarked for residential development, including schools, public open space, and a local centre. This development will significantly alter the character of the area due to the increased population, traffic and facilities.

7.3.2 Non-Residential

As mentioned this local area is characterised by the natural environment and agriculture and sits on Perth's urban fringe. As a result there is no major infrastructure in regards to commercial activity but does contain small farm holdings, equestrian facilities, facilities associated with the logistical industry and a stock feed processing plant.

Another important and distinguishable feature are the several extraction sites, which with its little permanent built

structures, does contribute to the make up of this area. The future use and development of these sites are important to the character of this area.

7.3.3 Draft Local Rural Planning Strategy

The City of Swan's draft Local Rural Planning Strategy (LRPS) was developed to consolidate existing local strategies and guide the future land use planning direction of rural areas for the next 10-15 years.

The Place specific objectives for the broader Upper Swan area, including the urban land to the west:

1. Provide for urban development once existing land supply elsewhere has diminished and services are available.
2. Address current constraints prohibiting development in a Strategic Master Plan.

In regards to urban development in this area, one of the LRPS's main strategies is to ensure that the rural landscape and character is maintained. This means that urban intensification should be kept at a "minimum maintaining the dominance of important topography and natural vegetation features over development" (2015, pg 26).

Triggered from the future urban area to the west of Upper Swan, the draft LRPS specifically has an action for the "preparation of a strategic Master Plan or similar spatial planning instrument in order to guide land use and service and infrastructure delivery in the Upper Swan townsite" (2015, pg 30). Major constraints which would impact on this plan are listed within the draft LRPS document (see 2.9.3 of LRPS). The Upper Swan Local Area Plan will address the future land use potential of the Upper Swan Townsite, taking due consideration of the outcomes and actions which result from community consultation from this Local Area Plan.

7.4 Community Facilities and Open Space

7.4.1 Community Facilities

Upper Swan local area has limited access to social and community services within its local area, as a result of its low population. Population is the main industry trigger that determines the need for certain community facilities including sports fields and community centres. This being said the Baskerville Oval and Pavilion, Ellenbrook and Bullsbrook facilities are located in close proximity to this local area. Community consultation for this plan will help determine whether these facilities are sufficient and are meeting the community's needs.

The District facilities such as Swan Park in Midvale and Ellenbrook Sports Hub are also available to these residents. The Baskerville Pavilion is used by community groups in the local area including the City's Community Development Officer once a week.

A major facility which has also been acknowledged in the draft NESRPF is the State Equestrian Centre located off Cathedral Avenue. The land utilised by this facility is owned by the City. This Centre is well located as the suburbs of Upper Swan and Brigadoon include many equestrian based properties. The City's priority regarding this property is the management of the land, particularly as it includes sensitive wetlands which also have an important aboriginal heritage context.

Key issues

- Identifying future land use potential in the Upper Swan townsite
- Infrastructure and service provision as part of future development
- Improvement of storm water management
- Impact of new urban development to the west of the Upper Swan townsite



ABOVE: Apple Street Drainage and Power Lines

7.4.2 Open Space

The quality of open space forms part of a place's fabric and contributes to the quality of life in that place. This is particularly true in Upper Swan where the majority of existing open spaces are associated with water bodies or places that have additional mythological associations for Aboriginal people. Residents in the Upper Swan local area have access to a wide range of open spaces, notably through Bells Rapids, the bushland at the Darling Scarp and Walyunga National Park.

The reserves/parks in this local area are Almeida Park in Upper Swan and the new park on Rollinghills Drive within the Avon Ridge estate. Brigadoon also has a tennis court on Boulannais Drive as well as another proposed for Connemara Drive. Most of the properties within this local area are large which means that the need for parks is less significant than it would be in a more densely populated area.

7.5 Infrastructure Services

The lack of availability of essential infrastructure such as water provision, power and reticulated sewerage could be a major constraint to any further urban development or redevelopment of an existing area (Draft Local Planning Strategy, 2013). This is not a significant issue in this area, with no future urban development foreseen.

7.5.1 Electricity

The majority of the Upper Swan local area is well serviced with overhead power, with underground power as standard practice for more recent subdivisions and redevelopments.

7.5.2 Wastewater

The Water Corporation of Western Australia (Watercorp) has full responsibility for sewerage provision and the City has little influence in servicing any networks within the Upper Swan local area. Proper assessment of capacity requirements, compared with the existing capacity of the networks, should be undertaken before any discussion on redevelopment can be finalised. New developments and subdivisions with lot sizes less than 200m² are expected to have sewer connection lines. Other properties including the existing Upper Swan townsite are on septic.

7.5.3 Water Infrastructure

The City is responsible for providing storm water drainage infrastructure to ensure the removal of the damaging effects

Table 7. Actions and strategies relating to the built environment applicable to the Upper Swan local area plan

City of Swan Strategic Community Plan 2012-2022	
	• B1.1 Facilitate and integrate housing options, local services, employment and recreational spaces. • B1.1.1 Facilitate diverse, inclusive, housing options. • B1.1.2 Align land use and infrastructure planning. • B1.1.3 Provide commercial and industrial land aligned to economic need and growth. • B2.1 Manage current and future assets and infrastructure.
Draft Local Rural Planning Strategy 2015	
	• To provide functional rural living in designated precincts; where appropriate access to services, facilities and amenities can be demonstrated; bushfire risk can be adequately managed; and where environmental assets are not compromised. • To protect the productive capacity of agricultural rural land, promoting sustainable agricultural production and provide an emphasis on land management practices rather than tight land use controls. • Identify potential precinct areas of 'Local Priority Agriculture', following an assessment of land capability meeting several factors. • Apply effective development standards for areas in the city that have landscape significance. • Sensitive land uses in bushfire prone areas should be avoided where possible. • Specific development standards for rural and agricultural land uses in each precinct if not guided by Structure Plan or similar instrument, should be considered as part of a local planning policy.

of runoff from rain events of a specified design severity. Drainage infrastructure protects residents' property from damage, and surrounding services from damage or deterioration, which allows infrastructure such as roads, footpaths and car parks that may be subject to water inundation, to function as originally intended.

Provision of potable water is one of the fundamental infrastructure requirements to progress any development. The City is not a water provider and only facilitates the structure planning process and agreements between landowners and the Watercorp.

Environmentally sustainable design principles are being promoted by the City for more efficient use of water within new and existing community buildings owned by the City of Swan. Improvements to the reticulation and water usage will be required on all active Public Open Spaces to meet Department of Water requirements.

Any rezoning to urban or industrial land use requires a District Water Management Strategy and it is up to the developer's consultant to assess the site in accordance with Department of Water guidelines. Any major work being planned will only happen as a result of rezoning to urban/ industrial development such as the proposed development area west of Upper Swan.

7.6 Basic Raw Materials

As referred to in Section 6.1.10, basic raw materials (BRM) are mined and extracted from several sites within this local area. As a result these sites have minimal built infrastructure apart from equipment required to extract and process the materials. Development adjacent to these sites are restricted by an 'Extractive Industry Buffer' which prevent impacts from noise, dust and other influences which would affect a property owner and the use of their land. This has therefore created a limitation on any development which falls within this buffer zone.

Some of the Resource zoned sites in Upper Swan, primarily along Great Northern Highway are already closed or will close in the short-medium term. Once these sites are closed, site remediation and rehabilitation works are required to be undertaken on site. Careful consideration needs to be given regarding the long-term use of this land and whether it should be reserved for rural residential, agriculture, freight services (industrial) or for future urban. The outcomes of the Local Area Plan will consider these options to determine the most appropriate use of these sites and there adjoining areas.

The Action Plan regarding BRM which forms part of the State's *draft Perth and Peel Green Growth Plan for 3.5 Million* provides a detailed description of processes that will impact on BRM extraction activities. The implementation of this Action Plan is intended to both protect important areas of remnant vegetation and secures strategic BRM resources to meet predicted future needs, when balancing competing land uses. It also describes the enabling legislative and planning framework that relates to BRM extraction, which has the objective of ensuring activities occur in a sustainable way whilst supporting future growth (Dept of Premier and Cabinet, 2015).

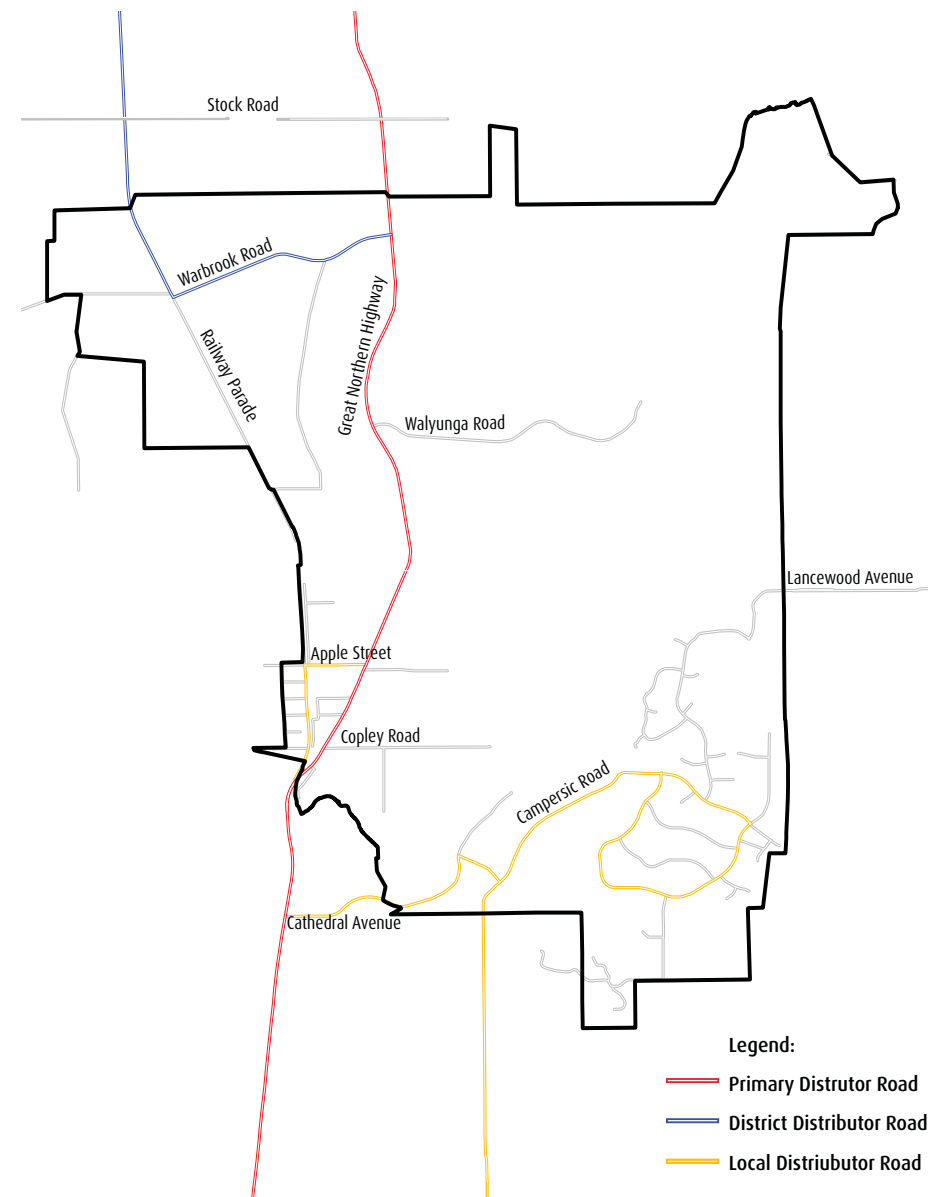


Figure 16. Road heirarchy in the Upper Swan local area

7.7 Transport and Access

7.7.1 Road Network

Upper Swan local area is connected to the rest of the metropolitan area by Great Northern Highway (GNH), with its other major roads being Warbrook Road, Apple Street, Railway Parade, Cathedral Avenue and Campersic Road (Refer Figure 17). The area tends to be a thoroughfare due to the highway as well as the limit for Restricted Access Vehicles (RAV) being in place in this area. As a result Main Roads have provided a Road Train Assembly Area on Apple Street to allow RAV's to breakdown their road trains before entering the metropolitan area.

The City's Transport Strategy 2014 addresses freight within the City of Swan. It states that combined freight volumes in Perth are expected to double over the period 2010 to 2030. It is considered imperative that the existing freight corridors and freight operations are protected from incompatible urban encroachment in order for industrial development to grow within the Perth metro area.

The draft North-East Sub-regional Framework (Refer Figure 14) map shows some proposed and planned major road extensions which will have an impact on the existing road network in the Upper Swan local area. The most significant for this local area is the Perth-Darwin National Highway (PDNH) which will connect Tonkin Highway with GNH at Muchea via Ellenbrook. This will improve freight movement and general traffic capacity through Upper Swan and divert traffic from GNH, West Swan Road and Lord Street (2015, pg 33). The connection of Tonkin Highway to GNH is referred to as Northlink and construction is anticipated to commence in 2016.

Future road freight is primarily expected to follow the major highways within the City, as a result of the connections created by the PDNH. This Highway will help to close to gap and connect Perth's existing freight routes. As a result, there may no longer be a need for the breakdown of RAVs before entering the metropolitan area. The GNH Access Strategy which was jointly prepared by the City and Main Roads WA states that there should be consideration given to the long term requirements of the Apple Street Truck Assembly Area site as the Northlink project may eventually render this site obsolete.

Based on RAVs no longer being required to break down before entering the metropolitan region, it raises the need to provide any other additional freight related businesses in this area. As a result, consideration needs to be given regarding the long term need for this type of facility as well as its location.

The draft NESRF (2015, pg 27) identifies the potential for a future intermodal (road-rail) freight terminal at Bullsbrook in the medium-to-long term in order to facilitate related strategic employment and to optimise the use of existing and proposed transport

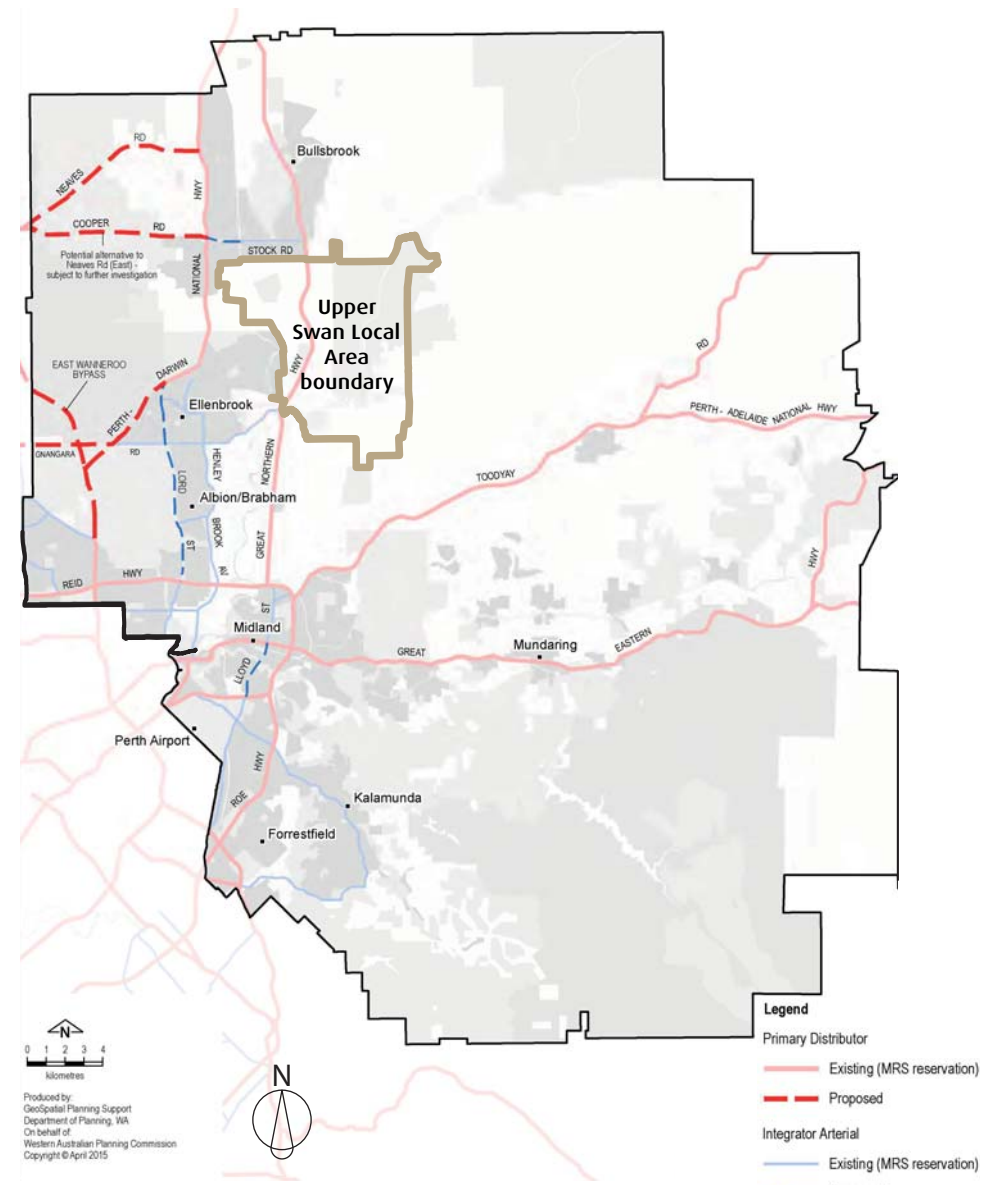


Figure 17. Proposed new major roads identified in the draft North-East Sub-regional Planning Framework

BELOW: Railway Crossing at Railway Parade and Apple Street



infrastructure. This terminal will be accessible to the population and industrial centres in the North-West sub-region.

In regards to improvements in local vehicle movements a significant connection is currently underway at Railway Parade. As identified in the draft City of Swan Transport Strategy 2014, a bridge over Ellen Brook is currently in the planning stage and will include the connection of Railway Parade in this area. This project is being funded by developer contributions as a result of the proposed Upper Swan development which requires improved connections. This road will result in a better connection for residents in Ellenbrook, the Vines as well as current and future residents of Upper Swan townsite.

According to the Transport Strategy, rail movements are expected to increase by 50% over the next 10 years and in response recommends a study to prioritise the grade separation of critical rail crossings. This has particular relevance to the intersection at Great Northern Highway and Railway Parade freight rail line. This will need to be considered in future strategies, noting that Department of Transport is currently working on such a study.

7.7.2 Cycling Routes

The Swan CycleConnect Strategy provides guidance on the development of cycling and pedestrian networks in the City with connections to existing commercial, educational and recreational facilities prioritised. The strategy proposes network upgrades along several roads including Morrison Road, Farrall Road and Toodyay Road and to enhance the onroad cycle lanes on Roe Highway.

The CycleConnect Strategy also proposes linkages in the onroad cycling network which will require road widening on Toodyay Road to accommodate a 1.2m cycling lane from Roe Highway to Campersic Road in Brigadoon.

7.7.3 Public Transport

Public transport is essential to the economic and social quality of communities. It provides access for those who do not have private vehicles and for those who choose to use public services. Public transport improves overall mobility, not only for the user but also for those who choose to use other modes. This local area is currently serviced by the 310 and 311 Transperth bus service travelling along Great Northern Highway and into Upper Swan townsite. Residents in the local area have a strong reliance on private vehicle ownership due to the low population base and acknowledgement of its distance to services.

Table 8. Actions and strategies relating to the transport applicable to the Upper Swan local area plan

City of Swan Strategic Community Plan 2012-2022	
	- B3.1.1 Lobby and advocate for public transport. - B3.1.2 Provide bicycle and pedestrian connections.
City of Swan's Transport Strategy 2014	
	Freight - Continue to promote realignment of the Midland Freight line. - Conduct a study to prioritise grade separation of critical rail crossings. Public Transport - Undertake an independent demand study to promote effective bus links. - Undertake an independent study to promote effective bus transport links to Midland, focusing on local precincts, optimal routes, frequency and demand. Pedestrians - Undertake Walkability Plans for precincts wherever significant change is expected, or in older suburbs without quality infrastructure. Intersections and Roads - Investigate the need for, and implementation of, a connection from the PDNH in the vicinity of Maralla Road/Warbrook Road. - Support improvements to wayfinding to promote heavy vehicle use of the primary road network. - Undertake or request demand modelling for the Rose Street Bridge connection. Determine the future impact and benefits of this connection. Cycling - Introduce minimum infrastructure standards for cycling facilities into planning policies. - Implement the recommendations of the Swan CycleConnect Plan.

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Part 2 – Community Engagement

8.0 Community Workshop

8.1 Background

One workshop was held for the Upper Swan Local Area Plan on the evening of Wednesday 24 August 2016 from 7pm to 9pm, at the Baskerville Memorial Hall. Stakeholders and interested parties were invited to the community workshop through a variety of methods and advertising, including:

- Emails and letters to various known stakeholders and landowners;
- Public advertising of the event in the *Advocate* (Community newspaper) on 3 and 10 August; and
- Posters in the local area and the City's main administration building.

As a result, there were 88 attendees to the Upper Swan local area community workshop.

8.2 Purpose

The purpose of the community workshop was to obtain feedback from the community on the following three questions:

1. What do you like about what is happening or being planned for the Upper Swan local area?
2. What are your concerns about what is happening or being planned for in Upper Swan local area to address local issues?
3. What are your suggestions about what the City should be doing in the Upper Swan local area to address local issues?



ABOVE: Community consultation at Baskerville Hall

8.3 Conduct

8.3.1 Community Workshop

Upon registration of each workshop participant, they were given sets of three different coloured adhesive dots, being a different colour for each of the three questions they would be asked during the workshop.

The City of Swan's Coordinator of Local Area Planning gave a presentation at the workshop, explaining the Local Area Planning process, as well as a presentation by the Senior Strategic Planner who is the project manager of this local area plan.

The project manager gave insight to current City initiatives and known concerns within the Upper Swan local area and undertook a session where attendees were asked the following:

1. What did they like about what was happening or planned in the Upper Swan local area?
2. What were their concerns about the Upper Swan local area?

Responses to each of the two questions were recorded and voted on by using the adhesive dots, indicating their five priorities in each category.

To conclude the workshop, the attendees had an open discussion in response to the third question asked:

3. What are your suggestions for what should be happening in Upper Swan?

Again, priorities were then voted on by using the third set of dots.

These voting exercises gave a clear indication of what the attendees of the community workshop considered priorities for the Upper Swan local area.

8.3.2 Survey

For those not available to attend the community workshop, an online survey took the top priorities in each category and allowed priority voting to occur once more.

The survey also offered the opportunity, under 'other', for participants to articulate any likes, concerns or suggestions that were not already listed for consideration in the creation of the Upper Swan Local Area Plan.

The online survey was made available on the City's website from 5 September until 30 September, and attracted 32 responses.

8.3.3 Community Consultation Results

The results of the community consultation process, in the form of feedback and comments from workshop attendees, and survey participants, are displayed in Tables 9, 10 and 11.

8.3.4 Conclusion

Responses from the community during the community engagement process were considered in the final formulation of Upper Swan Local Area Plan and its strategies and actions.

Responses were aligned to the key result areas of governance, social environment, economic environment, natural environment, and built environment in the recently released Strategic Community Plan (SCP) 2017-2027.

Key priorities are as follows:

Communication and Consultation

The community have highlighted a lack of communication during recent scheme amendment and development application processes as a concern. Also identified has been a lack of regular communication between the City and community.

Management of Growth Pressures

Being located on the urban fringe, and featuring natural and economic features that are statutorily protected, the local area is subject to a unique set of growth pressures. The community have indicated a desire to have greater certainty that their way of life is not threatened, and any future development is properly planned for.

Impact of New Residential Development

Closely associated with these pressures to free up rural land for urbanisation, are the additional pressures that population growth put on existing hard and soft infrastructure. Of particular concern are the potential issues relating to the Upper Swan Local Structure Plan.

Bushfire Management and Emergency Access

Concerns were raised with regard to the threat of bushfires, from several aspects. Aside from the usual bushfire planning and preparedness, which most residents are aware of, highlighted concerns included un-managed bush land areas which are a risk for anti social behaviour and arson, and access/egress in times of emergency.

Community consultation results and related actions

Table 9. Results from the Community Engagement in Upper Swan local area - Likes

Key Result Area	Public Comments received	Comments	Related Actions
LIKES: in order of priority by theme			
SOCIAL ENVIRONMENT	1. Creating a sense of place and culture through community interaction and events.	The City will continue to provide support of festivals and other community events to highlight the areas local produce, heritage, youth, aboriginal tourism etc. The City will investigate the development of a 'welcome pack' for residents that should include information on local issues, waste, social well-being, biodiversity threats, fire, community events etc.	12, 14, 23
NATURAL ENVIRONMENT	2. Bushfire management through the Bushfire Risk Management Plan.	This document identifies high risk assets and protection options for land owners. The City works closely with land owners, DFES and other members of the public to raise bush fire awareness and readiness. This is ongoing for the City.	30.1, 30.2, 30.3
	3. Management and restoration of wetlands, drainage corridors and bush forever sites.	The City will prioritise the implementation of the Local Biodiversity Strategy. The City is responsible for the management of City owned bushland and pro-actively restores high value environmental assets. DPaW are responsible for Bush Forever sites. The City is currently progressing works for a site within the State Equestrian Centre with co-funding from WWF and DPaW to rehabilitate the important wetlands.	31.1, 31.2, 32, 33.1, 33.2, 34
	4. Protection and conservation of the Western Swamp Tortoise (WST) through community groups and state government.	The City will continue to support the two existing community groups (i.e. Friends of the WST and the Ellen Brockman Integrated Catchment Group. The City also employs a staff member to encourage and coordinate community groups and other volunteers in this local area.	32, 33, 34
ECONOMIC ENVIRONMENT	5. Promote tourism opportunities (including aboriginal tourism) to diversify employment and economic opportunities.	Through the City's Tourism Development Strategy, the City will help to promote tourism opportunities within the Upper Swan local area, particularly focusing on Aboriginal tourism. There is a strong state level focus on this also and therefore the City can investigate opportunities to build on this.	6, 18, 23, 24.1, 24.2, 24.3, 24.4
BUILT ENVIRONMENT	6. Protect the 'rural' feel of the area.	The City is to implement actions from the Local Rural Planning Strategy particularly Actions 2.5 (1 and 3) which aims to protect and enhance the existing rural landscapes of the area.	26, 31.1, 31.2, 42, 43
	7. Support rural lifestyles through efficient planning and environmental management mechanisms.	These actions are the key focus of the Local Rural Planning Strategy 2016. Several Actions focus on the promotion of the sustainable use and management of natural resources. Environmental management is also built into state and local government Schemes and Policies.	32, 34, 42, 43
	8. Perth-Darwin National Highway (Northlink).	This project is run by Main Roads WA (MRWA). The City continues to liaise with MRWA to keep informed on the projects, its impacts on local communities and to ensure a positive outcome for existing and future residents in impacted areas. The City has been able to negotiate with MRWA to upgrade some local roads which will be impacted by the new highway. These have been funded by MRWA but project managed by the City. The Northlink project is scheduled to be completed in 2019.	8, 44

Key Result Area	Public Comments received	Comments	Related Actions
LIKES: in order of priority by theme			
BUILT ENVIRONMENT	9. Environmental management plans for new subdivisions to maximise bushland protection.	The City assesses structure plans and subdivisions as needed and ensures that best practice is established in regards to the natural environment and the protection of existing bushland, water courses and other high value natural assets. These have also been considered when assessing the Upper Swan Local Structure Plan (located adjacent to this local area).	31.1
	10. Timely provision of built infrastructure service when new residential development is established.	The City places conditions on structure plans and subdivision decisions to ensure that upgrades and new works are conducted by the developer, in a timely manner and as per requirements. Residents have an opportunity to comment on proposals during the advertising periods of these plans to ensure that this process covers all aspects of development. The Upper Swan Local Structure Plan is currently being assessed and includes several provisions regarding the requirement for upgrades and new infrastructure.	5, 19, 38
	11. Support adequate agriculture land within proximity of the City.	The City will implement actions from the Local Rural Planning Strategy which relate to preserving the rural landscape and the sustainable use of natural resources. The City through its Commercial and Economic Development Business Unit is currently investigating and initiating an Agri-business Strategy which would help to protect existing agricultural land and support its continued growth.	20, 25, 40, 41, 42

Table 10. Results from the Community Engagement in Upper Swan local area - Concerns

Key Result Area	Public Comments received	Comments	Related Actions
CONCERNS: in order of priority by theme			
SOCIAL ENVIRONMENT	12. Increased crime and vandalism resulting from rural-residential development in rural areas.	There is no statistical evidence of increased crime, and the crime rates in this area are minimal compared to more urban areas; therefore the focus is directed at those areas. The 'Eyes on the Street' program between City of Swan staff, the WA Police, and Crimestoppers to report suspicious behaviour. Community Advocates also report and deal with issues. The City also has CCTV strategically located at various hot spots within this local area. The City will continue to work with WA Police as well as implement the City's Community Safety Plan.	15, 16
	13. Compared to more urban areas with high social and community needs, the City knows little about the local community.	The City can investigate ways to increase the engagement with the local community. This may be triggered with the development of the Upper Swan Local Structure Plan area. The City has provided Place Offices in Bullsbrook and Ellenbrook which both service this area. There is also a Community Development Officer who operates from the Baskerville Community Hall once a week. The area appears to be self-sustaining from a social services point of view, as the City hears little from the existing local community, however through our Place and Community Development staff the City will respond to any changes in this situation.	11, 13
	14. Inappropriate waste disposal and illegal dumping.	The City has introduced the 'Reducing Illegal Dumping (RID)' program. This program was an organisational priority and has been allocated funding for several years.	29
	15. Developers drive process without community input.	The City always encourage developers to conduct consultation with the community particularly at pre-submission stage of a structure plan but they are not compelled to do so. The City will investigate a program to initiate conversations between developers, the City and the community prior to submission of local structure plans and other major developments. This is only possible on a local level. Metropolitan Region Scheme amendments follow a separate process with little influence from the City.	4, 7, 37
ECONOMIC ENVIRONMENT	16. Changes in Council rates due to change in MRS zoning to 'Urban'.	Properties predominantly used for Rural are rated on an (UV) Unimproved Value (site value of the land). Properties predominantly used for Non-Rural are rated on (GRV) Gross Rental Value. The valuations either UV and GRV are provided by the Valuer General to Council. As zoning is changed through MRS and Local Planning Scheme amendment processes, the 'use' of the property does not necessarily change. As a property owner changes the 'use', at that point the rating of the property may be re-calculated. Zoning change does not directly cause rating changes.	Nil
BUILT ENVIRONMENT	17. Impact of new residential development (i.e. Satterley site) on traffic congestion in Upper Swan townsite and access to Great Northern Highway.	The impacts of the new development will be reviewed as part of the assessment of the Upper Swan Local Structure Plan and associated Developer Contribution Plan. The City is liaising with Main Roads WA regarding the access to Great Northern Highway. The City has annual budgets for combating traffic congestion and other traffic and safety hazards as part of their operating budget. Therefore any unanticipated issues can be dealt with on an ongoing basis.	44
	18. Management of resource extraction sites and future use of the land.	Development applications are approved by the City but follow state government legislation. The future use of land is usually constrained. The City holds bonds for the rehabilitation of land once a site is closed. The City will investigate an audit of all resource extraction sites to create a central database of all sites, determine their location, size, bonds, conditions and rehabilitation requirements.	27, 28

Key Result Area	Public Comments received	Comments	Related Actions
CONCERNS: in order of priority by theme			
BUILT ENVIRONMENT	19. Impact of Satterley development not properly considered including land use conflict.	The impacts of new development will be reviewed as part of the assessment for the Upper Swan Local Structure Plan (Note the Upper Swan LSP is located outside this study area). The Local Rural Planning Strategy, and the Upper Swan LAP, both contain several actions to address land use conflict going forward.	36, 37, 42, 43
	20. Emergency access for Upper Swan residents (particularly when restricted on Great Northern Highway).	The City recommends that affected properties have a bushfire survival plan which provides escape routes from their properties. DFES also has the 'Prepare. Act. Survive' guidelines to aid residents in the preparation of such a plan. This is also managed by the City through Bush Fire Management Plans. The City is also working to provide access/egress to the local area.	30.3, 44
	21. Conflict between surrounding land uses and the nature reserves impacting on the Western Swamp Tortoise (WST).	The land surrounding the Western Swamp Tortoise reserves are protected by the Environmental Protection (Western Swamp Tortoise Habitat) Policy 2011 and regulated by the EPA and DPaW. The City also liaises with these agencies should any compliance issues arise. The City will implement actions from the LRPS to manage land use conflicts.	32, 34, 42
	22. Speeding/racing particularly on Campersic Road in Brigadoon and Railway Parade, Ellenbrook Road and Maralla Road in Upper Swan.	Speeding and racing on public roads are a matter to be dealt with by Police, however the City acknowledges the role it plays in assisting with communication gathering via the community. The City will look to provide stronger links between the community and the Police to enable more effective communication lines.	16
	23. Cumulative impacts of trucks from extractive industries and lack of data available regarding extraction sites.	The City will investigate an audit of all resource extraction sites to create a central database of all sites, determine their location, size, bonds, conditions and rehabilitation requirements. Future applications will be addressed as statutorily required, including vehicle movements and potential impacts on the transport network.	28
	24. Upper Swan townsite will also be zoned 'urban'.	The existing townsite is already recognised as 'townsite expansion' in the Local Rural Planning Strategy. The North East Sub-regional Planning Framework should determine what the State's vision for this local area is, however as it stands, the City has anticipated its outcome through the LRPS and the Bullsbrook Townsite and Rural Strategy 2008 (adopted by Council but not endorsed by the State). The City's/State Governments's intentions for the area will be reiterated through future land use planning exercises, which will involve public consultation.	21, 36, 42
	25. Uncertainty and timing of state strategies and policies as they have implications to the local area.	The City works closely and aims to maintain a relationship with state government to ensure that knowledge sharing and policy changes are well communicated and interpreted. It is however acknowledged, that considerable delays on a decision on the North-East Sub Regional do impact on the City's ability to plan for the area.	3, 8
	26. Lack of public transport to facilitate new urban development (i.e. for the Satterley site).	The City will support and lobby for increased public transport when development occurs and the local population grows.	22, 46

Table 11. Results from the Community Engagement in Upper Swan local area - Suggestions

Key Result Area	Public Comments received	Comments	Related Actions
SUGGESTIONS: in order of priority by theme			
SOCIAL ENVIRONMENT	27. More community consultation from the City (i.e. annual meetings).	For community consultation to occur, there should be a purpose and objective. The City would encourage the establishment of a ratepayers/residents association or other similar group. This would most likely be established when the population grows in the coming urban development in Upper Swan. The City would be happy to engage and present at community meetings when required.	7, 13, 15
NATURAL ENVIRONMENT	28. Green corridors around development.	All corridors are mapped and generally follow existing creek lines. These are located in areas where it is practical and would serve biodiversity purposes. Green corridors are encouraged where appropriate when assessing local structure plans, subdivisions, scheme amendments and other major developments. This has been heavily considered in the Upper Swan Local Structure Plan.	31.1, 31.2, 34
	29. Enforce rehabilitation plans and implementation of resource extraction sites.	The City holds bonds for the rehabilitation of land once a site is closed. The City will undertake an audit of all resource extraction sites to create a central database of all sites, determine their location, size, bonds, conditions and rehabilitation requirements.	27, 28
	30. Compliance action on salvage yards adjacent to Western Swamp Tortoise reserves.	The City is aware of this issue and is currently liaising with the land owners and operators to clarify the issue.	Nil
BUILT ENVIRONMENT	31. Passenger rail on existing railway from Midland to Muchea.	The existing railway line is privately owned and is used as a freight line. The Public Transport Authority has a policy which ensures that freight lines are not to be used for passenger transport, so at this stage it is not being seriously considered.	Nil
	32. Investigate provision of aged care facilities - particularly within Upper Swan.	The City's Strategy for the Ageing Population has investigated this issue, and with current population rates and limited facilities, this local area has not been highlighted as a priority area to encourage the need for aged care accommodation. Ultimately, the market will determine whether an area is appropriate. Through the City's Lifespan Services Business Unit, there are several programs and opportunities for aged services provided by the City or other service providers. Nevertheless, zonings in the Upper Swan Structure Plan do not preclude the development of age care facilities.	9, 10
	33. City needs to ensure that the diversity of land uses are compatible.	Land uses are determined by the Local Planning Scheme and other state planning policies. Development applications consider the surrounding land uses and environment to help reduce land use conflicts.	36, 37, 39, 40, 41, 42, 43
	34. Allow urban development within townsite area (Upper Swan).	This objective has been adopted in the LRPS. Currently awaiting adoption of the North East Sub-regional Planning Framework for clear direction from state level.	36, 42
	35. Enclose drains in Upper Swan.	The City generally encloses drains and other services during local roads upgrade programs. Some local roads within Upper Swan have already been upgraded and drains enclosed. The City will consider the remaining roads as part of the local roads upgrade program. Some of the roads in Upper Swan may be given priority and funding supported by the new development in Upper Swan.	34
	36. Create bridle trails in Upper Swan.	Bridle trails are often created as fire breaks. They can be extremely difficult to maintain due to their accessibility and funding limitations. The City will investigate the creation of a Trails Strategy in the future and will consider trails as part of the Swan Valley Community Infrastructure Plan.	24.1, 47.1, 47.2

Part 3 - Local Area Plan

9.0 Local Area Plan

The Upper Swan local area has strong linkages with the natural assets of the area such as the Swan River, Ellen Brook and the surrounding natural bushland. The area is also characterised by its rural feel whilst maintaining proximity to major centres.

9.1 A Vision for the Future

The Upper Swan local area is comprised of the suburbs of Upper Swan, Walyunga, Brigadoon and parts of Bullsbrook and Baskerville. The area is predominately rural residential and characterised by natural environment and rural uses. The local area is connected to the far northern reaches of the Swan Valley, to which it has strong ties, and to the Darling Scarp to the east.

The needs of the Upper Swan local area are diverse, with the rural nature of the area creating various issues and opportunities for its local population. The relative proximity of the Upper Swan local area to Bullsbrook and Midland provides for employment and services but its low population also inhibits service providers from establishing themselves within the local area itself, increasing the importance of strong transport links.

The Upper Swan Local Area Plan has developed as a consolidated document for the future of Upper Swan, to be reviewed and to evolve as the needs of the local area are

met and priorities shift. The following objectives, strategies and actions represent what the City is to undertake in coming years to ensure the Upper Swan local area strengthens its position as a sustainable and desirable area to live, work and play.

9.2 Objectives

Governance – To continue to work with State Government and other agencies to ensure that the City is working in an efficient and effective manner, and maintaining clear communications with the community.

Social Environment – To facilitate the improvement of response to crime and illegal dumping, and to reduce bush fire risk through efficient communication with residents.

Economic Environment – To protect the existing agriculture and develop value adding rural industries in the local area. Also to promote tourism products and investigate new tourism opportunities.

Natural Environment – To improve management of bushland and undeveloped areas, to address concerns over protection and rehabilitation of the Ellen Brook and the two Western Swamp Tortoise nature reserves, and the rehabilitation of closed resource extraction sites.

Built Environment – To ensure that planning recognises and appropriately manages future growth pressures of the area but maintains key aspects of the locality, such as the 'rural feel'.

BELOW: Avon Ridge Park, Brigadoon



9.3 Strategies and Actions

In achieving the vision for the Upper Swan local area, actions have been developed through a process of consultation with the City of Swan's Business Unit representatives and internal staff. Community input was considered during the development of this Local Area Plan which was supplemented by City approved strategic documents and reports.

The actions identified in the following tables (Tables 12-16) are aligned to the City's internal business planning process and will be reviewed annually as part of the City's budget reviews, and its corporate business planning process.

The following key priorities were identified by the community during the community consultation process:

1. Impacts of New Urban Areas

With the new Upper Swan Local Structure Plan area adjacent to this local area, it has raised concern from local residents that it will reduce the rural feel of the area and create a variety of land use conflicts. Through the structure planning assessment of this development, the City has been working closely with the developer and other relevant state government authorities to help reduce any potential negative impacts caused by the major development and the increased population.

2. Manage Natural Assets

The Upper Swan local area contains a number of natural bushland, wetlands and public open space assets, which workshop participants indicated were highly valued in the community and a strong contributor to the area's sense of place. Concerns were raised that a lack of management was resulting in the clearing of vegetation, degradation of the environment and loss of biodiversity. Deficiencies in bushland management were also blamed for providing a bushfire risk and promoting antisocial behaviour. The City works with local environmental groups on rehabilitation projects and the City's Local Biodiversity Strategy, provides the strategic imperative for the preservation and protection of environmental assets.

3. Improve Road Safety

A major concern of community members was potentially dangerous and congested intersections and roads as a result of population increase both locally and from the surrounding areas. The Upper Swan local area has linkages with Great Northern Highway as a heavy haulage route and also contains the Road Assembly Area. This, along with the freight line, provide physical barriers to the local road network, and congestion is expected to increase as these routes become busier. A number of regional projects including NorthLink and construction on Gnangara Road, are currently being undertaken to address congestion at a regional level, which will have flow on effects for the Upper Swan local area.

4. Protect Existing Agriculture

The Upper Swan local area has a large amount of agricultural, industrial and extractive industries. The City will initiate and implement strategies to help balance these demands in line with state government plans and strategies. This in turn will help maintain employment, protect the rural lifestyle and allow a diverse range of land uses within the area.

5. Compatible Land Uses

With the new proposed urban development in Upper Swan, it has raised issues regarding the variety of land uses located in this local area. Issues such as dust and waste from extractive industries and development, traffic congestion, freight noise, bush fire risk, and recreational uses are all issues which have been raised. These have impacts on the local population as well as the local natural environment. Several actions have been established to help manage these competing priorities in this Local Area Plan and other existing City strategies.



Theme: Governance

Objective – To continue to work with State Government and other agencies to ensure that the City is working in an efficient and effective manner, and maintaining clear communications with the community.

Table 12. GOVERNANCE: The Upper Swan Local Area Plan Strategies and Actions

Key Result Area	Strategic Community Plan (SCP) Strategies	Local Area Planning Actions	Responsibility	Priority	Current Status (As at March 2017)
GOVERNANCE A Sustainable and Capable Council	G1.1 Provide accountable and transparent leadership				
	G1.1.1 Continue to develop policy framework that guides decision making.	1. Align the LAP process and actions to fit within the SCP objectives and strategies.	All Business Units	High	On-going Implementation
	G1.1.2 Integrate planning, resources and reporting.	2. Develop a Resources Plan as part of Local Area Planning. Ensure that Local Area Planning actions are embedded in the City's corporate business planning process for implementation by all Business Units.	Strategic Planning All Business Units	High	On-going Implementation
	G1.1.3 Respond to State government initiatives for the benefit of the City.	3. Action and implement changes as required as a result of changes in State government initiatives.	All Business Units	High	On-going Implementation
	G1.2 Promote the City of Swan as a place to live, work and visit				
	G1.2.1 Develop successful and collaborative partnerships.	4. Liaise closely with developers throughout the planning and development of the local area to ensure high quality liveable outcomes.	Executive Place Management Strategic Planning Statutory Planning	High	On-going Implementation
	G1.2.2 Advocate for infrastructure and access to services.	5. Ensure that the Upper Swan local area has access to appropriate services, housing and facilities for the existing and future population.	All Business Units	High	On-going Implementation

Theme: Governance continued

Key Result Area	Strategic Community Plan (SCP) Strategies	Local Area Planning Actions	Responsibility	Priority	Current Status (As at March 2017)
GOVERNANCE A Sustainable and Capable Council	G1.2.3 Promote, advocate and market the City and Place	6. Promote and support local tourism businesses and their growth as well as the establishment of new tourism ventures within the City.	Commercial and Economic Development (CED) Marketing and Public Relations (MPR)	High	On-going Implementation
	G2.1 Improve capability and capacity				
	G2.1.1 Improve organisational systems with a focus on innovative solutions.	7. Place Managers to work with Statutory Planning to investigate a program to initiate conversations between developers, the City and the community prior to the submission of structure plans and other major developments.	Place Management Statutory Planning	High	To Commence
	G2.1.2 Strengthen customer service.	8. Continue a close relationship with State government to ensure that knowledge sharing and policy changes are well communicated and interpreted.	All Business Units	High	On-going Implementation
	G2.1.3 Use resources efficiently and effectively.	Refer to Action 2.			

Theme: Social Environment

Objective - To facilitate the improvement of response to crime and illegal dumping, and to reduce bush fire risk through efficient communication with residents.

Table 13. SOCIAL ENVIRONMENT: The Upper Swan Local Area Plan Strategies and Actions

Key Result Area	Strategic Community Plan (SCP) Strategies	Local Area Planning Actions	Responsibility	Priority	Current Status (As at March 2017)
SOCIAL Connected, Safe, Inclusive	S1.1 Build service delivery options to meet the future needs of aged, youth, families and children				
	S1.1.1 Develop and deliver service options meeting future community requirements.	9. Implement the City of Swan's Strategy for an Ageing Population.	Lifespan Services Statutory Planning Strategic Planning	High	On-going Implementation
	S1.1.2 Seek alternative service providers to facilitate coordinate or partner appropriate service access; such as other agencies, non-government organisations and community groups.	10. Continue partnerships with external service providers and explore opportunities for new partnerships.	Lifespan Services Place Management	High	On-going Implementation
	S2.1 Build connectivity in local areas				
	S2.1.1 Strengthen place based management of services through collaboration and access	11. The City has undertaken a service gap analysis in the Upper Swan local area (Rural SGA) and has identified services which are lacking. Need to implement key actions from this document.	Lifespan Services	High	In Progress
	S2.1.2 Strengthen the sense of place and culture and belonging through inclusive community interaction and participation.	12. Develop a 'welcome pack' for residents new to Upper Swan local area, to inform on local issues such as waste, social wellbeing, biodiversity threats and fire.	MPR Place Management Lifespan Services Community Safety	Medium	In Progress
		13. Investigate the establishment of a ratepayers/residents association (particularly with the expected population growth in the area) to create a better connection between the City and its residents.	Lifespan Services Place Management	Medium	To Commence
	S2.1.3 Actively strengthen relationships with our diverse cultural community.	14. On-going support for community initiatives and events to promote the inclusion of people from diverse cultural backgrounds in on-going community projects.	Lifespan Services Place Management All Business Units	High	On-going Implementation

Theme: Social Environment continued

Key Result Area	Strategic Community Plan (SCP) Strategies	Local Area Planning Actions	Responsibility	Priority	Current Status (As at March 2017)
SOCIAL Connected, Safe, Inclusive	S2.1 Build a strong sense of community health and safety				
	S.2.2.1 Facilitate improvement of community safety.	15. Implementation of the City of Swan's Community Safety Plan: Direct service delivery at place, through local place office. Ensure effective communication flows between City of Swan front line staff, place based staff and business units working on community safety priorities such as crime prevention and perceived crime rates.	Community Safety Lifespan Services Facilities Management (FM)	Medium	On-going Implementation
	S2.2.2 Strengthen public health and safety outcomes within the community through promotion and education.	16. Local police teams and City of Swan safety representatives to make more regular contact with local community. Police and City of Swan Community Safety team members to attend relevant to community meetings.	Community Safety Lifespan Services Place Management	High	To Commence

Theme: Economic Environment

Objective - To protect the existing agriculture and develop value adding rural industries in the local area. Also to promote tourism products and investigate new tourism opportunities.

Table 14. ECONOMIC ENVIRONMENT: The Upper Swan Local Area Plan Strategies and Actions

Key Result Area	Strategic Community Plan (SCP) Strategies	Local Area Planning Actions	Responsibility	Priority	Current Status (As at March 2017)
ECONOMIC Thriving, Sustainable Business Capacity and Growth	E1.1 Actively support and develop local and new business				
	E1.1.1 Lobby for the technological infrastructure necessary to support commercial and business growth.	17. Improve telecommunications and internet infrastructure. The City is actively pursuing NBN installation across the City. The City is looking into installing pits/pipes during the construction of new/upgraded roads to accommodate future improved telecommunication infrastructure.	MPR Asset Management Project Management	High	On-going Implementation
	E1.1.2 Create business and community partnerships.	18. Identify partners in government, non-government and the private sector with an investment interest in the City of Swan. Foster on-going partnerships with business and community (i.e. prospective education investors).	CED	High	On-going implementation
	E1.1.3 Review and align land use and infrastructure plans.	19. Undertake on-going implementation and review of land use and infrastructure plans.	Strategic Planning Statutory Planning	High	On-going implementation
	E2.1 Attract business and investment opportunities				
	E2.1.1 Identify extent and type of industry growth in all economic and commercial centres throughout the City of Swan and address our economic vulnerability.	20. Initiate an Agri-business Strategy. Identify opportunities for agricultural diversification.	CED	High	To Commence
	E2.1.2 Facilitate future industrial development.	21. Implement the actions from the Local Commercial and Activity Centres Strategy (to be adopted 2017).	Strategic Planning	High	In Progress
	E2.1.3 Target and attract emerging growth sectors to capitalise on local economy and employment.	Refer to Action 20.			

Theme: Economic Environment continued

Key Result Area	Strategic Community Plan (SCP) Strategies	Local Area Planning Actions	Responsibility	Priority	Current Status (As at March 2017)
ECONOMIC Thriving, Sustainable Business Capacity and Growth	E2.1.4 Strengthen Midland as the 'strategic metropolitan centre' ensuring community needs are met.	22. Support the growth and connection to employment nodes such as Midland Strategic Metropolitan Centre and future Bullsbrook industrial areas, to provide employment opportunities for residents in the Upper Swan local area.	Strategic Planning CED	High	On-going Implementation
	E3.1 Strengthen the capacity and integration of the tourism industry				
	E3.1.1 Develop partnerships to actively support visitor growth.	23. On-going support of festivals in the area, encompassing aboriginal tourism, youth, heritage, local produce and traditional events. Promotion of festivals within Upper Swan and surrounding local area.	CED MPR Place Management Lifespan Services	High	On-going Implementation
	E3.1.2 Leverage our environmental, built, heritage and social assets in the promotion of tourism.	24. Implement the City's Tourism Development Strategy.			
		24.1 Improve the promotion of the trails network in the area including walking, cycling, bridle and canoe/kayak. These could include a guided tour element or self-guided.	CED MPR Strategic Planning	Medium	To Commence
		24.2 Investigate the opportunity to establish formalised campgrounds at Bells Rapids and improve/expand the ones at Walyunga National Park.	CED Strategic Planning	Medium	To Commence
		24.3 <i>Refer to LRPS Action 2.1 (3b)</i> Development of value adding rural industries, support services and tourism will be encouraged	CED MPR Strategic Planning	Medium	To Commence (Refer to Action 20)
		24.4 Promote tourism opportunities, (particularly Aboriginal Tourism) to diversify employment and economic opportunities.	CED MPR Strategic Planning	High	To Commence

Theme: Natural Environment

Objective - To improve management of bushland and undeveloped areas, to address concerns over protection and rehabilitation of the Ellen Brook and the two Western Swamp Tortoise nature reserves, and the rehabilitation of closed resource extraction sites.

Table 15. NATURAL ENVIRONMENT: The Upper Swan Local Area Plan Strategies and Actions

Key Result Area	Strategic Community Plan (SCP) Strategies	Local Area Planning Actions	Responsibility	Priority	Current Status (As at March 2017)
NATURAL ENVIRONMENT Environmentally Sustainable Leadership and Stewardship	N1.1 Mitigate City's carbon footprint, reducing waste and greenhouse gas production				
	N1.1.1 Effectively manage resource consumption, including water, energy and non-renewable resources.	25. <i>Refer to Action from LRPS 2.2 (1)</i> Promote the sustainable use and management of natural resources (land and water resources) in the City of Swan's rural areas and the surrounding region.	Strategic Planning Statutory Planning	High	On-going Implementation
		66. <i>Refer to Action from LRPS 2.5 (1)</i> Protect and enhance the rural landscape recognising prevailing native vegetation and topography as important landscape features through the local planning framework and decision-making.	Strategic Planning Statutory Planning	High	To Commence
		27. <i>Refer to Action from LRPS 2.2 (4c)</i> Ensure appropriate staging and rehabilitation of extractive industry operations, to ensure post-extraction areas are restored to accommodate viable agriculture and rural land uses, post extraction.	Statutory Planning Strategic Planning	High	On-going Implementation
		28. Conduct an audit on existing Resource Extraction sites. Purpose is to create a central database of all sites, determine their location, size, bonds, conditions and rehabilitation requirements. These must all be in line with state and local government policy.	Strategic Planning Statutory Planning (Compliance) Asset Management	Medium	To Commence
	N1.1.2 Reduce waste through reduction, re-use and recycling of waste products.	29. Implement the Reducing Illegal Dumping (RID) program in problem areas within the local area.	Community Safety	High	On-going Implementation

Theme: Natural Environment continued

Key Result Area	Strategic Community Plan (SCP) Strategies	Local Area Planning Actions	Responsibility	Priority	Current Status (As at March 2017)
NATURAL ENVIRONMENT Environmentally Sustainable Leadership and Stewardship	N1.2 Adapt to the effects of climate change				
	N1.2.1 Minimise the impact of extreme weather conditions through emergency management planning.	30. Manage fire risk through collaboration with residents and agencies.			
		30.1 Liaise with land owners regarding the City's yearly fire hazard inspection process in areas of high risk.	Community Safety	High	On-going Implementation
		30.2 Liaise with DFES with regards to their fire response plans for public land.	Community Safety	High	On-going Implementation
		30.3 Ensure that bushfire hazards are properly considered in planning decisions through the Bushfire Risk Management Plan (BRMP).	Statutory Planning Strategic Planning Community Safety	High	On-going Implementation
	N1.2.2 Implement Policy changes through planning, building, land management and infrastructure.	Refer to Actions 30.1-30.3 Ensure that all assessments take into consideration all current and new policies relating to fire and emergency management.			
	N2.1 Enhance, preserve and protect local ecology and biodiversity of natural ecosystems				
	N2.1.1 Conserve and enhance open spaces.	31. Implement actions of the Local Biodiversity Strategy.			
		31.1 Preserve remnant vegetation, encourage re-vegetation of cleared areas, reduce soil and water degradation.	Asset Management Strategic Planning Statutory Planning CM	Medium	On-going Implementation
		31.2 Discourage the clearing and degradation of bush land and associated loss of biodiversity through advocacy in Strategic and Statutory Planning, in line with the Biodiversity Strategy. This includes requiring environmental management plans for new subdivisions to maximise bush land protection.	Statutory Planning Strategic Planning	High	On-going Implementation
		32. <i>Refer to Action from LRPS 2.9.3 (2a.i)</i> Address the sensitivity of the surrounding environment, including the Ellenbrook Catchment area and the Ellen Brook Nature Reserve, with consideration given to up-to-date advice provided by the EPA in regards to the Western Swamp Tortoise habitat and surrounding land uses, in order to allow development in Upper Swan.	Statutory Planning Strategic Planning Asset Management	High	To Commence

Theme: Natural Environment continued

Key Result Area	Strategic Community Plan (SCP) Strategies	Local Area Planning Actions	Responsibility	Priority	Current Status (As at March 2017)
NATURAL ENVIRONMENT Environmentally Sustainable Leadership and Stewardship	N2.1.2 Conserve natural vegetation and bushland.	33. Encourage environmental leadership within local communities.			
		33.1 Encourage environmental action groups to take ownership of natural spaces such as investigating a 'Friends Of' for Bells Rapids to help minimise negative environmental impacts.	CM Strategic Planning	High	On-going Implementation
		33.2 Support 'Friends of the Western Swamp Tortoise' and the 'Ellen Brockman Integrated Catchment Group' to enable protection of the endangered Western Swamp Tortoise particularly in Twin Swamps and Ellen Brook Nature Reserves.	CM Strategic Planning	High	On-going Implementation
	N2.2 Reduce adverse impacts on biodiversity				
	N2.2.1 Protect waterways through appropriate land management practices.	34. <i>Refer to Action from LRPS 2.9.3 (2a.ii)</i> Review the LPS17 measures for the Western Swamp Tortoise habitat protection, namely through application of a spatial statutory plan (structure plan or similar) addressing specific requirements by the EPA such a land use activity, setbacks, minimum lot sizes and land management measures in areas abutting, or affected by, the nature reserves containing the habitat.	Strategic Planning Statutory Planning Asset Management	High	To Commence
	N2.2.2 Implement "best practice" in management of ground and surface water.	35. Investigate the closure of the drains in Upper Swan through the local roads upgrade program.	Asset Management	Medium	To Commence

Theme: Built Environment

Objective - To ensure that planning recognises and appropriately manages future growth pressures of the area but maintains key aspects of the locality, such as the 'rural feel'.

Table 16. BUILT ENVIRONMENT: The Upper Swan Local Area Plan Strategies and Actions

Key Result Area	Strategic Community Plan (SCP) Strategies	Local Area Planning Actions	Responsibility	Priority	Current Status (As at March 2017)
BUILT ENVIRONMENT Diverse, Connected, Sustainable Places	B1.1 Facilitate and integrate housing options, local services, employment and recreational spaces				
	B1.1.1 Facilitate diverse, inclusive, housing options.	36. <i>Refer to Action from LRPS 2.9.3 (1b)</i> Identify the townsite expansion area consistent with land uses and urban development anticipated for the area.	Strategic Planning	Medium	To Commence
	B1.1.2 Strengthen growth through the alignment of land use and infrastructure planning.	37. Undertake Scheme amendments as required. Seek approval from WAPC on all relevant Scheme Amendments pertaining to the Upper Swan local area.	Strategic Planning Statutory Planning	High	On-going Implementation
		38. Ensure Development Contribution Areas and Plans are adopted and implemented as appropriate and align to state and local strategies and plans.	Statutory Planning Strategic Planning Finance Asset Management	High	On-going Implementation
		39. Implement the Commercial Centres Strategy Provide appropriate zoning for commercial needs within the Upper Swan local area, through assessment of appropriate applications for scheme amendments, additional uses, or development assessments.	Statutory Planning Strategic Planning	High	On-going Implementation
		40. <i>Refer to Action from LRPS 2.1 (2a)</i> Establish a Rural Smallholdings zone in the LPS17 to allow lots of 4-40 hectares only where it can be demonstrated the subject land can accommodate viable and sustainable agricultural and/or rural enterprise.	Strategic Planning Statutory Planning	High	To Commence
		41. <i>Refer to Action from LRPS 2.1 (2b)</i> Consider alternative systems for primary production such as cluster farming and agricultural cooperatives in development of future land use planning policy, subdivision assessment and development applications.	Statutory Planning Strategic Planning	High	On-going Implementation

Theme: Built Environment continued

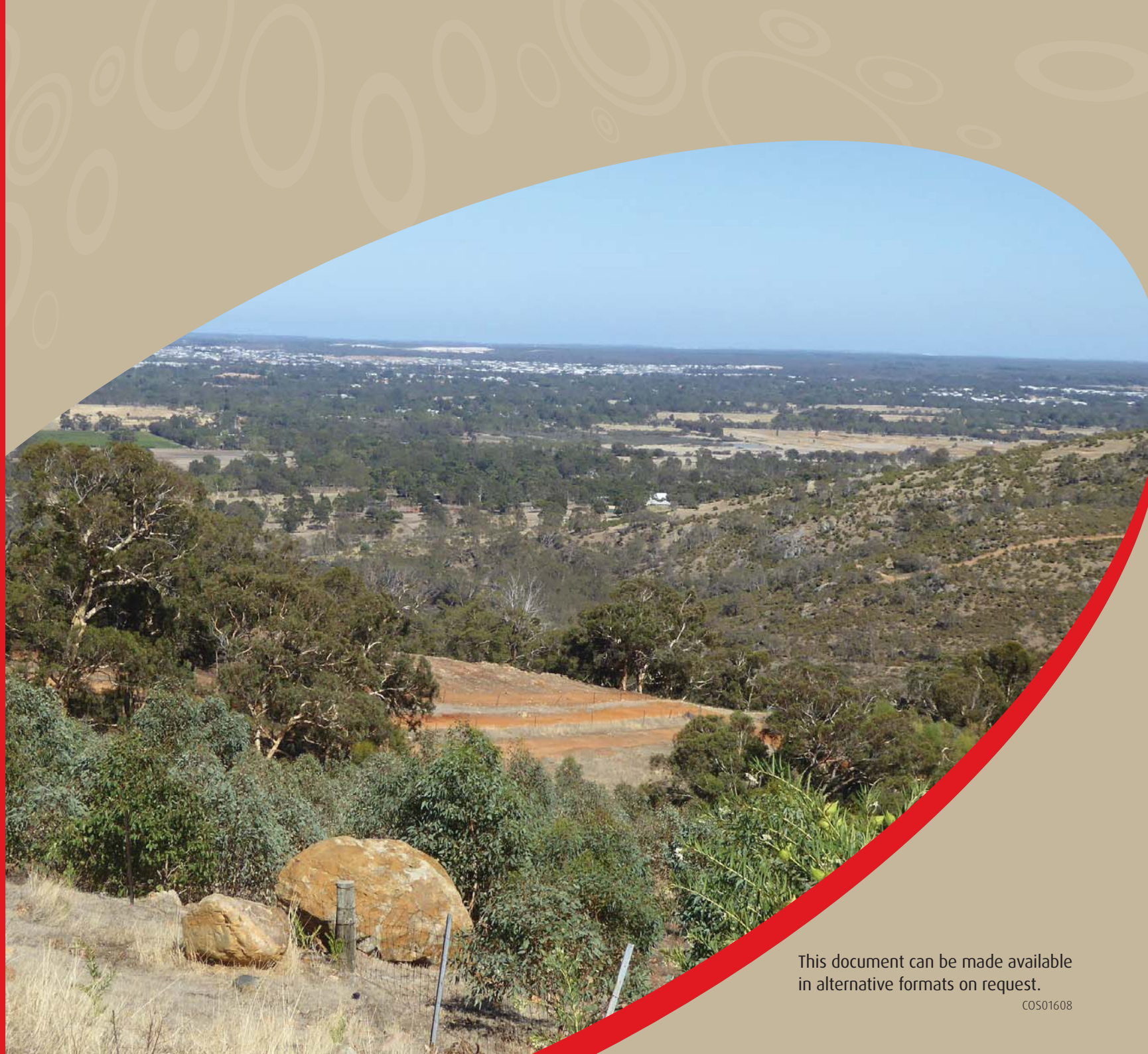
Key Result Area	Strategic Community Plan (SCP) Strategies	Local Area Planning Actions	Responsibility	Priority	Current Status (As at March 2017)
BUILT ENVIRONMENT Diverse, Connected, Sustainable Places	B1.1.3 Provide appropriate open space to recreate and connect.	42. Refer to Action from LRPS 2.9.3 (1c) Preparation of a strategic Master Plan or similar spatial planning instrument on order to guide land use and service and infrastructure delivery in the Upper Swan townsite. <i>Note: An indicative future land use map has been included at the rear of this document as Appendix A, to demonstrate possible future land use zoning.</i>	Strategic Planning	Medium	To Commence (If justified by outcome of Sub Regional Framework)
	B1.2 Enhance the public realm				
	B1.2.1 Build a sense of place through public realm and improved streetscapes.	43. Refer to Action from LRPS 2.5 (3) Retain and enhance the rural character and landscape of the City's rural townsites and their surrounds.	Strategic Planning Statutory Planning	High	On-going Implementation
	B1.2.2 Create liveable Places through Local Area Planning.	See Action 42.			
	B2.1 Manage current and future assets and infrastructure				
	B2.1.1 Continue to improve asset management practices.	44. Facilitate major road upgrades in the surrounding area, such as the creation of the Perth-Darwin Highway and Railway Parade bridge and upgrade.	Executive Strategic Planning Asset Management Project Management	High	In Progress
	B2.1.2 Maintain and protect heritage.	45. Ensure that heritage is properly considered in the development and redevelopment process including decision making frameworks.	All Business Units Statutory Planning	Medium	On-going Implementation

Theme: Built Environment continued

Key Result Area	Strategic Community Plan (SCP) Strategies	Local Area Planning Actions	Responsibility	Priority	Current Status (As at March 2017)
BUILT ENVIRONMENT Diverse, Connected, Sustainable Places	B3.1 Advocate and provide alternative transport				
	B3.1.1 Lobby and advocate for public transport.	46. Implement the recommendations of the City's Transport Strategy. Support consideration of public transport when the population becomes sustainable for a service.	Strategic Planning	Medium	TOngoing Implementation
	B3.1.2 Provide bicycle and pedestrian connections.	47. Provision of necessary paths in new structure plans.			
		47.1 Consider pedestrian, cycle and bridle trails for this local area as part of the Swan Valley Community Infrastructure Plan.	Asset Management Strategic Planning CM	Medium	To Commence
		47.2 Develop a long-term City-wide trails strategy identifying existing trails assets including bridle, walking, cycle and kayak/canoe trails.	Asset Management Strategic Planning CM	Medium	To Commence

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