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Executive Summary

The Shire of Kalamunda's Local Planning Strategy has been prepared in accordance with the Shire's statutory obligations under the Planning and Development Act 2005 and also in accordance with the 'guidelines' for the preparation of a Local Planning Strategy required by the Department of Planning.

The Purpose of the Local Planning Strategy is to enable Council to determine the vision and strategic planning direction for the Shire of Kalamunda for the next twenty (20) years, to coincide with Directions 2031. Once Council has endorsed the Local Planning Strategy it will be submitted to the Western Australian Planning Commission (WAPC) for endorsement.

Preparation of the Local Planning Strategy has included assessment of all relevant State and Regional planning documents. These include the State Planning Strategy, State Planning Framework, Statements of Planning Policy and many more. Key Planning Issues and Implications have been identified.

Preparation of the Local Planning Strategy has also taken the Local Planning Context into consideration. All relevant Local Planning Documents have been examined such as: the Shire's Strategic Plan 2009 – 2014, Aged Accommodation Strategy, Economic Development Strategy, Tourism Strategy and draft Community Facilities Plan. Key Planning Issues and Implications have again been identified.

Community consultation was undertaken at the beginning of the planning process by means of a number of Planning Vision Workshops held in each ward after extensive advertising. Each ward in the Shire was consulted on their Values, Concerns and Visions for the Shire of Kalamunda in the future and their community's responses have been considered throughout the process. Once the WAPC has endorsed the Local Planning Strategy additional consultations will be held with the community.

Western Australia is currently growing and developing very rapidly and changes in the immediate environs of Kalamunda will ensure that land use planning pressures will be a major challenge for the next 20 years and beyond. It is therefore imperative to update our thinking and planning for the future on an ongoing basis.

The Local Planning Strategy has been arranged in three main sections:

1. An introduction that provides the reason for preparing the Local Planning Strategy.
2. The Strategies and Actions that will deliver the desired outcomes for the Key Action areas.
3. Detailed Background Information and Analysis that includes State and Regional Planning Context, Local Planning Context, Local Profile, Key Issues and Opportunities and Constraints, which underpins the strategies and actions.

The main thrust of the Local Planning Strategy is described as follows:

1. The promotion and enhancement of the Kalamunda Town Centre and Forrestfield Forum as the main centres in the Hills and Foothills respectively.
2. The protection of the natural environment and biodiversity.
3. The provision of a range of housing types to suit the demographic profile.
4. The promotion of local employment growth based on airport development, industrial expansion in the freight sector and home based businesses.
5. The encouragement of well-designed commercial activity centres in the community.
6. The encouragement and promotion of tourism activities where appropriate.
7. The provision of excellent recreational and community facilities throughout the Shire.
8. The expansion of new industrial areas to take advantage of the State industrial and transport policies and opportunities at Perth Airport.

9. The expansion of new urban areas in a sustainable manner, providing increased housing and lifestyle opportunities; local employment opportunities and protection of biodiversity and the natural environment.
10. The maintenance of quality and economic viability of the rural areas without adverse impacts on the environment.
11. The promotion of excellent public transportation and the efficient development of physical infrastructure.

The following are the Key Strategic Issues that have emerged from the planning analysis:

Aged Accommodation:

- The ageing of the population and in particular the 'Baby Boomers' will impact on the available housing in the Shire. Approximately 94 per cent of the housing in the Shire is single residential housing on large lots that was constructed for families during times when the demographic profile was different to the present. By 2031, 1 in 3 people will be over 55 years of age and more than half of them will be over 70 years of age. There is an urgent need to diversify the housing stock in all localities of the Shire to cater for more compact housing for older people so as to avoid making older members of the community leave the Shire to find suitable accommodation.

Future of the Special Rural Areas:

- The Shire contains large areas of Special Rural Zoning that are coming under pressure for urban growth given their locational attributes such as their close proximity to the Perth CBD and local freight industrial uses and employment opportunities such as the Forrestfield Industrial Area and Perth Airport. This pressure is evident with commercial uses such as truck parking, machine storage and builders yards encroaching on the Special Rural areas. The quality of rural residential uses is declining.

Future Land Uses in the Orchard Areas:

- The Shire is under continual pressure to reduce the size of lots in the orchard areas with the social fabric of the hills orchard areas changing with family members within the industry moving into other occupations and the aging of the workers, many family members no longer have time to devote to working the orchards. In addition, claims of declining markets from overseas competitors have placed added economic pressures on the industry. Staff at the Department of Agriculture has strongly opposed such changes in the past as they claim that the orchards are a strategic fruit growing area for the Perth Metropolitan Region. This is an aspect that will require further investigation.

Industrial Growth and Employment:

- The rapid growth and development of the mining industry and associated employment is having a direct impact on the Shire. The Forrestfield industrial area has developed rapidly over the past few years. The Shire of Kalamunda is currently progressing the development of the Forrestfield/High Wycombe Industrial Area north of Berkshire Road and west of Roe Highway.

Perth Airport growth and Expansion:

- Perth Airport is the fastest growing airport in Australia. In addition aviation expansion the Westralia Airport Commission (WAC) is rapidly expanding the non aviation sector. The WAC has projected an additional 14,000 jobs by 2031. Anecdotal evidence suggests the growth of Perth Airport is currently having a significant impact on the demand for housing in the residential areas of High Wycombe, Forrestfield and Wattle Grove. This is expected to increase as the commercial expansion of Perth Airport continues.

Housing Development:

- With the current growth in the rate of employment in industry, freight and airport staff the rate of housing development in the Shire has been rapid. In comparison with higher value land in coastal locations, developable land in the Foothills is relatively more affordable. With the predicted population growth, the demand for housing is expected to continue. During the recent worldwide economic recession over 550 new houses were constructed in the Shire.

Sustainable Development Based on the Shire's Biodiversity Strategy:

- The Shire has a relatively high percentage of remnant vegetation and natural areas compared with most Local Governments in Western Australia and it is intended to develop sustainably within the guidelines established in the Shire's Local Biodiversity Strategy to ensure all local natural areas and environmentally sensitive areas are afforded the appropriate protection in the planning process.

Public Transport to Perth:

- The Shire of Kalamunda is relatively poorly served by public transport to Perth. There is an opportunity to link the Shire to Perth via a proposed rail line from Perth to the integrated Perth International – Domestic Terminal. An extension of the rail line into the eastern suburbs of the Shire could potentially open the line to 80,000 people in the future which would add to the economic efficiency of the rail connection.

Facilitation of Tourism Development Opportunities:

- The Shire has a number of tourism development opportunities that should be enhanced so as to improve the tourist visitations to the Shire. These include access to the start of the renowned Bibblumen Walk Track, Mundaring Weir lookout, the Hills wine and orchard areas and State Forrest and National Parks for passive and active recreation pursuits.

Provision of Community Infrastructure and Facilities in Established and Newly Developed Areas:

- The Shire maintains and enhances community infrastructure and facilities in established and newly developed areas. The future growth of the Shire will place greater demand on existing and new facilities. Council has adopted a Community Facilities Plan to guide the provision of a wide range of community facilities in the Shire of Kalamunda over the next 20 years.

Urban Design and Streetscape:

- There is an urgent need to improve the urban design and streetscape in the Shire, particularly the Kalamunda and Forrestfield activity centres. To this end, the Shire has embarked on an ambitious urban design project to improve the design and quality of the commercial activity centres in the Shire through the preparation of Townscape Improvement Plans. To date, the following improvement plans have been prepared and adopted :
 - Kalamunda Town Centre
 - Lesmurdie Shopping Centre
 - Edinburgh Road Shopping Centre, Forrestfield
 - Berle Way Shopping Centre, High Wycombe

Copies of the above plans are included as attachments to the report. Improvement plans are currently being prepared for:

- Forrestfield District Shopping Centre
- Kenneth Road Shopping Centre High Wycombe
- The section of Kalamunda Road between Abernethy Road and Roe Highway.

In support of the Townscape Improvement Plans, Planning Design Guidelines have been prepared for the Kalamunda Town Centre and Wattle Grove Village Centre.

To further guide development of the Shire's existing and planned commercial centres a Structure Plan is currently being prepared for the Forrestfield District Shopping Centre in accordance SPP 4.2 Activity Centres and a Development Concept Plan for the Wattle Grove Village Centre.

Key Elements Plan

The Local Planning Strategy includes a Key Elements Plan which is a broad strategy plan that provides guidance on the various areas within the Shire where rezoning or changes in density codings could occur over the next 20 years. This is however subject to further investigations being conducted in terms of, amongst other matters, the impact on environmentally sensitive areas, the availability of adequate services and bushfire management.

The Key Elements Plan identifies Investigation Areas that present development and growth opportunities however require further investigations.

The key matters that will need to be investigated for each Investigation Area are, but not limited to:

- Bushfire risk.
- Transport/movement networks.
- Infrastructure/servicing.
- Environmental and landscape impacts.
- Urban water management.

It should not be assumed that Investigation Areas will be rezoned for further subdivision, urban or industrial development at any time.

Population Projections and Future Growth:

- Existing population projections for the Shire prepared by the Department of Planning, although out of date, indicate approximately 20,000 additional people in the Shire by 2031. It is considered however, that the Shire of Kalamunda could accommodate population growth in excess of 80,000 by 2031. The Department is currently updating the projections but these have not been finalised to date. The current planning analysis has examined four broad population scenarios and assessed how these will impact on the Shire at various take up rates and densities.
- Recent Commonwealth / State Government Announcements indicate that the Australian population could reach 35.5 million by 2056 and that Perth will reach a population of 3.5 million by 2056 has caused widespread discussion relating to sustainability and reasonable levels of growth. The Western Australian State Government through its key strategic plan Directions 2031 and beyond has identified a population of 2.2 million for Perth, however has undertaken scenario planning in order to plan for the land supply and housing needed to accommodate a city of 3.5 million. What does this mean for the Shire of Kalamunda and the Local Planning Strategy?

What proportion of the future growth will Kalamunda be expected to accommodate or prepared to accommodate by 2031?

As part of the planning assessment it was decided to prepare 4 Population Scenarios: i.e. growth by 10,000, 20,000, 25,000 and 30,000 additional people over the next 21 years. The analysis also looked at what planning principles should underpin the scenarios and what the impact would be on the Shire of the different scenarios. Some of the key planning principles cover the following aspects:

- Targeted urban consolidation, transport corridors, availability of services, infrastructure networks, commercial centres, employment availability, retention of buffers and reserves.

Accommodation of the projected population growth will be achieved through the following combination of strategies:

- Consolidation of existing urban areas, utilizing the capacity in existing urban structure plan cells, proposed new urban expansion areas, proposed urban investigation areas and potential future low density residential development in semi-rural areas of the Foothills.

Population Scenario 1:

Growth by 10,000 people accommodated in existing Development Areas (Wattle Grove U9, Forrestfield U7, High Wycombe U2, Maida Vale U6 and U4 and Canning Location 311, Lesmurdie). Proposed Urban Area (Stirling Crescent) and Proposed Urban Infill Areas (Kalamunda, High Wycombe and Forrestfield). At current development rates Scenario 1 will be achieved in approximately 7 years (2017) without any major changes. **See Scenario 1 Plan, Figure 19 on page 78.**

Population Scenario 2:

Growth by 20,000 people accommodated as in scenario 1 (with some higher take up rates) plus Proposed Urban Investigation Area from Special Rural to Urban (R20/30) (north of Sultana Road East and Pickering Brook). At current development rates this would be achieved in 15 years (2025). **See Scenario 2 Plan, Figure 20 on page 80.**

Population Scenario 3:

Growth by 25,000 people accommodated as in scenarios 1 and 2 plus Residential Bushland development R5 (R2.5) of Special Rural land to the east of Hawtin Road/Lewis Road (R5) and Wattle Grove south of Welshpool Road to a range of densities (R2.5, R5, R20 and R30 in centre) and including a Neighbourhood Centre in Wattle Grove. At current development rates the final part of this scenario (Special Rural land to Urban) would be required by 2025. **See Scenario 3 Plan, Figure 21 on page 83.**

Population Scenario 4:

Growth by 30,000 people accommodated as in scenarios 1 and 2 plus Residential development (R20) of Special Rural land to the east of Hawtin Road/Lewis Road and Wattle Grove (south of Welshpool Road) to densities of R20/R30 including a Neighbourhood Centre in Wattle Grove. This scenario would retain a special rural buffer along the edge of the Scarp. See plan of Scenario 4 below. At current development rates the final part of this scenario (Special Rural land to Urban) would be required by 2025. **See Scenario 4 Plan, Figure 22 on page 85.**

Scenario 3 is the recommended scenario for the Local Planning Strategy. The rationale for this recommendation is as follows:

- It best meets the expressed needs and wants of the community as discovered during the Land Use Planning Workshops held in each ward of the Shire.
- It provides for growth consistent with the State Government's key strategic planning documents Directions 2031 and beyond.
- The introduction of new urban areas in Maida Vale South and Wattle Grove recognises the locational attributes of these areas for urban growth. These new urban areas are balanced through the introduction of a low density Residential Bushland zoning in the foothills areas of Maida Vale and Forrestfield with an emphasis on tree and vegetation retention and protection. The proposed urban areas will provide an appropriate mix of housing and lifestyle opportunities in areas only 15 -20 minutes from the Perth CBD.
- It represents a sustainable approach and achieves an appropriate balance between population growth, protection of the environment, jobs growth and economic development in the Shire.

Importantly, the introduction of new urban areas will require comprehensive planning and analysis of the issues relating to each of the proposed new areas to be undertaken prior to the Metropolitan Region Scheme amendment, Local Planning Scheme amendment, structure plan and subdivision process. The planning analysis will be required to examine a range of issues, including:

- Site analysis, comprising topography and soils, wetlands and hydrology, vegetation – flora and fauna
- Servicing information – Wastewater, water, power supply.
- District and Local Water Management Strategy - Hydrological investigations.
- Geotechnical and drainage investigations.

In addition to the above analysis a Bush Fire Strategy will have to be prepared with particular emphasis on the proposed Residential Bushland zoning.

Once the Local Planning Strategy is endorsed by the Western Australian Planning Commission it will provide the strategic context to update and review Local Planning Scheme No.3.

The Local Planning Strategy will represent an evolving strategy for the ongoing management of planning matters in the Shire in the future and will be subject to regular review.

1.0 Introduction

The Shire of Kalamunda's current Local Planning Scheme No.3 was gazetted in March 2007. The Scheme review commenced in 1993 and took many years to prepare. Once the Scheme was put into daily use it was realised that many aspects of the Scheme that were introduced in the 1990s were based on 1980s planning concepts and many aspects were already out of date. As the current Scheme was commenced before 1999 it included the preparation of a Scheme Review Report and not a Local Planning Strategy. The 2007 Scheme therefore contained only a minimum of strategic planning consideration.

In August 2007 Council endorsed the preparation of a Local Planning Strategy that would be used to update the Scheme by means of one or more Amendments to introduce the changes that were considered necessary. On the basis of Council's approval Planning Vision Workshops were held later in 2007 and during the first half of 2008.

Once Shire planning staff had the feedback from the Visions Workshops they commenced the preparation of the Local Planning Strategy. The current Draft Report is therefore the combined work of a large number of Shire planning staff.

During the process of preparation a number of changes took place in the Shire and at a State planning level. Network City was the original Metropolitan scale strategy that was used as a basis for planning. With the change in government in 2008 Network City was superseded at the Metropolitan scale which resulted in additional reworking of the Local Planning Strategy.

1.1 Purpose of a Local Planning Strategy

In 1999, Town Planning Amendment Regulation 12 A (3) was introduced that requires a Local Planning Strategy be prepared with the purpose of:

1. Setting out the long term planning directions for the Local Government,
2. Applying State and Regional Planning Policies, and
3. Providing the rationale for the zones and other provisions of the Scheme.

1.2 Community Consultation

A series of Land Planning Vision Workshops were held between November 2007 and May 2008. Workshops were held in the Kalamunda Town Centre and each of the five wards. Each of the workshops examined community values, concerns and visions as these would become the building blocks for the preparation of the Local Planning Strategy. An analysis was made of the community feedback on the basis of social, economic and environmental considerations and also the frequency of particular issues occurring. The results of the workshops are recorded in Appendix 1. It should be noted that many of the community suggestions may be seen as contradictory and for that reason staff has relied more on the higher ranked suggestions than the lesser ranked suggestions.

In addition to the workshops, questionnaire surveys were undertaken through the medium of a local community newspaper. The results of the questionnaire surveys are recorded in Appendix 2.

A total of 317 people attended the workshops. The workshop attendees have been consulted as a reference group for the Local Planning Strategy.

1.3 Methodology

1.3.1 Consultation with the Department of Planning

For the purpose of preparing the current Local Planning Strategy the Department of Planning was consulted. The Department stressed the need for a concise document, based on their guidelines. They also stressed that they did not require excessive data and analysis, but wanted a well reasoned rationale that focussed on planning implications of the Strategy.

1.3.2 Project Management Arrangements

In August 2007, Council resolved to support the preparation of the Local Planning Strategy. The methodology adopted is in accordance with the statutory requirements of the Planning and Development Act (2005) and the Policies of the Western Australian Planning Commission.

2.0 Strategy

2.1 Vision and Planning Principles

Vision

The Vision for the Local Planning Strategy is based on the vision statement in the 'Shire of Kalamunda Strategic Plan 2009 – 2010'. This vision is as follows:

"The Shire will have a diversity of lifestyles and people. It will take pride in caring for the natural, social, cultural and built environments and provide opportunities for people of all ages."

Planning Principles

The Planning Principles on which the present Local Planning Strategy is based are similar to those set out in the State Planning Strategy that applies at the local scale. These are as follows:

- The primary aim of planning is to provide for the sustainable use and development of land.
- Environment: to protect and enhance the key natural and cultural assets of the Shire and deliver to all residents a high quality of life which is based on environmentally sustainable principles.
- Community: to respond to social changes and facilitate the creation of vibrant, safe and self reliant communities.
- Economy: to actively assist in the creation of regional wealth, supports the development of new industries and encourages economic activity in accordance with sustainable development principles.
- Infrastructure: to facilitate strategic development by making provision for efficient and equitable transport and public utilities.

2.2 Objectives

The objectives for the Local Planning Strategy are therefore as follows:

- To be a guiding document that provides strategic planning direction to the year 2031.
- To set out the direction for economic, social, and environmentally sustainable development based on a comprehensive analysis of State, regional and local planning issues and objectives.
- To give direction to the Shire of Kalamunda Council, the Department of Planning, the Western Australian Planning Commission (WAPC) and the Minister for Planning, in the assessment of Scheme amendments, subdivision and development applications and to provide strategic support for this decision-making.
- To provide the basis for coordinated decision making on future servicing of the Shire by local, State government and servicing agencies.
- To provide a rationale for the strategic direction for growth and development to all stakeholders.
- To provide the context for coordinated planning and programming of physical and social infrastructure for the Shire.
- To identify further studies or investigations required within the Shire to meet objectives for creating good quality environments.

2.3 Strategic Plan

2.3.1 Local Planning Strategy

Based on the assessment of the State, Regional and Local Planning framework and an analysis of the planning components of the Shire of Kalamunda it is considered that population Scenario 3 should form the basis of the Shire's Local Planning Strategy to the year 2031.

Population Scenario 3 includes growth by 25,000 people accommodated as in Scenarios 1 and 2 plus low density Residential Bushland development (R5, 2,000sqm lots) of Special Rural land to the east of Hawtin Road and Lewis Road and Wattle Grove, south of Welshpool Road to a range of densities (R30 at the centre, R20, R5 and R2.5) radiating from a Neighbourhood Centre in Wattle Grove.

Scenario 3 is the recommended scenario for the Local Planning Strategy. The rationale for this recommendation is as follows:

- It best meets the expressed needs and wants of the community as discovered during the Land Use Planning Workshops held in each ward of the Shire.
- It provides for growth consistent with the State Governments key strategic planning documents Directions 2031 and beyond.
- The introduction of new urban areas in Maida Vale South and Wattle Grove recognises the locational attributes of these areas for urban growth. These new urban areas are balanced by the introduction of a low density Residential Bushland zoning in the foothills areas of Maida Vale, Forrestfield and Wattle Grove. The proposed urban areas will provide an appropriate mix of housing and lifestyle opportunities in areas only 15 -20 minutes from the Perth CBD.
- It represents a sustainable approach and achieves an appropriate balance between population growth, protection of the environment, jobs growth and economic development in the Shire.

2.3.2 Key Elements Plan

The Local Planning Strategy includes a Key Elements Plan (Appendix 9) which is a broad strategy plan that provides guidance on the various areas within the Shire where rezoning or changes in density codings could occur over the next 20 years. This is however subject to further investigations being conducted in terms of, amongst other matters, the impact on environmentally sensitive areas, the availability of adequate services and bushfire management.

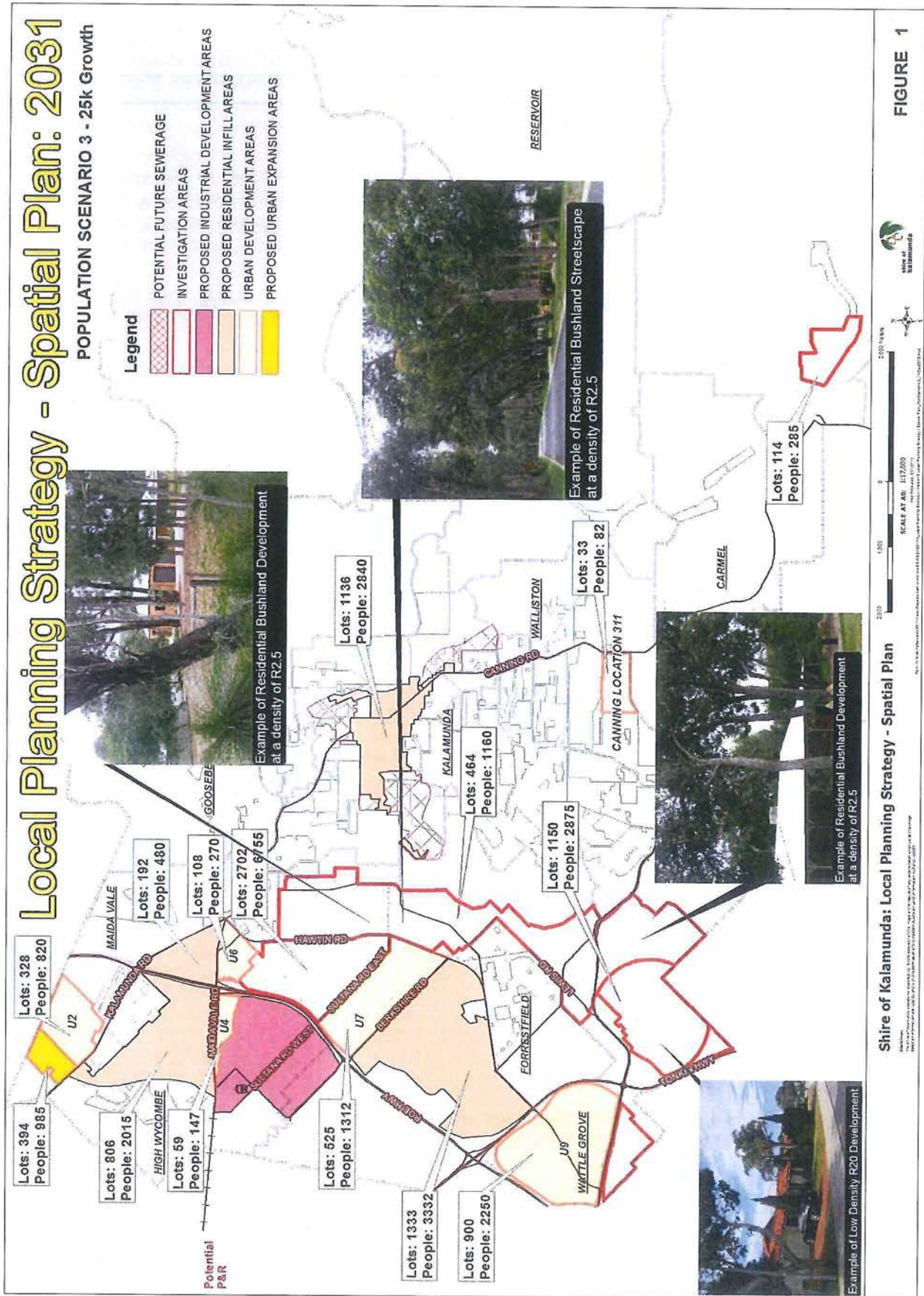
The Key Elements Plan identifies Investigation Areas that present development and growth opportunities however require further investigations.

The key matters that will need to be investigated for each Investigation Area are, but not limited to:

- Bushfire risk.
- Transport/movement networks.
- Infrastructure/servicing.
- Environmental and landscape impacts.
- Urban water management.

It should not be assumed that Investigation Areas will be rezoned for further subdivision, urban or industrial development at any time.

Figure 1: Local Planning Strategy; Scenario 3; Spatial Plan with Population Increase by 25,000.



2.4 Strategies and Actions

2.4.1 Kalamunda Town Centre

Vision Statement 1

Kalamunda Town Centre is the primary activity centre for the Shire.

Strategies:

- Create Kalamunda Town Centre as the "heart" of the Shire.
- Ensure business needs are recognized through land use planning, parking provision, appropriate development of the public domain and events.
- Engage with the commercial sector.
- Encourage a range of activities, including residential, to ensure vibrancy.
- Provide appropriate density housing to support the Town Centre.
- Plan for expanded tourism opportunities.
- Address long term utility requirements to support Town Centre.

Proposed Scheme Amendments and Policy Initiatives:

- Review Town Centre Zone recognising its characteristics and purpose through appropriate objectives, scheme provisions and policies.
- Implement Townscape Improvement Plans and Planning and Urban Design Guidelines.
- Review parking requirements through the preparation of a Traffic and Parking Study.

Vision Statement 2

Maintain 'village' look and feel in Kalamunda Town Centre.

Strategies:

- Enhance the 'village' streetscape through appropriate urban design criteria by implementing the Townscape Improvement Plans.
- Provide for future commercial development, including tourist accommodation, of an appropriate type and scale to compliment 'village' theme.
- Encourage town centre housing to compliment the 'village' theme.

Proposed Scheme Amendments and Policy Initiatives

- Review town centre policies to place emphasis on streetscape and pedestrian amenity.
- Enable shop top housing through appropriate scheme provisions and design parameters.
- Implement Townscape Improvement Plans and Planning and Urban Design Guidelines.

2.4.2 Environment

Vision Statement

The biodiversity and natural environment values are protected and preserved for existing and future generations.

Strategies:

- Minimise the impacts of the built environment on the natural environment.
 - Protect and enhance the existing natural environment in accordance with the objectives, targets and recommendations of the Local Biodiversity Strategy 2008 or any subsequent review, taking into account the need to balance these objectives with the wider strategic land use planning objectives.

Proposed Scheme Amendments and Policy Initiatives

- Create Special Control Area to guide future land use and development in drinking water catchments.
- Implement water sensitive urban design and 'water wise' policy initiatives.
- Environmentally Sensitive Development Scheme provisions and complementary policies.
- Provide streetscape guidelines for infill housing areas.
- Protect significant Local Natural Areas identified in the Local Biodiversity Strategy through:
 - Requirements for comprehensive structure planning at the earliest stages of the planning process based on environmental studies of vegetation, flora and fauna in accordance with EPA guidance statements with the objective of protecting and enhancing existing significant natural areas.
 - The development of a Local Planning Policy for Biodiversity Conservation to provide guidance on this issue.
 - Investigate the inclusion of zones and reservations and provisions in the Local Planning Scheme to facilitate protection of areas of high conservation value.
 - Investigate the potential for the development of a private landholder incentives strategy.

2.4.3. Housing

Vision Statements

Ensure housing provision is appropriate for future population.

Strategies

- Provide housing for the ageing population.
- Developed sustainable housing.
- Provide a range of housing options.
- Support activity centres with appropriate housing.
- Encourage compact housing within walking distance of Town Centre and commercial hubs.
- Provision of new urban areas providing for a mix of low to medium density residential housing.
- Encourage regeneration and redevelopment of older suburbs.

Proposed Scheme Amendments and Policy Initiatives

- Increase residential zone densities around Kalamunda Town Centre and Forrestfield Forum Shopping Centre.
- Prepare Scheme provisions and incentives to rationalise land at Forrestfield Forum and provide a mix of uses including housing.
- Identify medium density infill development opportunities around activity centres, public transport and public open spaces, subject to urban design and streetscape guidelines.
- Prepare development contribution schemes for infrastructure.
- Requirement for comprehensive planning and analysis of the issues relating to each of the proposed new urban areas to be undertaken to support the Metropolitan Region Scheme amendment, Local Planning Scheme amendment and structure plan process. This analysis is required prior to the rezoning and subdivision process proceeding.
- Introduction of the Residential Bushland zone into the foothills areas of Maida Vale, Forrestfield and Wattle Grove. Comprehensive planning and analysis of issues relating to bush fire risk, future servicing, biodiversity protection and other relevant planning considerations will be required prior to rezoning, subdivision and development of the land proceeding.
- Introduce Scheme provisions to the Residential Bushland zone requiring the preparation of structure plans to guide and coordinate the future subdivision of the land.
- Prepare a Bush Fire Strategy with particular emphasis on the proposed Residential Bushland zoning.
- Rezone land for well located aged care facilities in Scheme.
- Prepare a Local Housing Strategy for the Shire.

2.4.4. Employment

Vision Statements

Increase the local employment base where possible.

Encourage home based businesses as a source of employment.

Take advantage of the growing employment base at the Perth Airport.

Strategies

- Encourage development in the District Centres which will provide employment opportunities for the local community.
- Implement the recommendations of the Kewdale-Hazelmere integrated master plan (KHIMP), with the development of the Forrestfield/High Wycombe Industrial area.
- Consolidate industrial uses west of Roe Highway to provide additional employment opportunities.

Proposed Scheme Amendments and Policy Initiatives

- Review home business provisions.
- Develop policy guidelines for the design and operation of home businesses.
- Rezone in accordance with recommendations of the KHIMP.

2.4.5. Retail and Commerce (outside Kalamunda Town Centre)

Vision Statements

Activity centres will be attractive, economically successful places, accessible and well connected to residents.

Develop centres in accordance with the hierarchy of centres.

Ensure centres are capable of meeting a range of local community needs and are appropriately integrated with local community facilities.

Have regard to the interface between centres and adjoining communities in regard to design, traffic, parking, noise and lighting.

Strategies

- Develop the concept of activity centres by considering mixed use and co-location of community facilities.
- Provide increased residential densities near centres to support economic viability of commercial centres.
- Improve streetscapes, vehicle accessibility, public transport, and pedestrian/cyclist access around centres.

Proposed Scheme Amendments and Policy Initiatives

- Review commercial development requirements to encourage a main street approach, where appropriate, and good urban design.
- Implement town centre improvement plans for Kalamunda Town Centre, Sanderson Road shopping centre, Forrestfield Forum, Edinburgh Road shopping centre and commercial centres in High Wycombe.
- Prepare Activity Centre Plans to ensure comprehensive development of centres.
- Link Scheme to activity centre plan.
- Review residential densities together with urban design requirements.
- Prepare Planning Design Guidelines for commercial centres.

2.4.6. Tourism

Vision Statements

Attract tourists to the Shire, facilities, natural environment and village atmosphere and be a recognised tourist destination.

Develop the Shire's unique tourist opportunities having regard to potential impacts on the natural environment and infrastructure.

Strategies

- Promote the unique characteristics, attractions and events in the Shire.
- Provide for the diversification of rural land use to support tourism in rural areas subject to environmental sustainability.
- Provide appropriate Scheme zones and provisions at recognised tourist destinations to meet tourist requirements.

Proposed Scheme Amendments and Policy Initiatives

- Enable development of tourist facilities in, or near, major attractions (such as a cafe in Stirk Park) through appropriate Scheme provisions.
- Review the Scheme's provisions to ensure that they adequately protect sites and buildings of historic significance.
- Review the Shire's Municipal Heritage Inventory.
- Develop a policy allowing for appropriate itinerant traders at tourist destinations where there is demand.
- Amend Scheme provisions to enable development of complementary tourist facilities in eastern rural zone areas such as, cafes, restaurants and chalets subject to environmental sustainability.
- Prepare a Master Plan for Stirk Park.

2.4.7 Open Space and Recreation

Vision Statements

Provide a range of active and passive recreation facilities that have regard to the changing needs of the community and ensuring maximum value and usage, subject to environmental sustainability.

Strategies

- Provide adequate open recreation facilities based on the demographics of the local population, particularly in new residential areas.
- Ensure that open space is well located and encourages community participation.

Proposed Scheme Amendments and Policy Initiatives

- Seek contribution to open space and infrastructure improvements through the introduction of scheme provisions linked to developer contributions as provided for under SPP 3.6 Developer Contributions for Infrastructure.
- Identify specific space provisions for youth.
- Review existing recreational open spaces.
- Identify potential open space and recreation areas in infill development areas.

2.4.8. Community Facilities

Vision Statements

Provide good quality well located community facilities that meet the needs of the community.

Strategies

- Ensure community facilities are designed for flexibility of use and developed using sustainability principles.
- Ensure equity in distribution of community facilities recognizing demographic differences and needs.
- Integrate community facilities with activity centres where feasible to maximise access and opportunities for community cohesion and interaction.

Proposed Scheme Amendments and Policy Initiatives

- Rationalise existing stand-alone community purpose sites.
- Seek community purpose sites adjacent to, or within, activity centres.
- Seek opportunities to incorporate community purposes within private development in activity centres and amend zones and centre plans to accommodate this.
- Ensure preparation of structure plans to include community facilities is consistent with the Shires Community Facilities Plan.

2.4.9. Industry

Vision Statements

Expand industrial development and uses within the Shire taking advantage of the broader state industrial and transport policies, and the development related to Perth Airport.

Develop industrial areas to maximise economic and employment opportunities without compromising the amenity of the adjacent land uses or the natural environment.

Strategies

- Implementation of KHIMP recommendations in accordance with the KHIMP report.
- Implementation of recommendations contained in the Economic and Employment Lands Strategy.
- Consolidate existing and planned industrial uses west of Roe Highway and east of Perth Airport to form single industrial freight hub.
- Review road and transport hierarchy around existing and planned industrial area to support freight movements and seek government financial assistance to address vehicle blackspots.
- Work with the City of Gosnells in respect to the planning implications of the Maddington Kenwick Strategic Employment Area for land owners in the Shire of Kalamunda.

Proposed Scheme Amendments and Policy Initiatives

- Incorporate relevant zoning changes as proposed in the Economic and Employment Lands Strategy – Non Heavy Industry (2012).
- Prepare Environmentally Sensitive Design guidelines for industrial development and other controls to manage potential impact on the amenity of adjacent areas.
- Work with State Government and Landcorp to secure partnership to develop the Forrestfield/High Wycombe Industrial Area.
- Undertake comprehensive planning and analysis of the Forrestfield/High Wycombe Industrial area.
- Identify land located to the south of Welshpool Road East abutting the City of Gosnells as future Industrial Development.

2.4.10. Rural

Vision Statements

Maintain the rural areas of the Shire to ensure their economic viability, sense of open space and quality of lifestyle.

Have regard for the values of the community in maintaining the rural qualities, reducing the impact on the natural environment and the landscape.

Strategies

- Stem the trend of 'urban' uses such as trucks intruding into rural areas.
- Preserve the 'bona fide' productive orchard industry from urban uses.
- Promote the use of Residential Bushland zone (minimum 2,000sqm and 4,000sqm lots) as a means of preserving trees and endemic vegetation.
- Promote the use of Rural Composite zone for 'space extensive' uses in rural areas.
- Review the Pickering Brook town site with the intention of consolidating the uses and giving it a focus.
- Promote the implementation of rural industries to allow for tourism related activities subject to environmental sustainability.

Proposed Scheme Amendments and Policy Initiatives

- Review the Hills Orchard Study, with consideration to the potential for further subdivision and development. This has to be considered against the broader social, economic and environmental implications of such a move.
- Undertake comprehensive planning analysis of Pickering Brook town site and surrounds to investigate potential for the creation of new lots.
- Amend Scheme provisions to support tourism related activities in rural areas subject to environmental sustainability.
- Introduce Scheme objectives and Scheme provisions for proposed Residential Bushland zone which will promote and enhance identified Local Natural Areas by encouraging smaller lots in cleared areas and the protection of areas of environmental significance.
- Undertake investigation of rural zoned land to the east of the Kalamunda and Lesmurdie urban areas to identify land below the established minimum lot size to determine the suitability of the land for rezoning.

2.4.11. Urban Design and Heritage

Vision Statements

Have regard to the principles of good urban design when considering the impacts of new development.

Recognize the importance of heritage and ensure that heritage features and characteristics are protected and preserved.

Strategies

- Clarify the 'village' design concept and use it uniformly.
- Provide for public security and safety in urban design.
- Review the Shire's Municipal Heritage Inventory.
- Consider incorporation of a Heritage List into the Shire's Local Planning Scheme.
- Review the Shire's Heritage Precincts.
- Prepare a policy that would specify guidelines and incentives for development of places of heritage significance.

Proposed Scheme Amendments and policy Initiatives

- Review of Municipal Inventory and incorporation into the Local Planning Scheme.
- Re-examine the heritage precincts for incorporation into the Local Planning Scheme.
- Prepare Planning design guidelines for commercial centres in the Shire.

2.4.12. Traffic and Transport

Vision Statement

Ensure that the transport network (roads, rail, bike, and public transport) are adequate for the needs of the community and that any impact of them on the community is minimised.

Strategies

- Maintain the Shire's Primary Road Network and Regional Road Network in a good state of management.
- Review road and transport hierarchy around existing and planned industrial areas to support freight movements and seek government financial assistance to address vehicle blackspots.
- Examine measures to improve public transport links with the centre of Perth.
- Promote the potential rail connection to Perth central business district from High Wycombe via the international airport.
- Improve access to and from the airport for freight, aviation and employment so as to minimise impact on Kalamunda residents.
- Improve pedestrian and cycle access between urban centres.

Proposed Scheme Amendments and Policy Initiatives

- Identify a possible rail terminal in High Wycombe.
- Make provision for improved road access to and from the airport into Kalamunda.

- Ensure that sustainable land use and transport are mutually compatible in accordance with SPP5.4 - Road and Rail Transport Noise and Freight Considerations in Land Use Planning, to minimise the adverse impact of transport noise, without placing unreasonable restrictions on noise-sensitive residential development, or adding unduly to the cost of transport infrastructure.
- Require traffic impact assessments to be submitted at each stage of the planning process, which has been prepared in accordance with the Commission's Transport Assessment Guidelines for Development.

2.4.13. Utility Services

Vision Statements

Ensure that existing development within the Shire is adequately serviced and that there is a continuity and reliability of service.

Ensure that the utility services are capable of expansion to accommodate the planned growth.

Strategies

- Examine the extension of sewerage services to larger areas in the Hills.
- Consolidate urban development in central Kalamunda to make the existing sewerage scheme more economically viable.
- Ensure adequate electricity supply to Kalamunda.
- Examine infrastructure requirements to accommodate residential infill developments.
- Provide underground power to suitable parts of Kalamunda Town Centre.

Proposed Scheme Amendments and Policy Initiatives

- Recode residential areas in central Kalamunda to increase development and make the sewerage scheme more economically viable.
- Investigate provision of a pump station in Stirk Park to support additional commercial development in the Kalamunda Town Centre and medium density residential development north of Stirk Street.

2.5 Implementation, Monitoring and Review

Implementation

The Shire of Kalamunda Local Planning Strategy will be used as a planning tool to assist Council, the State Government and the community in their respective roles in land use decision making.

Many of the Local Planning Strategy's recommendations will be implemented through the adoption of particular strategies and policies and finally through Scheme Amendments to bring Local Planning Scheme No.3 up to date.

Once the Local Planning Strategy has been before Council there will be an opportunity for further community consultation. At the time of preparing the Shire of Kalamunda Local Planning Strategy the WAPC is in the process of finalising 'Directions 2031 and beyond' and State Planning Policy 4.2 -

'Activity Centres for Peel and Perth'. These may have implications for the Shire's finalisation of this Strategy and subsequent Scheme Amendments.

Monitoring and Review

The Local Planning Strategy has been prepared to provide the Shire with strategic direction for the next 20 years. It is, however, inevitable that over those years, considerable change will take place at an international, national, state-wide and locally. In addition, community views are likely to change as growth and development changes the 'culture' of Kalamunda. In order that Council is able to respond to future changes it will be necessary to undertake continual monitoring and review. A review of the document should be undertaken every five years, preceding reviews of the local Planning Scheme.

3.0 Background Information and Analysis

3.1 Introduction

The purpose of this part of the Local Planning Strategy document is to provide analysis of the information and the rationale for making strategic recommendations. The information in this section is subject to change over time but will not be part of the Local Planning Strategy to be endorsed by the WA Planning Commission. The information in this section is also supplemented by the inclusion of the findings of the Land Use Planning Vision Workshops that were held with the community in 2007 and 2008.

3.2 State and Regional Planning Context

3.2.1 State Planning Strategy

The Western Australian Planning Commission published the State Planning Strategy in 1996. This Strategy was the first state-wide plan to consider how and where the State would develop in the long term. It also provides a basis for coordination of the many decisions and actions that are taken on an ongoing basis. The State Planning Strategy divides the State into several regions and develops Visions, Regional Strategies and Regional Actions that need to be undertaken in the future.

The Shire of Kalamunda is part of the Perth Metropolitan Region and shares a common Vision, Strategies and Actions with the other Local Governments in Perth. The Vision for Perth is to develop as, "One of the cleanest, most productive and livable cities in the world".

The following are the main Regional Strategies;

- Promote Perth as an international city.
- Provide for future economic development.
- Plan for population growth.
- Limit travel demand in urban areas.
- Promote a strategic transport network.
- Protect key environmental resource areas and cultural heritage.
- Protect water resources.
- Protect prime agricultural land and intensive agriculture infrastructure from incompatible development, and
- Protect quality of air and water systems.

Planning Implications

1. The planning implications for the Shire of Kalamunda from the State Planning Strategy are very broad and general and are shared with all the other local governments in the Perth Metropolitan Region.

3.2.2 Regional Strategies

In addition, the following Regional Strategies are relevant to the planning in the Shire of Kalamunda:

- Metroplan
- Network city

Metroplan was superseded by Network city and Network city is in the process of being superseded by Directions 2031.

Directions 2031 and beyond (2010)

'Directions 2031 and beyond' supersedes Network city and replaces Metroplan and all other metropolitan strategies. Directions 2031 and beyond is a spatial framework to guide the growth of Perth and Peel. A number of assumptions are made in the document, namely:

- A more compact city is desirable.
- We must work with the city we have.
- We must make more efficient use of land and infrastructure.
We must prioritise land that is already zoned for development.

The stated vision is:

"By 2031, Perth and Peel people will have created a world class livable city; green, vibrant, more compact and accessible with a unique sense of place".

The key expectations are:

- Is clean, green, productive and distinctive;
- Has good public transport, cycling and pedestrian systems;
- Is equitable, inclusive, safe and prosperous;
- Provides high standards of affordable and diverse housing forms, education and health care;
- Maintains high levels of employment;
- Is tolerant and embraces diversity;
- Is culturally and intellectually stimulating; and
- Gives people a sense of identity and belonging.

'Directions 2031 and beyond' promotes 'the connected city model' which assumes a more balanced distribution of housing, population, and employment across the metropolitan area. This model recognizes that the future growth will be shaped in part by the planning decisions that have already been made, however, it will require significant improvement over the next 20 years in targeted infill development and an increase in greenfield residential densities.

The key features of 'Directions 2031 and beyond' for the Shire of Kalamunda are as follows:

- Kalamunda town centre and Forrestfield (shopping centre) are identified as District centres.
- A target of 75% employment self sufficiency has been set for the north-east sub region, an additional 42,000 jobs over the whole sub-region.
- An estimated increase in population of 69,000 across the whole sub-region.
- The importance of the vast areas of forest for conservation within the Shire is acknowledged.
- Perth Hills is identified as a 'metropolitan attractor' that entices tourists and is highly valued by local and regional residents.

- Several areas around the Shire have potential for increased residential development to accommodate airport, freight, container and light industrial development in the area.
- Forrestfield, High Wycombe, Maida Vale and Wattle Grove have potential for increased residential development.

Middle Helena Catchment Area Land Use and Water Management Strategy

The Draft Middle Helena Catchment Area Land Use and Water Management Strategy was prepared by the Western Australian Planning Commission in 2003. The strategy identifies the Middle Helena water catchment as a major future source of drinking water. The draft strategy was opposed by some of the local stakeholder groups on the grounds that the strategy was too restrictive on existing uses and placed onerous controls on land use intensification.

The strategy was re-examined in 2009 with the intention of finalising the document. A revised Steering Committee was convened and a revised Reference Group comprising local stakeholders was formed. The WAPC commissioned a consultant to identify the aspects of the report that had caused the process to fail previously. Revised proposals were developed with inputs from State Departments and Service Authorities. Following a final round of stakeholder consultation the Shire Council approved the Strategy early in 2010. The Western Australian Planning Commission approved the Strategy in July 2010.

The strategy will provide better direction for the Shire in relation to ongoing planning and development decision making in the future. It will also provide the Shire with the opportunity to clarify the status of the Middle Helena Catchment and amend Local Planning Scheme No.3 accordingly.

The implications of the final strategy are as follows;

- The majority of the Middle Helena Catchment co-insides with the Piesse Brook catchment and is a declared drinking water priority P1 area.
- The strategy makes recommendations for planning controls over the catchment in the Metropolitan Region Scheme and the Shire of Kalamunda Local Planning Scheme.
- The strategy does not recommend changes to existing zoning but recommends the overlaying of a Special Control Area (SCA) into the Local Planning Scheme by amendment.
- Through this mechanism ultimate control of land use planning in the middle Helena Catchment will be under the jurisdiction of the WAPC.

Kewdale-Hazelmere Integrated Masterplan

The Western Australian Planning Commission (WAPC) prepared and published the final report of the 'KHIM' in 2006. The study area of this regional Masterplan included land in the cities of Canning, Gosnells, Swan, Belmont and the Shires of Kalamunda and Mundaring. The area was identified as having strategic importance to Perth and Western Australia particularly for the freight industry. The report acknowledged the fact that the freight industry is growing rapidly and the volume of freight and the number of freight movements in the Perth Metropolitan Region is expected to increase significantly over the next 30 years. A key action identified in the strategy was the preparation of an integrated transport and land use Masterplan for the study area. The document was prepared by the State Government together with local governments and private sector stakeholders.

Some of the planning implications for the Shire of Kalamunda are as follows;

- Identification of future industrial land for the freight industry.
- Guidelines for future structure planning and infrastructure provision.
- Ingress/egress from Abernethy Road.
- Grade separation of key intersections.
- Potential integration with Perth Airport especially the future combined International and Domestic Terminals.

- Recommendations to identify land suitable for industry between Berkshire Road west, Milner Road, Poison Gully Creek and Roe Highway.

3.2.3 Regional Planning Scheme

The Metropolitan Region Scheme (MRS)

The Metropolitan Region Scheme (MRS) is the relevant Regional Planning Scheme for the Perth Metropolitan Region and has precedence over the Shire of Kalamunda Local Planning Scheme No.3 in terms of broad land use planning. Where the Kalamunda Scheme is at variance with the MRS the MRS prevails. The MRS deals with generalised, broad scale land uses and all zoning changes need to be approved by the commission and signed off by the Minister before they can be gazetted.

3.2.4 State Planning Framework

The State Planning Framework is Statement of Planning Policy (SPP) No.1. It unites existing State and regional policies, strategies and guidelines within a central framework which provides a context for decision-making on land use and development in Western Australia. The State Planning Framework is an amalgamation of all planning policies, strategies and guidelines. Section A sets out general principles for land use planning and development. In section B it lists plans, policies, strategies and guidelines and each becomes a provision of the SPP. In addition, the SPP sets out measures to avoid conflict between documents, provides direction as to the resolution of conflicts and establishes that the provisions of the State Planning Strategy generally prevail.

In terms of SPP the following are relevant to the Shire of Kalamunda and the Local Planning Strategy:

- SPP2 - Environment and Natural Resources Policy
- SPP2.4 - Basic Raw Materials
- SPP2.5 - Agricultural and Rural Land Use Planning
- SPP2.7 - Public Drinking Water Source Policy
- SPP2.8 - Bushland Policy for the Perth Metropolitan Region
- SPP2.9 - Water Resources
- SPP3 - Urban Growth and Settlement
- SPP 3.1 - Residential Design Codes
- SPP 3.4 - Natural Hazards and Disasters
- SPP4.1 - State Industrial Buffer Strategy (Review Draft)
- SPP4.2 - Activity Centres for Perth and Peel'
- SPP4.3 - Poultry Farms Policy
- SPP5.1 - Land Use Planning in the Vicinity of Perth Airport
- SPP5.2 - Telecommunications Infrastructure
- SPP5.4 - Road and Rail Transport Noise and Freight Considerations in Land Use Planning

In addition, the following Regional Strategies are relevant to the planning in the Shire of Kalamunda:

- Metroplan.
- Network City.
- Directions 2031 and beyond (This document supersedes Metroplan and Network city).
- Middle Helena Catchment Area land Use and Water Management Strategy.
- Economic and Employment Lands Strategy – Non Heavy Industry (2012).

The following Regional and Sub-regional Structure Plans are relevant to the Planning in the Shire of Kalamunda:

- Foothills Structure Plan
- Darling Range Regional Park

Strategic Policies endorsed by the Commission and relevant to planning in the Shire of Kalamunda are as follows:

- Rural Small Holdings Policy
- Urban Expansion Policy: Metropolitan
- Regional Residential Density Guidelines for the Perth Metropolitan Region
- Service Stations Policy (Draft)
- Government Sewerage Policy: Perth Metropolitan Region
- Metropolitan Rural Policy
- Urban Bushland Strategy
- Bush Forever
- Liveable Neighbourhoods Edition 3 (Final)

The State Planning Framework Policy also lists all the Commission's Operational Policies. Most are relevant to the subdivisional and development process but are not directly relevant to the broad strategic scale presently being dealt with.

3.2.5 State Planning Policies

In terms of Statements of Planning Policy the following are relevant and have implications for the Shire of Kalamunda and the Local Planning Strategy;

SPP2 - Environment and Natural Resources Policy

This policy provides statutory provisions for the sustainable management of; water resources, air quality, soil and land quality, biodiversity, agricultural land and rangelands, minerals, petroleum and basic raw materials, marine resources and aquaculture, landscapes and greenhouse gas emissions and energy efficiency. The matters covered by the policy have recently been addressed in the preparation of the Shire's Local Biodiversity Strategy and are dealt with on a day to day basis by Shire environmental staff

SPP2.4 - Basic Raw Materials

The Basic Raw Materials Policy is intended to act as a framework for identifying and protecting resources in order to ensure that the building and development needs for basic raw materials will continue to be met. The Policy outlines key resource and extraction areas within the metropolitan region. A portion of a rock resource area is located within the Shire of Kalamunda, inclusive of the locality of Pickering Brook. The key principles of the policy are to ensure the protection of resource areas and extractive operations from the encroachment of incompatible land uses; ensure the extraction of such materials complies with acceptable environmental and amenity standards; and provides a consistent planning approval process for extractive industry proposals.

In the past hard rock quarrying was undertaken in the Shire in the vicinity of the Zig Zag but this is now within the Darling Range Regional Park. Some sand quarrying was also undertaken in the Foothills area but this is no longer operational.

SPP2.5 - Agricultural and Rural Land Use Planning

This Statement of Planning Policy should be read in conjunction with Policy DC 3.4 Subdivision of Rural Land (2002) and the Metropolitan Rural Policy (1995). The Statement of Planning Policy requires those local authorities experiencing pressure for change in rural land use to prepare and adopt for the approval of the Commission a Local Rural Strategy. Although the Shire of Kalamunda is listed as a Category A metropolitan local authority, requiring a rural strategy, it is not considered that there is sufficient rural activity to warrant a full Local Rural Strategy. The policy does, provide for a section in the Local Planning Strategy to form a rural strategy, if it adequately addresses rural planning issues.

The Agriculture and Rural Land Use Policy is intended to consolidate previous policies inclusive of the Rural Land Use Planning Policy. The Policy applies to all land zoned Rural under the Metropolitan Region Scheme and with Policy DC 3.4 is used as a basis for determining applications for the subdivision of rural land. The policy also includes special requirements for the development of land in areas suitable for agriculture, raw material, future urban, landscape/conservation, and rural-residential usage. The Policy is intended to guide local authorities in preparing rural strategies.

The key objectives of the Policy are as follows:

- Protect agricultural land resources wherever possible by discouraging land uses unrelated to agriculture; minimising 'ad hoc' fragmentation of rural land; and improving resource and investment security for agricultural and associated industries.
- Plan and provide for rural settlements where it can benefit and support existing communities; and have access to appropriate community services and infrastructure.
- Minimise the potential for land use conflict by providing adequate buffers; introducing measures to protect existing agricultural land uses; identification of new areas suitable for intensive agricultural activities; and avoid locating new rural settlements that are likely to create conflict with established agricultural areas.
- Carefully manage natural resources by discouraging development or subdivision that may result in land or environmental degradation; integrate land, and water catchment requirements with land use planning controls; assist in the wise use of resources; prevention of land and environmental degradation during the extraction of minerals and basic raw materials; and incorporating land management standards in the land use planning and development process.

Any rural or rural residential development within the Shire should occur generally in accordance with the above mentioned principles.

SPP2.7 - Public Drinking Water Source Policy

The objective of the Policy is to ensure that land use and development within Public Drinking Water Source Areas is compatible with the long-term management of water resources for public water supply.

The Department of Water is responsible for managing and protecting water resources. The Commission has identified three priority classification areas or source protection areas: P1, P2 and P3. P1 and P2 areas should be identified as a Water Catchment Reserve or covered by a special control area for water protection in the MRS and local Planning Scheme. Priority 3 areas are not generally subject to specific provisions as described above.

Local planning strategies should identify Public Drinking Water Source areas on advice from the Department of Water.

SPP3 - Urban Growth and Settlement

This policy sets out the principles and considerations that apply to planning for growth and settlements in Western Australia. Its objectives include managing the growth and development of urban areas in response to the social and economic needs of the community, recognising relevant climatic, environmental, heritage and community values and constraints and promoting the development of a sustainable and liveable neighbourhood form.

SPP3.1 - Residential Design Codes

The Residential Design Codes (R-Codes) provide controls for residential design and development and apply throughout the Shire of Kalamunda. Its provisions are included in the Shire's Local Planning Scheme No.3. The R-Codes have been in place in Western Australia since the 1980s with a number of revisions having occurred since then, the most recent being November 2010. The purpose of the R-Codes is to provide local governments, the community and the development industry with a comprehensive tool for the control of the built form and density of residential development throughout Western Australia. At a strategic level its principle use is to ensure that there is an appropriate choice and distribution of housing types and densities to meet the needs of the community as a whole.

SPP3.6 – Developer Contributions for Infrastructure

The purpose of this policy is to set out clear principles and considerations that apply to development contributions for the provision of standard and community infrastructure in new and established urban areas. Land developers in Western Australia have been responsible for many years for the provision of standard infrastructure such as water supply, sewerage, drainage, roads and some community infrastructure such as public open space, car parking and primary school sites. As local government has limited financial capacity to provide additional community facilities such as recreation centres, libraries, sporting facilities and child care centres there is growing expectation for the development industry to assist. The policy sets out considerations that the local government needs to attend to if it needs to require contributions from developers for community infrastructure. The local government is expected to prepare a 'development contributions plan' based on 'strategic planning' usually linked to a 'local planning strategy', 'structure plans' or included in its 'local planning scheme'.

The Shire will proceed in accordance with State Policy in respect to the planned industrial area in Forrestfield and High Wycombe and proposed new urban investigation areas of Maida Vale South and Wattle Grove. The Shire has experience with its Wattle Grove (Cell 9) Guided Development Scheme that has been in operation for several years and is working well.

SPP4.1 - State Industrial Buffer Strategy (Review Draft)

The purpose of the State Industrial Buffer Policy is to provide a consistent statewide approach for the protection and long term security of industrial zones, transport terminals, other utilities and special uses. This policy addresses the buffer requirements of the following industries; resource processing, general, hazardous, noxious, extractive, rural, light, service and technology parks. The policy also addresses the buffer requirements of major infrastructure including; major freight terminals, waste water treatment plants, water treatment plants, power generation facilities, solid waste disposal sites, airports and gas/petroleum pipelines. Buffers for the relevant sites in the Shire; such as Perth Airport noise contours and Poultry Farm Buffers will be shown on the Local Planning Strategy map.

SPP4.2 – 'Activity Centres for Perth and Peel'

Activity Centres for Perth and Peel is a ~~Draft~~ State Planning Policy, and replaces the Metropolitan Centres Strategy. The activity centres policy builds on the hierarchy of the activity centres established in Directions 2031 and beyond.

The key features and changes from the existing policy are:

- The existing caps on shopping floor space within centres have been removed.
- A mixed use threshold has been set as one of the criteria for future growth of centres – for the Kalamunda Town Centre and Forrestfield this threshold has been set at 0.5sqm of community or commercial floor space for every 1.0sqm nla of shop above 5,000sqm nla of shop, and 1.0sqm of community or commercial floor space for every 1.0sqm nla of shop above 15,000sqm nla of shop.

- Local Governments, not the landowners, are required to prepare Centre Plans for the District Town Centres.
- Housing targets are to be set for the Activity Centres through the provision of appropriate R-Codes. The targets for the district town centres are set at a minimum of 15 dwellings per gross hectare and a desirable 30 dwellings per gross hectare within a walkable catchment of the centre.
- The draft policy also provides a Model Centre Framework addressing spatial and urban design considerations for future growth in centres.

The current Commercial Strategy for the Shire was adopted in 1996 and will need to be updated. In relation to the urban form of the centres the Shire is addressing this through separate studies, which will have regard to the model framework. It is intended that any future expansion of commercial space will be in accordance with population growth in the trade area, i.e. 1sqm per head of population, approximately, based on Department of Planning Guidelines.

SPP4.3 - Poultry Farms Policy

This policy provides guidance on matters that must be considered by the Commission and local government when considering rezoning, subdivision and development applications for land in the vicinity of poultry farms and for the development of poultry farms. This policy has relevance for the Shire as there is one poultry farm in the Shire and another in an adjacent local government area that is the subject of complaints from Kalamunda Shire residents. The policy generally requires that poultry farms are at least 500m from residential uses. This buffer is not always effective in the dispersion of bad odours as wind can move the odours greater distances. The existing poultry farm has a buffer of 500m and is shown on the Shire's Local Planning Scheme map.

SPP5.1 – Land Use Planning in the Vicinity of Perth Airport

This Policy applies to land located in the vicinity of Perth Airport which is or may be affected by aircraft noise. The objectives of the of the Policy are to protect Perth Airport from unreasonable encroachment by incompatible development; and minimise the impact of aircraft noise operations on existing and future residential areas located in close proximity to Perth Airport.

The Policy identifies measures for areas below 20 ANEF, between 20 and 25 ANEF; and areas above 25 ANEF. Areas below 20 ANEF are not subject to building or zoning restrictions. Areas located in the 20 to 25 ANEF are restricted to a residential density of R20 except where it can be demonstrated there is a strategic need for more consolidated development. In areas above 25 ANEF there is a general presumption against zoning for residential use. The Policy recommends noise attenuation measures and associated development control provisions to be considered for areas located in the 20-25 ANEF noise contour and is compulsory for buildings deemed unacceptable in areas 25 (ANEF) and above.

Residential areas of High Wycombe and Wattle Grove are affected by 20 to 25 ANEF and therefore subject to the abovementioned policy measures. ANEF contours are shown on the Local Planning Scheme maps.

SPP5.2 – Telecommunications Infrastructure

This policy provides a framework for the preparation, assessment and determination of applications for planning approval of telecommunications facilities within the context of the State planning system and applies to all such applications in the Shire of Kalamunda. The Shire has a number of telecommunication towers located mainly in the rural and reserve areas to the south of Kalamunda town centre. These include towers for television broadcasting. The Shire also maintains a schedule of mobile telephone telecommunications installations and there are approximately 16 such installations in the Shire.

SPP5.4 – Road and Rail Transport Noise and Freight Considerations in Land Use Planning

This policy aims to promote a system in which sustainable land use and transport are mutually compatible. It seeks to minimise the adverse impact of transport noise, without placing unreasonable restrictions on noise-sensitive residential development, or adding unduly to the cost of transport infrastructure. It aims to provide a standardised and consistent triple bottom line framework for the consideration and management of the impacts of transport noise and freight operations when dealing with:

- new noise-sensitive development in the vicinity of existing or future major transport corridors or freight handling facilities;
- new major road or rail infrastructure projects, including major redevelopments, in the vicinity of existing or future noise-sensitive land uses; and
- the location of freight handling facilities.

The policy does this primarily by—

- identifying the situations in which it would be appropriate to assess proposals for transport noise impacts;
- establishing noise criteria to be used in the assessment of these proposals; and
- identifying measures that can be adopted to reduce road and rail transport noise in these instances.

Note that relevant stakeholders, including but not limited to the Shire and relevant State government agencies, will need to work together to ensure that road and rail transportation noise is appropriately considered at each stage of planning and as early as possible.

3.2.6 Regional and Sub-regional Structure Plans

The following Regional and Sub-regional Structure Plans are relevant to the Planning in the Shire of Kalamunda:

Foothills Structure Plan

The Draft Foothills Structure Plan was released for public comment in August 1991 to illustrate how the area could accommodate an additional 25,000 people by expanding existing settlements inclusive of High Wycombe, Maida Vale and Forrestfield. The Plan expanded on principles and policies contained in Metroplan and gave effect to the Urban Expansion Policy adopted by the State Government in November 1990. Following assessment of 375 submissions, the final Plan was released in September 1992.

The objectives of the plan include: the provision of additional land for urban development whilst having regard for environmental issues; the promotion of a variety of housing; provision of local employment opportunities; expansion of services and facilities to cater for future growth; development of an efficient transport system; protection of the Scarp and areas of scenic, recreational and environmental value; retention of rural wedges to accommodate compatible rural and rural-residential pursuits; cost effective provision of infrastructure; and ultimately a high quality built and natural environment.

The Plan envisaged a comprehensive approach to neighbourhood planning through promoting the concept of urban communities with a range of services and facilities, a permeable transport network, a combination of densities, innovative housing design and a distinctive character. The Plan outlined a number of planning units for future urban development within the Shire of Kalamunda which are to be addressed progressively through the Urban Development Program.

In addition to areas identified for residential expansion a number of industrial expansion areas were identified by the Plan. A 73 hectare site located between Dundas Road, Berkshire Road and existing public purpose reserves comprising a mixture of light and general industrial lots now operating as the Forrestfield Industrial Area was identified by the Plan. The Plan also identified a second small industrial area is proposed between Milner and Maida Vale Roads, however, a portion of this area has since been identified for future residential development although this is being questioned.

This plan has generally been superseded by Local Planning Scheme No.3, the Kewdale-Hazelmere Integrated Masterplan and other more up to date planning documents. This plan is seldom referred to by staff in planning reports to Council and is mainly of historical interest. It is, however, still on the WAPC matrix of Planning Policies and it is up to the Commission to update it or remove it.

It should be noted that the Foothills Structure Plan area included parts of the City of Gosnells (set aside as Rural but now being replanned for Industry) and parts of the City of Swan, along Midland Road (set aside for Residential but now being considered for Industry).

Darling Range Regional Park

The Darling Range Regional Park study was undertaken with the purpose of identifying and conserving the landscape values of the Darling Scarp from potential encroachment from development. It was considered that certain key areas of land should be set aside as a regional park to safeguard the sensitive aesthetics of the scarp for the people of Perth in general and the residents of the Hills and Foothills in particular. The recommendations of the study have been implemented, i.e. additional land has been included in the regional park and ongoing management has been established to deal with land management requirements.

Sub-Regional Structure Plan for the North-Eastern Metropolitan Area of Perth

A Sub-Regional Structure Plan is to be prepared for the North-Eastern Metropolitan Area of Perth, with substantial progress anticipated over the next 12 months.

3.2.7 Strategic Policies

Strategic Policies are essentially non-statutory development control policies, guidelines and Planning bulletins endorsed by the Commission to guide and elaborate on desired planning outcomes. The following Strategic Policies are relevant to planning in the Shire of Kalamunda;

Draft Outer Metro Perth and Peel Sub-Regional Strategy (August 2010)

The Department of Planning and WAPC released the Draft Outer Metropolitan Perth and Peel Sub-regional Strategy in August 2010 in conjunction with Directions 2031 and Beyond. While the 'Directions' document provides guidance at the metropolitan scale the Sub-regional Strategy provides detail at the local level. The Shire of Kalamunda is part of the North-east Sub-region Region, which also includes the City of Swan and the Shire of Mundaring. The strategy estimates that the population of the Sub-region will grow by 69,000 people and that an additional 40,000 dwellings will be required.

The expectations for the Shire of Kalamunda in the Sub-regional strategy are as follows;

- An additional 14,100 dwellings are anticipated through a combination of planned new urban areas in Maida Vale South and utilisation of capacity in existing urban areas. Of this 14,100 figure 9,700 are anticipated in infill/redevelopment areas (Forrestfield, High Wycombe and Kalamunda central).

The main outcomes for the Shire of Kalamunda are as follows;

- minimal development in the 'Hills' area owing to conservation of environmental values and lack of sewerage, industrial expansion in Forrestfield related to the expanding 'freight hub' and growth of Perth Airport and rapid residential development in the 'Foothills' owing to affordable residential land and rapidly growing employment opportunities. Identification of Maida Vale Road South and Wattle Grove as future urban centres.

Bush Forever

The Final Report of the State Government's Bush Forever was published in December 2000. The main purpose of the document is to have a strategic plan for the conservation of bushland on the Swan Coastal Plain in the Perth Metropolitan Region. The report sets out the vision, identifies the bushland, provides a rationale for the selection of sites and sets out a program of how the strategy will be implemented.

The eastern boundary of Bush Forever runs along the bottom of the Darling Range and includes 12 major sites in the 'Foothills' sector of the Shire. The following are the main Bush Forever sites:

- 45 – Poison Gully Bushland, High Wycombe
- 50 – Welshpool Road Bushland, Wattle Grove
- 122 – Hawkevale Bushland, High Wycombe
- 123 – Sultana Road West Bushland, High Wycombe
- 217 – Ridge Hill Road Bushland, Gooseberry Hill
- 282 – Tomah Road Bushland, Wattle Grove
- 316 – Maida Vale Reserve and adjacent Bushland, Maida Vale
- 319 – Dundas Road Bushland, Forrestfield
- 320 – Hartfield Park Bushland, Forrestfield
- 01 – Bougainvillea Avenue Bushland, Forrestfield
- 440 – Pioneer Park Bushland, Forrestfield
- 466 – Gooseberry Hill Bushland, Gooseberry Hill

Liveable Neighbourhoods; a WA Government Sustainable Cities Initiative

Liveable Neighbourhoods is a Western Australian Government sustainable cities initiative. It addresses both strategic and operational aspects of structure planning and subdivision development in a code framework. The purpose of the policy is to better structure new urban development on Greenfield and large urban infill sites. The policy aims to increase support for efficiency, walking, cycling and public transport, achieving density targets, urban water management, public open space planning, retention of environmental features, landscaping needs, street cross section standards and movement networks and speed controls. It also establishes standard minimum street widths and street trees, establishes activity centres and schools, and provides improved centre design and simplified context, site analysis and application requirements.

Perth Airport Master Plan 2009

The most recent update of the Perth Airport Master Plan was published in November 2009. The report highlights the very rapid growth in aircraft flights, passenger movements and development on the airport land. For example, the scale of domestic aviation almost doubled between 2003 and 2008 and

forecasts indicate that passenger movements will grow from 9.2 million in 2008 to 18.9 million by 2029. In addition, since 2005 there have been 71 major development projects at Perth Airport. Some of these relate to upgrading of existing aviation installations, commencement of upgrades for future combining of the international and domestic terminals and major industrial developments in the non-aviation precincts. The Master Plan predicts that the rate of change will again increase rapidly over the next five years.

The growth in the number of flights and passenger trips has put pressure on surface access to and from the airport. Road improvements are being planned with Main Roads WA and these include new access points and grade separation. The State's Public Transport Authority is examining the feasibility of connecting Perth Airport to the Perth suburban railway network. A by-product of this may be a rail terminal in the Shire of Kalamunda that will provide a service to Perth for the Kalamunda community. The Airport also contains environmentally sensitive precincts and areas of special significance for the Noongar people. These areas need to be managed on an ongoing basis.

The increase in aircraft movements also has an impact on existing residential communities in the vicinity of flight paths and ongoing consultation with affected communities is needed. Future noise contours (ANEF) have been predicted and these are shown on the Shire's Local Planning Scheme No.3 maps. These contours indicate which areas will be noise affected in the future and there are special building requirements to ensure noise reduction in residential buildings. The Shire has representatives at elected member and staff level on the Perth Airport Municipal Group (PAMG) that are involved with airport changes on an ongoing basis.

The growth and development of the aviation and non-aviation sectors is providing additional employment opportunities close to residential areas in Kalamunda. It is estimated that there were 18,700 jobs in the airport in 2008 and the employment is expected to grow to approximately 32,500 by 2029, i.e. an increase of 13,800 jobs. It is therefore anticipated that existing Development Zones in the Shire will be in high demand because of their close proximity and the fact that it is some of the more affordable land in the Perth Metropolitan Region.

Economic and Employment Lands Strategy – Non Heavy Industry (2012)

The Industrial Land Strategy for the Perth and Peel region was released for public comment by the WAPC in November 2009. The anticipated growth of the Western Australian economy has required that the State Government ensure that adequate industrial land is available for expansion over the next 20 years. The State recognises that there was a shortfall of industrial land during the mid 2000s. The Strategy was prepared collaboratively between the Department of Planning, LandCorp, the Department of State Development and the Department of Environment and Conservation.

The main purpose of the strategy is as follows:

- Identify light and general industrial land requirements over the next 20 years.
- Review the industrial land development program and examine extension opportunities.
- Identify and evaluate the suitability of locations for new light and general industrial estates.
- Facilitate the development of the land to restore the long term landbank.

The Shire of Kalamunda is generally supportive of the overall intent of the strategy, however, is has identified a few key aspects that it believes can be improved before the final report is published:

- No reference is made of the 'Kewdale-Hazelmere integrated masterplan', a WAPC report published in August 2006. The strategy identifies the Kewdale-Hazelmere area as a major strategic area for the freight industry of Perth and Western Australia.

- It is of concern to the Shire of Kalamunda that the land bounded by Berkshire Road, Roe Highway, Poison Gully Creek and Milner Road comprising part of the planned extension of the Forrestfield/High Wycombe Industrial area was not included in the strategy.
- The Shire of Kalamunda is also concerned about the proposals for the Orange Grove area predominantly in the City of Gosnells as this land may eventually be better suited to residential development rather than industrial. It also has the potential to conflict with the welfare of existing Shire residents.

Since the release of the document for public comment, and liaison between the Department and Shire it is anticipated that the final document will identify the Forrestfield/High Wycombe industrial area as a key strategic industrial site suitable for the development of transport and logistics related industries.

3.2.8 Operational Policies

The Commission has a manual of planning policies that are used for detailed planning and development control. They are relevant for planning in the Shire of Kalamunda but not particularly for strategic planning.

3.2.9 Planning for Bushfire Protection Guidelines

The WAPC has been concerned about planning in bushfire hazard areas for many years. The original Development Control Policy DC 3.7 Fire Planning was rescinded and replaced by Planning for Bushfire Protection Guidelines'. The Shire of Kalamunda together with the Fire and Emergency Services Authority has prepared an Emergency Manual that includes procedures for fire emergencies.

The primary focus of the Guidelines document is bush fire protection within new land development, new subdivisions and related development in rural residential developments. The document establishes a set of performance criteria that are required to be met by new subdivisions and related development within bush fire prone areas. Local governments are encouraged to adopt Planning for Bush Fire Protection Guidelines.

In addition, the Fire and Emergency Services has published a document, 'Prepare. Act. Survive'-Your Guide to Preparing for and Surviving the Bushfire Season'. This document is intended for residents of high fire risk areas to manage their properties, prepare them for fire attack and to minimise the personal risks involved.

There are many areas in the Shire of Kalamunda that have an Extreme fire risk rating and may not meet the design Bush Fire Protection Guidelines. The Shire of Kalamunda has prepared a detailed, 'Local Emergency Management Arrangements' that are intended for a broad range of emergency situations including bush fires. The document sets out emergency procedures to coordinate a broad range of State and local government people who are trained to manage emergency situations, including bush fires.

The people of Kalamunda are passionate about their trees and the preservation of the trees on their land and surrounding reserves and State forests. As has been experienced elsewhere in Australia and Western Australia a sensible balance needs to be achieved to protect resident's homes and lives from wildfires and firestorms.

For this reason the WAPC Guidelines have identified certain measures that should be followed in Extreme Fire Hazard areas;

- Reduction of hazard levels in Extreme hazard areas to Moderate or Low by selective clearing of vegetation such as firebreaks on adjacent reserves.
- Creating a Building Protection zone of 20 metres around buildings. In this zone fuel loads are to be reduced and maintained at 2 tonnes per hectare. Trees with crowns are to be a minimum of

10 metres apart and must be pruned to a height of no more than 2 metres and must not be located within 2 metres of a building.

- An 80 metre hazard separation zone should be maintained on the edge of forests, woodlands, closed shrub, open shrub, mallee/mulga and rainforest.

Planning for Bush Fire Protection Guidelines recognises the potential conflict between human safety and vegetation protection as described below:

"It should be noted that building protection zones can adversely affect the retention of native vegetation. Where this loss of vegetation is not acceptable or causes conflict with either landscape or environmental objectives, reducing lot yield may be necessary in order to minimise the removal and modification of remnant vegetation"

The Shire has commenced the preparation of a Bush Fire Management Plan in conjunction with FESA and the Department of Planning. The plan will include the completion of bushfire hazard assessments, the designation of areas as being bush fire prone and the introduction of special control area provisions in the local planning scheme to ensure building designs are consistent with AS3959.

Within designated special control areas, both land use and development will be subject to a detailed assessment in relation to the particular constraint or factor underlying the special control area, and where deemed appropriate planning approval may be granted subject to conditions designed to specifically address the particular environment factor, in certain cases development approval may be refused.

In addition to the application of conditions affecting the characteristics of development which may be undertaken within a special control area on Title advising the owner and any prospective purchaser, of the presence of the particular constraint or limitations affecting the land.

Any local or regional planning scheme amendments affecting properties within a special control area would need to be supported by a completed fire hazard assessment and that it is possible that recommendations from the assessment may mean that rezonings may not be able to proceed.

3.2.10 Development in the Region Surrounding Kalamunda

Key Issue: Perth Airport Development

The privatisation of Perth Airport by the Commonwealth Government and the management of Perth Airport by the Westralian Airports Commission have resulted in considerable development in aviation and non-aviation sectors of the airport. In recent years considerable development has occurred on airport land, i.e. 71 major projects, adjacent to the Shire of Kalamunda. It is estimated that an additional 13,800 new jobs will be created in the airport by 2029 and this has and will result in ongoing demand for residential land in the Shire over the next 20 years. Over the past 12 months while the world has been in a recession 550 new houses have been built mainly in the Foothills of Kalamunda which has some of the most affordable residential land in the Perth Metropolitan Region. It is evident therefore that the Shire will continue to attract home builders for the next 20 years.

Key Issue: Industrial Development in Hazelmere

The City of Swan is presently planning for expansion of Industrial uses along Midland Road in Hazelmere and north of Adelaide Street in High Wycombe. Considerable work has been undertaken on assessing a number of drainage issues in the area. High Wycombe residents in close proximity to that part of the Shire are concerned about the increase in truck movements on roads previously intended for residential uses. (The Foothills Structure Plan had previously identified the land for residential purposes).

Key Issue: Industrial Development in Maddington Kenwick

The City of Gosnells is presently planning for the extension of industrial zoning and development to the south of its common boundary with the Shire of Kalamunda. Environmental assessments related mainly to drainage and other environmental constraints are currently being undertaken. This area is relatively low lying and owing to the clayey soils drainage is a potential issue. Water monitoring has commenced in the area. The Metropolitan Region Scheme amendment for Precinct 1 of the Maddington Kenwick Strategy Employment Area is currently being advertised.

If planning changes to introduce industry are approved there will be impacts on existing Special Rural zoned areas in the Shire of Kalamunda to the south of Welshpool Road East. The potential impacts are increased truck movements along Coldwell Road and Brook Road and other potential industrial impacts such as noise.

Preliminary consultation has been undertaken with the Kalamunda residents in the affected areas and with the City of Gosnells to consider planning options for the site. Given that the City of Gosnells will be proceeding with the industrial development of Maddington, it is likely that the Shire will need to consider and investigate a similar zoning over the affected land.

Planning Implications

The following are the main planning implications for the Shire of Kalamunda as a result of the State and Regional Planning Plans and Policies:

1. Bush fire hazard assessment and strategy and needs to be undertaken for most of the urban areas of the Shire of Kalamunda, with the acknowledgement that human safety takes precedence over tree conservation.
2. The Middle Helena Catchment Strategy requires that a Special Control Area (SCA) be overlaid over the catchment to protect priority drinking water areas.
3. The Shire will need to protect prime agricultural land as a strategic food resource for the Metropolitan area.
4. The Shire will need to ensure that the Local Planning Strategy is consistent with the intent of the State Governments key strategic planning documents such as Directions 2031 and beyond and the Economic and Employment Lands Strategy.
5. The Shire needs to provide appropriate Rural Settlement for the changing demographics.
6. The Shire needs to protect local natural areas and landscapes where these do not endanger human lives.
7. The Shire will need to manage and minimise land use conflicts between industrial areas and environmentally sensitive land.
8. Promote the development of existing commercial centres into robust activity centres such as Forrestfield District Centre through the introduction of mixed land uses and a high standard of urban design and amenity.
9. The need to undertake comprehensive planning to ensure a coordinated and sustainable approach to the proposed urban investigation areas.

3.3 Local Planning Context

3.3.1 Shire of Kalamunda; Strategic Plan; 2009 – 2014

The Shire of Kalamunda, 'Strategic Plan; 2009 – 2014' sets the following Vision for the Shire over the next five years;

"The Shire will have a diversity of lifestyles and people. It will take pride in caring for the natural, social, cultural and built environments and provide opportunities for people of all ages."

The Strategic Plan identified the following Values:

- Customer Service
- Innovation
- Leadership
- Mutual Respect
- Trust

The Strategic Plan also identified the following Goals:

- Community Development; a strong sense of community.
- Built Environment; an integrated built environment.
- Natural Environment; the protection of natural resources from the impact of unsustainable development.
- Economic development; a prosperous economy.
- Governance and Organisation; a leading organisation.

3.3.2 Shire of Kalamunda; Aged Accommodation Strategy

The Shire of Kalamunda commissioned an independent consultant, 'Community Perspectives' to prepare an 'Aged Accommodation Strategy' in 2008. The research that was undertaken to prepare the strategy addressed current and future housing, home and community care and residential care needs of the older people in the Shire. Some of the more important findings of the study were as follows:

- By 2030 one in three people will be 55 years or older and half will be over 70 years;
- The ageing of the 'baby boomers' will present the Shire with challenges over the next 20 years;
- There is a general desire to 'age in place';
- Existing levels of home support fall short of demand;
- 94% of housing stock in the Shire comprises separate houses designed for families but 25% of the population are over 55 years and do not need such housing;
- There is a need for a greater diversity in housing stock to cater for the needs of the community;
- The Commonwealth Government is investing less in public housing and needs will have to be met by the private sector;
- There is a significant shortage of Residential Care Places for the ageing;
- Appropriate locations for residential care homes should be identified now; and
- Every locality in the Shire of Kalamunda needs aged care accommodation.

3.3.3 Shire of Kalamunda Community Facilities Plan

The intent is to prepare a Community Facilities Plan for the next 5 – 20 years that will contribute to the Shire's longer term strategic and financial planning in an integrated manner. The Community Facilities Plan will consider the key principles of long term viability, rationalisation, collocation and multi functionality.

Various components of the project include the following:

- Community needs assessment
- Adequacy of current facility provisions
- Demand and Gap Analysis
- Service Catchment Identification
- Scenario Planning Outcomes (in respect to varying actual population growth)
- Infrastructure Benchmarks and Standards
- Priorities and Timelines
- Financial Planning Implications (Capital Expenditure Plan)
- Funding models / sources

The findings and recommendations from the plan will provide a significant component of future Development Contribution Plans that are now required in accordance with State Planning Policy 3.6

The plan will be based on the following:

- Needs assessment and other relevant plans and previous studies.
- Requirements of various State Government agencies and relevant State Associations.
- Justification of new facilities versus upgrading of the existing facilities.
- Justification of relocating facilities/programmes versus retaining current sites.
- Best practice relating to long term viability and functioning of other similar facilities in Western Australia and Australia.
- The process and framework for applying developer contributions towards future community facilities

- A costed future Development Contribution Plan, that is inclusive of priorities for the provision of future community facilities that can be incorporated into the local planning scheme.

3.3.4 Shire of Kalamunda; Local Biodiversity Strategy (2009)

The Shire of Kalamunda completed a Local Biodiversity Strategy in 2009. The strategy was developed as a stand-alone document because at the time of commencement the Shire had recently finalised Local Planning Scheme No 3. The Shire of Kalamunda's vision statement with regard to biodiversity conservation is to ensure the Shire will protect, manage and promote the social, economic and environmental values of biodiversity to ensure a lasting legacy for future generations.

The strategy was undertaken in anticipation of future development encroaching into the remaining natural assets.

- Of the total area of the Shire, 30,244 ha (67%) is in Conservation Reserves and is comprised mainly of endemic vegetation. (This area includes; Bush Forever sites, Regional Parks and State Forest and are outside the control of the Shire).
- The Urban Areas of the Shire comprise 8,272 ha (26%) and these areas have a large number of Local Parks and Recreation reserves.
- Within the Shire 2,110ha remain in Local Natural Areas (7%). The Local Natural Areas are the main focus of the Local Bio-diversity Strategy. (These include public and private land and will need additional work in the future to refine their conservation standing and value.)

A major focus of the Kalamunda Local Bio-diversity Strategy is the Action Plan which recommends the following actions;

- Endorsement of the Local Biodiversity Strategy by the Shire and State Government agencies.
- Improve the protection and management of local reserves.
- Develop supporting planning policies.
- Provide roadside public signage to implement the Tree Preservation Policy.
- Protect existing natural areas in new urban areas.
- Develop a private land preservation policy.
- Develop the Shire's Environmental Services division with adequate staff resources.
- Augment Shire activities to reduce threats to biodiversity.
- Assess all natural areas using the Natural Area Initial Assessment templates.
- Expand Shire managed natural areas.
- Consider a revolving fund to determine future purchased natural areas.
- Implement Private Land Conservation Strategy.
- Amend the Local planning Scheme to include protection of the environment in Special Rural zones. Determine the success of verge planting trials.
- Update the weed control strategy.
- Review the Wildlife Corridor Strategy.
- Maintain a watching brief on carbon credit research and opportunities.
- Conduct a feasibility study into an environmental levy.
- Monitor and review the progress of the implementation of the strategy.

To date, a number of the Action Plan items have been implemented or commenced. These include endorsement from the Shire Council, expansion of Shire Staff in the Environmental Division and inclusion of Action Items in annual works programs.

The strategy is consistent with SPP 2.8 Bushland Policy for the Metropolitan Region in that it recognises the protection and management of significant bushland areas as a fundamental consideration in the planning process, moreover it seeks to integrate and balance wider environmental, social and economic considerations. Importantly like SPP 2.8 the strategy does not prevent development, rather it requires that the protection of biodiversity needs to be considered and implemented in the early stages of the planning process.

The Shire's Wildlife Corridor Strategy is a guideline document that has no formal status but was taken into consideration during the preparation of the Local Biodiversity Strategy. Most of the 'wildlife corridors' are included in reserves; however, they also encroach on private land holdings and for that reason are managed on a day to day basis in consultation with landowners.

Targets detailed in the Strategy will guide the increased protection of natural areas, including areas of endemic vegetation and other natural features. Representation targets have been developed to protect a percentage of each of the 14 vegetation complexes found in the Shire. The Strategy also contains an action plan. Implementation of the action plan will allow the Shire to:

- Protect its own natural areas,
- Incorporate biodiversity protection into planning and decision making, and
- Encourage private landowners to voluntarily protect their natural areas.

3.3.5 Draft District Conservation Strategy (2010)

The District Conservation Strategy has been one of the key drivers and a source of direction for the Shire of Kalamunda's environmental projects and actions over the past fifteen years. The document is currently being reviewed to evaluate the actions implemented through the District Conservation Strategy. This will provide the bases for establishing a new environmental strategy that builds upon the work of the District Conservation Strategy and aims to incorporate the key identified actions in order to provide direction for future years.

The *Draft District Conservation Strategy Review* revises external and internal policies and practices that have been implemented by the Shire of Kalamunda which stem from the District Conservation Strategy, and identifies any important outstanding actions, as well as providing future recommendations.

The *Draft District Conservation Strategy Review* is considered under the broad themes of:

1. Conserving Sources;
2. Conserving the Natural Environment; and
3. Sensitive Planning of the Built Environment.

Each theme includes:

- A brief introduction and background to the issues related to the theme;
- Discussion of the actions to date undertaken by the Shire of Kalamunda to address these issues; and
- A set of recommendations or actions to address these actions in future.

The review of the District Conservation Strategy and future recommendations will aid in the development of a future environment strategy for the Shire of Kalamunda. This strategy will be developed in consultation with the local community and broader strategic documents adopted by the Shire, which will ensure that their aspirations are reflected in the final document.

3.3.6 Local Planning Scheme No.3

Local Planning Scheme No.3 was gazetted in February 2007. The preparation of the Scheme had commenced in 1993 and took 14 years to prepare. As Scheme No.3, was commenced before 1999, it was based on the old system of a Scheme Review Report, not a Local Planning Strategy. Scheme No.3, therefore lacks a Strategic direction that a Local Planning Strategy would provide. In addition,

once the current Scheme was put into daily use it was realised that it was based on 1980s/1990s thinking and was soon considered to require updating.

In July 2007, Council resolved to prepare a Local Planning Strategy that would re-examine the new Scheme, identify strategic aspects that need to be updated and to prepare amendments to introduce the required changes. The ultimate purpose of the current Local Planning Strategy is therefore to update Local Planning Scheme No.3 and to provide for growth and development over the next 20 years.

To date there have been a total of 40 amendments to Local Planning Scheme No.3, these are listed as follows:

Ame nd No.	Address	Proposal	Gazetted Date
1	Lots 5 (32) and 3 (28) Elizabeth Street and Lots 4 (3) and 6 (7) Dixon Road, Kalamunda	Density Increase (R30)	11/04/2008
2	Lot 350 (84) Canning Road, Kalamunda	Density Increase (R20)	15/04/2008
3	Lot 796 (223) Walnut Road, Bickley	Additional Use (Chalets)	15/05/2009
4	Various lots, MRS Omnibus Amendment 7, Lot 51 (118) Lawnbrook Road West	Rezoning from Special Rural and Residential Bushland R2.5 to Residential R5.	Did Not Proceed
5	Lot 800 (10) Stirk Street, Kalamunda	Density Increase (R30)	Did Not Proceed
6	Lot 411 (9) Preece Court, Forrestfield	Density Increase (R25)	15/05/2009
7	N/A	Warehouse car parking provisions	Did Not Proceed
8	N/A	Sexual Services Business	Did Not Proceed
9	Lot 1 (31) Sanderson Road, Lesmurdie	Rezone to Special Use (Aged persons dwellings)	1/05/2009
10	Lot 800 (10-12) Stirk Street, Kalamunda	Density Increase (R40)	7/08/2009
11	Portions of Lots 112, 113 & 114 Dundas Road, High Wycombe	Rezone to Special Use (Business)	14/05/2010
12	N/A	MRS Minor Amendment (1139/57)	
13	Part Lot 22 Hawtin Road, Forrestfield (Waldrige Village School)	Rezone from Urban Development' to 'Private Clubs and Institutions'.	13/12/2009
14	Lots 1, 2, 293 & 295-300 Graham Road, Gooseberry Hill (Decision Deferred until LPS)	Residential R2.5 to Residential R5.	Deferred
15	Catherine Place, Lesmurdie, south of the Glen Road intersection (Catherine Place Road Reserve)	Rezoning to 'Private Clubs and Institutions'.	18/12/2009
16	30 Mundaring Weir Road, Kalamunda	Additional Use (Chalets)	25/06/2010
17	Lots 8, 9, 12, 13 and 100 Brentwood Road, Wattle Grove	Rezoning from 'Special Rural' to 'Rural Composite'	27/04/2010
18	32 Gavour Road	Aged Persons Home	Pending With

			Minister
19	Lot 124 Lawnbrook Road, Walliston	Rezone from 'Public Purposes - Church' to 'Residential R5'.	10/12/2010
20	N/A	Unkempt Land Provisions	
21	80 Dodd Road, Bickley	Additional Uses (Chalet, Tea Room & Private Recreation)	23/07/2010
22	Lots 23 (131) Milner Road and 551 (371) Milner/Dundas Road, High Wycombe (On Hold)	Rezoning from Mixed Use to Light Industry	Pending With Minister
23	Lots 4, 9, 11, 12 Ibis Cl, Lot 7 Raven St, Lot 5, 6, Sultana Rd Wst & Lot 1, 7 Milner Rd	Rezoning (Urban Development to Industrial Development)	Pending with Minister
24	N/A	Scheme text	
25	1 Newburn Road		Did Not Proceed
26	33 Berkshire Road	Rezoning (Urban Development to Private Clubs and Institutions)	8/03/2011
27	Lot 36 (15) Gooseberry Hill Road	Additional Use (Art Gallery)	Awaiting documents
28	Kalamunda Road/Stirling Crescent	Rezone area Bounded by Kalamunda Road, Stirling Crescent, Adelaide Street and located to the east of land reserved Public Purposes— Commonwealth Government within the MRS (Perth Airport) from Special Rural to Urban Development.	26/10/2010
29	Berkshire Rd/Sultana		Did Not Proceed
30	N/A	Amended Special Rural and Rural Composite provisions	
31	N/A	Amended street setback area provisions	
32	100 Wittenoom Road	Rezoning north west area (Special Use - Business to Residential R30)	Approved by Minister 9/6/2011
33	6 Dixon Road	Boundary Re-Alignment	Approved by Minister 9/6/2011
34	All land bound by Berkshire Rd Roe Highway, Sultana Rd West & Milner Road	Forrestfield Industrial Area - Stage 1	Pending with Minister
35	Halleendale Rd/Dan Close	Increased density (R2.5 to R5)	Awaiting documents
36	304 Holmes Road	Additional Uses (Veterinary Centre and Consulting Rooms)	Approved by Minister 4/5/2011
37	Middle Helena Catchment Area	Scheme text	Awaiting documents
38	Lots 724 (2) to 734 (38) Sultana Rd West, Lot 752 (1) Eureka Street, Lots 752 (100) to 756 (122) Milner Rd	Rezone from Special Use (Business) to Light Industry	Pending with Minister
39	484 Kalamunda Road, High Wycombe	Additional Use (Consulting Rooms)	Awaiting Documents
40	8 Stirk Street, Kalamunda	Additional Use (Office)	Being Advertised

3.3.7 Shire of Kalamunda, Structure Plans

The Shire of Kalamunda maintains a file of Structure Plans for active urban development areas. These Structure Plans are required by Local Planning Scheme No.3 to ensure the coordination of; subdivision, road alignment, provision of public open space, location of services and location of community facilities. Structure Plans are required to be approved by Council and endorsed by the Western Australian Planning Commission. They serve as a mechanism to ensure new urban areas are properly planned and designed to deliver sustainable residential communities.

Feedback received from the "Community Needs Survey" has been reflected in the introduction of the low density Residential Bushland zoning in the foothills areas of Maida Vale, Forrestfield and Wattle Grove. The proposed zoning with its emphasis on larger urban lots of 2,000sqm to 4,000sqm and tree and vegetation retention will offer choice of lots sizes and lifestyle opportunities close to all amenities. Importantly these areas will be carefully planned through the preparation of structure plans.

3.3.8 Shire of Kalamunda, Planning, Building and Environmental Policies

The Shire of Kalamunda has prepared a suite of Local Planning Policies over a number of years to address a broad range of planning matters. Overall, the content of these policies deals with detailed procedures and has little impact on strategic planning matters. A list of the Shire's Local Planning Policies is provided in Appendix No. 3. The content of the policies relates mainly to local scale planning and development control and has little effect on Strategic Planning.

Planning Implications

The major planning implications for the Shire as a result of assessing local planning issues are as follow:

1. The Shire's Strategic Plan has set a high level of goals that include; community development, integration of built environment, protection of natural environment, strong economic development and creating a leading organisation.
2. The Shire's Aged Accommodation Strategy has identified the need for diversification of housing stock to cater better for an ageing population, increase in the supply of Aged Care Accommodation in every locality and improved levels of home support.
3. The Shire's Local Biodiversity Strategy has been prepared to protect natural assets being encroached upon by ongoing development. The Strategy identifies targets for protection of Local Natural Areas, incorporating biodiversity protection into planning decision making and encouragement of private landowners to protect their natural areas.
4. The Shire's Planning, Building and Environmental policies need to be used on an ongoing basis for local planning and development control but have little impact on strategic planning.

3.4 Local Profile

The purpose of the local profile is to focus on the key characteristics of the local government and the major social, economic and environmental influences relevant to the planning for the future.

The Shires Local Biodiversity Strategy identifies and makes recommendations regarding the following key characteristics and social, economic and environmental influences. These recommendations are listed in Section 3.3.4 of the Strategy.

3.4.1 Environment and Landform

The Shire of Kalamunda has a substantial area of natural environment contained within its boundaries which comprise 74% of the total area of the Shire. The Shire has three distinctive landform types namely the Swan Coastal Plain, the Darling Scarp and the Darling Plateau. The Shire also contains National and Regional Parks, State Forest and a diverse range of reserves some of which contain local endemic species.

The Swan Coastal Plain extends westwards from the edge of the Darling Scarp. It is comprised generally of low relief terrain made up of alluvial sediments, aeolian deposits, including Guildford, Forrestfield and Southern River soil associations. In general, the soils become more fertile on the east of the coastal plain in the zone of transition between the Swan Coastal Plain and the Darling Scarp, locally referred to as the Foothills. Wetlands are found in low lying areas on the Swan Coastal Plain and their water levels are usually interlinked to the underlying groundwater levels.

The Darling Scarp and Plateau covers the majority of the Shire and is dominated by lateritic uplands and duritic gravels and sands which form an undulating surface. The topography ranges from 50m AHD on the westerly fringe of the deeply dissected Darling Scarp to 360m AHD on elevated ridges.

Vegetation

The endemic vegetation of the Shire may generally be described according to vegetative communities or complexes which are closely linked to soil type, landform and climatic conditions. Vegetation across the landscape varies across the three land formation types of the Swan Coastal Plain, the Darling Scarp and the Darling Plateau. In some cases these can be easily recognised such as the difference between the Banksia woodlands on the Swan Coastal Plain, or they can be very subtle differences that are difficult to distinguish. The variation across the landscape is the main reason for the high number of vegetation complexes that occur. Vegetation complexes are different vegetation groupings identified through the dominant plant species, often named after the soil classification units on which they grow. Vegetation complexes are used in the Perth Metropolitan Region to define the broad boundaries of ecological communities.

The endemic vegetation within the Shire can be categorised under the two broad landforms or geomorphic provinces, namely the Swan Coastal Plain and the Darling Plateau. The Swan Coastal Plain contains the following vegetation complexes; Forrestfield, Southern River, Guildford and Swan.

The Darling Plateau contains the following vegetation complexes: Dwellingup, Cooke, Yarragil (Minimum Development of Swamps), Yarragil (Maximum Development of Swamps), Swamp, Helena (Medium to high rainfall), Helena (Low to medium rainfall), Murray, Murray and Bindoon Complex (Low to Medium Rainfall) and Darling Scarp. The Shire's Biodiversity Strategy contains a full description of the above vegetation complexes.

Bush Forever

Bush Forever is the primary mechanism for implementing the State Government's commitment to conserve regionally significant bushland in Perth. There are 287 Bush Forever sites, which represent, where achievable, a target of conservation of at least 10% of each of the original 26 vegetation complexes of the Swan Coastal Plain (Local Government Biodiversity Planning Guidelines for the Perth Metropolitan Area, 2004).

As Bush Forever has a regional focus and does not consider areas that are locally significant, there is the opportunity for the Local Biodiversity Strategy to compliment Bush Forever by increasing the protection of locally significant ecological communities or vegetation complexes and providing linkages between Bush Forever sites.

Of the remaining vegetation complexes on the Swan Coastal Plain within the Shire of Kalamunda, there are 3 complexes protected in Bush Forever Sites; Southern River, Forrestfield and Guildford.

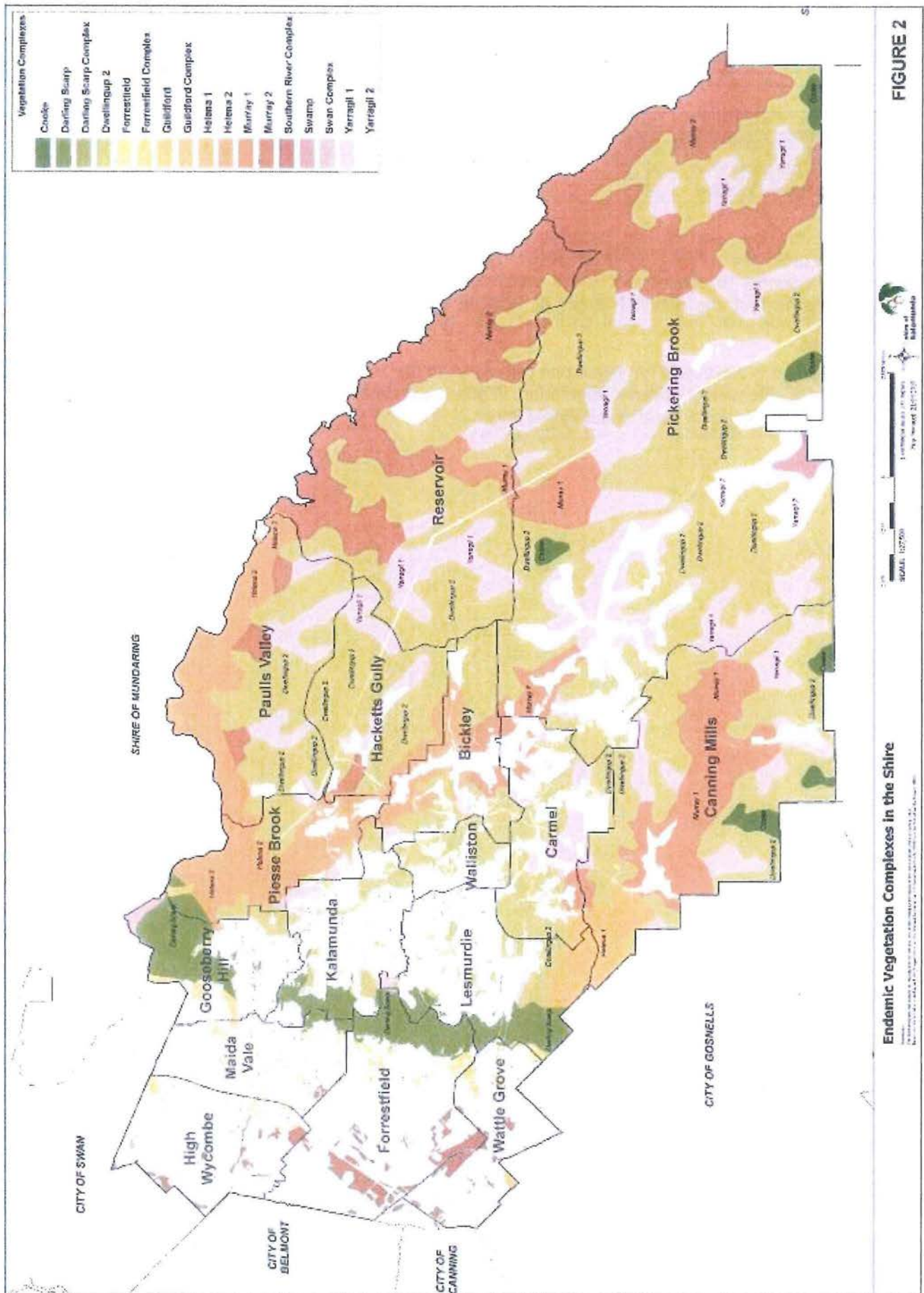
The protection of these complexes in Bush Forever Sites within the Shire of Kalamunda is summarised in **Table 1**.

Vegetation Complex	Pre-European Extent	Extent protected in Bush Forever Sites	
	ha	ha	% of original
Forrestfield Complex	1925	64.738	3.36
Guildford Complex	91	9.034	8.43
Southern River Complex	2319	195.458	9.93

Bush Forever does not provide protection for these three vegetation complexes above 10%. Increased protection of the Southern River, Forrestfield and Guildford vegetation complexes is therefore essential to ensure that these communities do not become endangered. Past clearing already means that the national target of 30% is unlikely to be achieved for these vegetation complexes.

The 30% target is achievable for vegetation complexes in the Jarrah Forest and the Darling Scarp due to the level of retention of endemic vegetation, in good or better condition, and the higher levels of protection within Regional Parks and National Parks.

Figure 2: Endemic Vegetation



Remaining Endemic Vegetation

The total area of the Shire, and hence the pre-European extent of endemic vegetation, is 32,354 ha. A total of 24,081 ha of this currently remain, 74%. A summary of the remaining endemic vegetation extent by administrative planning category is shown in the following Table.

Administrative Planning Category	Area (ha)	% of total
Total Area of Shire	32,354	100
Total Urban Area	8,273	26
Total Conservation Area	24,081	74
• Bush Forever	291	0.9
• DEC Conservation	9,091	28.1
• DEC State Forest	11,011	34
• Regional Parks	1,467	4.5
• Local Natural Areas	2,110	6.5

The Shire is responsible for safeguarding Local Natural Areas, some of which are in Shire reserves and some of which are on private land. The Shire also has responsibility for managing public open space reserves in the urban areas.

Flora

Threatened Ecological Communities (TEC's)

Threatened Ecological Communities (TECs) are ecological communities that have been assessed by the Federal or State Government and assigned a threat status.

There are four Threatened Ecological Communities and one Priority Ecological Community listed in the Shire of Kalamunda, occurring on the Swan Coastal Plain portion of the Shire.

The conservation of TEC's is provided for under the State Government policy and regulations and critically endangered TEC's are protected under the Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth). Two TEC's occurring in the Shire is listed under Federal Legislation.

All known TECs in the Shire of Kalamunda occur on the Swan Coastal Plain where the pressures from development are highest. These species will be protected and managed in order to prevent extinctions and encourage recovery.

Threatened Plants and Declared Rare Flora (DRF)

Threatened plants are plant species likely to become extinct or which are recognised as being rare at a Federal or State level. These species will be protected and managed in order to prevent extinctions and encourage recovery.

At a national level, the Shire is known to, or likely to, contain a number plant species protected under the EPBC Act 1999. Those species known to occur in the Shire correspond to species declared under the State's Wildlife Conservation Act 1950. This is likely to be due to the fact that before a species can be declared under this act it must be adequately surveyed. DRF species were found and reported during assessment of the Shire reserves undertaken in the 2005 and 2006 spring seasons.

The presence of threatened plants or declared rare flora may however remain undetected if processes are not in place to undergo ecological assessment prior to development. It is not possible

to estimate how many additional rare flora species will be identified in the Shire in the future. It is possible that as more is known about particular species of DRF or as protection programs are initiated the status of DRF species may change.

A 50m buffer of continuous vegetation surrounding DRF is protected under the Environmental Protection (Clearing of Native Vegetation) Regulations 2004.

Threatened and Specially Protected Fauna (SPF)

Threatened fauna are endemic animal species which are likely to become extinct or which have been declared in need of special protection at a Federal or State level. These species should be protected in order to prevent extinction and to encourage species recovery.

At a national level, the Shire is known or likely to contain a number of threatened fauna species listed under the EPBC Act 1999. The Shire is likely to contain habitat for a number of threatened fauna species which should also be protected so that in the event of species recovery, populations can expand.

At a State level, all endemic fauna species in Western Australia are protected unless otherwise declared under the Wildlife Conservation Act 1950. Endemic animals therefore cannot usually be captured or killed without a licence. Some threatened endemic fauna species are further declared to be 'fauna that is in need of special protection' under the Act. The Wildlife Conservation (Specially Protected Fauna) Notice 2006 lists Specially Protected Fauna in the following four schedules:

- Schedule 1 – Fauna that is rare or likely to become extinct;
- Schedule 2 – Fauna that is presumed to be extinct;
- Schedule 3 – Birds protected under international agreement;
- Schedule 4 – Other Specially Protected Fauna;

There are 13 Threatened Fauna Species or their habitat listed under the EPBC Act 1999 or the Wildlife Conservation Act 1950 likely or known to occur in the Shire of Kalamunda which should be protected to ensure that in the event of species recovery, populations can expand.

Wetlands

Wetlands are important with regard to biodiversity as they often have high species richness and provide a dependable location for many bird species. Wetlands are directly linked with their surrounding landscape. This landscape forms the catchment of the wetland, and activities that occur in the catchment can ultimately impact on the health and functioning of the wetland. The Shire is within the same catchment as the Forrestdale and Thompson Lakes which together form a Ramsar wetland. The following wetland types are found in the Shire; Lakes, Floodplains, Seasonally inundated wetlands, Damplands and Springs.

The Environmental Protection Act, 1986, prohibits environmental harm to wetlands including removal or damage to native vegetation or indigenous aquatic or terrestrial animals. Wetland habitats are therefore protected under this legislation.

Under the Environmental Protection (Clearing Native Vegetation) Regulations 2004 Conservation Category Wetlands (CCWs) are defined as Environmentally Sensitive Areas (ESAs). Exemptions to the requirements of these regulations do not apply within ESAs and therefore the vegetation surrounding CCWs is more highly protected. There are 21 CCWs areas within the Shire.

Wetland protection needs to be considered in the context of total water management and biodiversity protection planning. Development proposals shall have due regard to the Shire's objectives for wetland conservation and relevant state policy requirements including:

- Retention and protection of all lakes listed under the Environmental Protection (Swan Coastal Plain Lakes) Policy 1992 and Conservation Category Wetlands (Shire of Kalamunda Local Biodiversity Strategy, 2008)
- Minimisation of impacts on Resource Enhancement Wetlands, their buffers and the associated upland vegetation (Shire of Kalamunda Local Biodiversity Strategy, 2008)
- Wetlands that are to be protected require a minimum 50 metre buffer distance. Alternatively a site specific buffer may determined (EPA Guidance Statement No.33).

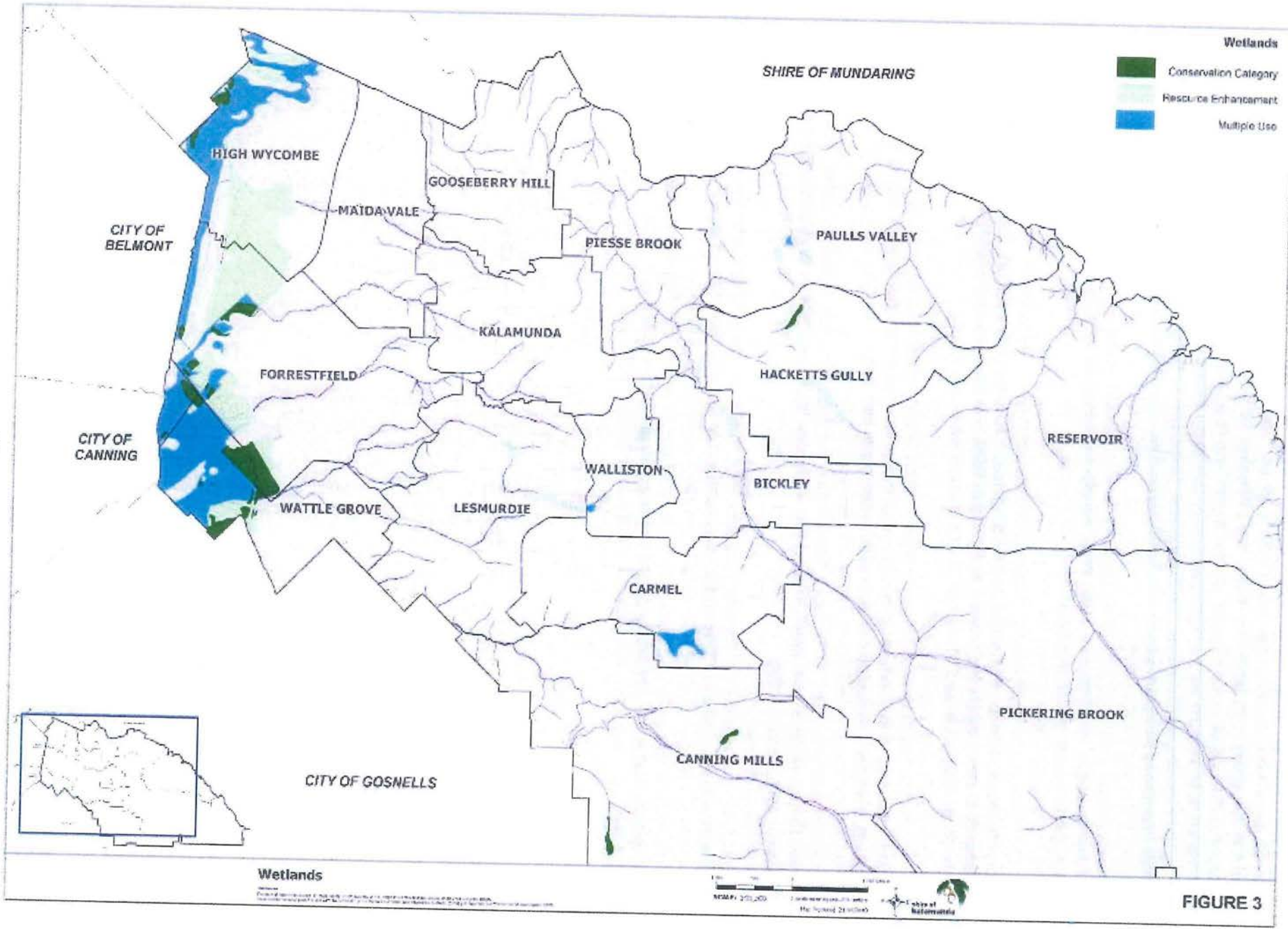


Figure 3: Wetlands

Waterways

Waterways are natural areas important for biodiversity conservation as they can provide important breeding and feeding sites for fauna and can be important in the maintenance of life cycles for specialised plant groups. A waterway can be a creek, brook, river, or stream, and include a lake, estuary or inlet at its base. A waterway in the Shire may be owned and managed by a number of different landowners or organisations. The importance of waterways within the Shire is currently recognised in a number of ways; water quality monitoring, management plan development and implementation, policy, support for Friends Group activities and restoration works.

The Local Biodiversity Strategy recommends the following target for the conservation of Waterways:

"Retain and protect riparian vegetation and upland vegetation in moderate or better condition associated with rivers, creek lines, other channel waterways and floodplain areas. Retain sufficient buffer distance to maintain the ecological function of the watercourse. Where practicable, enhance natural areas containing waterways to maintain and improve biodiversity values".

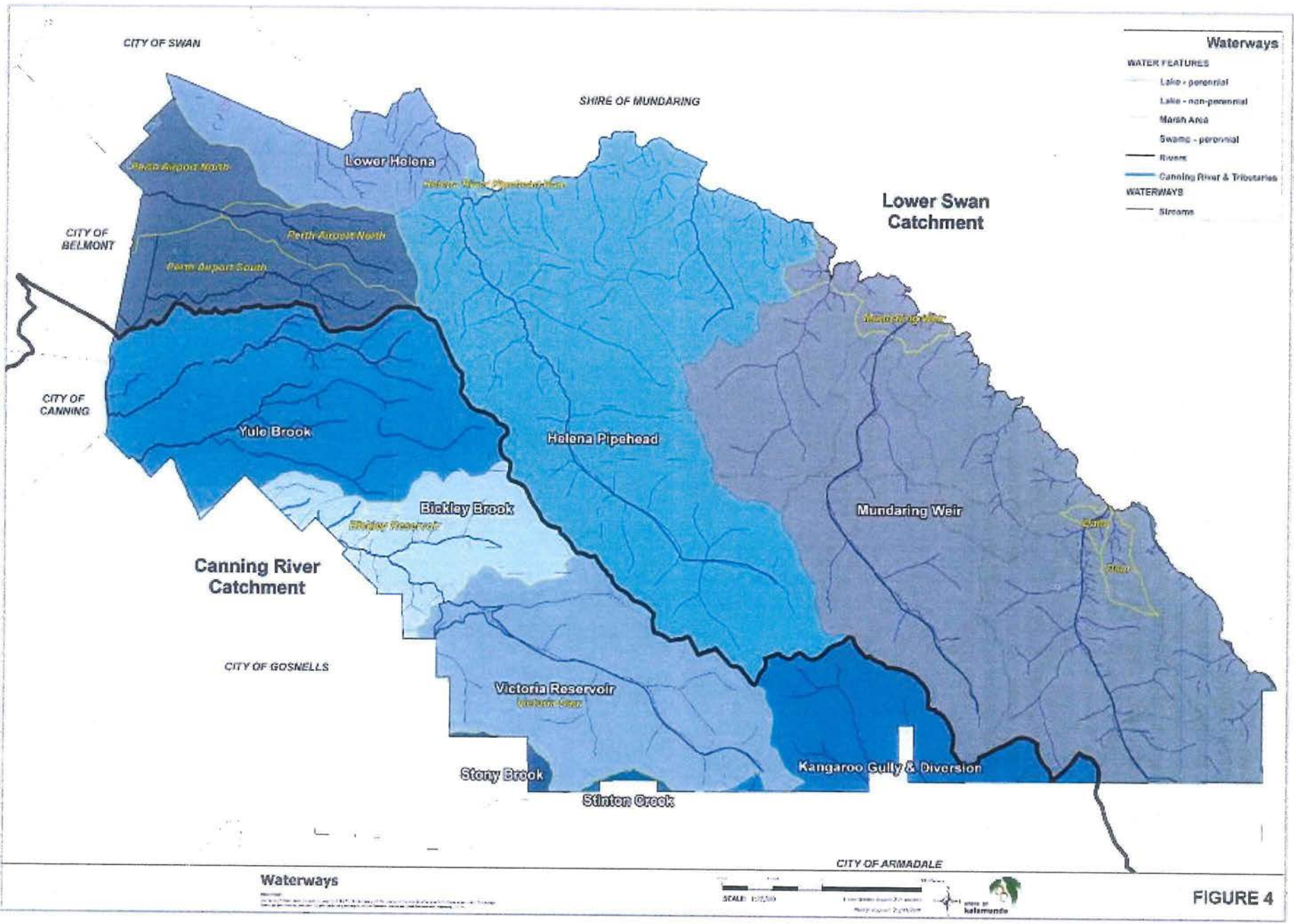


Figure 4: Waterways

FIGURE 4

Water Catchments

Surface water catchments require management to ensure that the health of the catchment and its watercourse is maintained or enhanced. A catchment can be assessed in terms of its health through known indicators such as percentage remnant vegetation and phosphorus export rates. Water catchments within the Shire can be broadly grouped according to their geographic location and purpose, namely; Swan Coastal Plain, Darling Scarp and Darling Plateau.

There are six catchments which drain from the Scarp to the west through the Swan Coastal Plain and into the Swan or Canning Rivers. These are as follows; Helena Valley and Perth Airport, North and South drain to the Swan River. The Perth Airport catchments run through important wetland areas which act as biological treatment ponds for potentially contaminated stormwater run-off. The Perth Airport, South catchment is largely undeveloped at present but is likely to be under pressure for urban development in the near future. Perth Airport, South is also the subject of a waterway strategy. The Kalamunda, Yule Brook and Bickley Brook catchments contain prominent watercourses such as Whistlepipe Creek, Woodlupine Brook and Yule Brook.

The majority of the Darling Range areas within the Shire are gazetted public water supply catchments as shown on the Scheme Map. The Mundaring Weir and Lower Helena Pipehead Dam Catchment areas all drain to the north toward the Helena River and Canning River Catchment. The Mundaring Weir Catchment Area is largely undeveloped and covered with remnant native forest. The Lower Helena Pipehead Dam Catchment is also well wooded in its northern portion, however, some clearing and the establishment of orchards has occurred in the Bickley, Carmel and Pickering Brook areas. The Victoria Reservoir and Kangaroo Gully Dam Catchment Areas drain southward and have experienced some clearing for orchard purposes, although this is mainly restricted to the upper reaches of the respective catchments.

It is important that the land use within a water catchment or sub-catchment is planned and managed to ensure the health of the catchment and its watercourse within the Shire is maintained or enhanced.

Threats to the Natural Environment

Subdivision and Development Approvals. Until recently, biodiversity conservation has not been considered an important aspect in land use planning. Activities such as subdivision have therefore led to widespread clearing of endemic vegetation. This is apparent where urban areas have been subdivided and the retention of areas with biodiversity conservation value has not been considered a priority. It is apparent that degradation of remnant vegetation has occurred where rural zones have been changed to special rural zones and led to smaller lot sizes, without the retention of vegetation.

Protection of biodiversity needs to be considered in the early stages of the land use planning process. This consideration will require detailed desktop assessment during the structure planning phase of subdivisions. Land capability analysis is required during subdivision of land zoned for special rural and rural composite uses. This analysis needs to consider retention of remnant vegetation, wetlands and waterways. In order to preserve biodiversity values within these zonings this requirement should be implemented. The protection will focus on Local Natural Areas as identified in the Shire's Biodiversity Strategy.

The Shire's Local Planning Scheme No. 3 contains provisions for the protection of the environment as part of any development approval. These provisions can be used to provide conditions for the achievement of biodiversity conservation. The main opportunity for biodiversity conservation comes from its inclusion in the planning process. Biodiversity therefore needs to be considered during the assessment of all development applications, during structure planning and when enforcing the purposes of various zonings.

Key Issue: Protection of Local Natural Areas

The Shire's Biodiversity Strategy has identified a number of Local Natural Areas (LNA's) totalling an area of 2,110 ha as the key areas for protection to achieve the intentions of the Biodiversity Strategy. Refer Figure 5 – Local Natural Areas.

Implementation of the Local Biodiversity Strategy will assist in the protection of Local Natural Areas through consideration of:

- biodiversity when preparing detailed structure plans;
- assessing subdivision and development applications with more rigorous ecological criteria; and
- making minor amendments to the Local Planning Scheme No.3.

It is important that detailed planning investigations are undertaken at the early stages of the planning process to ensure significant local natural areas are identified and afforded the necessary protection.

Between 2001 and 2005, 59 ha of endemic vegetation were cleared, mostly in LNAs. Indicating therefore the future of LNAs is uncertain and the remaining LNAs be considered as retained but not protected. The Local Biodiversity Strategy aims to increase the protection of these areas through the following mechanisms:

- Public land has been vested for the purposes of conservation;
- Private land is covered by a management agreement of at least 5 years; or
- Private land has a permanent conservation covenant.

In respect to the first dot point, The Shire has undertaken an independent assessment of its freehold reserves, vested reserves and state government controlled properties with a view to providing short to medium term options for preservation, redevelopment, disposal acquisition or use to deliver long term financial sustainability to its community. The assessment will also allow for the rationalisation of reserves which have no environmental value, no amenity value and are costly to maintain, to provide greater community benefit and service delivery. Some of the freehold sites have been identified and planned for community housing including aged accommodation.

It should also be noted that protected natural areas will need to be managed to alleviate the threats to biodiversity and funds will need to be allocated. Generally larger areas in good or excellent condition require less maintenance than smaller more degraded areas.

Locally significant natural areas in the Shire of Kalamunda have been identified using the criteria detailed in the Local Government Biodiversity Planning Guidelines. The standard ecological criteria for local biodiversity planning are grouped under the following themes:

- Representation of ecological communities;
- Diversity;
- Rarity;
- Maintaining ecological processes or natural systems – connectivity; and
- Protecting wetland, streamline and estuarine fringing vegetation.

Key Issue: Maintaining Ecological Linkages

Ecological linkages are non-contiguous, natural areas that connect larger natural areas by forming stepping stones that allow the movement, over time, of organisms between larger areas. Habitat fragmentation is a key threatening process leading to the loss of biodiversity. Survival of species within natural areas will depend on well planned and managed ecological linkages.

Regional ecological linkages link protected Regionally Significant Natural Areas (RSNAs) by retaining the best condition LNAs available between them that can act as stepping stones for flora and fauna.

This increases the long-term viability of the RSNAs as well as the LNAs in the link. To be effective the linkages should incorporate the major variation in plant communities and fauna habitat typical of the region so that the widest range of flora and fauna possible can use the links.

Regional ecological linkages have been identified by the Perth Biodiversity Project (PBP) with input from the Department of Environment and Conservation and the Department of Planning. Regional Ecological Linkages identified by PBP are included in the Local Biodiversity Strategy. On-ground assessment will however be required prior to making planning decisions enforcing the proposed linkage target.

Local ecological linkages are an important part of improving the viability of natural areas that may be too small to be viable on their own if isolated. The Shire of Kalamunda identified a number of local ecological linkages as part of the development of the Wildlife Corridors Strategy 1998.

Local ecological linkages should aim to link protected Locally Significant Natural Areas (LSNAs) to other LSNAs, protected regionally significant natural areas and Regional Ecological Linkages. The linkages recognised in the Wildlife Corridors Strategy should be assessed to ensure that these linkages meet current criteria for local ecological linkages.

Identification of regional ecological linkages and wildlife corridors at the site analysis stage of the planning process will assist in improving the viability of local natural areas.

Local Planning Strategy - Spatial Plan: 2031

POPULATION SCENARIO 3 - 25k Growth
SIGNIFICANT LOCAL NATURAL AREAS

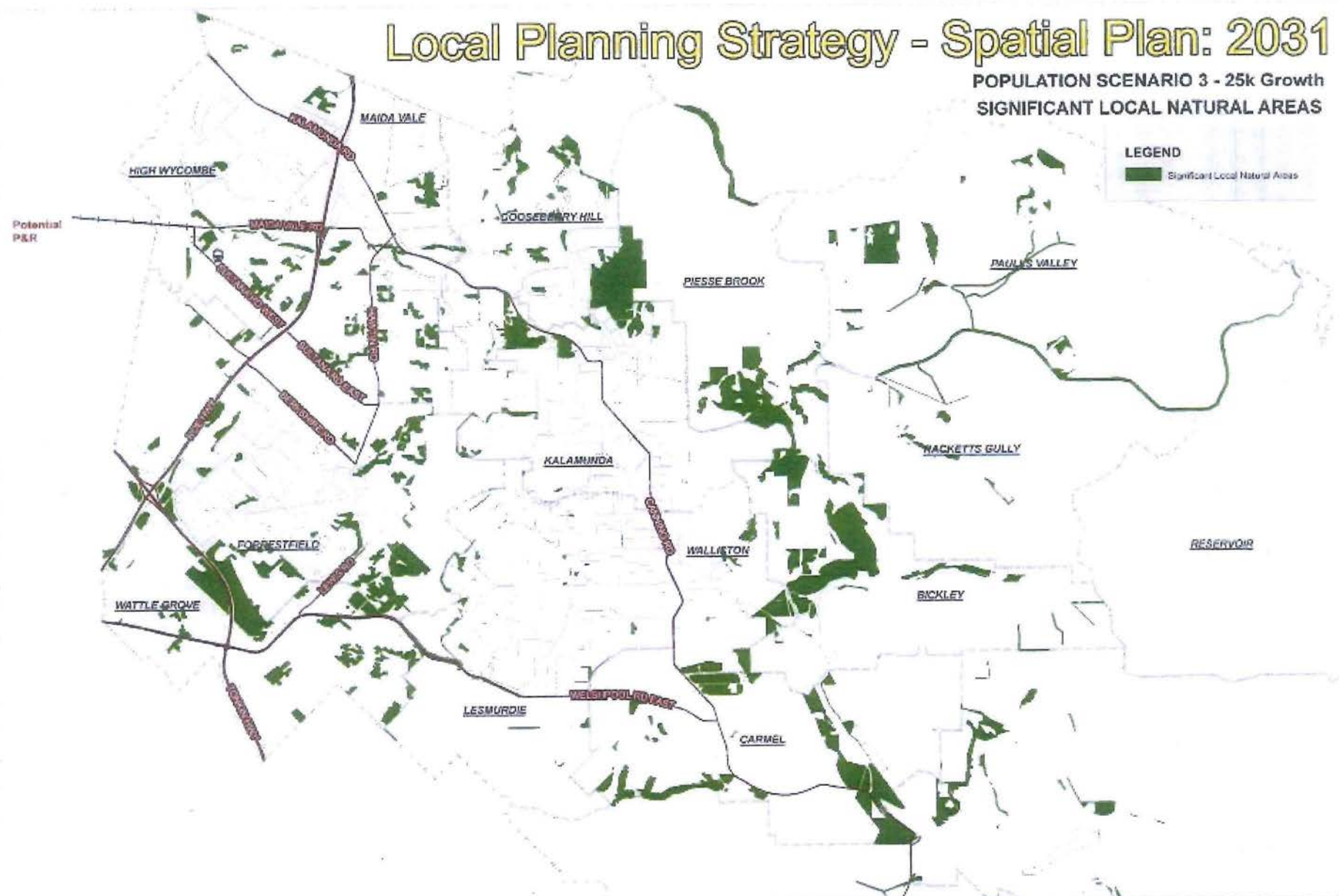


Figure 5: Local Natural Areas

Significant Local Natural Areas as the Biodiversity Strategy

Scale: 1:10,000
Map Date: 20/08/2024
Map Author: [Name]



FIGURE 5

Weeds

A weed is a plant growing out of its natural habitat and where it is not wanted. Environmental weeds that compete with and displace local endemic plant species are a significant threat to natural areas. Weeds compete with local endemic plant species for space and light and deprive local fauna of suitable habitat. Controlling weeds in natural areas is a significant cost to the management of these natural areas.

There are approximately 197 weed species known to occur within the Shire of Kalamunda. The top ten priority weeds are summarised in the table below:

Specific Name	Common Name	Rating
Asparagus asparagoides	Bridal Creeper	High
Cortaderia selloana	Pampas Grass	High
Eragrostis curvula	African Love Grass	High
Freesia aff. Leichtlinii	Freesia	High
Homeria flaccida	One Leaf Cape Tulip	High
Hyparrhenia hirta	Tambookie Grass	High
Heptospermum laevigatum	Victorian Tea Tree	High
Watsonia bulbifera	Watsonia	High
Rubus spp	Blackberry	Moderate
Echium plantagineum	Paterson's Curse	Moderate

Feral Animals

Feral Animals are introduced animals that compete with, predate upon and introduce diseases into endemic local faunal populations. They can alter the structure, density and floristic composition of natural areas through grazing and soil disturbance. Feral animals sighted or likely to occur in the Shire include, but are not limited to, the following; house cats, red foxes, European honey bees, black rats, European rabbits and Rainbow Lorikeets. Feral animal control is largely the responsibility of State Government although the Shire has produced a checklist for domestic cat owners encouraging responsible pet ownership. There is scope to investigate further controls with regard to domestic and feral cats.

Altered Hydrological Regimes and Water Quality

Plants and plant communities are strongly influenced by water availability. Urbanisation has significantly altered water regimes in the Shire and therefore the water available to plants and plant assemblages. Wetlands on the Swan Coastal Plain, for example, have historically been used for stormwater discharge. Some wetland areas that were previously seasonally inundated have become permanently inundated which has led to death of some flora species. Excessive nutrients, sediments and pollutants can also have a significant effect on endemic vegetation, wetlands and waterways. Excessive nutrients and pollutants contribute to algal blooms (eutrophication events), death of aquatic life in wetlands and promote the spread of weeds in both upland and wetland natural areas.

Climate

The unique biodiversity found in Western Australia is largely a result of its climate, soils and isolation. Current and future climate change will affect biodiversity directly through changes to temperature, rainfall, extreme events, and through altering the nature and intensity of existing biodiversity pressures. This will bring changes to landscapes and ecosystem services as species adapt, emigrate or immigrate and others become isolated. Reducing the effect of other threatening processes may help to increase the resilience of communities within the Shire. This will mean that they are more likely to withstand the effects of climate change and can adapt as necessary.

Key Issue: Drinking Water Protection

The Middle Helena Catchment is a priority drinking water catchment. Originally the catchment drained into the Helena River and was collected in the Pump-back Dam (Middle Helena Dam). Currently the water quality from the catchment is not good enough to be used for drinking water and the Water Corporation discards the water into the Helena River. The "Middle Helena Catchment Area Land Use and Water Management Strategy", was endorsed by the Western Australian Planning Commission in June 2010. Once this has been completed it is intended that a detailed Catchment Management Plan is prepared to identify point sources of pollution and work with the landowners to eliminate the pollution.

Planning Implications

Planning Implications from the assessment of the natural environment section are as follows;

1. The Shire of Kalamunda contains large areas, 24,081ha (74%) of land reserved for conservation purposes and not able to be developed for urban or residential purposes.
2. The Shire has responsibility for the following; Local Natural Areas, Shire Reserves in the urban areas and advice on ensuring that overall development throughout the Shire is sustainable.
3. The Shire has a major priority to eradicate weeds as a means of ensuring long term biodiversity.
4. Wetlands and waterways need to be protected and enhanced as a means of protecting sensitive habitats and water quality.
5. Areas of endemic vegetation need to be identified at the site analysis stage of the planning process and protected and enhanced so as to ensure biodiversity protection.
6. Identification of local natural areas and ecological linkages needs to be undertaken
7. The Middle Helena catchment is an important drinking water collection area and is presently polluted. The Shire needs to monitor the water quality so as to identify point sources of pollution and work with the land owners to rectify the issues.

3.4.2 Population Characteristics

Current Population and Projections

The Commonwealth Government 'State of Australian Cities 2010 Report' refers to Australian Bureau of Statistics (ABS) population forecasts which project that the population of Australia will grow to 35.5 million by 2056 and that Perth will reach a population of 3.5 million by 2056. The ABS has published population forecasts which suggest that the population of Perth and Peel will be between 2.40 million and 2.88 million by 2031. An additional number of dwellings ranging from 358,000 to 429,000 will be required in Perth (Directions 2013 and beyond 2010, p9).

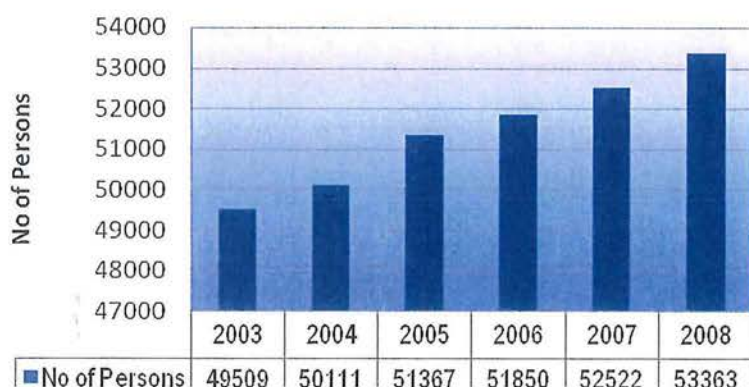
The population of the Shire of Kalamunda was 49,534 persons at the 2006 Census. According to the WA Planning Commission projections the Shire will reach a population of 52,300 people by 2011, 57,000 people by 2016 and 59,400 by 2021. It is estimated that the population of the Shire will increase by 8,666 persons over the next ten years, i.e. 17.5% growth. The median age of the Shire's population is 37 years which is the same as the median for the whole of Australia.

At the time of the 2006 Census 12,248 people (25%) were aged over 55 years. The Shire has a slightly higher age profile in the over 55 age group than the Perth Metropolitan Region. Some localities within the Shire have a higher proportion of residents in the over 55 age group, i.e. Kalamunda has 35%. By 2030 the over 55 age group in the Shire will have increased by 50% to 18,459 people. The majority by 2030 will be in the over 75 age group.

Population Trends

The population growth for the past five years has estimated to have grown between 7.5% and 8%. This trend is consistent with the Australian Bureau of Statistics and the Department of Health and Ageing statistics, which show the population growing from 49,509 in 2003 to 53,363 in 2008, an increase of 7.8%.¹

Figure 6: Kalamunda Population Trends, 2003 - 2008



Source: ABS, 2006

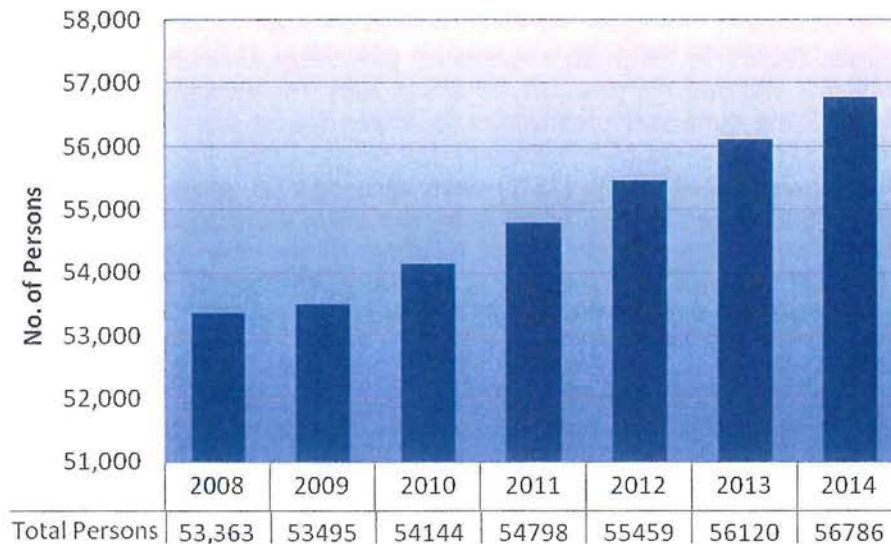
Short Term Population Forecast

¹ Figure 5 contains population statistics from the 2006 Census for the Kalamunda Local Government area and population projections for 2007 and 2008 from the Department of Health and Ageing

Based on the Department of Health and Ageing Statistical Local Area Population Projections 2008 to 2014, the population of the Shire of Kalamunda is estimated to grow at 6.4%; an absolute increase of 3,423 people. As highlighted in the Kalamunda Sporting Reserve Development Plan 2008, this rate of growth is approximately half the expected rate of growth for the state of Western Australia at 13.02%.²

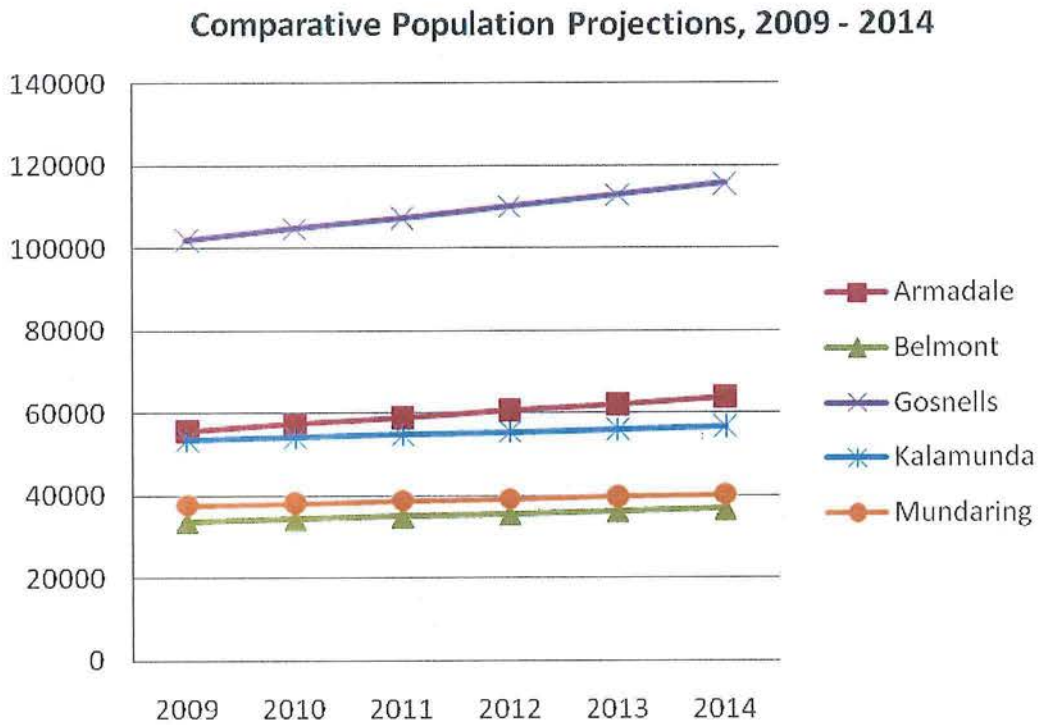
Over the next five years, it is projected that the major population growth areas within the Shire will be in the foothill areas; such as Forrestfield, Wattle Grove, High Wycombe and Maida Vale.

Figure 7: Kalamunda Short Term Population Projections, 2008 - 2014



² The WA State rate of growth was cross-checked using the sum of all projected population figures for all WA Statistical Local Areas from the Department of Health and Ageing

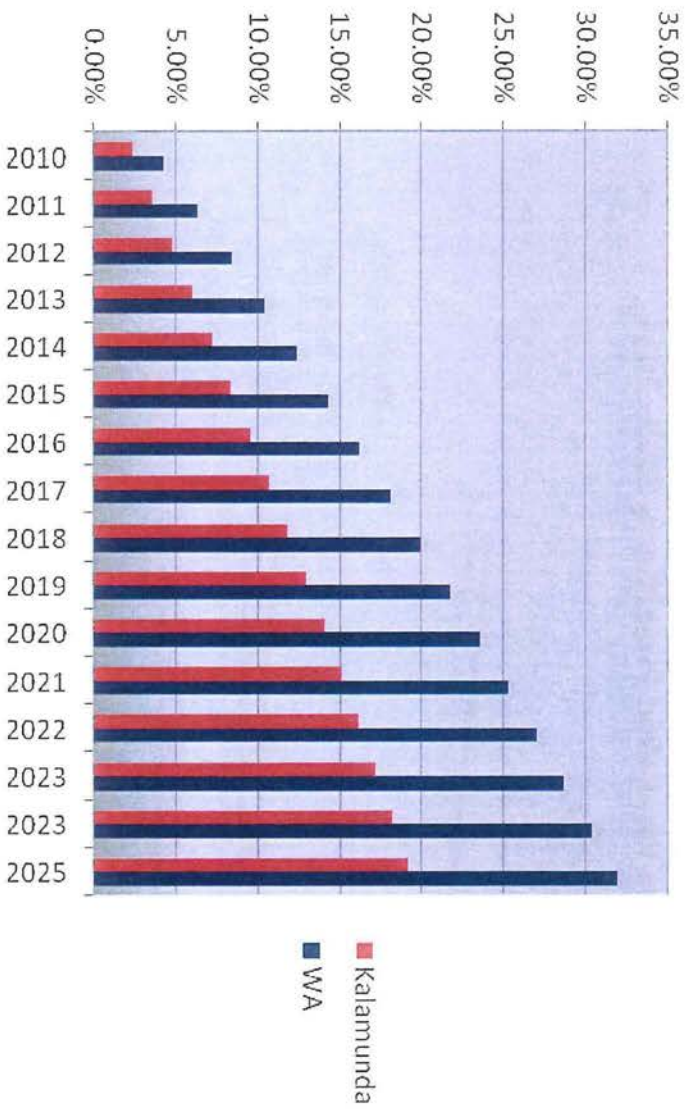
Figure 8: Regional Comparison of Population Projections, 2009 – 2014



Long Term Population Forecast

The Department of Health and Ageing Statistical Local Area Population Projections 2007 to 2027 indicates that the population of Kalamunda will grow from 53,495 in 2009 to 63,986 people in 2025; an increase of 19.6%. This is less than the expected rate of growth for the whole State, the population of which is projected to increase by 34.3% from 2009 to 2,953,600 in 2025.

Figure 9: Long Term Projection, Comparison of Kalamunda and W.A., 2010 – 2025

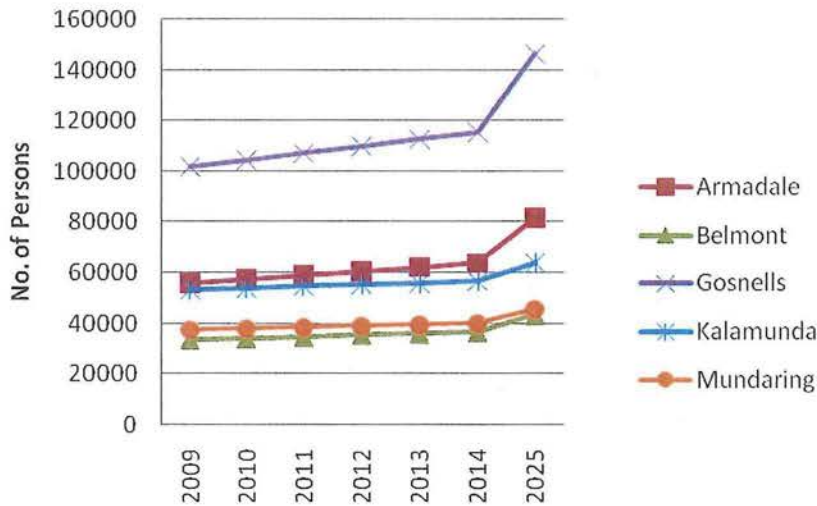


Source: Department of Health and Ageing, 2007

This growth in population is likely to put increased pressure on Shire services, land availability and asset and infrastructure requirements.

An analysis of the projected population growth for Kalamunda and neighbouring Councils was undertaken. As seen in the chart below, it is projected that the rate of population growth will significantly increase between 2014 and 2025.

Figure 10: Regional Comparison of Long Term Projections, 2009 – 2025

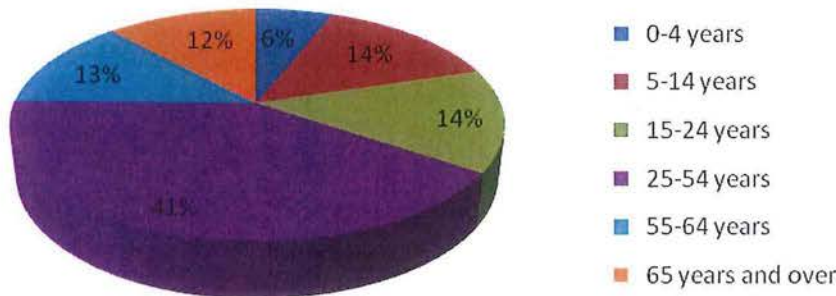


Source: Department of Health and Ageing, 2007

Age Composition

The Shire of Kalamunda current age composition below shows that 41% of the Shire’s population are aged between 25 and 54 years. People aged between 5 and 24 represent 28% of the Shire population and 25% are aged 55 years and over.

Figure 11: Kalamunda Age Composition, 2006

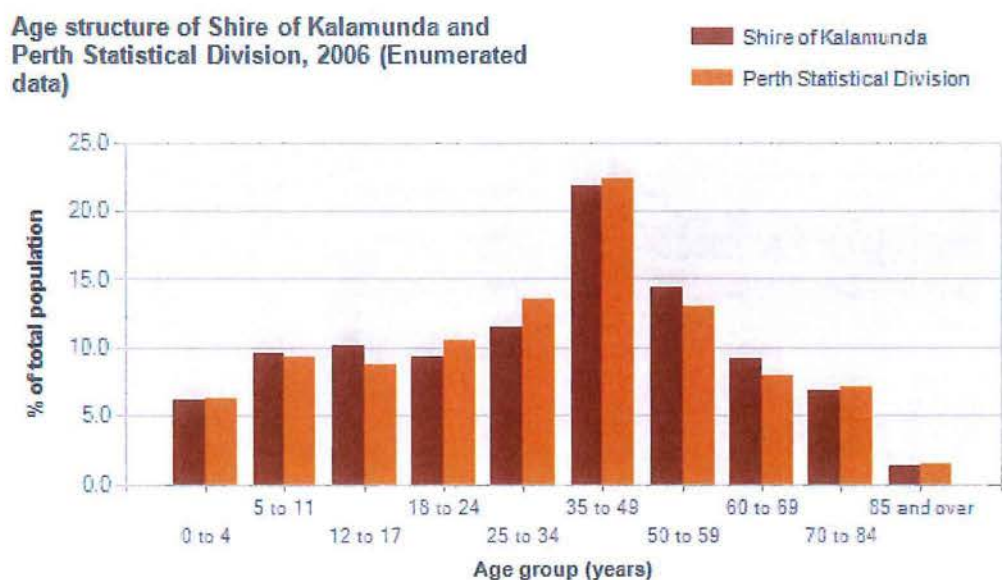


Source: ABS Census of Population and Housing, 2006

Analysis of the age composition of Kalamunda compared to the Perth major statistical area revealed that in large, the age composition is very similar, with some of the minor differences including:

- A larger percentage of 55-64 year old people live in Kalamunda (13% compared to 11% in Perth)
- A smaller percentage of 25-54 year old people live in Kalamunda (41% compared to 43% in Perth)

Figure 12: Kalamunda Comparative Age Composition with Perth, 2006



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Age Trends

From 2001 to 2006, the most significant change in the Shire of Kalamunda's age composition has been the increase of the 55+ year old people, as depicted in the chart below.

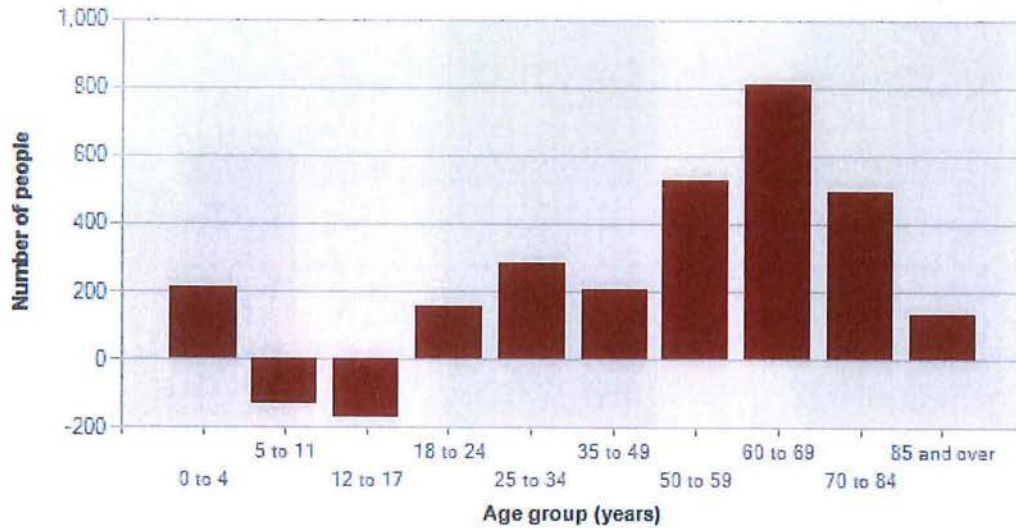
In contrast, the proportion of people aged below 54 has reduced in since 2001.³ As seen in the chart below, there are notable differences between the changes in age composition between Kalamunda and Western Australia; however the trends at large are similar.

The number of people aged over 55 years has increased from 9,702 in 2001 to 11,981 in 2006. It is evident that the increase in the proportion of people aged 55 years and above is greater in Kalamunda than the State total increase since 2001. The Kalamunda Aged Accommodation Strategy clearly identifies that the Shire will be required to address the ageing population.

³ In 2001, the proportion of an age group was calculated using the number of people aged within the age bracket, divided by the total population. This same formula was used for 2006 statistics, which allows us to measure the relative proportion increases or decreases of an age group to the total population. So, even though the population of an age group may have increased from 2001 to 2006, this increase may have been lower than the overall increase in population, hence negative growth displayed on the graph.

Figure 13: Kalamunda Comparative Change in Age Composition, 2001 - 2006

Change in age structure of Shire of Kalamunda, 2001 to 2006 (Enumerated data)



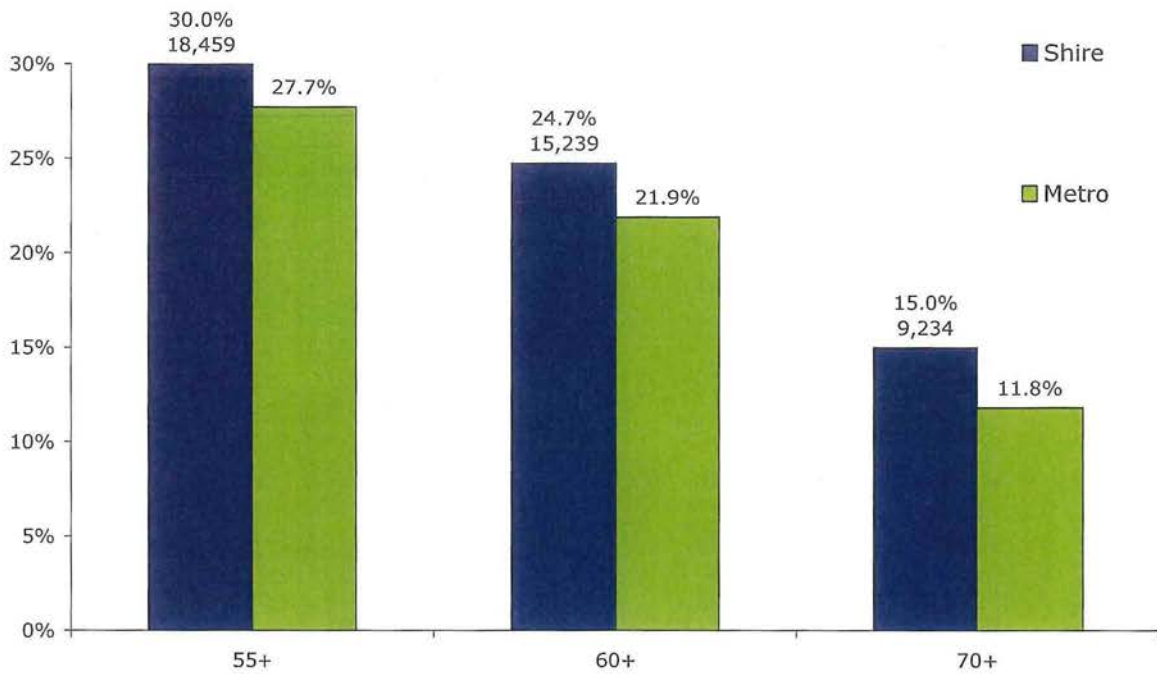
Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Age Projections

By 2030, the Shire of Kalamunda estimates that the 55+ population in the Shire will have increased by 50% to 18,459 where effectively, one in three people will be over 55 years and half of the 55+ population will be over 70 years of age (Aged Accommodation Strategy 2008).

This ageing trend is also indicative of world population trends resulting from longer life spans, declining birth rates and the ageing of the 'baby boomer' generation.

Figure 14: Comparative Age Composition and Projected Growth at 2030



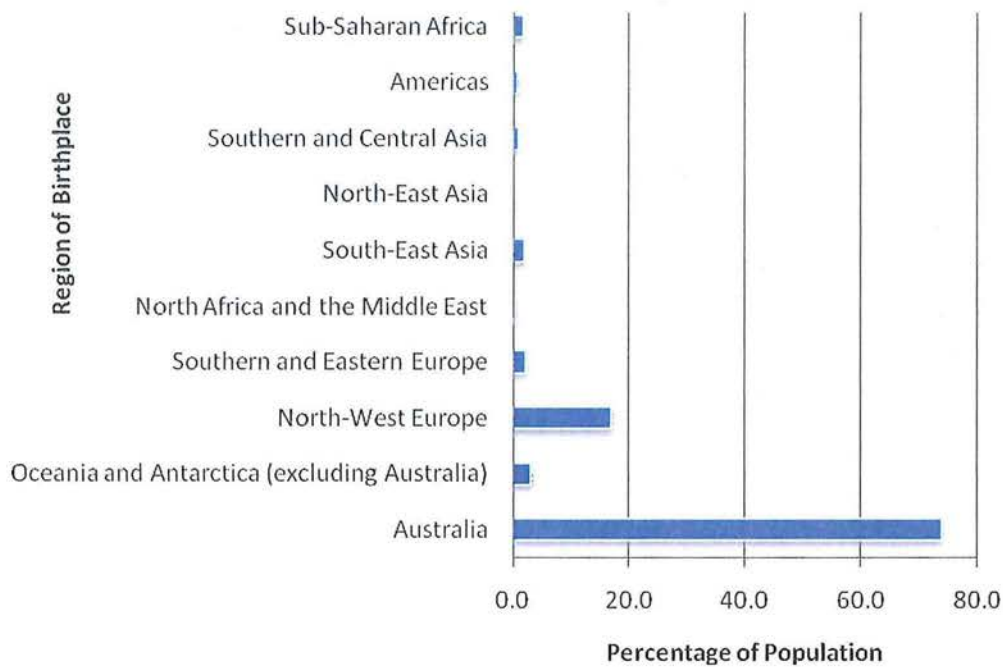
Source: Aged Accommodation Strategy June 2008

The Shire of Kalamunda recognises that this trend will have a significant impact on the Shire's ability to deliver services and provide facilities to address this growing demand. The Shire of Kalamunda has developed an Aged Accommodation Strategy (June 2008) and a Seniors Plan to address associated issues such as home and community care services and residential care needs of older people.

Migration

The majority of Kalamunda residents are Australian born (72%) followed by North-West Europe born persons migrating to the region (17%). This current trend is not dissimilar to Perth with Kalamunda showing a slightly lower migration rate of 26.6% compared to Perth at 31.3% (ABS, 2006).

Figure 15: Birthplace by Region, 2006



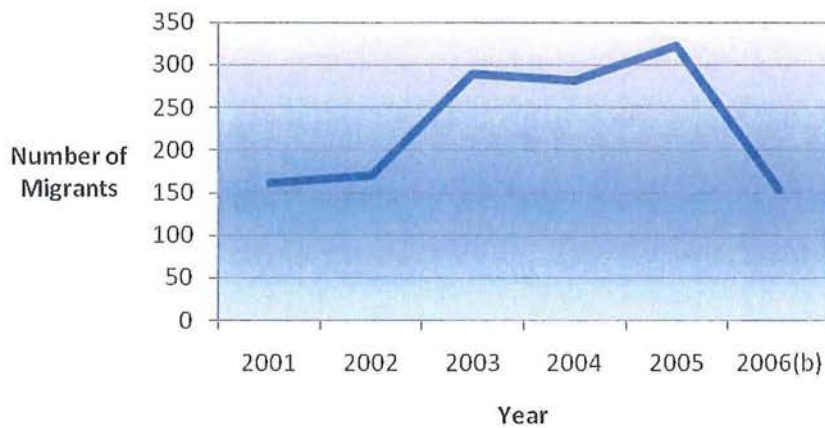
Source: ABS Census of Population and Housing, 2006

International Migration Trends

The 2006 Census data shows that the international migration trend has been fluctuating from 2001 to 2006, with its highest rate of migration in 2005 (322 persons) and its lowest rate in just the following year (154 persons). Of all the international regions, all except North-East Asia had a decrease in migration in 2006.⁴

Between 2001 and 2006, 1,629 people moved from overseas to Kalamunda.

Figure 16: Kalamunda International Migration Trends



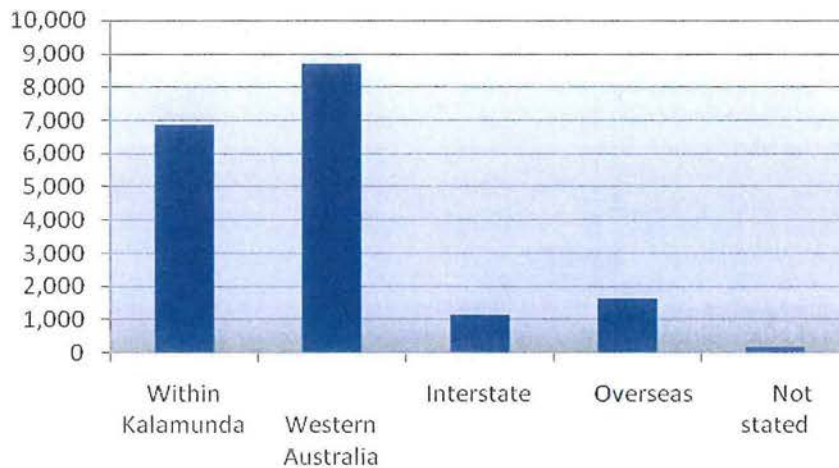
Source: ABS Census of Population and Housing, 2006

⁴ Note that the year 2006 is the period 1 January 2006 to 8 August 2006

Intrastate and Interstate Migration Trends

Between 2001 and 2006, 6,875 people moved within the Shire of Kalamunda, 8,689 people moved from elsewhere in WA to Kalamunda and 1,168 people moved from interstate to Kalamunda.

Figure 17: Migration to Kalamunda, 2001 – 2006



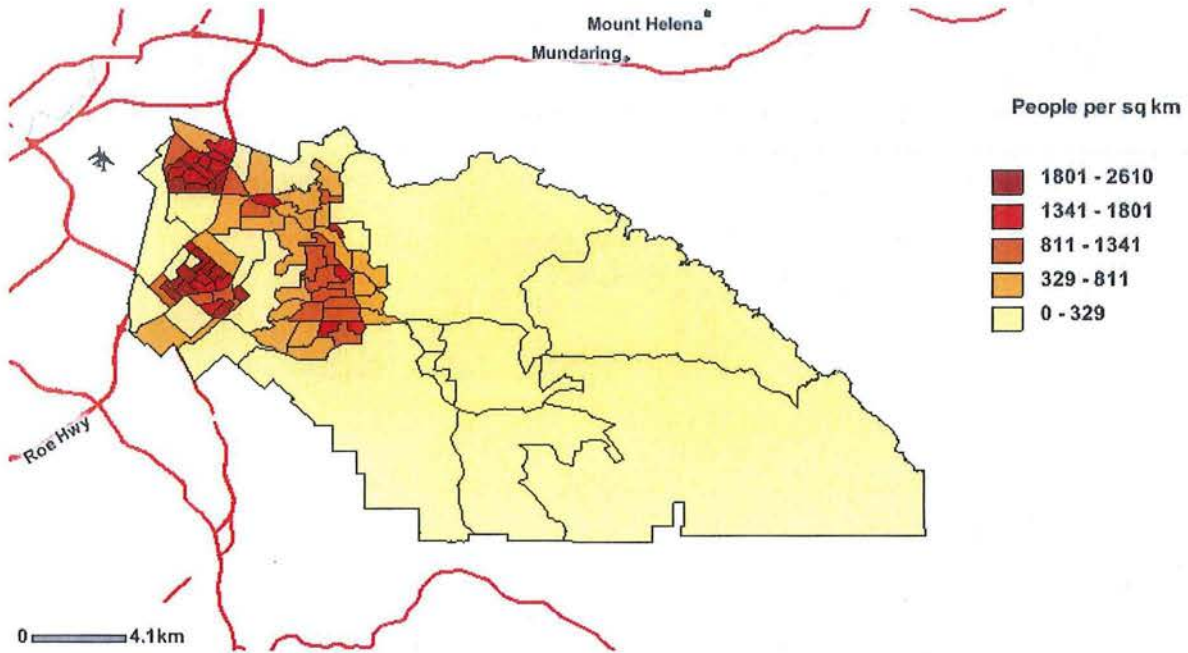
Source: ABS Census of Population and Housing, 2006

Interstate migration trends on a national scale highlight that persons aged 45 years and over were less likely to move interstate than younger persons. As seen in the chart below, approximately 80% of all migrant persons to Kalamunda in 2005-06 were aged 44 years or below.

Population Density

Based on the WA Local Government Directory 2008, the Shire of Kalamunda's total population is 51,778 for 2006/07. The highest population density is within the Foothills/Plains and the Escarpment geographical area. The Eastern Rural District has a much lower population density by comparison, as most of this land is national parks and reserves.

Figure 18: Kalamunda Population Density, 2006



Source: ABS, 2006

Assessment of Future Population Scenarios

In addition to the above broad assessment it was decided to provide a more detailed examination of the potential of the Shire to accommodate additional population so that the Shire Council would have a more detailed basis for decision making. It was decided that scenarios would be prepared for; an additional 10,000, 20,000, 25,000 and 30,000 people.

Population Scenario 1: Growth by 10,000 people accommodated in Existing Development Areas (Wattle Grove U9, Forrestfield U7, High Wycombe U2, Maida Vale U6 and U4 and Orange Grove Road, Lesmurdie) Proposed Urban Area (Stirling Crescent) and Proposed Urban Infill Areas (Kalamunda, High Wycombe, Forrestfield and Maida Vale). See plan of Scenario 1 below. At current development rates Scenario 1 will be achieved in approximately 7 years (2017) without any major changes.



Example of Low Density R20 Development



Example of Light Industrial Development



Example of Medium density R30 Development

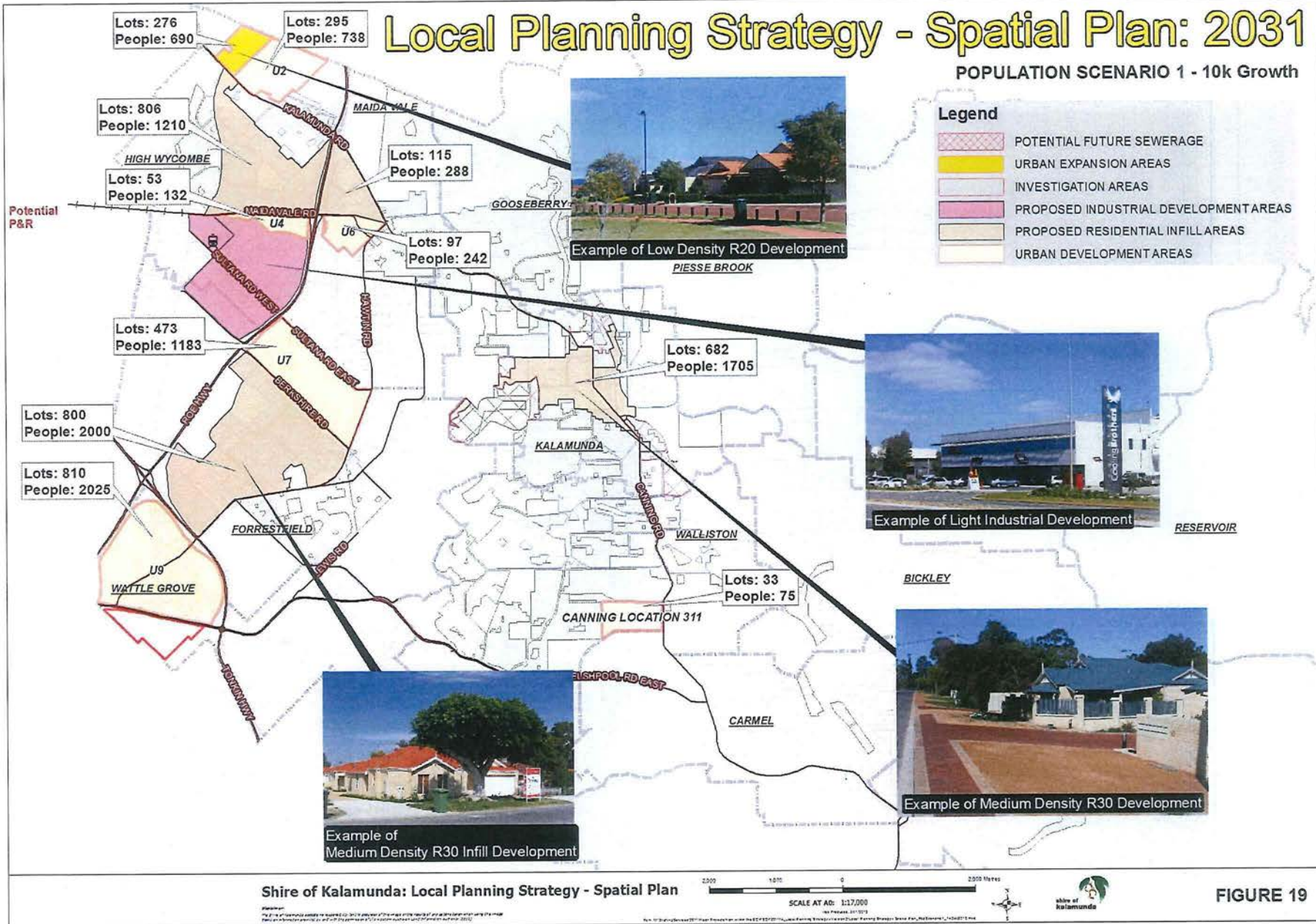


Example of Medium Density R30 Infill Development

Local Planning Strategy - Spatial Plan: 2031

POPULATION SCENARIO 1 - 10k Growth

Figure 19: Scenario 1; Additional 10,000 Population



Population Scenario 2: Growth by 20,000 people accommodated as in scenario 1 above (with some higher take up rates) plus Proposed Urban Development Area from Special Rural to Urban (R20/30) (Maida Vale South and Pickering Brook). See plan of Scenario 2 below. At current development rates this would be achieved in 15 years (2025).

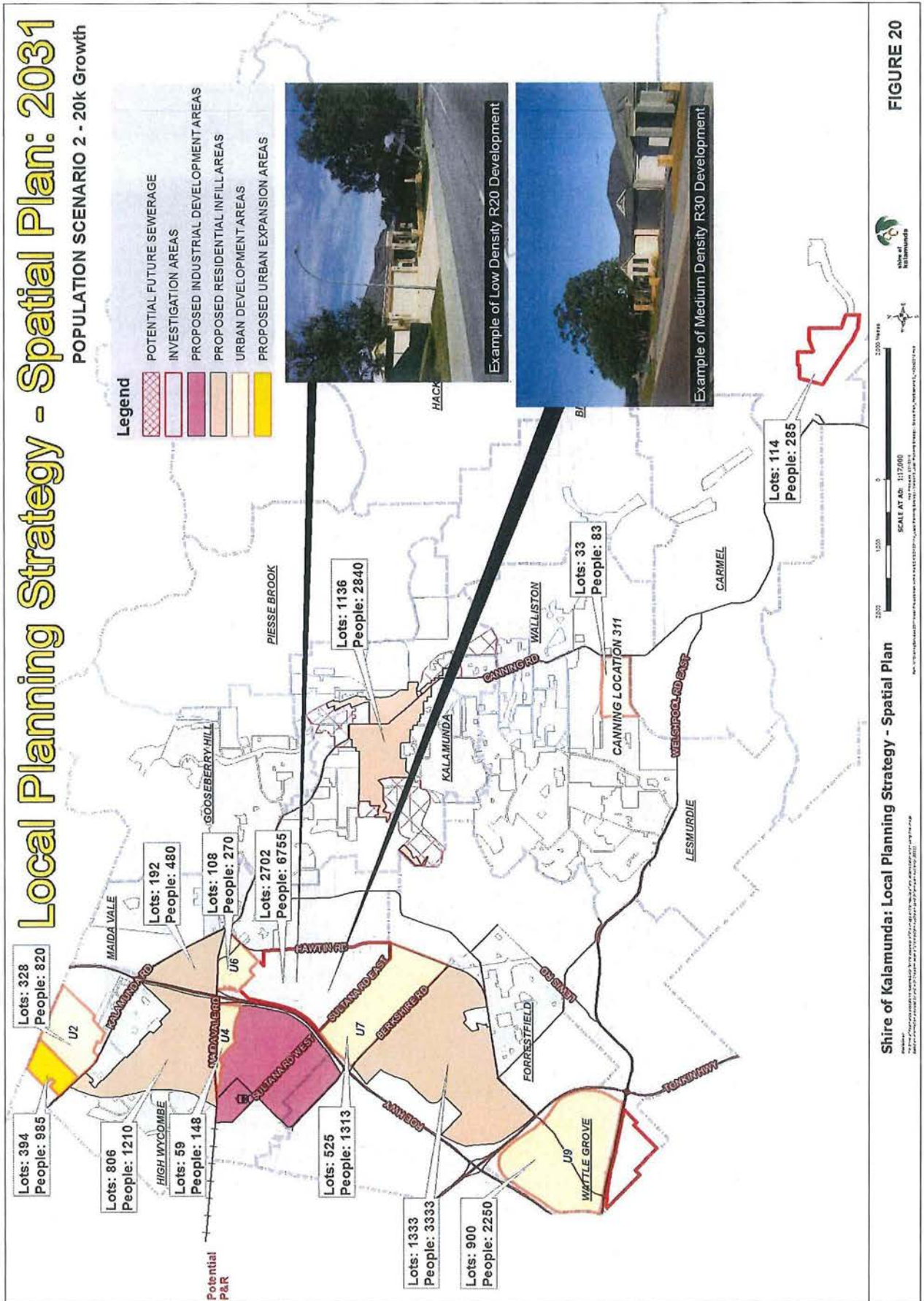


Example of Low Density R20 Development



Example of Medium density R30 Development

Figure 20: Scenario 2; Additional 20,000 Population



Population Scenario 3: Growth by 25,000 people accommodated as in scenarios 1 and 2 plus Residential Bushland development (R2.5) of Special Rural land to the east of Hawtin Road and Lewis Road (R5) and Wattle Grove south of Welshpool Road to a range of densities (R2.5, R5, R20 and R30 in centre) and including a Neighbourhood Centre in Wattle Grove. See plan of Scenario 3 below. At current development rates the final part of this scenario (Special Rural land to Urban) would be required by 2025.



Example of Residential Bushland Development at a density of R2.5



Example of Residential Bushland Streetscape at a density of R2.5

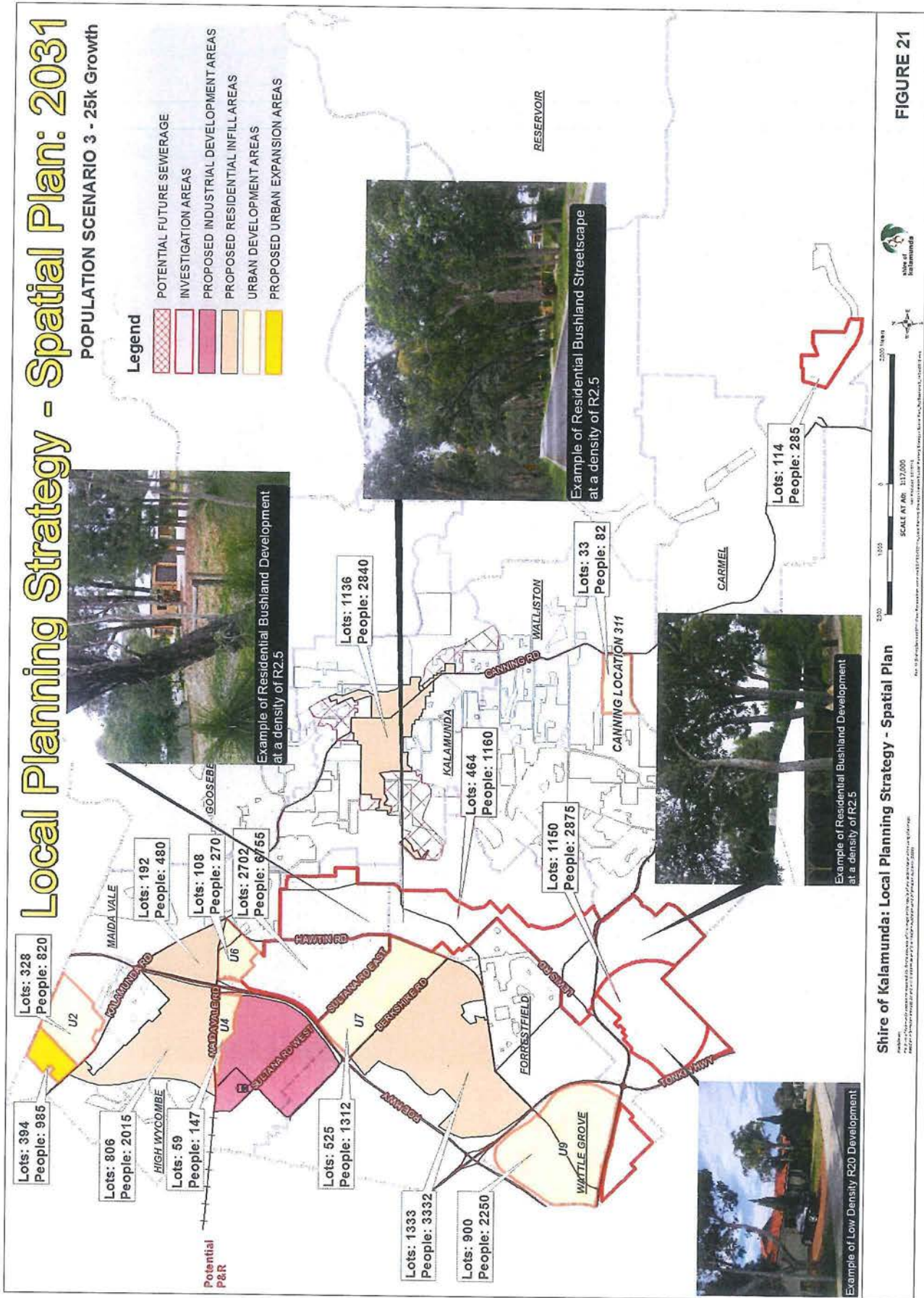


Example of Low Density R20 Development



Example of Medium Density R30 Development

Figure 21; Scenario 3; Additional 25,000 Population



It is the recommendation of the planning staff that **scenario three** provides the best current outcome in terms of the planning analysis and community consultation.

Population Scenario 4: Growth by 30,000 people accommodated as in scenarios 1 and 2 plus Residential development (R20) of Special Rural land to the east of Hawtin Road, Lewis Road and Wattle Grove (south of Welshpool Road to densities of R20/R30) including a Neighbourhood Centre in Wattle Grove. This scenario would also retain a special rural buffer along the edge of the Scarp. See plan of Scenario 4 below. At current development rates the final part of this scenario (Special Rural land to Urban) would be required by 2025.

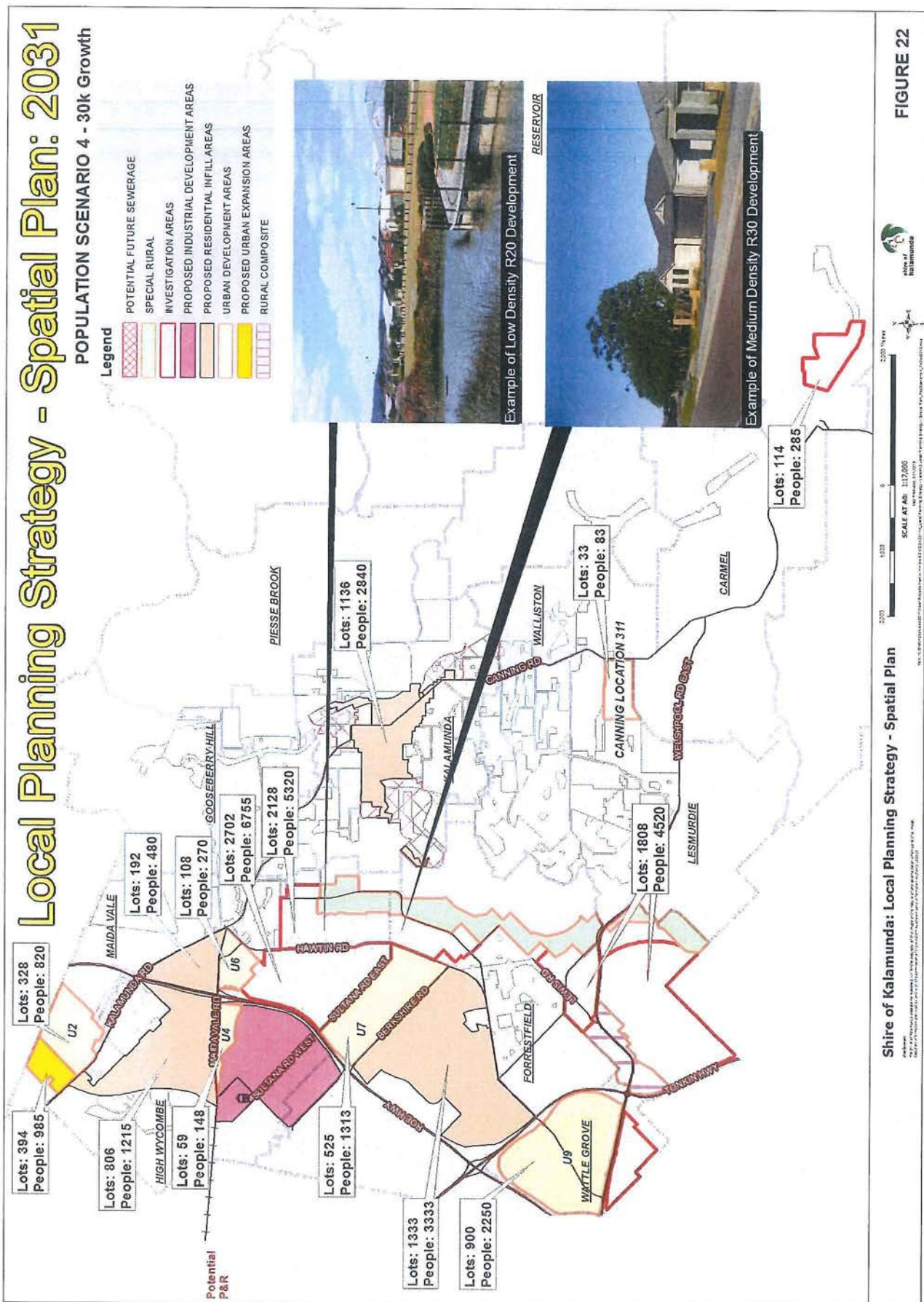


Example of Low Density R20 Development



Example of Medium density R30 Development

Figure 22: Scenario 4; Additional 30,000 Population



Key Issue: Population Projections

The most recent WAPC projection of population by local government areas was published in 2005. That report gave a projected population of 59,400 in the Shire of Kalamunda by 2021, being an increase of 8,666 people. The time horizon for this strategy is 2031 and it is reasonable to assume at least a doubling of population from 2010 to 2031, i.e. 17,332 people. From recent building trends during the recent international financial crisis development of residential housing in the Shire of Kalamunda has experienced rapid growth, i.e. 550 new houses per annum during the 'recession'. It is believed that this anomaly is driven by development of local employment in Perth Airport, close proximity to the airport and affordable residential land. Given these factors we believe that it is not unreasonable to expect an additional 20,000 people in the Shire by 2031.

Key Issue: Ageing Population

The population profile of the Kalamunda population indicates that the over 55 year group will have increased to 18,459 people. One in three people will be over 55 years and half of those will be in the over 70 year group. This ageing trend is indicative of world population trends resulting from longer life spans, declining birth rates and the ageing of the 'baby boomer' generation. His changing population profile will create a number of social and economic issues over the next 21 years. Kalamunda's housing was originally built for predominantly families, i.e. 94% of housing is single detached housing. This form of housing is not ideally suited to the older generation who will face increasing difficulties in maintaining large properties as health declines.

Planning Implications

The following are the main population implications for planning in Kalamunda:

1. The current population projections of the WA Planning Commission for the Shire of Kalamunda extend to the year 2021 and predict an increase in population from 52,300 in 2011 to 59,400 people by 2021, an increase of 8,666 people. This is ten years short of the Directions 2031 target date, however, it would be reasonable to anticipate a doubling of population extending from 2021 to 2031, i.e. approximately 17,300 people by 2031.
2. The Commonwealth Department of Health and Ageing have projected the Kalamunda population to increase to 63,986 people by the year 2027. This is an increase of just over ten thousand over 20 years. It would seem reasonable to extend this by another 2,000 people to cover the additional years to 2031. This would give an increase over the current population by about 15,000 people by 2031.
3. Enquiries made with the State Department of Planning as to the next population projection update indicates that they are being reviewed at present but the new figures will only be available by the end of 2010.
4. Development rates, including 550 new houses being constructed during the worldwide financial crisis in 2009 suggests population growth rates may be higher than projected. The reason for this is development and job creation at Perth Airport and affordable land. Based on the above it is considered that a target population increase of 25,000 people is reasonable by the year 2031.
5. The ageing of the population is believed to be one of the most significant challenges facing the Shire over the next 21 years, i.e. an additional 6,311 people will move into the over 55 age group to give a total of 18,459 people in this group. One in three people will be over 55 years and half the over 55 year people will be over 70 years of age.

3.4.3 Housing Characteristics

Housing Types, Density and Condition

Separate houses make up 93.7% of the housing stock in the Shire (compared to 74.8% Australia wide), semi-detached / terrace / town housing at 3.5% (9.2% Australia wide) and flat, units or apartments at 1.7% (14.2% Australia wide). The variety of housing types available to residents is limited in comparison to the rest of Australia whilst in contrast; the age structure and house hold compositions are very similar.

The majority of housing throughout the Shire was built in the 1960s and is therefore nearing 50 years old. This includes old State housing properties throughout Kalamunda which were not built to a high standard. The 1970s saw the development of Forrestfield and the South East of Wattle Grove. Over the last 20 years there have been pockets of new development such as the portion of High Wycombe to the North of Kalamunda Road and the remainder of Wattle Grove.

Urban investigation areas in the Foothills localities and in central Kalamunda are zoned R20/25/30 (requiring a minimum lot size of 270-440sqm) this is classified as low to medium density under the residential design codes. Localities of Maida Vale, South High Wycombe, Gooseberry Hill, Lesmurdie and Walliston are predominantly zoned R5/10 (minimum lot size of 1000 to 2000sqm) with some pockets of special rural requiring 10,000sqm lots. Carmel and Bickley are rural localities where the lot sizes are approximately 1 ha or larger and are zoned Rural Agriculture, Rural Conservation and Rural Landscape Interest.

The Implications of Population Growth/change on Future Housing Needs

To house an extra, approximately 20,000 people, over the next 21 years would require an additional approximately 8,000 new homes, needing (based on average lot size of 400sqm) approximately 320 ha of land. The land currently set aside for urban development would not meet that need and so a high proportion of infill development would be required. Land supply is predominantly driven by market demand and in the past, supply has met the demand by rezoning rural land to urban. New land releases generally attract the greatest interest from purchasers and so developers have been most interested in obtaining large tracts of land for development rather than small scale subdivisions.

Implications of Population Growth and Change for Infrastructure and Service Provision

Infrastructure and service provision will be guided by community demand unless there are major constraints to provision. At the Structure Plan stage of any new land release the provision of infrastructure and services needs to be planned. Major retailers and land developers pay close attention to population growth and developing new areas and so retail service provision is catered for by market demand.

In the case of infill development the existing infrastructure, especially sewerage, will determine the density of subdivision; in many cases the infrastructure cannot feasibly be upgraded. Service provision also provides local employment opportunities which allow a community to develop and support a higher density of population. Industrial land is in high demand and the services provided to these areas needs to be considered when opening up new areas for development. This also raises the issue of the capacity of existing utilities to keep providing for growth.

Changes in the Character and Amenity of Residential Areas, Arising from Redevelopment, Consolidation and Higher Densities

Many of the properties in High Wycombe and Forrestfield with residences built in the 1960s on large lots have potential for infill subdivision and now are in the situation that the house is to the front on the

lot is old and in relatively poor condition with a new house to the back. This is of concern in terms of the character and social amenity of these areas.

When developing new areas, design standards and streetscape guidelines can be applied to whole areas (under the residential design codes) which stipulate the character and design of the locality. This is a possible way of ensuring that new land releases have some level of character and amenity for new residents and avoid the monotonous nature of suburban developments in the Shire. The Shire needs to prepare guidelines to enhance development to ensure; walking convenience, water sensitive urban design, adequate open space provisions, affordable housing, and a variety of housing types.

Issues Associated with New Housing Development, Redevelopment and Infill

Sprawling low-density suburbs will result in settlements without individual identity. Low-density development also requires a much greater infrastructure and service investment in order to cover greater land areas. Rural wedges or greenbelts could be retained to create distinct urban settlements with separate identities to preserve natural amenity and environmental character. The semi-rural lifestyle enjoyed by a high proportion of the population is important and should be considered when assessing areas for higher density.

Investigation Areas

The Key Elements Plan identifies Investigation Areas that present development and growth opportunities however require further investigations.

The key matters that will need to be investigated for each Investigation Area are, but not limited to:

- Bushfire risk.
- Transport/movement networks.
- Infrastructure/servicing.
- Environmental and landscape impacts.
- Urban water management.

It should not be assumed that Investigation Areas will be rezoned for further subdivision, urban or industrial development at any time.

The State Government's Directions 2031 and Beyond, and Outer Metropolitan Perth and Peel Sub-Regional Strategy has identified Wattle Grove as having *"potential for future consideration as a urban investigation area this is due to its proximity to the urban front and employment around the airport"*.

Residential Bushland and Foothills Investigation Area

The Residential Bushland zone provides for low density residential and residentially compatible use and development of land, which is considered suitable for such use, and development but which has special environmental characteristics including land predominately covered with vegetation. The zone caters for land largely within the Bickley, Carmel and Pickering Brook town sites, although some land is located in the Foothills, i.e. Darling Fields in Maida Vale. Lots may range in size between 2,000sqm and 1 ha; however, 4,000sqm is considered an ideal lot size to preserve substantial amounts of natural vegetation. Subdivision and development is subject to the requirements of the Residential Design Codes for the applicable residential densities inclusive of a requirement for connection to reticulated water.

Some scope exists for further subdivision of the land in the town site of Pickering Brook to a minimum of 2,000sqm and the expansion of the Residential Bushland (4,000sqm lots) zone to land immediately abutting the town site to allow for the creation of additional lots. There is also potential for a small commercial activity centre at the centre of Pickering Brook to cater for neighbourhood services and to create a focus for the settlement. Consideration should therefore be given to the

preparation of a structure plan for the Pickering Brook Town Site to guide further subdivision in the town site area.

It is also proposed to rezone land to the east of Hawtin Road in the Foothills areas of Maida Vale, Forrestfield and Wattle Grove to a Foothills Investigation Area. Development of these areas will require comprehensive and detailed planning to be undertaken including an analysis of the bushfire risk and the preparation of structure plans before subdivision or development can proceed. This will necessitate the introduction Scheme objectives and provisions for the proposed Residential Bushland zone which will identify the requirements for the preparation of a structure plan. The structure plan process will ensure that significant Local Natural Areas are identified and protected. One such mechanism could be encouraging smaller lots in cleared areas to protect areas of environmental significance.

The introduction of the residential bushland zone into the foothills area will require prior to rezoning or subdivision of the land comprehensive analysis of issues relating to bushfire risk, future servicing of the area, biodiversity protection and other relevant planning considerations to be undertaken to support the proposed zone.

Constraints to Housing Provision; Infrastructure Capacity and Existing Patterns of Development

Increase in density on residential land is dependant predominantly on sewer availability. Sewer is not available throughout Lesmurdie, Gooseberry Hill, Walliston or Carmel and so most high density residential is restricted to the relatively small area in central Kalamunda and the Foothills. A large portion of the eastern part of the Shire is located in a Drinking Water Catchment and this limits urban expansion throughout much of the eastern Hills localities. The existing pattern of development throughout Maida Vale can constrain housing provision through existing residents being unwilling to alter their semi-rural lifestyle.

Opportunities for Higher Residential Densities

There is opportunity for increased residential densities ranging from medium to high residential development around the Kalamunda District Centre and surrounding Forrestfield District Centre. Opportunities also exist for increased medium density residential infill development in the older residential areas of Forrestfield, High Wycombe and Maida Vale. As these areas are connected to sewer, and within walking distance to public transport, retail provisions, medical facilities and all areas are adjacent to a community library they have a higher suitability rating. A high density residential area, designed for pedestrian access may be beneficial for the Newburn Road, High Wycombe precinct because it would also support the existing businesses which have been impacted as a result of the newer retail development on Kalamunda Road, approximately 500m to the north.

The introduction of infill development into the older suburbs of Forrestfield, High Wycombe and Maida Vale will require existing infrastructure and services to be reviewed and potentially upgraded to accommodate the new growth.

Revitalisation of residential areas in close proximity to activity centres and services could provide a mix of housing types (town houses, apartments, single residential, and affordable housing). The proposed higher density areas are included in this Local Planning Strategy and will be introduced to the Scheme by amendment or Scheme Review.

Any increases in density should take into account the age and condition of the houses in these areas, so as to ensure that there is a financial incentive for landowners to remove the houses that are in poor condition and also aim to provide a range of different housing types. Proposed higher density areas will also need streetscape guidelines to ensure the best aesthetics possible.

Housing, Climate Change and Urban Design

An understanding of the impact of urban development on the environment and climate change has increased dramatically in recent times and is now a concern for many people developing within the Shire of Kalamunda. The rural community of the Shire as a whole attracts people concerned about the environment around them.

The Building Codes of Australia stipulate standards for insulation, glazing, lot design, building materials and energy efficiency of appliances. More specific requirements apply to industrial developments and can include lighting types, heat and energy emissions. These requirements are administered by the State Government and the Shire of Kalamunda supports these initiatives. Information availability to prospective builders and homeowners is an area where the Shire can further support these initiatives along with promotion through providing rebates or discounts in the rates system. The Shire of Kalamunda can provide leadership in this area to encourage sustainable development to support and enhance the level of interest in green technology and solar passive design in the community.

Opportunities for Aged Accommodation

The Shire of Kalamunda commissioned 'Community Perspectives' consultants to prepare an 'Aged Accommodation Strategy' for the Shire in 2008. The following are some of the key findings of the strategy report;

- Australia's population is ageing. By 2021 one in four West Australians will be over 60 years of age. The Shire of Kalamunda has higher percentages of aged residents than average. By 2030 there will be 18,459 people over 55 years of age and half of those will be over 70 years of age.
- There is a strong desire to 'age in place' which means finding suitable accommodation locally without the need to move away from family and friends.
- There needs to be a significantly greater investment in home support and community care. The existing levels are not adequate and this will fall considerably short in the future unless this changes.
- There is little choice in housing for older people in the Shire. Currently 94% of housing is separate housing for 'families'. As 25% of the population is over 55 years of age there is clearly a mismatch of housing to community needs.
- The Shire needs to encourage the development of smaller dwelling units that are better suited to the population profiles.
- There is a decline in Commonwealth and State investment in 'public housing'. The Shire will need to play an active role in promoting greater investment in 'public housing' to counterbalance the negative trends in supply.
- There is a negative trend in the supply of Residential Care Places over the past decade despite a 44% increase in the population of people over 70 years of age. The Shire will need to adopt a 'bold' approach to rectify such discrepancies.
- The Residential Care Industry is 'struggling' and is calling for reforms to funding, regulation and compliance.
- Older people are changing and it is likely that their aspirations and priorities will also change.
- Appropriate locations for aged accommodation in the Shire need to be identified now reflecting indicative requirements for each locality. A local planning policy needs to be prepared to establish location and design criteria for aged accommodation.

- There needs to be more effective planning and coordination of the 30 government programs involved in aged housing, residential care and home and community care.
- Collaborative opportunities and innovation are needed to address the housing and accommodation needs of older people and requires the involvement of government, service providers and the local community.

The following sites are considered to present the best opportunity for the delivery of 'Aged Accommodation' across the localities in the Shire of Kalamunda.

As a guide, the sites are listed in the order in which it is considered development may proceed first.

- **Lot 106 Hale Road, Forrestfield** – The land comprises 1.8 ha and is owned by the Shire in freehold. A portion of the site has been developed to include the Woodlupine Community hall with approximately 0.8 ha of the site presently vacant. This portion has been identified for development as community housing included an aged (over 55's) component. The Shire is presently seeking expressions of interests from not for profit companies who provide social and affordable housing for the community. The site is ideally located comprising part of the Forrestfield District Shopping Centre.
- **Lot 500 Gavour Road, Wattle Grove** - Large privately owned site (14 ha) located between Gavour Road and Welshpool Road, in Wattle Grove. This is the single largest site available in the Shire for such a facility and can accommodate approximately 200 independent living units and a nursing facility for the frail. The size of the property does provide for appropriate economies of scale. The site is located a short distance from a local shopping centre in Forrestfield and is well serviced by major arterial transport routes. The provision of appropriate services can be provided to the Wattle Grove area.
- **Lots 303, 53 & 213 Brentwood Road, Wattle Grove** - Large privately owned site comprising 10 ha. The land is vacant and was formerly used as a Turf Farm. The owner has previously submitted plans to develop the site as a private 'lifestyle village'. The site is relatively unconstrained with good access to major arterial roads and can be serviced by the necessary utilities.
- **Lot 7, 8 & 4255 Lewis Road, Forrestfield** – The land comprises 3, 1 ha lots, one of which is developed and is leased to TAFE. The land is freehold land owned by the Shire. This land is zoned Special Rural and Local reserve under the Shire's Local Planning Scheme No.3. The Shire is currently seeking expressions of interest for the site to be developed for aged accommodation comprising independent living units and medium to low care facilities.
- **Reserve 30314 Wilkins Road, Walliston.** The land comprises 10.774 ha and is reserved for Parks and Recreation in the Shire of Kalamunda Local Planning Scheme. The site is vested with the Minister for Works with the purpose of "Use and Requirements for the Minister for works". The Shire of Kalamunda is interested in securing a portion of the site for the purpose of aged accommodation and related activities with the balance retained as the natural bushland. The Shire is currently investigating the potential for the vesting to be transferred to the Shire. The site is relatively flat with good road access and is located approximately 300 metres from the local shopping centre on Canning Road. The site can be connected to the sewer head works in the vicinity of the Local Shopping Centre.
- **Lot 800 Kalamunda Road, Maida Vale** - Hillview Golf Course. This land is large (approximately 40 ha) privately owned and used as a 27-hole golf course. The size and location of the site makes is ideal for aged accommodation use incorporating independent living units,

assisted care and a nursing home. Development of the site could incorporate all or part of the site.

A preliminary estimate is that the above properties would potentially provide 1,250 Aged Accommodation, independent living units. This would assist the needs of the aged persons in the Shire in the short to medium term.

There is a need to plan for accessible and affordable facilities which are integrated and not separated from existing and planned future surrounding development, and infrastructure.

Prior to the rezoning of the land for this purpose, there should be a demonstrated commitment to urbanisation of the surrounding area and a structure planning process to create a quality urban environment.

Further to this, the following should also be noted:

- The 6 identified sites for aged person accommodation have been based on preliminary investigations only and that each site requires further investigation.
- Additional sites within the Shire may be suitable for aged person accommodation, having regard to accessibility criteria and the ability to be effectively serviced by infrastructure.
- The Local Planning Strategy may be required to be modified to incorporate potential criteria for determining the suitability of sites including, but not limited to the following:
 - Accessibility to public transport.
 - Accessibility to convenience shopping.
 - The ability to be effectively serviced by infrastructure in an efficient and cost effective manner.
 - The characteristics of the land.
- Matters relating to aged person accommodation will be considered further as part of the local housing strategy that is currently being prepared by the Shire.

Ability of the Shire to Provide for the Projected Population over the Next 20 Years

A count of vacant lots has been made in existing Urban Development Zones, proposed future urban areas, potential urban infill areas, urban investigation areas and rural investigation areas in the Shire. See Table 3 below. It is evident from this assessment that the Shire of Kalamunda will be able to accommodate the additional approximately 20,000 people by the year 2031.

Table 3: Proposed Future Lots and Population to 2031

EXISTING URBAN DEVELOPMENT ZONES	LOTS	*POPULATION
Forrestfield U7	525	1313
Wattle Grove U9	900	2250
Maida Vale U6	108	270
High Wycombe U2	328	820
High Wycombe U4	59	148
Canning Location 311	33	83
Total	1953	4884

PROPOSED URBAN INFILL AREAS	LOTS	POPULATION
High Wycombe 50%	806	2015
Forrestfield 50%	1333	3333
Maida Vale 50%	192	480
Kalamunda (DURE)	1136	2841
Total	3467	8669

PROPOSED URBAN INVESTIGATION AREA	LOTS	POPULATION
Maida Vale South	*2702	6755
Total	2702	6755

PROPOSED URBAN EXPANSION AREA	LOTS	POPULATION
High Wycombe – Kalamunda Road & Stirling Crescent	394	985
Total	394	985

RURAL INVESTIGATION AREA	LOTS	POPULATION
Pickering Brook Town Site Expansion	76 @ R2.5 38 @ R5	285

TOTAL		21,578
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***Population figures calculated on the basis of 2.5 persons per dwelling.**

Key Issue: Future of Urban Development Zones

The existing Urban Development zones in Wattle Grove (U9), Forrestfield (U7) are developing rapidly and will therefore be the first priority for development of new dwelling units. It will be important to develop the public open space and ensure that community facilities are developed as a matter of priority as soon in the development cycle as possible. Landscaping of the road reserves is also a high priority to ensure that the newly developing area soon looks well established.

Key Issue: Residential Growth and Density

As discussed above, the current population projections set a framework for the population growth in the Shire in the future. From a few existing projections conservatively extended to the year 2031 the Shire can expect a growth in population of approximately 20,000 people over the next 21 years. To accommodate the additional population an estimated 8,000 new dwellings will be required. There is existing Urban Development zoned land that will absorb many of the additional population. It is also proposed to increase the density of older large lot areas of Forrestfield and High Wycombe to accommodate a large percentage of the additional growth. Together these two changes have the capacity to absorb the projected additional population.

Key Issue: Review of Shire Land

The Shire has undertaken an independent assessment of its freehold reserves, vested reserves and state government controlled properties with a view to providing short to medium term options for redevelopment, disposal acquisition or use to deliver long term financial sustainability to its community. The assessment will also allow for the rationalisation of reserves which have no environmental value, no amenity value and are costly to maintain, to provide greater community benefit and service delivery. Some of the freehold sites have been identified and planned for community housing including aged accommodation.

Planning Implications

The following are the planning implications of the housing assessment;

1. Housing in Kalamunda is predominantly single residential, i.e. 93.7%. There is therefore an imbalance in housing supply relative to the demographic profile.
2. Housing stock in the Shire is getting old and there may be opportunities for redevelopment of these areas in the near future.
3. The projected population of an additional 25,000 people by the year 2031 will require in the order of 10,000 new lots and a land area of at least 400 ha. It is believed that this can be accommodated in the existing; urban development zones, proposed urban area, potential infill areas, urban investigation area and rural investigation area, i.e. 10,000 new lots or 25,000 people.
4. Residential infill and the development of new urban areas will require detailed investigations to determine the capacity of existing service infrastructure and potential upgrades required to accommodate the proposed development.
5. As increased development generally means more 'sprawl' increasing residential density is a priority. Planners and developers will need to examine alternative ways of increasing density including medium rise apartments and double storey townhouses.
6. The Foothills localities will need to absorb the majority of the new development because there is better access to infrastructure and utilities.
7. The Hills localities are generally unsewered and are not capable of increasing density to any great extent. The exception being in Central Kalamunda where there is spare capacity in the DURES Sewerage Scheme, but that will require higher levels of Residential density to generate new development.
8. Higher care accommodation options and home support services will be in demand and land needs to be set aside for such uses.
9. Six potential Aged Accommodation sites in the Shire have been identified and these if developed greatly assist the needs of the older people in the community. Aged Accommodation facilities are potentially required in all localities in the Shire to facilitate 'ageing in place'.

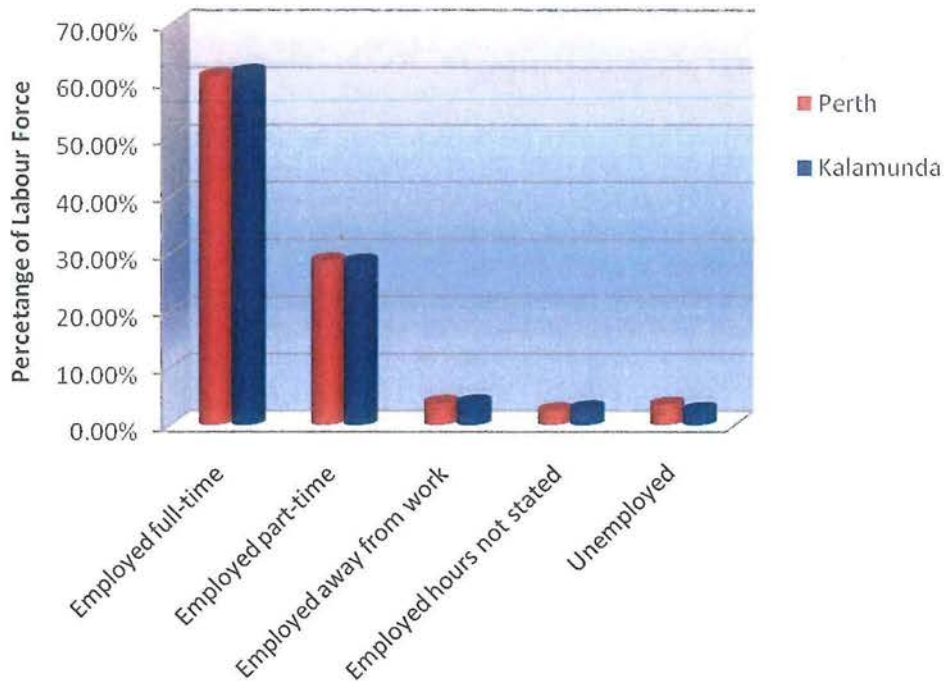
3.4.4 Employment Characteristics

Employment

The Shire of Kalamunda has a low percentage of unemployed persons (2.6%) in comparison to Perth (3.6%) and Australia (5.2%) based on 2006 Census data. Since the 2006 Census, however, the unemployment rate in Western Australia has risen (as a result of the current economic climate). The unemployment rate for WA in May 2009 was 4.9%.

Of those employed, the majority of people are full-time (61.7%) and 28.6% are employed part-time. This is consistent with the Perth labour force composition, as seen in the chart below.

Figure 23: Employment Type for Persons 15 Years and Over, 2006

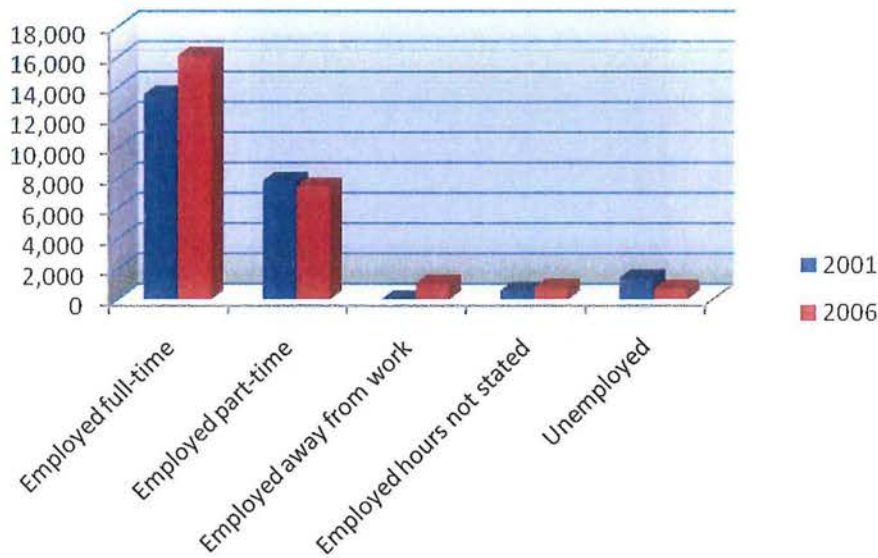


Source: ABS Census of Population and Housing, 2006

Employment Trends

The size of the Kalamunda labour force has grown from 23,330 people in 2001 to 26,087 people in 2006, an increase of 2,757 people (12%). Between 2001 and 2006, the proportion of full-time employed persons has increased by 4% (2,535 people) and the proportion of part time employed persons has reduced by 4.9% (347 people). The number of unemployed persons in the labour force has reduced by 685 people (6.8% change) in this time.

Figure 24: Kalamunda Labour Force Composition, 2001 - 2006



Source: ABS Census of Population and Housing, 2006

Employment by Occupation

Based on 2006 Census data, the three highest employing occupations within the Shire of Kalamunda are Technicians and Trade Workers (17.5%), Clerical and Administrative Workers (17%) and Professionals (15.6%).⁵ Currently, Community and Personal Service Workers represent the lowest proportion of the labour force. However, it is anticipated that, consistent with the ageing population within Kalamunda, there will be an increase in employment in the Community and Personal Service category in future years.

The following graph displays the composition of the labour force by occupation

⁵ Note that Kalamunda residents may be employed outside out of the Shire area.

Figure 25: Kalamunda Employment by Occupation, 2006

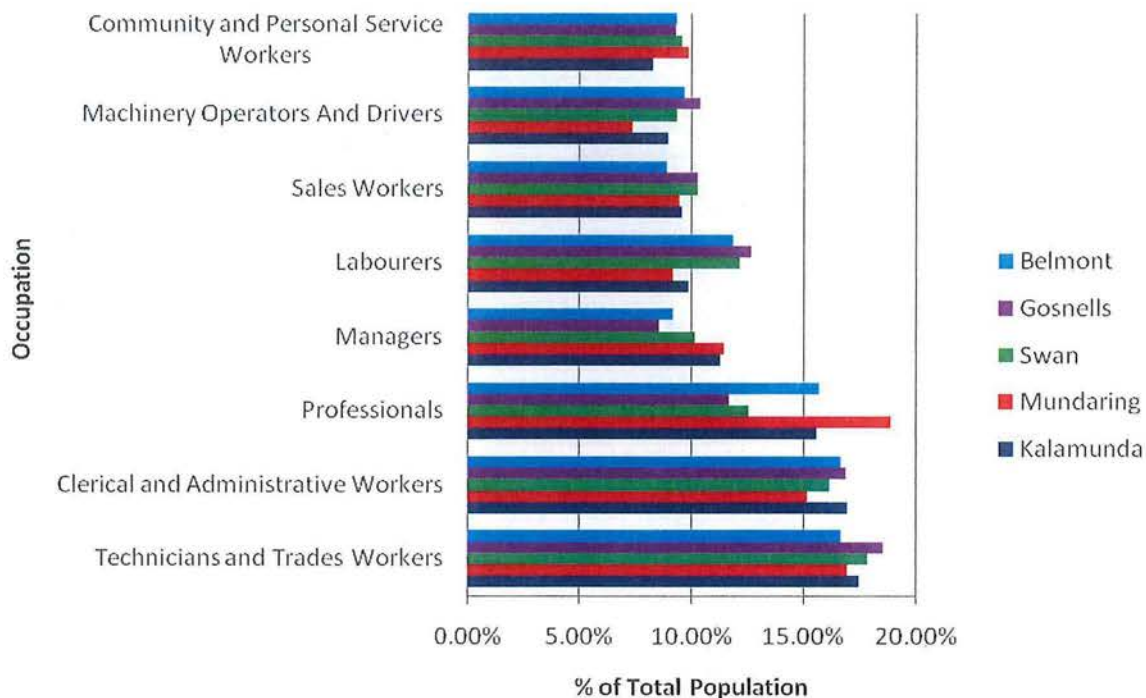


Source: ABS Census of Population and Housing, 2006

In comparison to neighbouring Local Governments, the major points of difference are:

- A larger percentage of Clerical and Administrative Workers in Kalamunda, and;
- A smaller percentage of Community and Personal Service Workers and Labourers in Kalamunda

Figure 26: Comparison of Occupation by LGA, 2006



Employment by Industry

An analysis of the three highest employing occupations within the Shire of Kalamunda identified that the Construction and Manufacturing industry had a high proportion of both Technicians and Trade Workers and Clerical and Administrative Workers. Professionals were mainly employed within the Education & Training industry. This is summarised in the table below:

Table 4: Labour Force by Industry and Occupation, 2006

Industry	Occupation Technicians and Trade Workers	Clerical and Administrative Workers	Professionals
Manufacturing	24.4%	21.3%	5.5%
Construction	21.3%	10.1%	1.3%
Transport, postal & warehousing	5.7%	18.9%	1.7%
Education & Training	2.8%	5.9%	45.5%

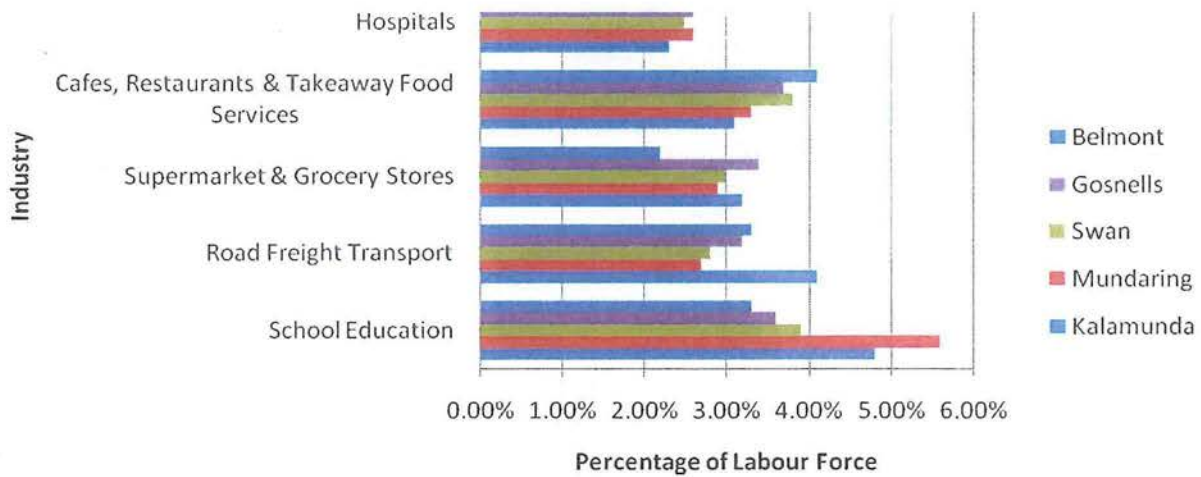
Source: ABS Census of Population and Housing, 2006

The Education industry is the highest employer within the Shire. It also ranks as one of the highest employment categories within the neighbouring local government group.

Kalamunda has the highest employment of the neighbouring local government group in the Road Freight Transport industry at 4.10%. This industry is expected to continue to benefit from opportunities associated with the development of the Perth Airport.

The following graph displays a comparison of employment by industry for residents of Kalamunda and neighbouring Councils.

Figure 27: Comparison of Employment by Industry by LGA, 2006



Workforce Occupation by Industry

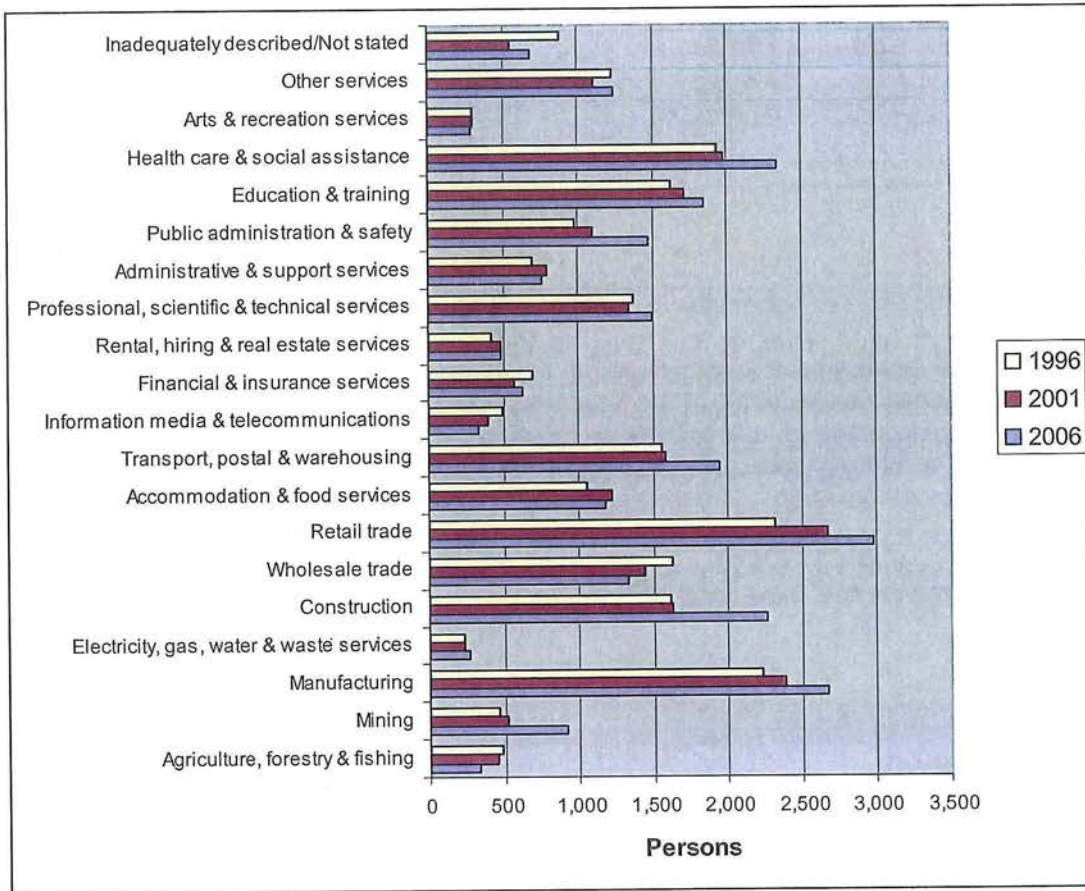
A comparison of the sectors of employment in Kalamunda and the Perth metropolitan areas reveals a very comparable composition in most sectors except in Health care and social assistance (9%) compared to Perth's 11%. Figure 4 shows the changes in each sector over the years and the more dominant sectors of employment for our residents. Retail trade 2,969 (12%), construction 2,255 (9%), manufacturing 2,664 (10%), and health care and social assistance 2,342 (9%).

The 2006 Census showed a 1.6% growth in Construction from the previous Census as well as a 1.2% decline in the proportion of residents employed in Wholesale trade.

From 2001-2006 the largest increase in the number of Kalamunda residents employed occurred in the Construction sector (633). During this same period the largest decline occurred in the Agriculture, forestry and fishing sector (124).

Mining (393), transport, postal and warehousing (362), public administration and safety (372), and health care and social assistance (366) also showed growth in the number of residents they employed.

Figure 28: Employed Persons Industry, 1996-2006



The Proposed Forrestfield Industrial Area has been identified under the State Government's Kewdale Hazelmere Integrated Master Plan as a key strategic industrial and transport hub, which will accommodate the rapid growth of freight industry in Perth through integrated transport and land use planning.

The Shire of Kalamunda recognises the strategic importance of the area at both a State and Local Government level and as such is at present progressing the structure planning of the area between Berkshire Road and Sultana Road West for future industrial use. It is proposed that planning investigations for the area north of Sultana Road West through to Poison Gully will commence late 2010.

Unemployment

The total number of Shire of Kalamunda residents employed in 2006 was 25,379, which represents an increase of 13% from 2001. During this period the proportion of employed residents in the Perth Metropolitan Area increased by 15%. The total number of unemployed residents in the Shire of Kalamunda in 2006 was 707 people.

Table 5: Unemployment Rate and Labour Force Comparison: Shire of Kalamunda and City of Swan, 2006.

	Unemployed	Rate (%)	Labour Force
Kalamunda	707	2.7	26,086
Swan	1, 616	3.5	45,803

Planning Implications

The planning implications for the Shire of Kalamunda in terms of employment are as follows:

1. The foregoing analysis of employment in the Shire of Kalamunda has raised a number of important facts about the employment profile of the Kalamunda community, i.e. most people are employed full time, low percentage of unemployment, ongoing positive growth in the labour force, high percentage of 'technical/clerical jobs (34.5%), lower percentage of 'professional' jobs (15.6%), increasing jobs in construction and decreasing jobs in 'agriculture/forestry/fishing' and a growth in 'freight' jobs.
2. While being of academic interest the above facts do not have direct planning implications for the Shire.

3.4.5 Economic Characteristics

Economic Growth and Industry

The Shire of Kalamunda has a diversified economic base. The sectors with the largest number of businesses include: Construction (882) and, Property and Business Services (1,026). From 2003 and 2006 there has not been much change in the number of business establishments with only an additional 69 businesses operating in 2006. Figure 1 shows the number of business establishments by industry in the Shire of Kalamunda.