ALKIMOS BEACH

CITY CENTRE
ACTIVITY CENTRE STRUCTURE PLAN
AUGUST 2013

PART TWO: EXPLANATORY SECTION

LANDCORP Partnering

Lend Lease

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Project:	Alkimos City Centre
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PART TWO
EXPLANATORY SECTION

1.0 PLANNING BACKGROUND

1.1 Introduction and purpose

This report constitutes an Agreed Structure Plan for the Alkimos Secondary Centre, pursuant to the City of Wanneroo District Planning Scheme No. 2 Centre Zone requirements, and an Activity Centre Structure Plan pursuant to State Planning Policy No. 4.2 Activity Centres for Perth and Peel, and is referred to as the ACSP for the purposes of this report.

The ACSP area encompasses the City Centre zoned land under the Metropolitan Region Scheme and is situated within the greater Alkimos – Eglinton District. The Alkimos – Eglinton District consists of a 2,660 hectare parcel of land located 40 km north-west of the Perth Central Business District.

The purpose of this ACSP is to facilitate the subdivision and development of the subject site.

1.1.1 Project Team

The ACSP site is to be developed by LandCorp.

Other members of the Project Team include:

• Lend Lease	Project Management, Design and Sustainability
• Roberts Day	Statutory Planning
• Cossill + Webley	Civil Engineering
• RPS	Commercial/Retail Analysis
• Emerge	Environment + Hydrology
• Bruce Aulabaugh	Traffic
• Herring Storer Acoustics	Acoustics
• Aecom	Landscape Architecture
• Ethnosciences	Aboriginal Heritage
• York Gum Services	Bushfire
• SKM	Public Transport + Parking

1.1.2 Strategic Objectives for Alkimos Secondary Centre

- A thriving community – a focal point for the local and wider community
- Multi-functional and mixed use centre
- A vibrant, pedestrian friendly town centre
- A distinctive identity and character
- A learning and enterprising community
- Flexibility for natural growth and expansion over time
- Diversity of housing choice
- Maximise the creation of local jobs
- Best practice sustainable development
- Integrated transport and land use
- Maximise public transport use
- Optimal economic return

Masterplan Principles and Objectives

- Transit and pedestrian orientated development
- A 'Main Street' centre
- Strong sense of place and civic identity
- Be distinctive in character
- Be a diverse and integrated centre
- Comprise a well connected and safe movement network
- Integration of proposed rail station and associated bus interchange
- Relationship of centre to Gateway and remainder of development
- Landform as determinant of town structure and form
- Compact town form and footprint
- Subservient car parking
- Integration of education and community facilities

Cornerstones

Our centre should integrate fundamental cornerstones

- *Place*
  Celebrating and integrating the inherent qualities of the place, natural, cultural and artificial

- *Balance*
  Balancing the social, environmental and commercial aspects of an integrated community

- *Community*
  Accommodating and facilitating the needs and aspirations of the local and wider community as it responds to changing social and economic drivers

- *Innovation*
  Providing a framework for adopting new technologies and a new social framework to deliver better community outcomes

1.2 Land Description

1.2.1 Location

Regional Context

The ACSP site is located within the north-west sub-region of the Perth metropolitan area and is located approximately 17 kilometres north of the Joondalup Strategic Metropolitan Centre and approximately 8 kilometres south of the Yanchep Strategic Metropolitan Centre.

District Context

The ACSP site is located within the central portion of the Alkimos-Eglinton District. The Alkimos-Eglinton District Structure Plan (DSP) has been prepared to guide development of this 2626 hectare District which is proposed to create over 23,000 dwellings and house a population of approximately 57,000 residents. The DSP has been approved by the City of Wanneroo and endorsed by the WAPC.

Local Context

The land immediately to the north is Regional Open Space (ROS) and the land north of this ROS is being developed for urban purposes (Central Alkimos), the land to the east is vacant but is reserved for the Mitchell Freeway extension, the land to south is being developed for urban purposes (Trinity) and the northern portion of the land to the west of Marmion Avenue is the Water Corporation waste water treatment plant and associated buffer and southern portion is being developed for urban purposes (South Alkimos).

1.2.2 Area and Land Use

The site has a total land area of 212 hectares. The site is currently vacant.

1.2.3 Legal description and ownership

The LSP area comprises portion of Lot 9003 Marmion Avenue, Alkimos.

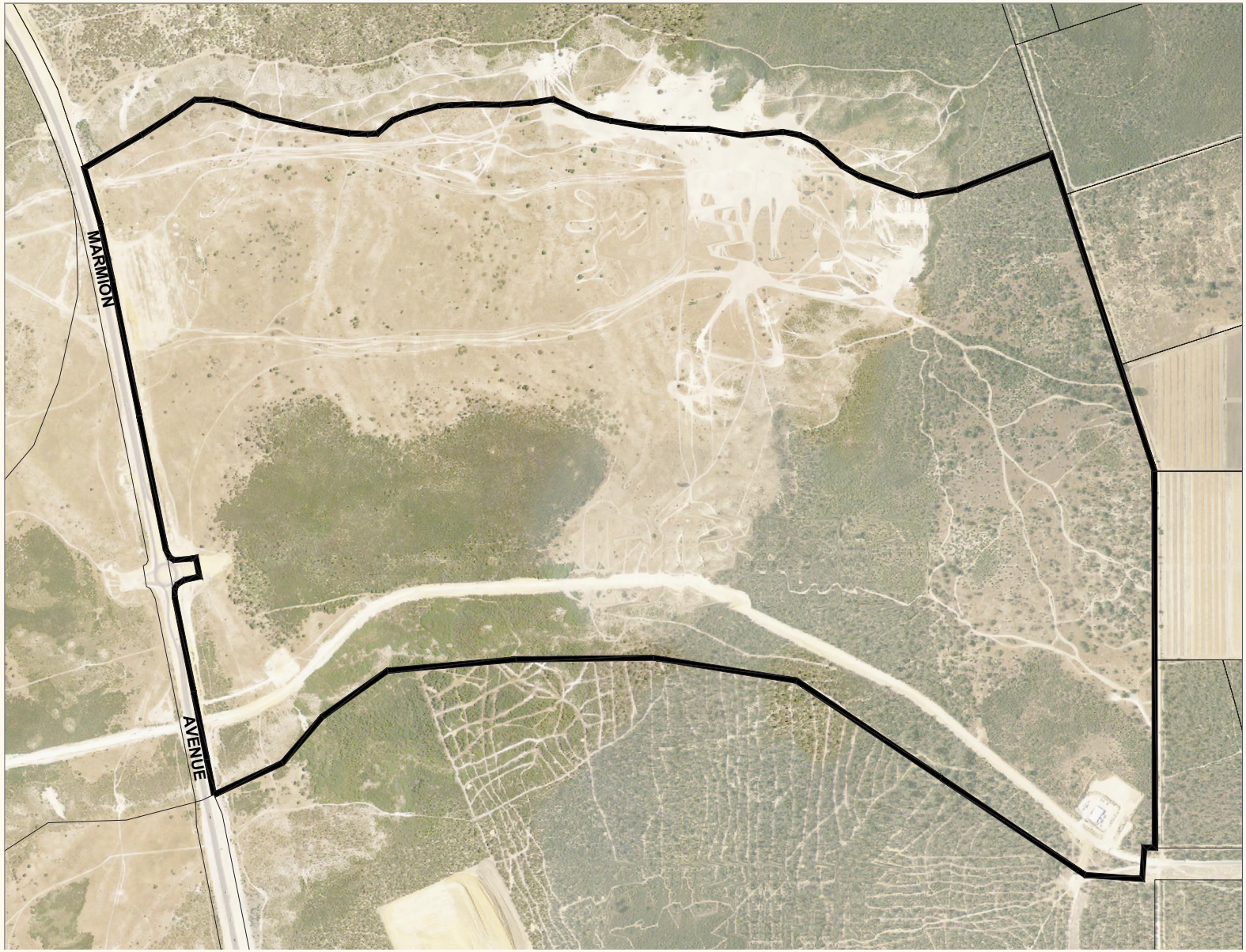
The legal description of the subject land is provided in Table 1. The location of this lot is shown in Figure 2.

Table 1 – Lot Details

Lot Number	Certificate of Title	Owner
9003	Volume 2771 Folio 789	Western Australian Land Authority (LandCorp)

Figure 1: Regional Context

Figure 2: Site Plan



1.3 Planning Framework

1.3.1 Zoning and Reservations

Metropolitan Region Scheme (MRS)

The subject site is zoned Central City Area under the MRS, with a Primary Regional Road reserve (Mitchell Freeway extension) located on the eastern boundary and Railways reserve through the centre of the site. An Other Regional Road reserve (Marmion Avenue) is located on the western boundary of the site and another Other Regional Road reserve (Romeo Road) traverses the site east to west.

Legend

scheme boundary

Reserved lands

- parks and recreation
- R — restricted public access
- railways
- port installations
- State forests
- water catchments
- civic and cultural
- waterways
- public purposes — denoted as follows:
  - H — hospital
  - HS — high school
  - TS — technical school
  - CP — car park
  - U — university
  - CG — Commonwealth Government
  - SEC — State Energy Commission
  - SU — special uses
  - WSD — Water Authority of WA
  - P — prison
- primary regional roads
- other regional roads

Zones

- urban
- urban deferred
- central city area
- industrial
- special industrial
- rural
- rural - water protection
- private recreation

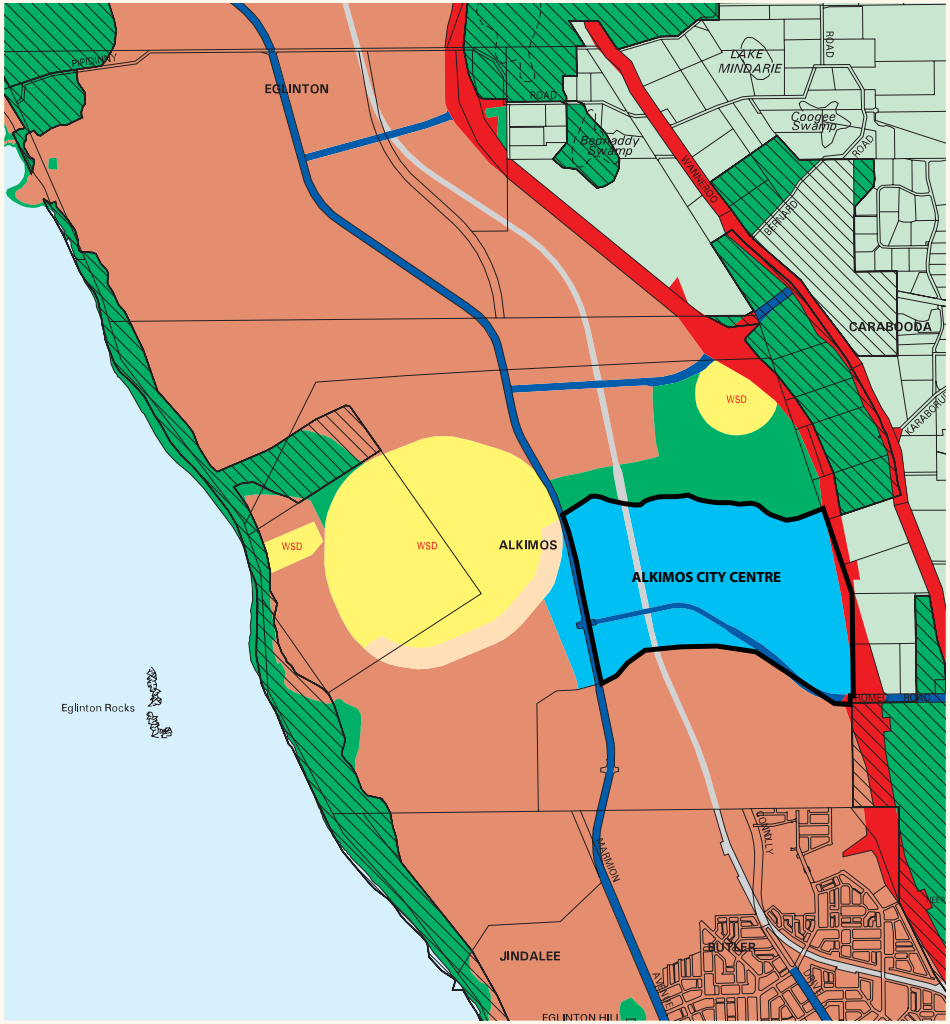
Notice of delegation

- bush forever area

Redevelopment schemes

- redevelopment scheme/act area

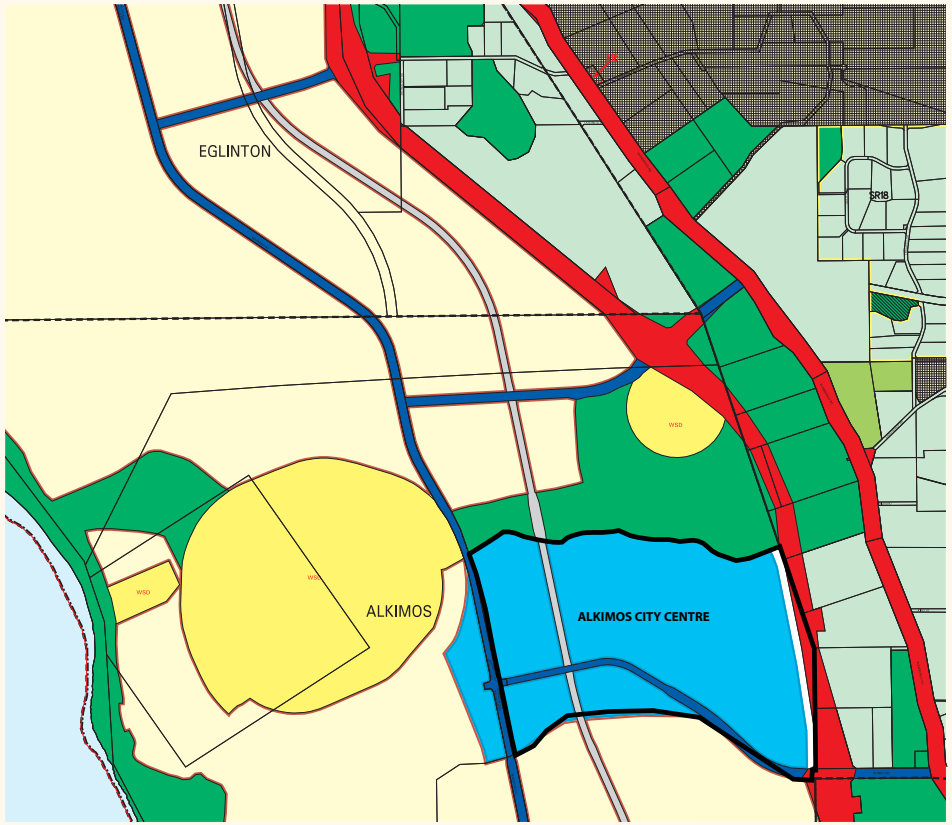
Figure 3: Metropolitan Region Scheme Zoning



City of Wanneroo District Planning Scheme No. 2

The City of Wanneroo District Planning Scheme No. 2 mirrors the current MRS zoning and reservations, with a majority of the site zoned Centre.

Figure 4: City Of Wanneroo District Planning Scheme No. 2 Zoning



1.3.2 Regional And Sub-Regional Structure Plans

North West Corridor Structure Plan (1992)

The North West Corridor Structure Plan supersedes the 1977 North West Corridor Structure Plan. The 1992 Structure Plan is based on 60% self-sufficiency in employment. The Corridor is expected to ultimately house a resident population of 420,000 with a resident work force of 210,000 (or up to 500,000 if the Carabooda / Nowergup areas are developed).

These forecasts are substantially higher than those of the 1977 plan. The plan recognises that there will also be a need to provide around 152,220 jobs, of which 125,000 will be taken up by Corridor residents and 26,000 will be taken up by workers from outside the Corridor. The remainder of the resident workforce, an estimated 84,000, will commute to work outside the Corridor. WAPC is currently undertaking a review of the NWCSP with a number of studies being commissioned into retail, transport and environmental analysis.

Alkimos-Eglinton District Structure Plan (2010)

The subject land falls within the Alkimos Eglinton DSP area. The DSP has been adopted by the City of Wanneroo and endorsed by the WAPC.

The DSP provides a broad district level land use strategy defining the strategic planning framework for the ACSP area. The DSP (report and plan) form the framework for more detailed Local Structure Planning over the duration of the project, which will be developed to reflect changing planning trends, demographics, community needs and market demands.

This ACSP is consistent with the intent of the adopted DSP, with the general arrangement of land uses and infrastructure as depicted on the DSP Map, including proposed land uses, residential density targets, road hierarchy and linkages to surrounding existing and planned developments.

The DSP requires that at the time of lodgement of a Local Structure Plan, the proponent shall provide supporting information to demonstrate how the objectives and strategies detailed in Part 1 of the DSP have been addressed and the supporting information utilised to guide and inform the ACSP design. This supporting information can be found in Section 5 of this report.

An amendment to the DSP has been lodged concurrently within this ACSP to reduce the area of the Service Commercial area within the ACSP area. The current DSP identifies a 61 hectare area of land within the Alkimos Secondary Centre as 'Service Commercial'. This area of land is bound by Regional Open Space to the north, the Mitchell Freeway extension reservation to the east, Romeo Road to the south and the parabolic dune to the west. It appears that this land use designation has arbitrarily been located in this area due to the surrounding constraints (e.g. road reservations and the parabolic dune) and its proximity to the freeway reservation.

The DSP does not provide a definition of 'Service Commercial', however it identifies that this area 'will incorporate uses such as Business and Research Parks, service commercial, and service industrial uses which meet the needs of larger retail outlets, showrooms, retail warehouses, light industrial and service industries.'

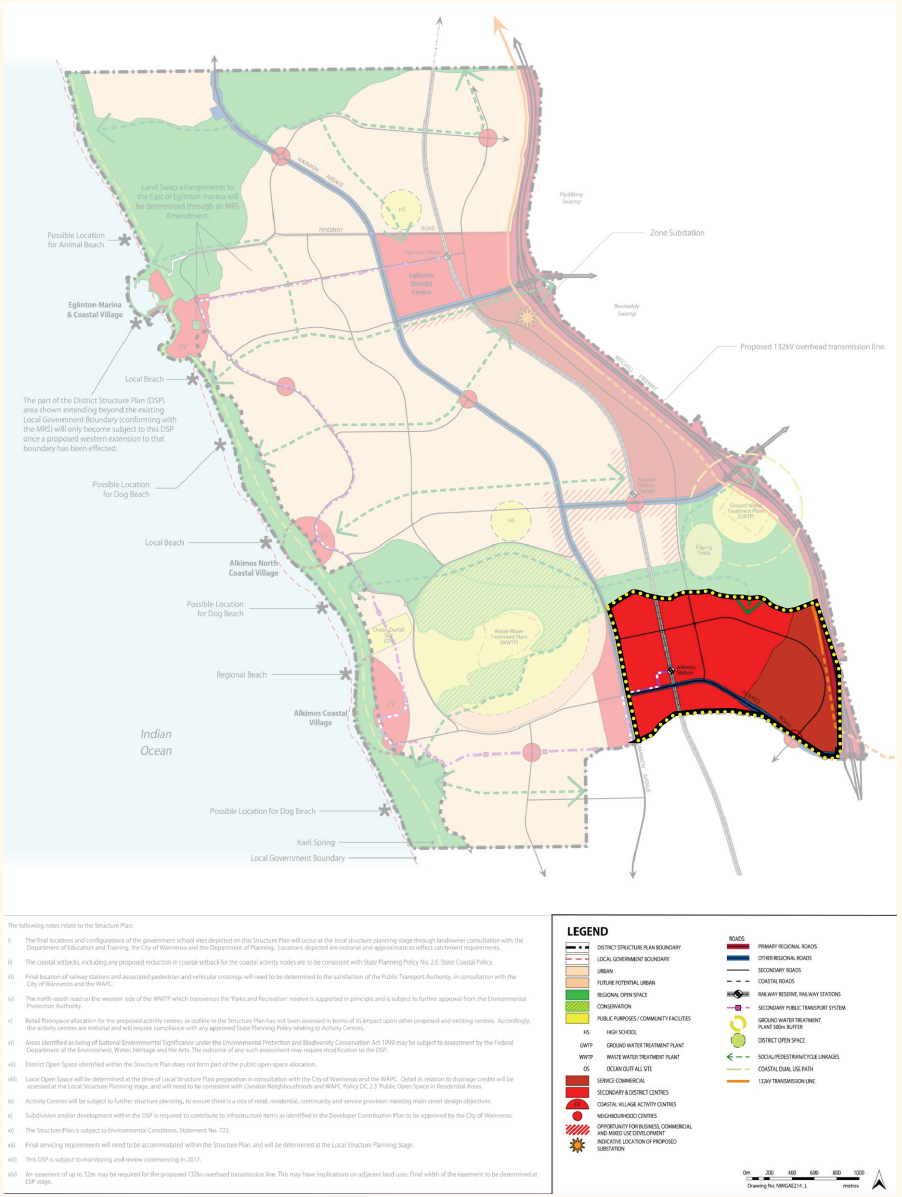
Through the design process and land use allocation for this 'Service Commercial' designated area of the City Centre it was determined that the northern portion of this land was not suitable for the types of uses identified in the DSP due to its topography. Whilst the land in the southern portion of the 'Service Commercial' designated area is gently undulating the land in the northern portion rises significantly in height from 34m AHD to 54m AHD.

The land uses identified in the DSP as suitable for service commercial areas generally require large building footprints with adequate access for large service vehicles, which are difficult to accommodate within areas of significant and varying slope.

It is therefore proposed to reduce the area of 'Service Commercial' designated land within the DSP to a 29 hectare portion of land adjacent to Romeo Road. This portion of land will retain its good access to the freeway and Marmion Avenue via Romeo Road.

The northern portion of the 'Service Commercial' designated land is to be amended to the 'Secondary & District Centres' designation on the DSP.

Figure 5: Alkimos-Eglinton District Structure Plan



1.3.3 Policies

State Policies

State Planning Strategy (December 1997)

The State Planning Strategy (1997) was prepared by the WAPC as a whole of Government approach to guide sustainable land use planning throughout the State up until 2029. The Strategy is aimed at developing a land use planning system to help the State achieve a number of key goals. These include generating wealth, conserving and enhancing the environment and building vibrant and safe communities for the enjoyment of this and subsequent generations of Western Australians. The Strategy was last audited in 2000-2001.

Liveable Neighbourhoods (2007)

Liveable Neighbourhoods has been prepared to implement the objectives of the State Planning Strategy. It is an operational policy, adopted by the WAPC, for the design and assessment of structure plans and subdivision for new urban areas and large brownfield or urban infill sites in the metropolitan area and country centres.

Development Control Policy 1.6 Transit-Oriented Development (2006)

DC Policy 1.6 – Planning to Support Transit Use and Transit Orientated Development was released in January 2006 detailing the integration of public transport and land use. As the public transport system is further refined and extended, there are emerging opportunities for new developments that focus on and maximise the benefits of transit infrastructure.

The policy promotes the benefits of integrating land use and transit facilities. The objectives outlined in the policy are to:

- Promote public transport use;
- Encourage the creation of destinations in parallel with the location of public transport facilities; and
- Promote walking and cycling.

Directions 2031 and Beyond (2010)

Directions 2031 is a high level spatial framework and strategic plan that establishes a vision for the future growth of the metropolitan Perth and Peel region; including a framework to guide the detailed planning and delivery of housing, infrastructure and services necessary to accommodate a range of growth scenarios. Directions 2031 builds on many of the aspirational themes of previous metropolitan plans which sought to guide the future structure and form of the city.

Directions 2031 identifies the City Centre site in the north-west sub-region. Under the connected city scenario it is estimated that by 2031 the population of the north-west sub-region will have grown by 39 per cent to 395,000. To achieve Directions 2031 outcomes employment self-sufficiency must increase from the current level of 41 per cent to at least 60 per cent if the negative impact of a relatively weak local employment base is to be moderated. Attracting the additional 69,000 jobs required to achieve this level of employment self-sufficiency presents a significant challenge for the sub-region in the coming decades.

Figure 6: North-West Sub-Region

State Planning Policies

Development of land must generally be consistent with any relevant State Planning Policies (SPP) which are prepared and adopted by the WAPC under statutory procedures set out in Part 3 of the Planning and Development Act 2005. The WAPC and local governments must have due regard to the provisions of SPPs when preparing or amending regional and district planning schemes and when making decisions on planning matters. Details of the SPPs relevant to the site are provided below.

i. State Planning Policy No 1 - State Planning Framework Policy (2006)

The State Planning Framework Policy (SPP 1.1) provides a framework for the application of more detailed planning policies and strategies in Western Australia, including general principles derived from the State Planning Strategy. It states that the primary aim of planning is to provide for the 'fair, orderly, economic and sustainable use and development of land'.

ii. State Planning Policy 2 - Environment and Natural Resources Policy (2003)

The policy sets out a planning response to environmental and natural resource management issues within the framework of the State Planning Strategy.

Specific policy areas of relevance to Alkimos-Eglinton include those relating to water resource management, air quality, soil and land quality, biodiversity, marine resources, landscapes, and greenhouse gas emissions and energy efficiency.

iii. State Planning Policy 2.9 - Water Resources (2006)

The purpose of this policy is to guide development of land that may impact on water resources in the state. Under the policy, water resources include 'water in the landscape with current or potential value to the community or environment'. This incorporates features such as wetlands and waterways, surface water, groundwater, drinking water catchments and sources, stormwater and wastewater. The policy aims to ensure that the quality and quantity of water resources in the state are not adversely affected by development and land use.

iv. State Planning Policy No. 3 - Urban Growth and Settlement (2006)

This policy sets out the principles and considerations to apply to planning for urban growth settlement in Western Australia. The policy aims to facilitate sustainable patterns of urban growth and settlement.

The objectives of the policy are:

- To promote a sustainable and well planned pattern of settlement with sufficient and suitable land to provide for a wide variety of housing, employment, recreation facilities and open space.
- To build on existing communities with established local and regional economies, concentrate investment on the improvement of services and infrastructure and enhance the quality of life in those communities.
- To manage growth and development of urban areas in response to social and economic needs of the community and in recognition of the relevant climatic, environmental, heritage and community values and constraints.
- To promote the development of sustainable and liveable neighbourhood form which reduces energy, water and travel demand whilst ensuring safe and convenient access to employment services by all modes, provides choice and affordability of housing and creates an identifiable sense of place for each community.

v. *State Planning Policy No. 3.6 - Developer Contributions for Infrastructure (2009)*

SPP No. 3.6 sets out the principles and considerations that apply to development contributions for the provision of infrastructure in urban areas. The policy brings together Planning Bulletin 18 - Developer Contributions for Infrastructure and Planning Bulletin 41 - Draft Model Text Provisions for Development Contributions.

The policy sets out the form, content and process for the preparation of a development contribution plans. The City of Wanneroo has prepared a Northern Coastal Growth Corridor Developer Contribution Plan, which is currently being assessed by the WAPC.

vi. *State Planning Policy 4.2 - Activity Centres for Perth and Peel (2010)*

This Policy aims to provide a more flexible regulatory approach to enable appropriate commercial, residential, mixed business and retail redevelopment opportunities in activity centres, with a much reduced emphasis on retail floorspace guidelines. The ACSP has been prepared to accord with the requirements of this Policy.

The ACSP has been assessed against the Model Centre Framework of SPP4.2. Refer to Appendix A.

vii. *State Planning Policy No. 5.4 - Road and Rail Transport Noise and Freight Considerations in Land Use Planning (2009)*

SPP No. 5.4 is aimed at increasing awareness of transport noise and its potential impact on the amenity and quality of life for residents. The policy therefore has objectives and implementation strategies to ensure that land use and transport planning are compatible. The policy also establishes a standardised set of criteria to be used in the assessment of proposals affected by transport noise.

As the subject site is located adjacent to the Mitchell Freeway extension, which is classified as Primary Regional Road in the metropolitan functional road hierarchy network, due regard to this policy is essential to ensure that transport noise does not adversely impact on future residents.

In accordance with the requirements of SPP No. 5.4 Herring Storer undertook an acoustic assessment. Refer to Appendix B.

City Of Wanneroo Strategies And Policies

City of Wanneroo Strategic Plan 2006-2021

Following extensive public consultation, Council prepared a Strategic Plan (2006-2021) that outlines its vision for the City of Wanneroo, namely:

"The City of Wanneroo, the centre for creative and sustainable growth, delivering strong, vibrant and connected communities."

The Plan takes into account a fresh focus on partnerships and networks with other government agencies and private enterprises to achieve its goals, with the "Pillars" of the Plan being Environment, Social, Economic and Governance each of which has stated objectives.

Economic Development Strategy

The City of Wanneroo's primary economic goal is to decrease the amount of people having to travel out of the region to access suitable employment opportunities. This is intended to be achieved through the implementation of an Economic Development Strategy.

The Economic Development Strategy for the City of Wanneroo is designed to build upon the project initiatives already in place and being pursued by the City and introduce new initiatives in line with the Strategic Plan.

According to the Strategy, the promotion of the City of Wanneroo as an investment and employment destination can only occur if it is understood that all regional stakeholders can contribute to growing the economic base of the region through their actions.

The key actions of the City's Economic Development Strategy are:

- Redressing the balance so that the City of Wanneroo has desirable centres of employment;
- Investing for the future through increased collaboration with the State government and other key stakeholders to map the strategic activities for the north-west metropolitan economic region;
- Generating wealth through jobs to create a new economic base, which integrates the community into the wider regional economy; and
- Ensuring basic infrastructure is in place to allow businesses to prosper and grow.

Employment Policy

The City of Wanneroo's Employment Policy is designed to establish a framework to encourage and retain local employment within the City of Wanneroo and ultimately the North West Corridor. The necessity for this policy has been driven by the fact that the City of Wanneroo suffers low employment self-containment within its boundaries, which has led to the many so-called 'dormitory suburbs'.

The Policy contains a schedule of strategies at district, local and subdivision levels to indicate the type and scale of initiatives that are expected when planning developments of various sizes. The City's Smart Growth Assessment Tool sets a target of 40% employment self sufficiency at the DSP level.

Tourism Strategy

The development of tourism within the City of Wanneroo is addressed in the City of Wanneroo's Tourism Strategy through six objectives:

- Development of new and existing tourism products;
- Provide a broader visitor experience;
- Increase year round appeal;
- Develop higher yield markets;
- Establish tourism as a major industry of the region; and
- Encourage industry participation in development of tourism.

Centres Strategy

The City of Wanneroo's Centres Strategy seeks to promote the future regional centres of Alkimos and Yanchep in the longer term as significant regional nodes offering community focus by providing a mix of retail, office, leisure, entertainment, recreation and community facilities. The Centres Strategy recognises that Alkimos has been planned as an important regional commercial and employment centre since the North West Corridor Structure Plan (1992).

Local Planning Policy 3.1 Local Housing Strategy

The City of Wanneroo's Local Housing Strategy is aimed at guiding future housing development in new residential areas; protecting existing residential areas from inappropriate development and ensuring adequate housing choice is available to meet the changing social and economic needs of the community. The Local Housing Strategy is a key component of the City's Smart Growth Strategy - and together the two strategies indicate the commitment the City of Wanneroo has to planning for the future needs of the community as well as facilitating and supporting effective growth management.

Additional objectives of the Strategy are to ensure that an adequate supply of affordable housing is provided, particularly for first home buyers, and to promote appropriate forms of housing close to existing and proposed community facilities and services.

Local Planning Policy 3.3: Northern Coastal Growth Corridor Development Contributions

The purpose of this Policy is to provide an interim arrangement to facilitate development contributions towards common infrastructure for any application for subdivision of land within the area covered by this Policy, until such time as a Developer Contributions Plan comes into effect.

Local Planning Policy 3.8: Marmion Avenue Arterial Road Access

This policy prescribes acceptable standards for the type and location of vehicular access points, provisional standards for cycling infrastructure, and operational procedures for all new planning proposals fronting Marmion Avenue including:

- structure plans and structure plan amendments;
- detailed area plans;
- applications for planning approval; and
- subdivision applications.

Local Planning Policy 4.3: Public Open Space Policy

This Policy articulates Council's position on the planning, provision, location, design, development and interim maintenance of public open space (POS) and is to be considered when preparing structure plans.

The purpose of this Policy is to:

- Ensure that POS is delivered to optimise community benefit;
- Provide local interpretation of the WAPC Liveable Neighbourhoods policy; and
- Guide Council, its officers and applicants in considering the planning of POS in new urban areas.

The ACSP has been prepared to accord with the above policies.

1.3.4 Other Approvals and Decisions

MRS Amendment 1029/33 and EPA Assessment

The ACSP area (and the wider Alkimos Eglinton area) was subject to MRS Amendment 1029/33 which was assessed by Environmental Review under Section 48A of the Environmental Protection Act 1986 by the Environmental Protection Authority (EPA).

The EPA assessed a range of relevant environmental factors during the assessment of MRS Amendment 1029/33 including:

- Vegetation
- Fauna
- Odour
- Geoheritage.
- Aboriginal heritage.
- Risk.

The EPA's assessment of Amendment 1029/33 considered the environmental values across the entire Alkimos Eglinton area. Environmental surveys were conducted by ATA Environmental (2005) to support the EPA's assessment. The EPA used this information to outline areas of regionally significant environmental value. This assessment was largely independent of the proposed reservations and zonings considered as part of the MRS amendment and resulted in areas being identified by the EPA as being "regionally significant" which were not accounted for within the original MRS amendment. The differences between the EPA's assessment and the original MRS amendment is shown as in the Environmental Assessment and Justification Report (Appendix C).

In relation to the site, the EPA considered the parabolic dune a significant landscape/vegetation linkage. The environmental investigations undertaken as part of the Environmental Review determined the northern arm of the parabolic dune has high biodiversity and natural value as well as geoheritage significance. With this advice from the EPA, the northern arm of the dune was proposed to be retained as "Parks and Recreation" (immediately north of the site, located within the Central Alkimos LSP area) which is also referred to as Regional Open Space.

Overall, the EPA's assessment resulted in changes to areas zoned "Parks and Recreation" to that which was originally proposed by the WAPC. The MRS amendment was supported by the Minister for the Environment in 2006 through Ministerial Statement 722.

Although thoroughly assessed by the EPA through the formal assessment process, no areas within the site have been identified as being "regionally significant".

2.0 SITE CONDITIONS AND ENVIRONMENT

2.1 Biodiversity and Natural Area Assets

Climate

The climate is described as Mediterranean, with hot, dry summers and moderately wet, mild winters. Summer mean daily temperatures are between 18.6ºC and 30.3ºC; and in winter 9.1ºC to 17.6ºC.

The majority of rainfall within the region occurs between May and October each year, and on average is between 600 to 1000 millimetres per year. However, in the last 40 years there has been a marked decrease in rainfall (approximately 11 per cent decrease), with a noticeable shift to a drier climate across the south-west of Western Australia.

In winter, the LSP area experiences north-westerly storm winds interspersed with calmer periods. During the summer period, winds blow from the east to south-east in the morning and from the south-west in the afternoon.

Vegetation

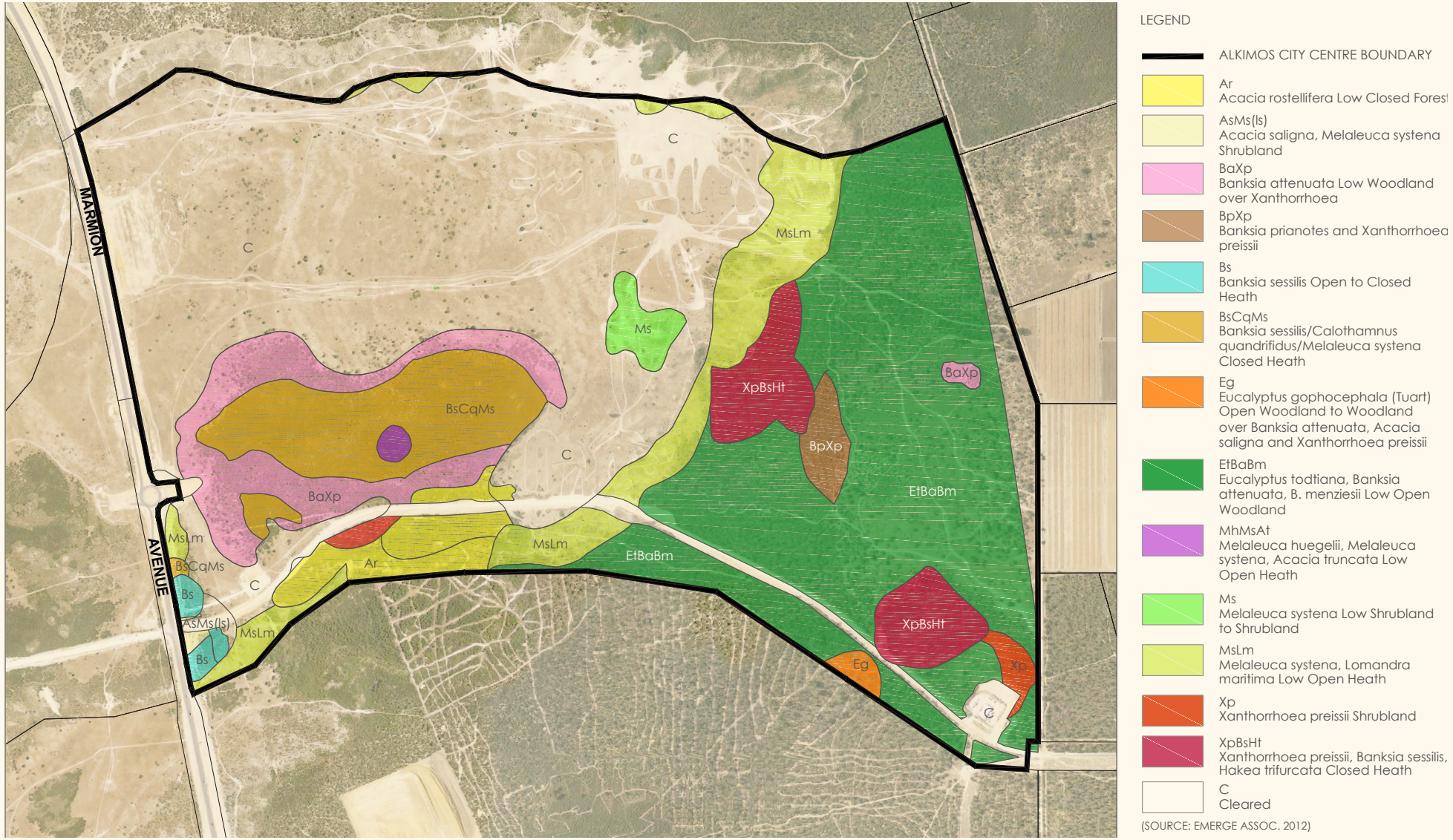
Vegetation complex mapping for the Swan Coastal Plain undertaken by Heddle et al. (1980) indicates that the Quindalup complex and the Cottesloe complex are the two vegetation complexes within the ACSP area. Vegetation is variable over the site, the majority is 'Completely Degraded' and there are remnant patches of 'Very Good- Good' condition vegetation in the southern portion of the site. Large areas of the site are degraded and have been historically grazed and are now used extensively by recreational vehicles. Rabbits and weeds are also affecting the vegetation condition in this area.

The LSP area is dominated by the Quindalup dune complex consisting of two broad groups, "Melaleuca spp heath on dune systems" or "Acacia shrublands". Over 14 vegetation associations were identified by ATA Environmental (2005) over the site.

No Declared Rare Flora or Priority Flora were identified during vegetation surveys of the site. Two vegetation associations representing Priority Ecological Communities were inferred in the site. These are "Acacia shrublands on taller dunes" (Priority 3) located along the parabolic dune, and "Northern Spearwood shrublands and woodlands" which is located in the south west portion of the site (Priority 3). In accordance with the DEC definition these Communities are those "that are known from several to many occurrences, a significant number or area of which are not under threat of habitat destruction or degradation".

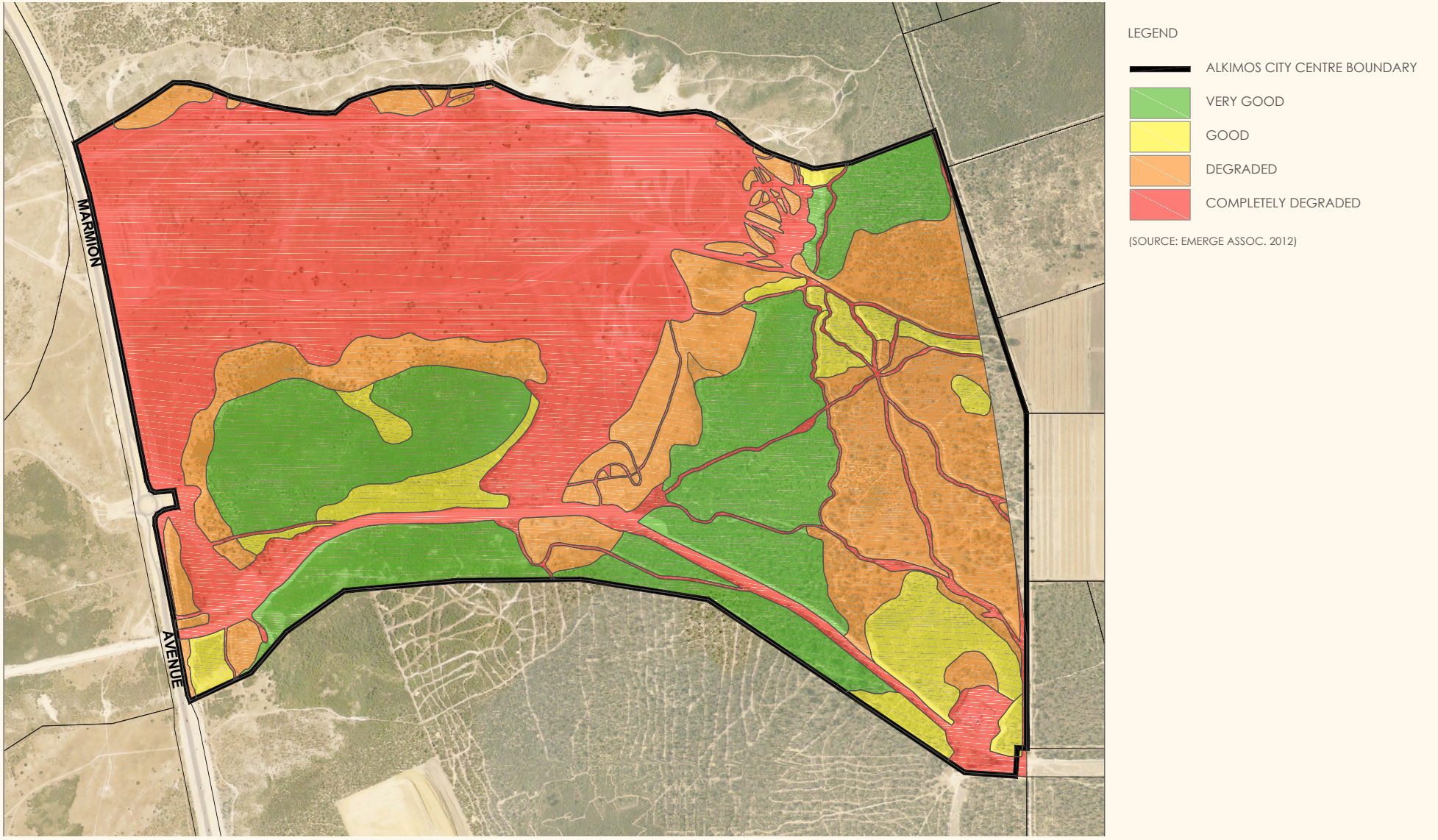
Refer to Appendix C for further information.

Figure 7: Vegetaion Communities



(SOURCE: EMERGE ASSOC. 2012)

Figure 8: Vegetation Condition



Fauna

The fauna habitats in the ACSP area consists of low open to closed heath, forest, low woodland and a significant area of cleared vegetation. Large areas of the site are degraded and have been historically grazed and are now used extensively by recreational vehicles.

A vertebrate fauna survey of the Alkimos – Eglinton area was undertaken in October 1996 by Alan Tingay and Associates and by ATA Environmental in 2005. Based on fauna surveys in 1996 and 2005, a number of species of conservation significance may occur within or potentially use the site.

The species considered to be most significant is the Carnaby's Black Cockatoo *(Calyptorhynchus latirostris)* which are species that are considered Endangered under the Environmental Protection and Biodiversity Conservation Act 1999 (EPBC 1999). Recent indicative habitat mapping for Carnaby's black cockatoo undertaken by WAPC (WAPC 2010) has been confirmed and updated by Emerge Associates.

The updated surveys confirmed:

- There is potential Carnaby's Black Cockatoo foraging habitat within the site corresponding with the remnant vegetation. There is no evidence of roosting or breeding by Carnaby's Black Cockatoo within the site, although there is evidence of foraging.

An EPBC Act referral to address potential impacts on these species is expected to be prepared for the site.

Refer to Appendix C for further information.

2.2 Landform and Soils

Environmental geology for the site has been mapped by the Geological Survey of Western Australia, Gozzard (1985). The ACSP area consists of limestone; sand and calcareous sand geological units.

Topography in the ACSP area varies from 55 m AHD to 29 m AHD. The LSP area has highly undulating topography due to the parabolic dunal system on which it lies. A parabolic dune runs from the south west to the north east of the LSP area and ranges in height between 30 and 55 m AHD. The Alkimos dune system was described by the Geological Society of Australia as an excellent example of a complex system of parabolic dunes of Holocene age belonging to the Quindalup system (Lemmon et al. 1979, EPA 2005). These features give the parabolic dune significant geoheritage value. Parts of parabolic dune will be retained and conserved within the proposed public open space outlined in the ACSP.

The ACSP area is situated within the coastal belt of the Swan Coastal Plain, within the Quindalup and Spearwood Dunes geomorphological units. The soils found at the site include:

- Karrakatta Shallow Soils Phase
- Karrakatta Sand Yellow Phase
- Quindalup Second Dune Phase
- Quindalup Deep Sand Flat Phase

Soil mapping of the ACSP area is further discussed in Appendix C.

Douglas Partners provided a desktop Geotechnical study of the ACSP area (refer Appendix A of Appendix C). The study reviewed the previous environmental geology mapping of Yanchep. The desktop geotechnical study indicates the ground conditions underlying the development site have a geological unit, which has "common solution cavities and fissures" but is not known to have large karst features such as caves.

Based on this information, Douglas Partners concluded that there was a very low susceptibility for development of large karst structures within the site and that the likelihood of karst formations impacting the proposed ACSP development is rare.

Figure 9: Site Geology

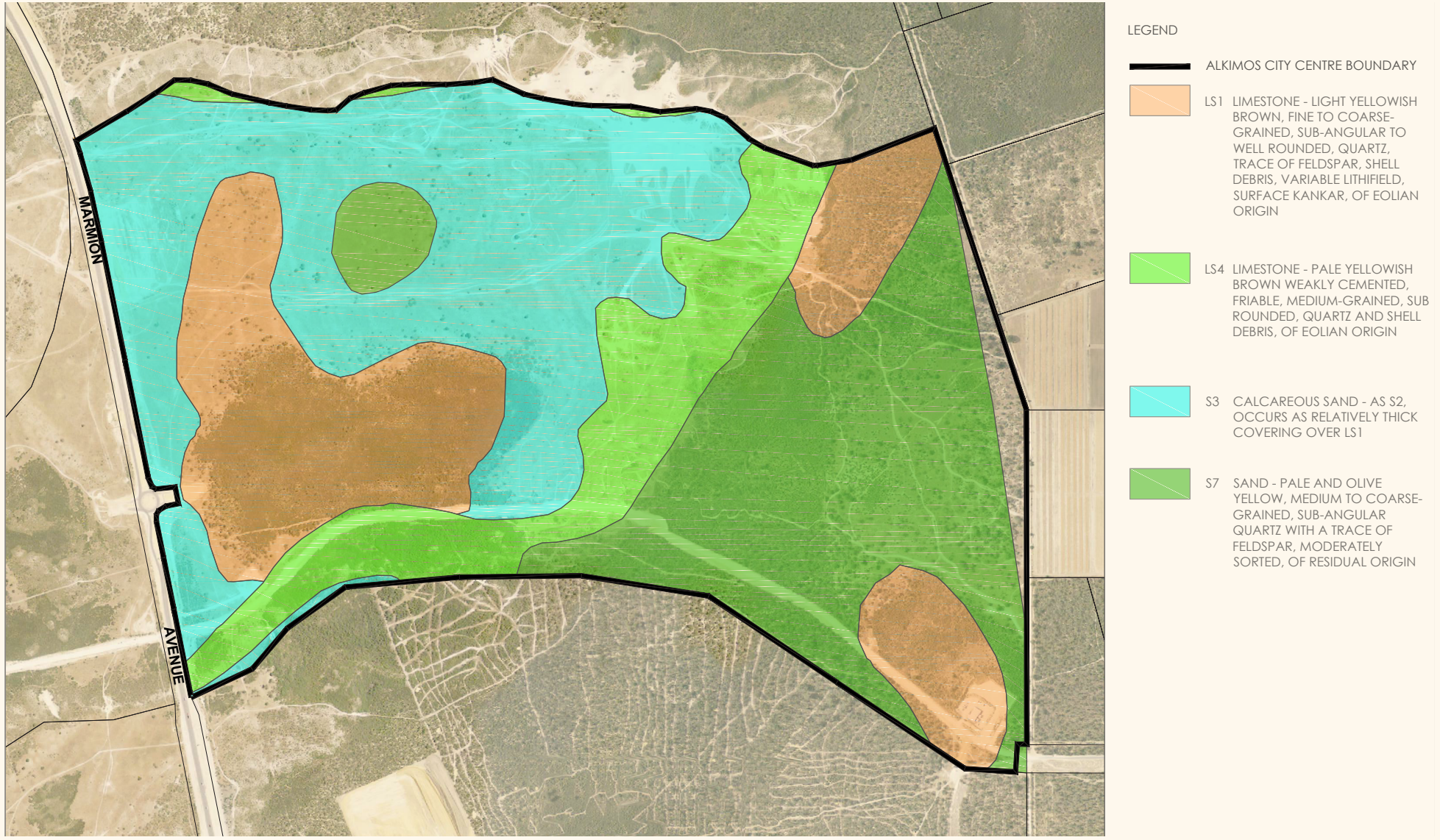
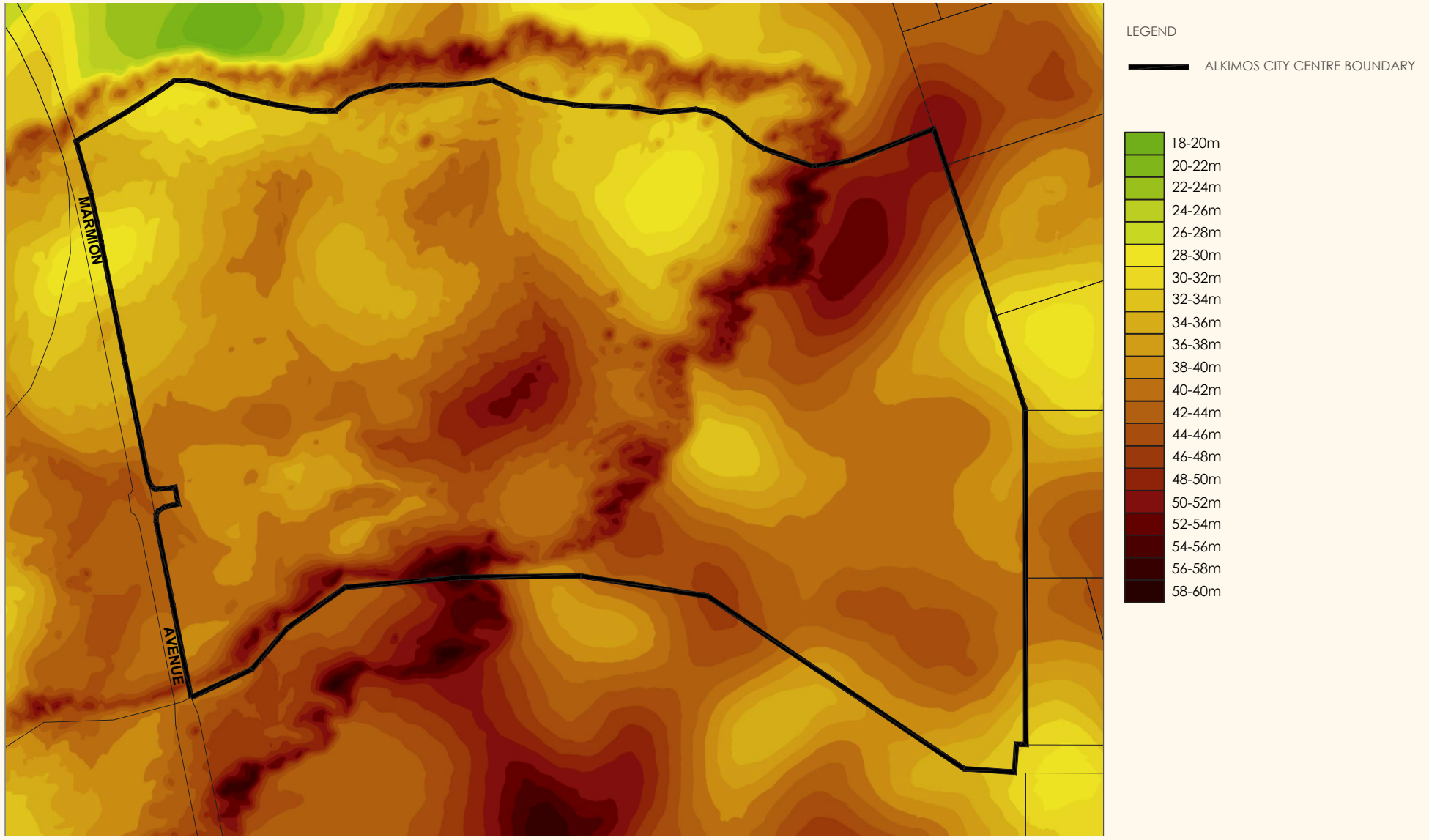


Figure 10: Contour Tint



2.3 Groundwater and surface water

There are no known surface water features associated with the site. The soils have a high infiltration capacity and there is little to no surface run off except during extreme events.

Groundwater data from the Perth Groundwater Atlas (Water and Commission 2004) shows that regionally groundwater levels for the DSP area range from between 5 m AHD in the east to <1 m AHD in the west before leading down to sea level at the coast. Groundwater monitoring carried out across the Alkimos-Eglinton DSP area indicates the depth to groundwater ranges between 13 to 40 m below the ground surface dependent on the topography of the site.

The entire ACSP area is located within a Priority 3 Public Drinking Water Source Area as part of the Perth Coastal Underground Water Pollution Control area. Priority 3 classification areas are defined to manage the risk of pollution to the water source from catchment activities and are compatible with the proposed land use of the site.

Well Head Protection Zones (WHPZ) are used to protect underground sources of drinking water, are circular with a radius of 300 m in P3 areas and are subject to special protection measures (Department of Environment 2004). The site also contains WHPZ, which are subject to restricted land uses, primarily requiring the connection to deep sewer.

Refer to Appendix C for further information.

2.4 Bushfire hazard

A Bushfire Management Plan (BMP) has been prepared in accordance with the WAPC's ***Planning for Bushfire Protection Guidelines*** (May 2010). The BMP has considered the bush fire hazard level when the ACSP is implemented and the area is developed. Refer to Appendix D.

The BMP demonstrates that the bushfire risk over the site can be managed, through dwelling setbacks and construction standards (if required). Furthermore, the ACSP provides a framework for additional work to be undertaken at the subdivision phase, including preparation of a more detailed BMP, if required, which will be based upon the City of Wanneroo's Specification D10 "Bushfire Protection" and Part 3 of the City's "Bushfire Protection Requirements for Subdivision and Development". This BMP will detail any required fire mitigation strategies, such as an appropriate landscaping and interface treatment of the zone between the retained bushland and residential development.

Figure 11: Environmental Assets

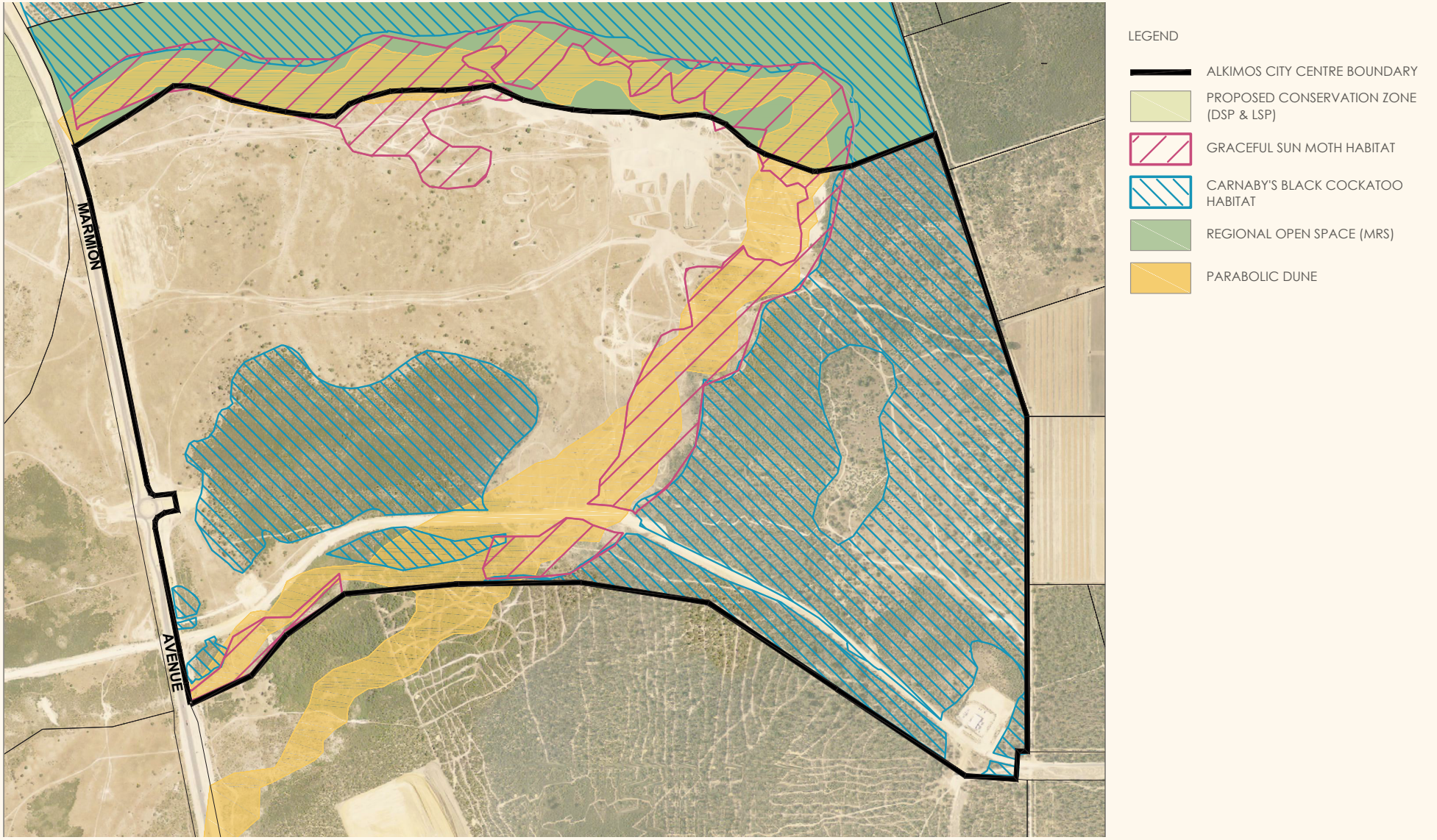
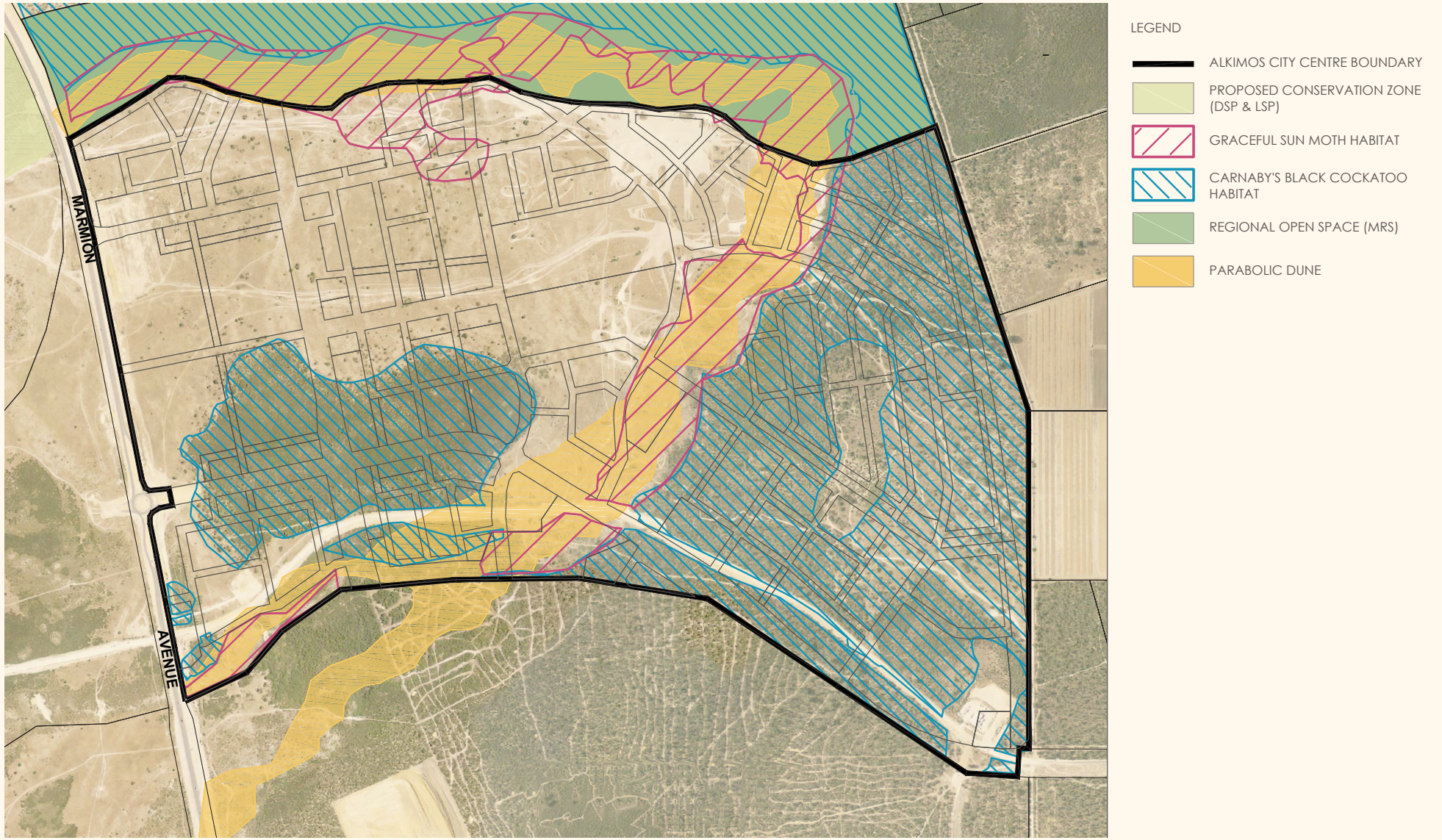


Figure 12: Environmental Asses with Masterplan



2.5 Heritage

Aboriginal Heritage

An Aboriginal Heritage Management Plan (AHMP) has been prepared over the ACSP site (Appendix E). Following a number of broad-scale heritage surveys over the site there were no Aboriginal archaeological sites or Aboriginal cultural material located or identified.

A search of the Department of Indigenous Affairs (DIA) Aboriginal heritage sites database did not identify any registered sites within the site.

European Heritage

The subject site contains no sites of European Heritage significance.

2.6 Context and Other Land Use Constraints

Existing and Future Transport Routes

Marmion Avenue and Romeo Road are identified as Integrator Arterial Type A Roads within the Alkimos-Eglinton District Structure Plan. These roads serve to distribute traffic throughout the district and in conjunction with the future Mitchell Freeway (Primary Distributor) provide the main access routes to the ACSP area. Marmion Avenue is currently a two-lane single carriageway road.

Romeo Road when constructed will connect Marmion Avenue to Wanneroo Road and ultimately the Mitchell Freeway. There is no indication from State Government agencies when the Mitchell Freeway will be constructed to Romeo Road. The transport priority is to progress development of the northern suburbs passenger railway (extension to Butler Station by mid 2014). Rail service is expected to reach the Alkimos Town Centre Station by approximately 2021.

Services and Infrastructure

132kV Powerline

The Alkimos-Eglinton District Structure Plan identifies a future 132kV powerline extending through the LSP area, adjacent to the eastern boundary. Western Power advises there is a 24 metre easement associated with the powerline, which restricts the use and development of the affected land.

Activity Centres + Employment Nodes

Regional and District Context and Constraints

The Brighton Neighbourhood Centre (anchored by a Coles supermarket) is currently the nearest existing activity centre, located 3.5km south of the North Eglinton LSP community.

The Alkimos City Centre is designated as a Secondary Activity Centre under the Perth and Peel activity centre hierarchy. With Alkimos reaching capacity well before Yanchep and Two Rocks in the north it will service a large catchment at this time. As a result the Alkimos City Centre will evolve into a larger Secondary Centre in terms of scale than Two Rocks and Clarkson. This will be necessary to support the growing local and regional population as well as helping to meet the North West Corridor employment self sufficiency targets.

Neighbourhood Context and Constraints

The Alkimos-Eglinton District Structure Plan (DSP) identifies one neighbourhood centre in the ACSP area, located on Romeo Road.

Open Space

The land directly to the north of the site is reserved for 'Parks and Recreation' under the MRS and is known as Regional Open Space (ROS). This ROS includes the northern arm of the parabolic dune. On a district scale, this ROS in conjunction with the WWTP buffer provides an ecological connection from the coast east through to Bush Forever site No.130, immediately east of the site.

Road and Rail Noise

The ACSP area is affected by the following noise sources:

- Marmion Avenue, located on the western boundary of the site;
- the future Mitchell Freeway extension, abutting the eastern boundary; and
- the future northern suburbs railway extension, traversing north-south through the site.

An Acoustic Assessment has been undertaken by Herring Storer (Appendix B). The assessment addresses the likely impacts of the above noise sources, and identifies appropriate design responses and mitigation measures, which have informed the ACSP design. A Noise Management Plan will be provided as a condition of subdivision approval, based on the final lot layout and levels.

Figure 13: Context + Constraints Plan

3.0 ACTIVITY CENTRE STRUCTURE PLAN

3.1 Land Use

3.1.1 Design Drivers

The following design drivers were used when preparing the ACSP:

- Edge City
- Natural Heritage and Sense of Place
- Access and Destination
- Consolidation and Integration
- Movement and Connection
- Civic Expression and Activation
- Liveability

Edge City

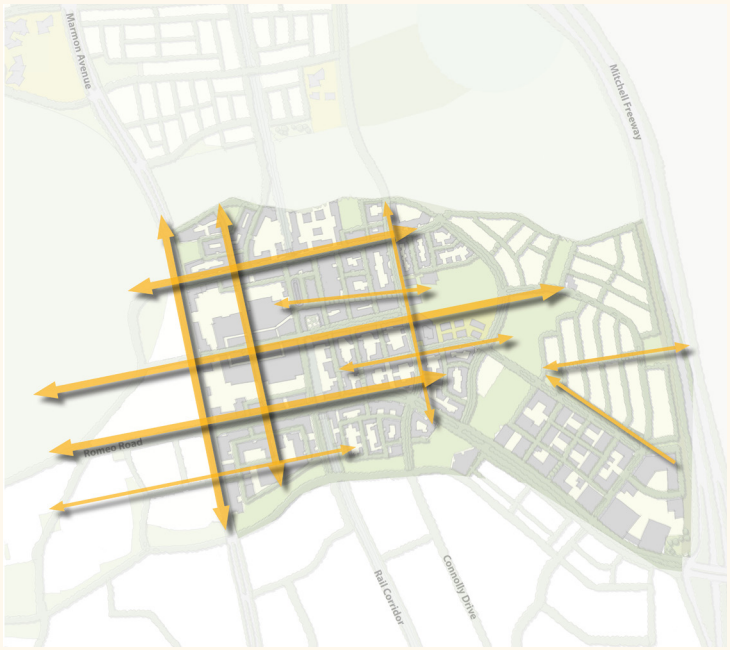
- Alkimos City Centre will be of a scale that will enable it to take its place as the heart of the region with a population of 50,000. It is over an hour travel, from the Swan River settlements, which frees it to establish as a City in its own right and with its own identity.
- The design settles the City at the edge of a nature arch, linking the coast on the west to the tuart groves on the east. The City seeks to contrast and respect nature. It gives its population a link to urbanity and also to nature and the inspiration and wonder wilderness offers.

Natural Heritage And Sense Of Place

- Within the City geological and ecological heritage is proactivity conserved. This is achieved not by wide buffers that dilute the urban City but by careful sculpting of the urban fabric into the landscape. Some areas are retained as natural and others landform is accentuated through built form.

GEO HERITAGE

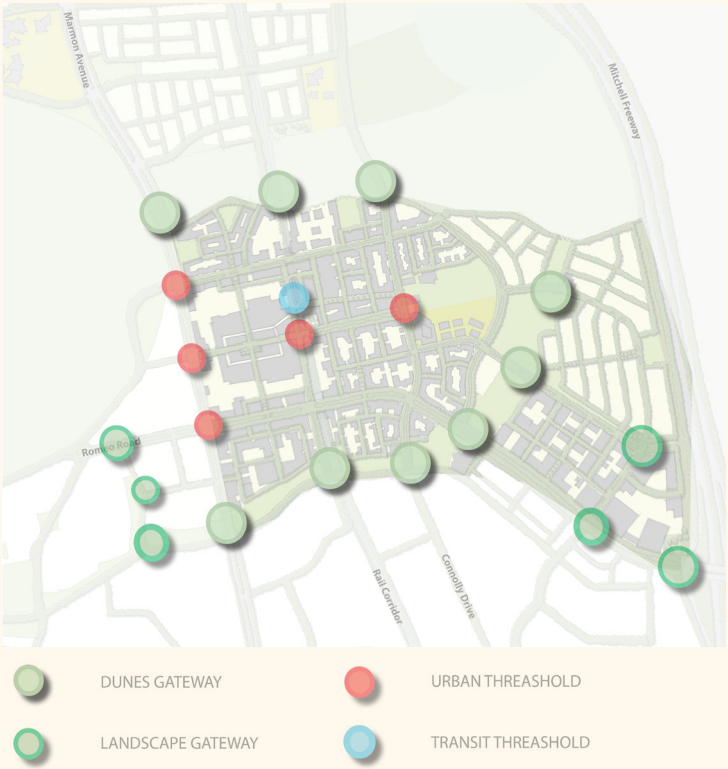
- The City is designed to provide views of the landscape to enrich the experience of using the city and to build an ethos of custodianship and enhancing legibility.



VIEW LINES

Access And Destination

- Alkimos City lies within an urban corridor that is as wide as the region between Cottesloe and Crawley. To ensure the design is well connected the City is served by a network of radiating roads.
- The network is designed to be multi modal so multiplies the reach of the City making many surrounding neighbourhoods transit villages. The City is accessible for all mobilities and connects into the wider public transport network of the region.
- Development within the parabolic dune is entirely mixed use. For all neighbourhoods in the corridor, this City is an urbane sanctuary accessed through a ring of dunes and landscape.
- The transit station is an important point of arrival into the city. It is both a place of arrival and will be a place of meeting and gathering.
- The City belongs no more or less to any neighbourhood or developer but is the community's stage within a natural arena.



Consolidation And Integration

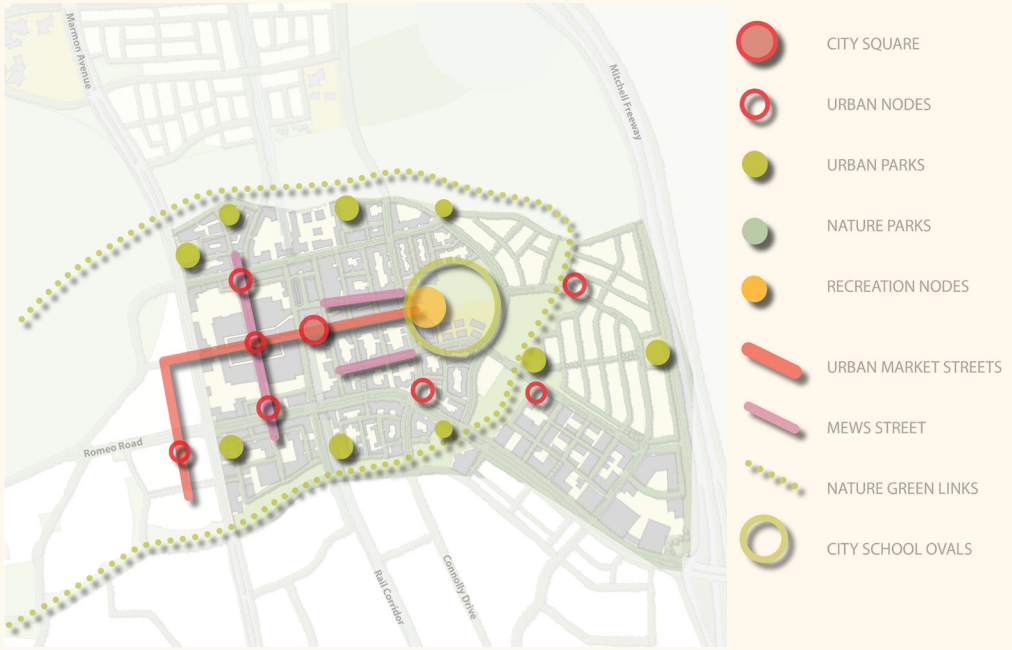
- The City retail core is located with exposure to Marmion Avenue to enable it to build and sustain its role in the highly competitive network of northern corridor activity centres. Rapidly the quality and extent of retail and entertainment experiences will set the City apart as a premier destination.
- The core of the City is compacted around the transit station. The City is designed to enable future development bridge the separation caused by the rail cutting.
- The commercial and education role of the City will be linked to the retail core through a seamless network of streets giving access to the transport facilities and a free exchange between the attractors.
- The broader City is shaped as a series of precincts enabling synergies between uses. The precincts are layer over a distorted grid ensuring they have identities of their and still parts of the larger whole.

Movement And Connection

- The City helps support the provision of transit to the region. High amenity and high activity areas around the transit station assist with safety, ridership and transport behaviour change. The City enables shoppers, students, workers, entertainers and socialisers to enjoy and support active transport.
- Parking location and ratios reduce vehicle use while on street parking helps with traffic calming and reduces the cost of transit supportive urban development.
- The movement pattern has been planned so citizens can democratically resolve to create more connections where these are not currently permitted, to improve local movement opportunities in the future.
- A primary focus of built form in the City Centre will be the definition of street edges and creation of rain, sun and wind shelter.
- A primary focus of mixed use zoning to enable the creation of vibrant urban precincts with active ground floor frontage to key streets and spaces.

Civic Expression And Activation

- The design is driven by the desire to create great places for civic life. Education, health, governance are considered and given places of price, access and inclusions in the City. At times these buildings are part of the street edge perhaps on a street corner. At other times they are pavilions or landmark architectural forms in open space.
- The Alkimos landscape undulates and roles shaping places within the arena of dunes. These places have been reinforced through a system of neighbourhood connectors that define the main movement network while avenues and local parks form the public realm of the precincts off the main streets.
- The distorted grid, draws the eye to small civic spaces and events in the urban pattern. Accentuated corners turn buildings in to landmarks and build a congestive map of a legible City with many places.
- Strategic civic places are provided across the City. Each has a distinct role. Urban Landscaping and architecture will combine to ensure the spaces are interesting, comfortable, memorable and inclusive. They will be places for kids to play grownup and grownups to have fun, for artists to leave a mark and the community to mark special events.
- The design of Alkimos City accepts the challenge of being the cultural centre of the corridor. Its respect for the place and the dune is an act of reconciliations. The City, as envisioned, will need to be more urban, more embracing of diversity and more experimental. Modest mundane and utilitarian responses will occur as they do in all cities but they will be hidden behind urban buildings and avenues of trees.



LIVEABILITY

Robust and Evolving

- The City is designed to enable redevelopment and intensification in short cycles enabling the City to start serving the population as a construction region and evolving quickly into a education, commerce and trade region

The Affordable City

- The design of the City envisages a higher degree of compactness than suburban based centres. This frees land just outside the core for affordable urban housing. The City and coastal amenity is shared while the affordable villages supply the City with life and a diverse employment base.
- Design ensures there are elevated neighbourhoods and ideally located inner City mixed use developments and apartments providing an attraction to high skilled, high wealth residents flavouring the City.
- The design makes space for district open space right in the City increasing amenity and enabling users to access the facilities by bus or train or to use them during the work week. Thus the City reintegrates work, sport and community.

The Economic City

- The plan of the City is a carefully considered frame for efficient urban development of a City to accommodate over 11,000 workers and its own significant population.
- The scale of the City retail core has been planned to accommodate a functional two supermarket, two discount department store centre with specialty development. The site allows for some sleaving while leaving at grade parking areas for future optimisation of the site though deck parking.
- The urban core includes 70 metre deep blocks to increase intra block parking. Many sites allow some larger format forms while showing a resolved street pattern for fine grain development.
- Future DAPs will respond to up to the moment information on economically successful development typologies and demand.

The Coastal Living City

- The City will explore the coastal character and coastal living in Western Australia. The best of contemporary practices and the timeless lessons of warm temperate zone design will be brought together in the City
- There will be a focus on ensuring the facades of the buildings are the gardens of the City. Places where workers can entertain and unwind; where residents can enjoy the soft ocean breeze overlooking the City.
- Coastal living also means a search for excellence in sustainability in all aspects of life. Few cities have the potential to be so vulnerable to future challenges if not future proofed. However, few cities have such a strong foundation for an environmentally responsive, climate smart, transport efficient, employment rich and socially diverse future. Alkimos will demonstrate excellence.

STREET FRONTED BUILDINGS WITH ACTIVATION

Figure 14: Masterplan

1. Mitchell Freeway and inter-city cycle route.
2. Key city links from surrounding urban areas including on street paths cycling and principle shared path movement network
3. Parabolic dune hills and escarpments framing City. Final position to be refined at detail design (Dune edge parks and walk trails and feature lookouts to be included)
4. Inner city urban boulevard (Marmion Avenue).
5. Inner city urban boulevard (Romeo Road).
6. Inner city urban boulevard (Connolly Drive).
7. Inner city urban boulevard (Alkimos Parade).
8. Sunken \Urbanised Rail Corridor with activated crossings.
9. Rail and Bus station in urban setting.
10. Temporary at grade parking area (Future development)
11. Central Square on Market Street with access from station.
12. Tree lined Market Street with ocean to escarpment views.
13. Urban retail core with pedestrian walkways, open air style malls
14. North facing small corner market and small events square.
15. Commercial and education core with City Centre facilities (eg. Library, Theatres etc)
16. Fine grain urban lanes and links with cafes and restaurants.
17. Grand Domain park with school and city events and recreation spaces.
18. Mixed use area with health and well-being focus
19. Mixed use area with employment services focus
20. Mixed used area with macro retail focus
21. Mixed use area with office, conferences and tourism focus.
22. Mixed use area with business enterprise and logistics focus
23. Inner city residential area on hilltop with 360 degree views
24. Neighbourhood scale parks for local neighbourhood activity. Park and services corridor buffer
25. District Play fields in Regional Open Space
26. Retained ecological areas with natural trails and regionally connected path network.
27. Waste Water Treatment Plant buffer. Opportunity for park-ecological areas with beach node access path network.

3.1.2 Precincts

The ACSP has been separated into eight Precincts, each with their distinctive location, function and lands uses:

Precinct A – Northern Mixed Use
Precinct B – Retail Core
Precinct C – Central Mixed Use
Precinct D – Eastern Mixed Use
Precinct E – Residential
Precinct F – Gateway Service Commercial
Precinct G – Southern Mixed Use
Precinct H – Business Enterprise

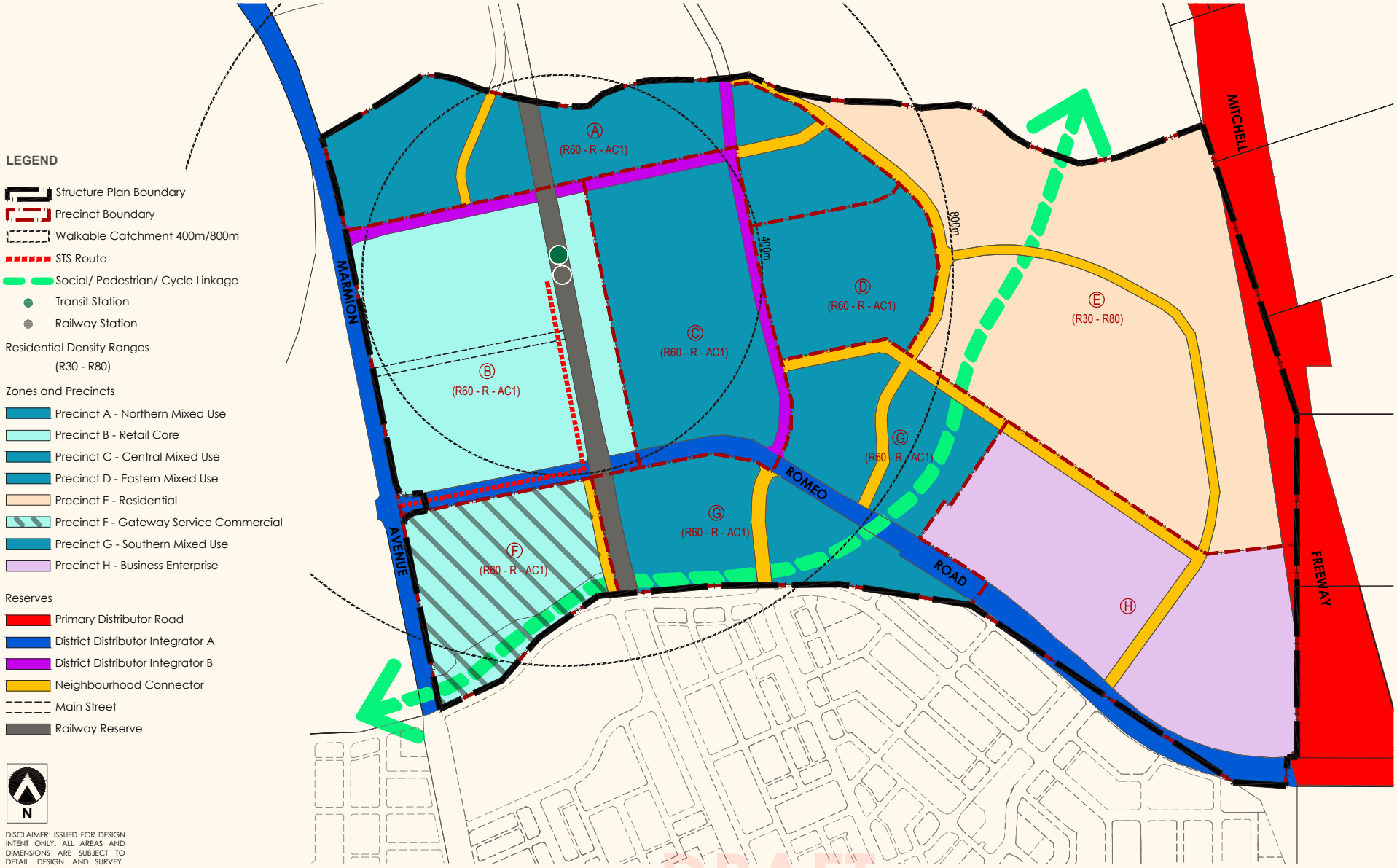
Each Precinct has specific objectives included in Part 1 of the ACSP. Any Detailed Area Plan and application for planning approval will be assessed having due regard to these Objectives:

Precinct A – Northern Mixed Use

Precinct A is a mixed area consisting of office, commercial, minor retail, educational and residential land uses, leveraging off its proximity to the rail station.

- Provide for strong pedestrian connections to the rail station and Precinct B - Retail Core;
- Built form is to address Integrators and Neighbourhood Connectors with active frontages;
- On site parking to be predominantly sleeved behind buildings;
- Acknowledge that the Precinct B - Retail Core the primary area for shop-retail uses;
- Facilitate residential development and density maximizing the potential residential catchment; and
- Allow for a staged development of the Precinct to achieve these aims.

Figure 15: Activity Centre Structure Plan



Precinct B – Retail Core

Precinct B is the retail core based on a main street design with strong connections to the rail station.

- Facilitate the development of retail core which is well integrated with the main street, the rail station and the remainder of the City Centre;
- Encourage a range of land uses which will generate activity outside core business hours;
- Provide for strong pedestrian connections to the rail station and town square;
- On site parking to be predominantly sleeved behind buildings;
- Provide a range of public and private realm open spaces;
- Provide an urban built form fronting Romeo Road, Marmion Avenue other streets;
- Allow for a staged development of the Precinct to achieve these aims; and
- Ensure that the rail reserve is well integrated with the adjoining land by:
  - Facilitating the appropriate development of rail and bus movement and transit interchange areas;
  - Providing active linkages across the rail reserve to provide for connectivity and activation on either side of the reserve;
  - Minimising the extent of land quarantined from active uses as part of the construction of the rail line; and
  - Enabling development over the rail and bus movement and transit interchange areas.

Precinct C – Central Mixed Use

Precinct C is a mixed use area consisting of retail, commercial, medical, entertainment, civic and residential uses.

- Provide for strong pedestrian connections to the rail station and retail core;
- Create a green avenue linking the Precinct B - Retail Core to the Precinct D – Eastern Mixed Use;
- Develop robust buildings that are capable of adapting to a mix of land uses and intensification over time;
- Encourage a range of land uses which will generate activity outside core business hours;
- Acknowledge that the Precinct B - Retail Core is the primary area for shop-retail uses;
- Create a legible street network with an integrated use of public and private space;
- Facilitate residential development and density maximizing the potential residential catchment;
- On site parking to be predominantly sleeved behind buildings; and
- Allow for a staged development of the Precinct to achieve these aims.

Precinct D – Eastern Mixed Use

Precinct D is the civic heart of the City Centre providing a range if education, civic and recreational uses.

- Collocate civic and recreational facilities with the City, education providers and other stakeholders;
- Provide for a landmark building focused towards the main street to create a defining terminating vista; and
- Create active and passive recreation opportunities.

Precinct E – Residential

Precinct E is primarily a residential area, which will provide for a variety of housing product.

- Development is to respond to the undulating nature of the Precinct and its proximity to the Regional Open Space and other public open space areas;
- Ensure that the buildings and streets are urban in form;
- Provide a legible street network with an integrated use of public and private space;
- Provide for strong pedestrian and cyclist connections to the remainder of the City Centre; and
- Maximise Home Based Business opportunities

Precinct F – Gateway Service Commercial

Precinct F is a mixed use area consisting of large format retail, commercial and service industrial uses.

- Provide an active frontage to Marmion Avenue and Romeo Road;
- Ensure that building setbacks, car parking, landscaping and access are appropriately coordinated; and
- Allow for a staged development of the Precinct to evolve to match Precinct A.

Precinct G – Southern Mixed Use

Precinct G is a mixed use area consisting of office, commercial, retail, educational and residential land uses.

- Develop robust buildings that are capable of adapting to a mix of land uses and intensification over time;
- Ensure land uses are appropriately located, residential uses in particular, to reduce the potential for land use conflict;
- Acknowledge that the Precinct B - Retail Core is the primary area for shop-retail uses; and
- Built form is to address Romeo Road with active frontages.

Precinct H – Business Enterprise Precinct

Precinct H is the primary employment area with office, commercial, service industrial, light industrial and large format retail uses.

- Develop robust buildings that are capable of adapting to a mix of land uses and intensification over time;
- Ensure land uses are appropriately located to reduce the potential for land use conflict, in particular the interface with the Precinct E - Residential;
- Built form is to address Romeo Road with active frontages;
- Provide for a high standard of built form and landscaping for the benefit of employees and visitors; and
- Ensure that building setbacks, car parking, landscaping and access are appropriately coordinated.

3.1.3 Preliminary Design Guidelines

The following are the preliminary design guidelines for the City Centre. They are to be used by developers, architects and builders when designing the built form elements of the City Centre, in particular the mixed use precincts. Detailed Area Plans and site specific design guidelines will be prepared, using the guidelines below, to ensure that the built form and associated elements are adequately controlled and implemented.

General Appearance

- Development should encourage a finer grain of built form to give the appearance of clusters of smaller components forming a streetscape rather than a large single complex.
- The facades of buildings accommodating multiple uses should contain some form of articulation to show the transition from one use to another with vertical and horizontal mixing of uses encouraged. Openings and architectural elements should have a vertical emphasis and rhythm.
- Upper floors shall include extensive balconies and terraces of at least 2.5 metres in depth to provide for 'living facades' and engagement with the street.

Street Setbacks

- Setbacks should strengthen the continuity of streetscapes and allow continuous weather protection for pedestrians.
- Buildings shall have a nil setback to both primary and secondary streets with a maximum setback of up to three metres permitted for building articulation. Greater setbacks to the street shall only be permitted where supported by an approved Detailed Area Plan.
- All levels above the fourth floor shall be setback a minimum of four metres from the building line of the lower floors, although balconies may project two metres into the setback area.
- Specific setback requirements for land within the City Centre will be provided in accordance with an approved Detailed Area Plan.

Other Setbacks

- Except where required for vehicle access buildings shall be developed from side boundary to side boundary to provide an urban wall to the street and screen parapet walls of adjoining development.
- Side and rear setbacks for levels above the second level shall be determined in accordance with the R-Codes regardless of the land use type, with internal commercial floor space being treated as a habitable room (not bedroom or study) unless there is an approved Detailed Area Plan over the subject lot.

Corner Sites

- Buildings located on corner sites shall emphasise the prominence of the street corner via:
  - Architectural roof features that protrude above the normal roof line;
  - Increased parapet heights with additional detail, colour and textures; and/or
  - Provision of an additional storey at the street corner.

Multi Storey Car Parks

- Multi storey car parks shall not be readily identifiable from the street and are not to adversely impact the streetscape. The ground floor of car parks should be sleeved behind active tenancies.
- Standalone multi storey car parks shall complement the surrounding built form, in terms of scale, height and character and shall ideally be located behind buildings.
- Multi storey car parks included within the main building shall be screened/ treated so as to provide a seamless appearance between the car park levels and other levels.

Facades

- Building facades are to be architecturally interesting.
- Blank walls shall not be visible from the public realm, unless abutting a side boundary where it is anticipated that another building will eventually be constructed to screen the wall. In such instances artistic treatments shall be installed on the portions of the wall visible from the public domain.
- A minimum 75% glazing shall be achieved at ground level on any façade to the street front.
- At the street level, 50% of the building facades are to comprise windows or other visually permeable treatments that are free of advertising and designed to provide a visual linkage between activity in the street and indoor spaces.
- Parking on upper levels shall either be sleeved behind habitable development or presented with openings commensurate with the design intent of openings on other levels.
- On the second storey and subsequent storeys above, building facades shall be articulated to break-up straight plain facades through the use of a combination of the following:
    - Openings;
    - Protruding or indented balconies;
    - Awnings or sun shading devices over all windows;
    - Use of different colours and textures; and
    - Indentations and extrusions with details to break the building into individual elements.

Parapets and Roof Features:

- New buildings that contain parapets shall include:
    - Indentations;
    - Additional modulation; and
    - Variation in parapet heights and designs so as to provide additional interest to the street.
- The parapet shall be appropriately capped to terminate the vertical plane or end at an overhanging eave or protruding roof commensurate with the design and scale of the building.

Balconies

- In order to control building bulk, balcony balustrades (where provided) shall be 50% visually permeable unless screening air conditioning plant or a clothes drying area.
- A balcony with a minimum depth of 2.5 metres and minimum width of four metres shall be provided to each dwelling (including short-stay apartments) accessed from a living room, not bedroom or study. Additional and larger balconies are encouraged.

Colours and Materials

- Encourage the use of light building colours and lighter roof colours to reduce heat absorption and further reduce cooling costs.
- The use of a variety of materials and textures is encouraged.
- Fluorescent colours shall not be used.

Streetscape Relationship:

Ground Floor Frontage

- Tenancies facing the street are to provide an attractive and inviting frontage.
- Where possible, buildings should provide a continuous frontage to core pedestrian areas.
- Ground floors in core areas shall provide the appearance of a fine grain of shopfront and café uses.
- The ground floor should be predominantly clear glazed with a mixture of openings, display windows and shopfronts that allow passive surveillance of the street and the tenancies.
- It is encouraged that lease agreements limit the amount of signage on individual windows to be no more than 20% of the area of the window.

Entry Points

- Entry points shall provide safe, clearly defined and comfortable access to buildings.
- Entrances provided at least every 20 metres; lesser distances are encouraged.
- Entry points shall directly face the street and include at least two of the following:
  - Signage above the entry door;
  - Indentation of the entry point, where recessed entrances are provided, they should be truncated at an angle to the pedestrian route of no less than 60 degrees;
  - Highlighting the entry point through the use of different materials; or
  - Increasing the height of the awning above the entry point to no higher than four metres above footpath level.
- Separate entrances should be provided to residential components on upper levels. Separate entrances should be clearly distinguished from the remainder of the façade.
- The location of entry points is to have due regard to the CPTED Assessment Table included in the Alkimos Beach Design Codes.

Activity and Uses

- The spatial location of land use activities should create an active and safe city centre environment.
- Pedestrian activity and the vitality of the centre shall be achieved by the following:
  - The provision of street front public spaces is only encouraged where these are likely to be activated due to location, design and fronting uses;
  - The awning and leasing of sidewalks to create shaded areas and café alfresco;
  - Covered ground floor walkways;
  - Shared spaces including plazas where these provide a safe, comfortable and useable space within the development;
  - The location of retail and other active commercial uses on the ground floor level; and/or
  - The location of office and other non-active uses (residential) on upper levels.
- Expansive building forecourts are not permitted unless included on a public spaces plan or DAP.

Weather Protection

- Weather protection should be provided to support a comfortable external environment for pedestrians.
- Awnings shall be provided over all footpaths that abut a building. Where a building is set back from the footpath, Council may, via a Detailed Area Plan, require future development to construct or contribute towards the construction of a separate shade structure over the footpath.
- Awnings shall be provided above all entrances and exits of a building.
- Awnings shall be constructed using durable and solid materials.
- Address the risk of the urban heat island effect by providing natural and manmade shade and shelter.
- New awnings shall line up with existing awnings (where present).
- Where possible awnings shall protrude from the face of the building by a minimum width of two metres and ensure that stormwater is not directed onto pedestrian pathways.
- Awnings shall be parallel to the footpath.
- Awnings shall be constructed to comply with the Local Government (Miscellaneous Provisions) Act 1960 – section 400 (2) and the Building Regulations 1989 Part 9.

Levels

- Development is to follow the topography of the land.
- There shall be no substantive difference between the ground floor level and the footpath level of a building to ensure appropriate and equitable access for pedestrians.
- Finished levels are to be determined having due regard to the CPTED Assessment Table in the Alkimos Beach Design Codes.

Fencing and Gates

- Fencing and gates are to provide an open, accessible and attractive urban environment.
- Fencing or gates behind the building line shall generally not be permitted where it obstructs access to public parking areas unless securing an area after hours and where surveillance is limited.
- Where required, gates and fences shall be an open style to 1.8 metres unless screening an approved servicing area.
- No barbed wire or electric fencing shall be permitted.
- The provision of fencing is to have due regard to the CPTED Assessment Table in the Alkimos Beach Design Codes.

Lighting

- Lighting is to be provided to ensure that developments support proper and attractive illumination of public and private spaces for security and safety benefits.
- Lighting shall be provided in the following areas to increase safety and security:
  - Under all awnings;
  - In all parking areas;
  - Service areas;
  - Of all footpaths;
  - Of all entry points; and
  - Additional lighting of key elements and features of the building and landscaping is encouraged to add vitality.
- Lighting is to have due regard to the CPTED Assessment Table in the Alkimos Beach Design Codes.

Safety and Surveillance

- Public and private areas are to be visible and safe, or screened and illuminated in order to achieve a high quality, safe and comfortable outdoor environment.
- The following design features shall be avoided to improve safety and reduce graffiti:
  - Entrapment areas, blind corners and narrow pathways;
  - Long expanses of blank walls;
  - Dead ends and hidden recesses;
  - Landscaping with extensive foliage between 0.5 and two metres that create visual barriers;
  - Rear servicing/loading areas without security gates or enclosures; and
  - Rear parking and pick-up/delivery areas with no surveillance from active indoor areas.
- Any development is to have due regard to the CPTED Assessment Table in the Alkimos Beach Design Codes.

Roller Shutter Doors

- Ground floor areas are to maintain an attractive frontage to the street and other visible spaces while providing security.
- Solid roller shutter doors shall not be permitted on any façade facing the street.
- Roller doors of transparent acrylic material are acceptable on shop fronts providing that at least 75% of the roller door is transparent and the material maintains a high level of transparency once installed.

Screening

- Air conditioning units, ducts and other services shall not detract from the streetscape.
- Air conditioning units, ducts and other services shall be screened from view and should be located away from the street front.

Parking And Access

Parking

- All parking is to be in accordance with the approved Alkimos City Centre Parking Strategy.
- Parking areas shall generally be set behind the development away from the street or screened from the street where appropriate.
- Semi basement parking may be permitted away from core areas where appropriately screened.
- Where a development orients to more than one street, the Council may permit at grade parking to the secondary street(s) where it is softened by landscaping, does not undermine the provision of shade and lighting for pedestrians, contributes to streetscape amenity and retains the architectural quality of the development.
- Upper floors may be used for parking where this can be done without undermining streetscape amenity and architectural quality.
- At grade uncovered parking bays shall be landscaped with shade trees at a rate of one tree per ten car bays.
- Dedicated loading areas shall be provided for service vehicles, which shall enter and exit the site in forward gear.
- All areas to be used for car parking, access ways, loading bays and for turning or manoeuvring of vehicles shall be designed in generally accordance with the City of Wanneroo standards and be sealed to the specification and satisfaction of the City.
- Universally accessible (disabled) parking bays are to be provided in accordance with the provisions of the Building Code of Australia.
- The location and design of parking areas is to have due regard to the CPTED Assessment Table in the Alkimos Beach Design Codes.

Vehicle Access

- Vehicle access is to ensure vehicle access ways are safe and easily traversed.
- Where available access shall be via a laneway or secondary street to minimise disruption to pedestrians.
- The impact of ramps and crossovers on the public domain is to be minimised.
- All vehicle movements shall be able to enter and exit the site in a forward gear.

Pedestrian Access

- Pedestrian access is to be provided in a manner that is safe and direct.
- Pedestrian access, in the form of a footpath, shall be provided from the parking area to the entry point of the proposed development and along all street frontages.
- For developments with parking at the rear, pedestrian access between the street and car parking area shall be provided.
- Pedestrian routes shall integrate with public transport networks.
- Pedestrian routes shall as far as possible be on publicly owned land, and preferably be within the road reserve as part of the street network.
- Pedestrian routes shall be aligned primarily along existing building lines and; thereafter, along proposed new development lines.
- Development shall provide pedestrian routes with sun protection.
- Pedestrian routes shall be as direct and level as possible.
- Dead ends and/or closed view corridors shall be avoided.
- Pedestrian access is to have due regard to the CPTED Assessment Table in the Alkimos Beach Design Codes.

Crossovers

- The number of crossovers is to be limited to reduce the impact on pedestrians and traffic. Generally a maximum of two crossovers shall be permitted for sites and in these instances one shall be for entry and the other for exiting.
- Shared crossovers are strongly encouraged.
- Different types of developments may have different access and design requirements. Therefore when submitting the application it is important to state the use of the site and the type of vehicles that are expected to access the development.

3.1.4 Integration with Surrounding Land

The external road connections to the north, south and west of the site have been located to connect with the approved and proposed adjoining designs (e.g. Central Alkimos to the north, Trinity to the south and South Alkimos to the west). These connections have been located following collaboration with the adjoining landowners to ensure seamless integration.

The road layout and configuration of land uses on the eastern side of Marmion Avenue have been designed to integrate with the Gateway Precinct of the South Alkimos Local Structure Plan on the opposite side of Marmion Avenue. This will result in the Gateway Precinct forming part of the City Centre.

Table 2 : Structure Plan Summary Table

Item	Data	Section number referenced within the structure plan report
Total area covered by the structure plan	212ha	Section 1.2.2
Area of each land use proposed: Retail Core Mixed Use Business Enterprise Service Commercial Residential	 26ha 64ha 29ha 11ha 39ha	Section 3.1
Estimated number of dwellings	Year 2030 – 1895 Year 2050 – 3335	Section 3.3
Estimated population	Year 2030 – 4358[1] Year 2050 – 7670[1]	Section 3.3
Number of high schools	1 (potential)	Section 3.6
Number of primary schools	0	Section 3.6
Estimated retail floor space	75,000m^2	Section 3.7
Employment self sufficiency targets	51.5% of Alkimos-Eglinton DSP target of 60%	Section 3.7
Estimated area and number: neighbourhood parks	23ha 13 parks	Section 3.2

[1] *Based on 2.3 residents per dwelling*

3.2 Open Space

3.2.1 Public Open Space

In accordance with the City's Public Open Space Local Planning Policy the public open space (POS) for the ACSP has been designed to meet the objective of ensuring new POS areas provide a balance between:

- A diversity of recreational uses and options for the community;
- The predicted active recreational needs of the community ;
- Conservation of natural assets;
- High levels of amenity;
- Affordability; and
- Environmental sustainability.

The Alkimos-Eglinton DSP stated that in defining POS areas, land attributes and functional values should be considered, including the following:

- Recreation needs;
- Conservation value;
- Fauna habitat values (e.g. significant habitat trees);
- Linkage values;
- Accessibility for the community;
- Visual quality and place making opportunities;
- Management issues; and
- Safety

In light of the above, the POS areas proposed for the site can be categorised into three types:

1. Parabolic Dune;
2. Urban Parks; and
3. Neighbourhood Parks.

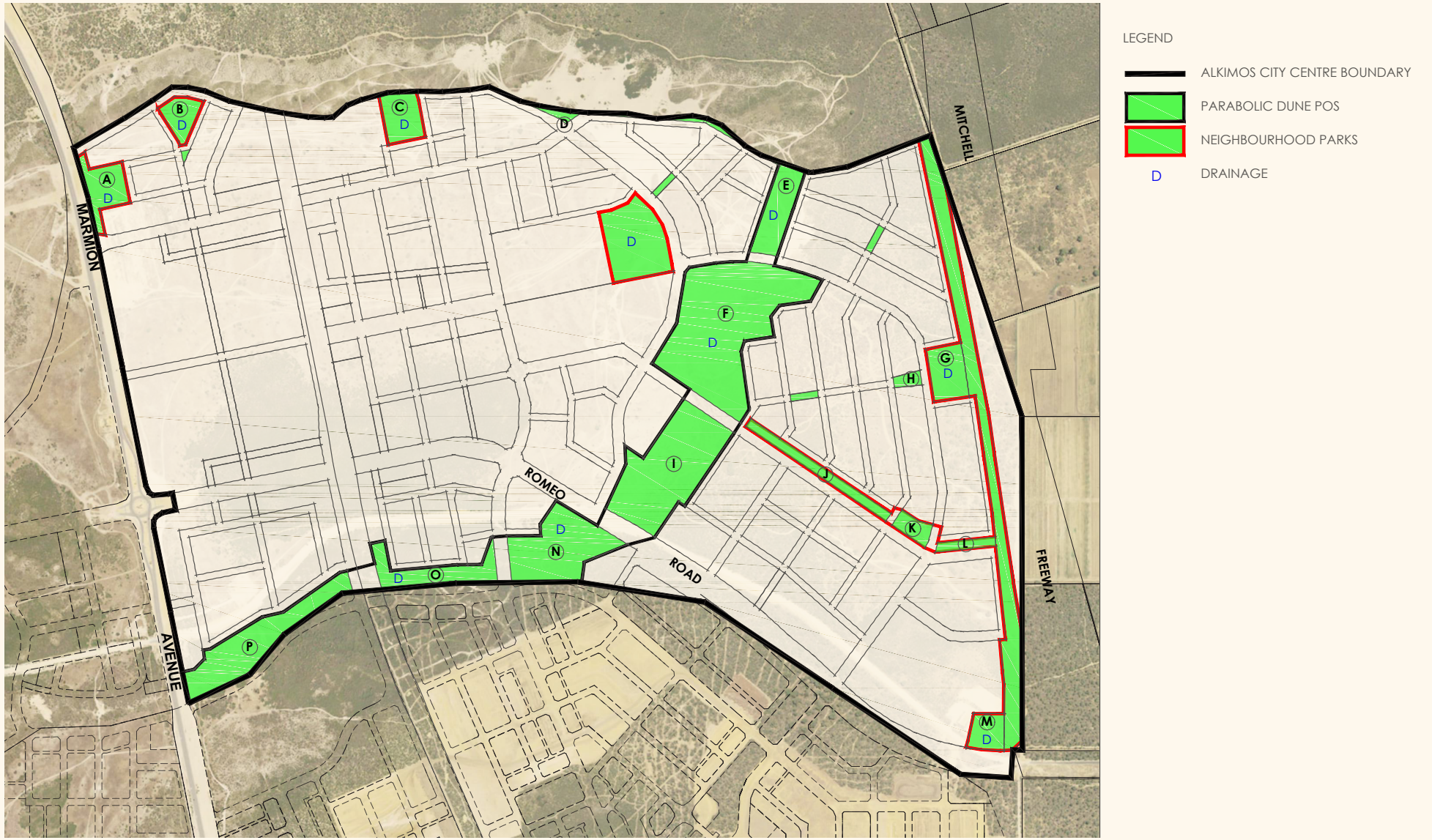
Parabolic Dune

The parabolic dune is a defining feature of the Alkimos locality and is acknowledged to have international geo-heritage significance. The dune traverses the northern boundary of the ACSP, within the Regional Open Space, and then dissects the eastern portion of the site in a south-westerly direction towards the coast. The retention of the dune is considered to be an integral element to the design of the site and provides opportunities for passive, active and conservation opportunities. The dune will link with the social/pedestrian/cycle linkage in the South Alkimos Local Structure Plan to provide access to the coast.

A path network will run along contours to establish links between the adjoining Precincts, with boardwalks, art and interpretive signage positioned in key locations. Lookouts and shelters at specific high points to reveal ocean and surrounding views. Fencing and controlled access will be provided for sensitive areas and works will include stabilisation and restoration. The final configuration of this open space will be determined at detailed design stage.

The final configuration of the parabolic dune POS will be dependent on the detailed design of land adjacent to the dune, the condition of the vegetation and the open space needs of the community (e.g. active, passive).

Figure 16: Public Open Space Plan



Neighbourhood Parks

Neighbourhood Parks provide nearby residents and workers with high amenity open spaces, primarily for passive activities, but some will include kick-around areas for active recreation. It is proposed to provide a variety POS types and encourage exploration and development of the 'sense of place' within each space.

The parks will have manipulated topographies, which reflect but do not necessarily conserve the existing site grades. The neighbourhood parks vary in size and will be well defined by tree planting and public streets or pathways. They will contain a number of facilities and areas that allow people in the community to gather and meet; including elements such as playgrounds, barbecues, picnic tables, off-leash dog areas etc.

Some of the parks are located at low points, to assist with stormwater detention and drainage. These parks also include planting, pathways, lighting and seating to ensure they contribute to the community as well as the environment.

Urban Parks

In order to provide amenity and relief for the workers, visitors and residents within the City Centre it is considered important to provide formal, urban parks. These parks will provide safe and protected spaces for crowds as well as informal shaded seating areas for meeting and gathering. They will feature large shade structures or arcades and will include distinct pavement design and furniture detailing. The landscaping treatment will include large scale canopy trees with minimal ground level planting.

The most important urban park will be the town square. This space will be located in close proximity to the proposed rail station and major retail core thoroughfare and will be easily identifiable as the heart of the City Centre. There will opportunities to provide water and lighting features, with the aim of attracting visitors and residents alike.

Figure 17: Town Square Concept

Source: Peter Edgeley

3.2.2 Conservation POS

The City of Wanneroo Local Planning Policy 4.3 Public Open Space (October 2010) requires a minimum of three percent (3%) of the gross subdivisible area to be provided as POS for the purposes of conservation. This equates to 2.15ha of the City centre. Conservation POS areas are subject to a viability assessment (as detailed within the Public Open Space Policy and the City of Wanneroo Local Biodiversity Strategy) to ensure that the size, shape and vegetation condition of the conservation POS area will support the long-term retention of conservation values.

It is not proposed to identify any specific conservation POS areas within the ACSP as result of a majority of the sites vegetation condition being degraded and as such does not provide significant fauna habitat and approximately 107 hectares of Lot 9003 previously being reserved as Parks and Recreation (Regional Open Space) under the MRS.

Notwithstanding the ACSP not identifying any specific conservation POS areas, the design has allocated large areas of the parabolic dune as POS, which will incorporate areas of retained vegetation. These areas will be detailed within a Vegetation and Fauna Management Plan (VFMP) prepared as a condition of subdivision. The VFMP will provide detail as to how the fauna values retained within the parabolic dune and other POS areas of the site will be managed for the long term. This may include Banksia woodland that is retained for Carnaby's Black Cockatoo. It is considered too premature at this stage to identify areas of vegetation retention and conservation until the detailed design over the POS and adjoining area has been completed.

It should be noted that in accordance with LPP4.3, 2.15ha is required for Conservation POS. The parabolic dune POS is 18ha in area. The retention, rehabilitation and protection of 2.15ha of this POS is therefore easily achievable.

The retention of the parabolic dune as POS will also provide a local fauna linkage through the site. This area of POS will connect through to the large area of Regional Open Space (ROS) immediately north of the site, which includes the northern arm of the parabolic dune. On a district scale, this ROS in conjunction with the WWTP buffer provides an ecological connection from the coast east through to Bush Forever site No.130, immediately east of the site.

It should also be noted that the site has been identified as a Secondary Centre in the MRS and is required to meet retail and office floorspace allocation and employment and density targets, as well as providing usable open space areas for residents, workers and visitors. The sterilization of a large proportion of this site for conservation purposes is contrary to the urban nature of the Secondary Centre.

3.2.3 Public Open Space Schedule

The following table, prepared in accordance with Liveable Neighbourhoods, provides an indicative summary of the POS provided with the ACSP area. The calculations demonstrate that approximately 32.5% of the gross subsdivisable area being provided as POS. This percentage is indicative only and will be subject to refinements at the detailed subdivision design stage.

Table 3 : Public Open Space Schedule

Site Area			212.61ha
Less NA			
Total			
Total Net Site Area			212.61ha
Deductions			
High School Precinct B – Retail Core Precinct H – Business Enterprise Mixed Use[1] Primary/Other Regional Roads Railway Reservation Powerline Easement (minus 20% POS credit) 1 in 1 year drainage areas	4.60ha 20.17ha 26.27ha 69.55ha 11.42ha 4.10ha 3.48ha 1.43ha		
Total		141.02ha	
Gross Subdivisable Area (GSA)			71.59ha
Public Open Space requirement @10% of GSA			7.16ha
Public Open Space Contribution			
May comprise: Minimum 80% Unrestricted Public Open Space Maximum 20% Restricted Public Open Space		 5.73ha 1.43ha	 7.16ha
Unrestricted Public Open Space Sites (7.16ha required)			
Powerline Easement (20% credit) A 0.9740 B 0.5983 C 0.8788 D 0.4230 E 1.2103 F 6.3099 G 0.1640 H 0.9016 I 3.8969 J 0.7300 K 0.3486 L 0.2559 M 0.5735 N 2.5822 O 1.3189 P 2.5585	0.8690 23.7244	 24.59ha	
Minus 1 in 1 year storm volume		-1.43ha	
Minus Restricted POS (1 in 5 year storm volume minus 1 in 1 year storm volume – 3.61ha minus 1.43ha = 2.18ha)		-2.18ha	20.98ha
Restricted Public Open Space Sites (1.43ha maximum)			
Total restricted use public open space contribution (less than 20% of total POS) Drainage area in POS (subject to inundation greater than 1 year ARI rainfall interval but more frequently than 5 year ARI rainfall event – i.e. between 1 and 5 year rainfall event)			2.18ha
Total Public Open Space Provision		32.3%	23.16ha

1 The Mixed Use Precincts within the ACSP total 91.55ha. It is proposed to provide 22ha of residential land development within these Mixed Use Precincts.

3.2.4 Landscaping Strategy

The overarching landscaping vision for Alkimos City Centre is to establish a landscape response and character that is responsive to the sites context and unique qualities to create:

- A city that is part of beach culture;
- A city nestled into dune forms;
- A city that connects you to the beach; and
- A city that delights you with coastal textures, colours, forms and aroma.

The landscape framework is engrained within the development of the ASCP as an integral layer of design response that aims to achieve and amplify the following fundamental principles and associated opportunities:

Sustainable City:

- Energy production;
- Water Sensitive Urban Design and Passive irrigation;
- Materials and recycling;
- Food production / Potential sites for community garden;
- Solar and wind responsive design; and
- Bushcare groups.

Green Ecological City:

- The green infrastructure of the city that aims to provide for urban ecologies and nurture the inhabitants;
- Grand green boulevards;
- Shady urban hollows;
- Roof gardens and greening strategies;
- Biodiversity; and
- Ecological linkages.

Lively Cultural City:

The eventscape of the city both organized and spontaneous.

- Busking;
- Performance;
- Seasonal celebrations;
- Social games/sports (chess, boules etc); and
- Large events
  - Festivals
  - Markets
  - Parades

High Quality Urban Experiences:

Specific moments +places that are choreographed to go beyond the normal and stimulate wonder + delight at both small and large scales.

Healthy City:

A city that promotes non-motorised movement as well as good access to high quality sport + recreational facilities in order to increase the health and well being of residents.

- Well located and safe open spaces for all residents;
- Safeways to schools;
- Informal exercise:
  - Running
  - Cycling etc
- Formal sporting areas;
- Bike and Pedestrian networks; and
- End of trip cycle facilities.

Figure 18: Landscape Framework

3.3 Residential

3.3.1 Densities

Each of the Precincts, which include residential development, has been allocated a Residential Design Code density range within Part 1 of this ACSP. The densities for each Precinct will be controlled via the Residential Design Code Plan. The inclusion of a Residential Design Code density range allows flexibility in the future to increase densities to meet market demands while giving security to the City and Department of Planning that adequate densities will be achieved.

The allocation of residential densities on the Residential Density Code Plan for each Precinct shall be in accordance with the following criteria:

Precincts A, B, C, F and G

i. A minimum density of R80 and a maximum density of R-AC1 within 400 metres of the rail station entrance;

ii. A minimum density of R60 and a maximum density of R-AC2 between 400 metres and 800 metres of the rail station entrance; and

iii. Medium density R60 (single house and grouped dwellings) on local access streets.

Precinct E

i. Low densities of R10 – R20 may be permitted to allow for landform and vegetation retention/protection despite not being within the Residential Density Ranges identified on Plan 1.

ii. Medium densities of R30 – R60 shall generally be provided in areas of high amenity including within 400 metres of centres (activity and community) and public open space.

iii. High density R80 shall generally be provided in areas of high amenity including within 100 metres of centres (activity and community), public open space and adjacent to neighbourhood connector roads.

3.3.2 Residential Yields

The ACSP provides for a range of densities through the City Centre depending on proximity to the proposed rail station and retail core, accessibility, views and landform. The densities will provide for a variety of housing types ranging from detached dwellings to apartments. This variety of housing will accommodate a broad demographic profile, which is considered important in creating a diverse and dynamic centre.

The proposed dwelling yields for the ACSP area have been calculated using a staged approach, with a 2030 target and a 2050 target. This staged approach is considered to be appropriate for a centre the size of Alkimos as the type and density of residential development will mature as the retail core and secondary land uses (e.g. offices, entertainment, education) are established. The 2030 dwelling target is 1895 and the 2050 dwelling target is 3335.

The Alkimos-Eglinton District Structure Plan (DSP) and the WAPC's State Planning Policy 4.2 - Activity Centres for Perth and Peel (SPP4.2), set the density targets for the core of the ACSP. These documents have different density targets based on different density target calculation methods. The following table details the density target calculation method and the associated density target for ACSP:

Table 4: Preliminary Dwelling Yield Calculations

Document	Density Target Calculation	Area	Dwellings Required	ACSP Dwelling Target
Alkimos-Eglinton DSP	50 dwellings per site hectare within 400m from the centre of the activity centre[1]	38.55ha	1925	2030 – 510 2050 – 1950[2]
SPP 4.2 Activity Centres Policy	Minimum 25 dwellings per site hectare within 400m walkable catchment[1]	19.84ha	Minimum 496 Desirable 694	2030 – 128 2050 – 608[3]

1 The starting point for these measurements is the entrance to the proposed rail station.
2 This yield is based on the construction of eighteen eight-storey apartment buildings with an average of 10 apartments per floor.
3 This yield is based on the construction of six eight-storey apartment buildings with an average of 10 apartments per floor.

Taking the above table into account must be noted that the densities and dwelling yields required by the aforementioned documents, in particular the DSP, could be considered unachievable. Based on the requirement for 50 dwelling per site hectare within 400 metres from the rail station a total of 1925 dwellings are required. This equates to thirty-two ten storey apartment buildings with six apartments on each floor. It is questioned as to whether this density has been achieved in Perth or even anywhere in Australia. It is therefore considered appropriate to take a pragmatic approach in dictating densities for the City Centre.

It should also be noted that the dwelling yields proposed by the DSP and SPP4.2 are calculated using arbitrary calculation methods and do not take into consideration external factors which impact on the delivery of density within close proximity to the proposed rail station.

The primary external factor is the rail stations proximity to the retail core of the City Centre. The retail core is the primary location for the centre's supermarkets, discount department stores and specialty retailers. This retail core will be purchased and developed by one entity. The current management of retail centres do not generally cater for the development of residential uses on them as the land tenure (strata titling) limits the potential for redevelopment in the future. There is also the potential for land use conflict between operations associated with retail centres, including noise associated with delivery vehicles, service areas and food and beverage uses, lighting and odour. Taking the above into consideration it is unlikely that any residential development will be accommodated in the retail core and none of the density calculations have included dwellings within the retail core.

The secondary external factor is that the core purpose of the City Centre is to provide employment. By utilising land that is close to the retail core and rail station for residential purposes, it reduces the allocation of employment generating floorspace in this area. Whilst residential development is important to the viability and vitality of a City Centre it is considered important for it to be appropriately located so as not to impact on employment.

The following table provides an alternative dwelling yield calculation using the calculation methods minus the retail core area.

Table 5: Alternative Dwelling Yield Calculations

Document	Density Target Calculation	Revised Area (minus retail core)	Dwelling Target	ACSP Dwelling Target
Alkimos-Eglinton DSP	50 dwellings per site hectare within 400m from the centre of the activity centre[1]	20.99ha	1049	2030 – 510 2050 – 1950[2]
SPP 4.2 Activity Centres Policy	Minimum 25 dwellings per site hectare within 400m walkable catchment[1]	15.64ha	391 Minimum 547 Desirable	2030 – 128 2050 – 608[3]

1 The starting point for these measurements is the entrance to the proposed rail station.

2 This yield is based on the construction of eighteen eight-storey apartment buildings with an average of 10 apartments per floor.

3 This yield is based on the construction of six eight-storey apartment buildings with an average of 10 apartments per floor.

The ACSP dwelling targets detailed in Table 5 are considered acceptable taking into consideration the arbitrary calculation methods required by the DSP and SPP4.2. The dwelling yields will be reviewed on a periodical basis with dwelling yield estimates provided at each stage of subdivision, which involves residential development.

Please note that lots within Precincts A, B, C, D, F and G that will include residential development in the lots first development stage will be identified at the subdivision stage with the built form outcome controlled via a City approved detailed area plan. It should also be noted that not every lot in these Precincts will include residential development, however there is nothing precluding them being redeveloped in the future for this use.

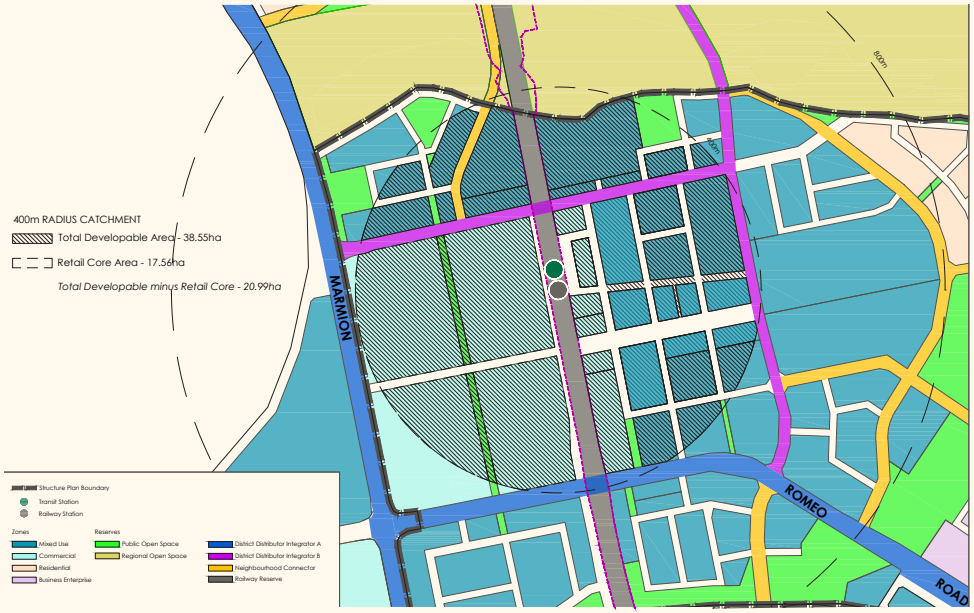


Figure 19: Ped-Shed Plan (Alkimos - Eg;inton DSP)

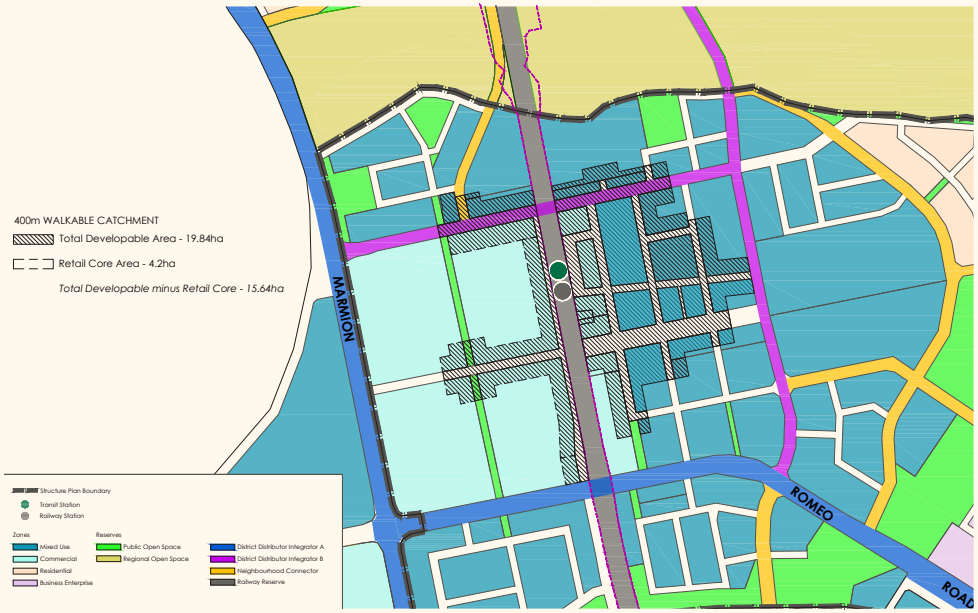


Figure 20: Walkable Catchment Plan (State Planning Policy 4.2)

3.3.3 Lot Mix and Housing Product

The dwelling type yield for the ACSP is presented below, based on the likely distribution of dwelling types in the ACSP area.

Table 6: Dwelling Types + Yield

Dwelling Type	Indicative Dwelling Yield (2030)	Indicative Dwelling Yield (2050)	Lot sizes	Percentage of Dwelling Type	
				2030	2050
Separate House	222	222	350 – 450m^2	12%	7%
Semi Detached/ Town Houses	915	915	130 – 350m^2	48%	27%
Apartment Units	758	2198	1000m^2 +	40%	66%
Total	1895	3335		100%	100%

3.4 Movement Networks

3.4.1 Roads

Road Network and Road Function

The Alkimos City Centre is to be served by the following key roads, as indicated in the Alkimos-Eglinton District Structure Plan and the Metropolitan Regions Scheme:

- Kwinana Freeway (ultimate 6 lane freeway, Primary Regional Road in MRS with Primary Distributor function)
- Marmion Avenue (ultimate 4 lane divided arterial, Other Regional Road in MRS with District Distributor Type A function)
- Romeo Road (ultimate 4 lane divided arterial, Other Regional Road in MRS with District Distributor Type A function)
- Alkimos Parade (2 lane divided minor arterial with District Distributor Type B function) NS1 (2 lane divided minor arterial with District Distributor Type B function)

Street Design

Alkimos Regional Centre street design is in accordance with Liveable Neighbourhoods policy. The street types and road reserve characteristics are described below:

- Residential Access Streets: reserve width range is 14m-16m
- City Centre Access & Circulation Streets reserve width range is 18m-22m
- Neighbourhood Connectors reserve width range is 20-24m
- District Distributor Type B reserve width range is 27-30m
- District Distributor Type A reserve width is 37m in the core city centre area (with 6m median)
- District Distributor Type A reserve width is 52m outside the city core (with 7m median and provision for frontage roads)

The above standards may be varied in consultation with the City and other Government agencies.

Arterial Road Access & Traffic Operations Assessment

Intersections and property access provisions along Marmion Avenue and Romeo Road have been determined from City of Wanneroo Local Planning Policy 3.8 and related discussion and agreement with City of Wanneroo and Main Roads Western Australia.

Controlled intersection operations (i.e. traffic signal or roundabout control) have been assessed for PM Peak Hour traffic levels at the ultimate development stage. All intersections are forecast to operate at Level of Service E or better, using SIDRA 5.1 computer simulation software.

The Marmion Avenue and Romeo Road intersection operation was assessed assuming bus queue jump lanes on Romeo Road. The queue jump lanes are provided to improve bus travel times to/from the Alkimos Rail Station.

Local Traffic Treatments

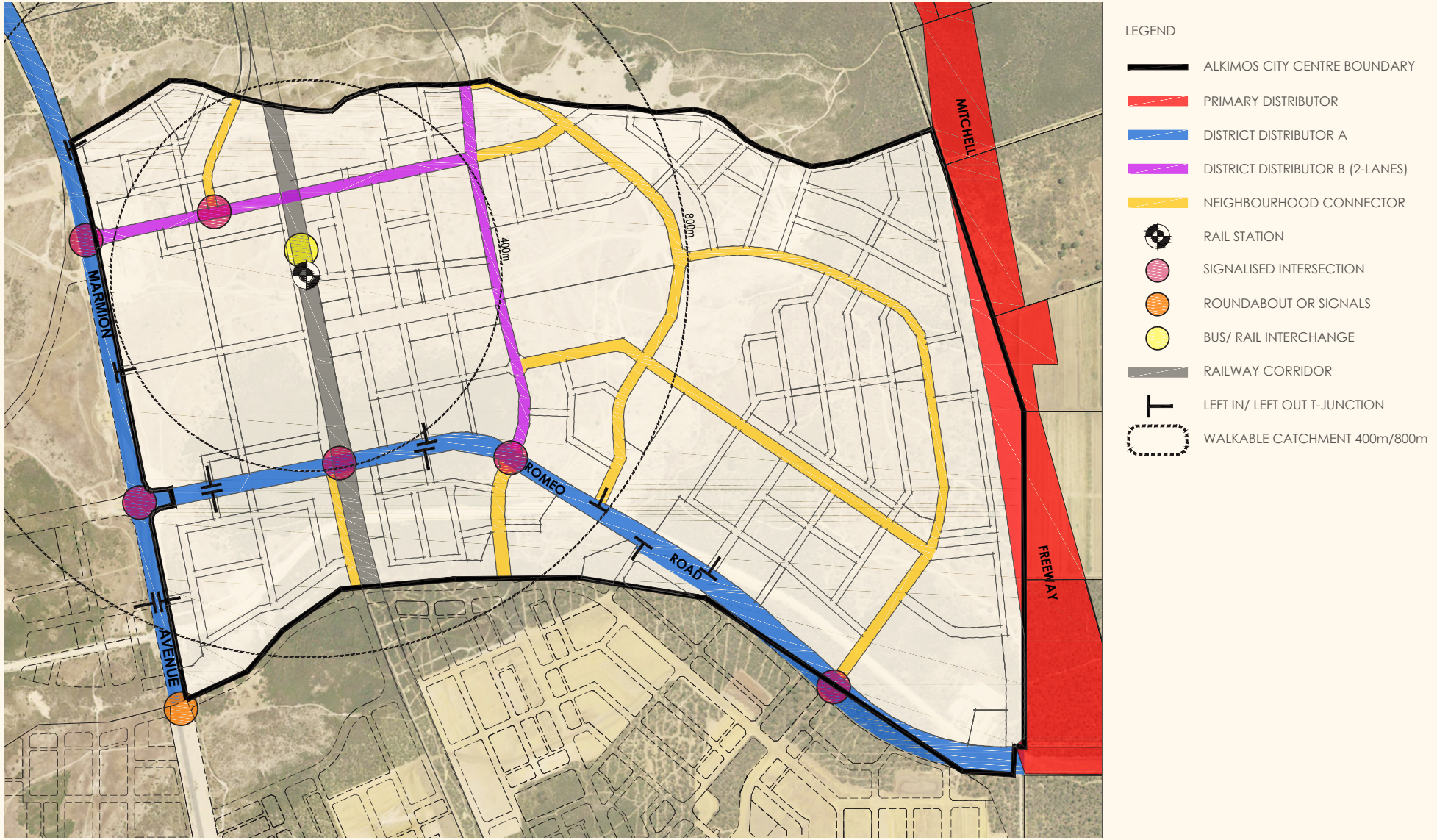
Intersection controls and local traffic management treatments include:

- Traffic signals or roundabouts;
- Sign controlled (stop or give-way) 4-way intersections;
- Speed control device (i.e. intersection plateau treatment); and
- School or Urban Centre Speed Zone.

Traffic signals and roundabouts are identified at the busier 4-way intersections and near schools to assist in slowing traffic and managing U-turn demand.

There are numerous 4-way intersections that will need to be reviewed at subdivision stage to confirm the appropriate traffic control and design features. These reviews will be done in consultation with the City of Wanneroo and Main Roads Western Australia.

Figure 21: Road Hierarchy



3.4.2 Public Transport

Bus Network + Station

At full development of the City Centre, it is estimated that approximately 10,000 bus passenger trips each day will be made to/from the City Centre. About half of these trips will have a destination in the City Centre, with the remainder transferring to train. Most of these trips will board and leave the bus at the proposed city centre bus/rail interchange.

A number of bus services are expected to serve Alkimos Bus Station. Following discussions with the Public Transport Authority an estimate of 48 peak bus services per hour has been used for preliminary planning and design purposes. It is expected that the main bus route will be the STS that is intended to be designed to bus rapid transit standards and will provide a connection to Alkimos Beach. The likely bus routes that have been discussed with the PTA, are shown in Figure 24.

The bus station has been planned and designed so that passengers are easily able to interchange with rail services from Alkimos Station. Pedestrian crossings are provided on either side of the railway line to allow passengers from stands on either side of the bus station to easily access the railway station and also interchange between bus services. Direct access to the main retail area is provided via a footway and crossings outside the railway stations.

It has been configured so that buses circulate in an anti-clockwise direction with the bus station wrapped around the railway line, with bridges at the northern and southern end of the bus station. The reason for this circulation direction is that it makes more efficient use of space and allows the bridges to be a standard 4.5 metres wide as buses standard driving line within the bus station is already set back from the railway alignment reducing additional space required to turn.

Buses are able to join and leave the bus station from Alkimos Parade to the north, Romeo Road to the south and to the east. No other vehicles are allowed within the bus station circulation area with through traffic being directed along a road to the east of the bus station. All turning movements have been tracked to ensure that buses are able to make turns. Refer to Appendix G for further information.

Rail Corridor + Station

The PTA's base design for the railway and rail station allowed for batter slopes in a reserve of 40 metres. However, the proponent believes a narrower reserve with retaining is more suited to a city centre and the SKM concept (Figure 23) has been prepared to reflect this. At the time of finalising this report discussions are ongoing between the proponent and PTA.

It is therefore proposed that the railway line be located in a cutting throughout Alkimos City Centre, with retaining walls put in place at 90 degree angles to the track alignment. The advantage of this arrangement is that it maximises the amount of land that can be developed and allows for future capping. The reduced width at ground level also reduces the severance impact of the railway line as well as enabling bridges to be put in across the railway line at frequent intervals.

The proponent had originally planned two entrances to the station – one shown to serve the bus station and one at the southern end of the platform to provide direct access to a city square, market street and the heart of the city centre. The PTA does not favour two entrances for operational cost reasons. The concept plan shows only one access in accordance with the PTA's advice, however the proponent is still in discussions with the PTA in respect to this matter.

Figure 22: Rail/Bus Station Interchange Cross Section

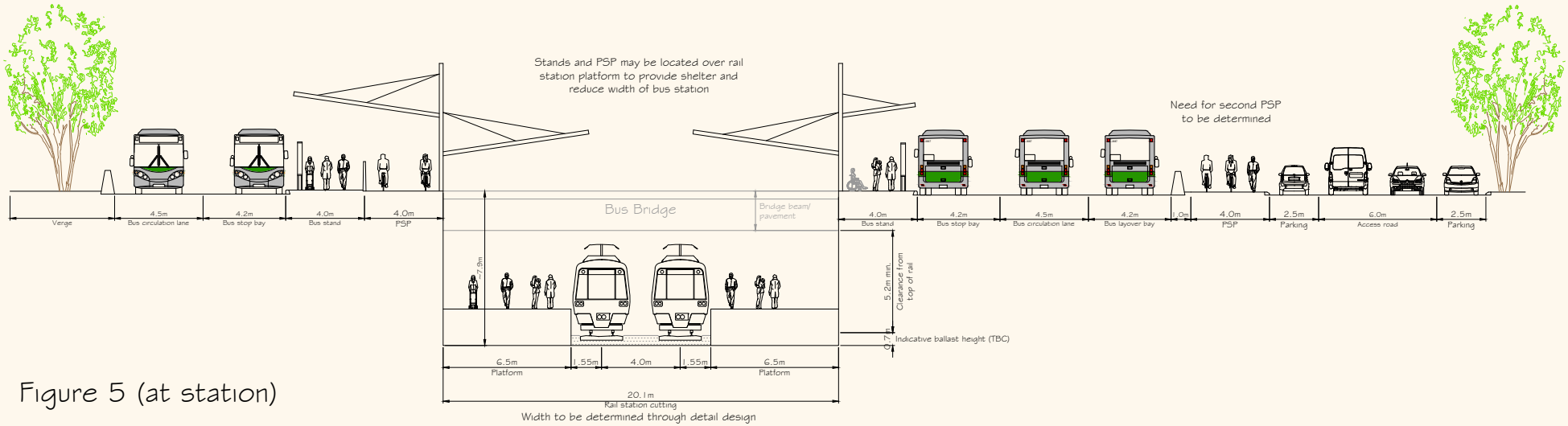
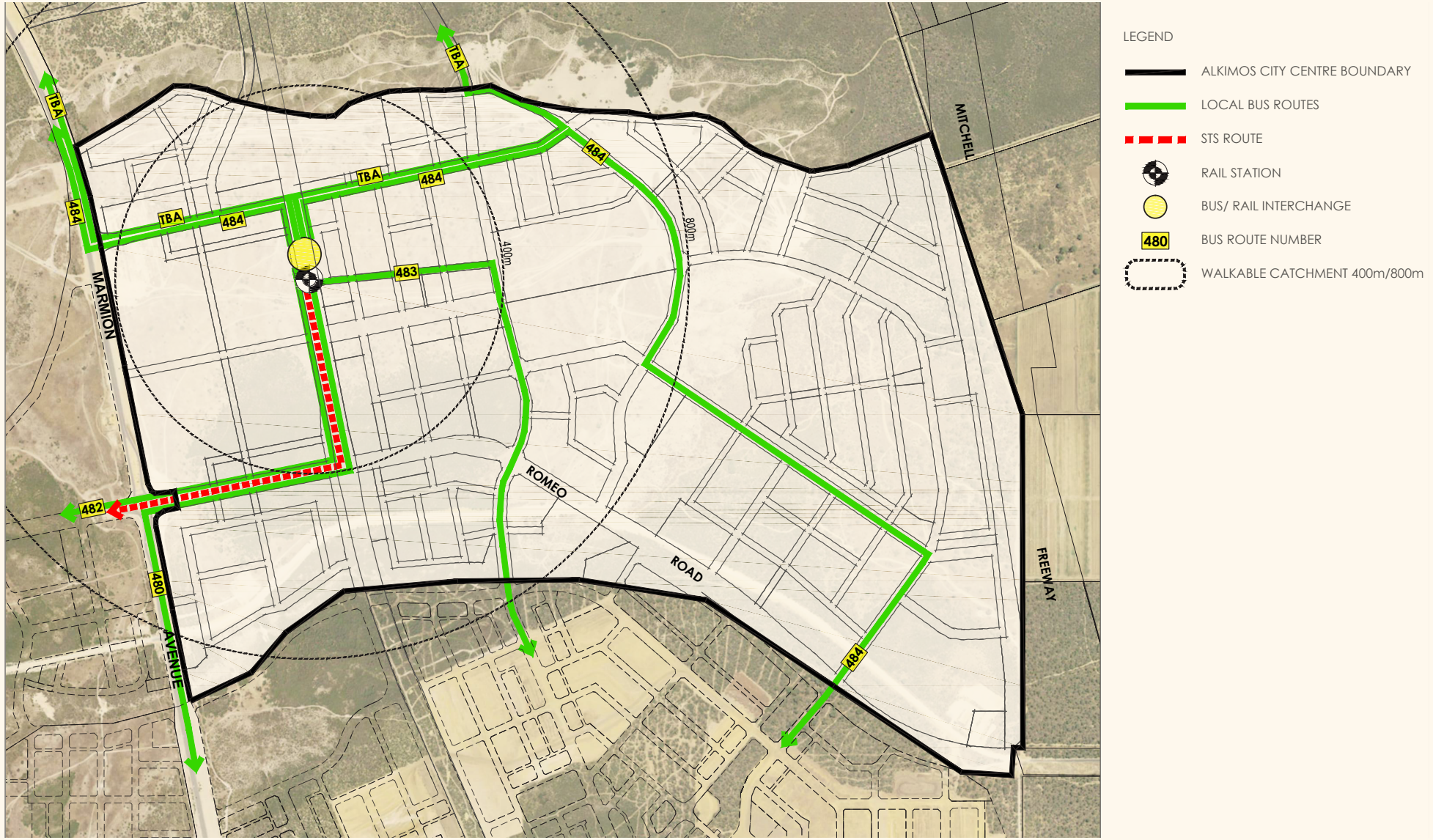


Figure 5 (at station)

Figure 23: Proposed Public Transport Routes



3.4.3 Car Parking

There is now significant evidence that the amount or parking provided and how it is managed changes the way people travel to, from and within developments of this type. The Alkimos city centre is being developed in a way that will encourage use of public transport, walking and cycling and a reduced level of car driving. As such it supports modern planning paradigms with specific objectives of maximizing access for the whole community, whilst avoiding the most severe impacts associated with excessive car usage.

In order to address this issue within the City Centre a Parking Strategy is currently being prepared to comply with relevant state and local government planning policies including the WAPC State Planning Policy 4.2 on Activity Centres for Perth and Peel.

The intention of the Alkimos City Centre Parking Strategy is to recommend an optimum level of parking to meet user needs and to comply with broader transport planning policy for the Alkimos city centre. Specific principles in relation to parking provision and management are:

- The parking strategy should maximize efficiency of the use of resources and reduce impacts on people travelling to, from and within the centre;
- The amount of parking to be provided should relate directly to the planned car mode share for access to the centre,
- Parking should include provision for a wide variety of vehicles including minibuses, motorcycles, scooters
- The proportion of car parking in the centre available on demand (rather than allocated to a single user) should be maximized
- Strategic locations for any larger public car parking on the periphery of the centre should be supported to balance the accessibility of users with the stimulation of key streets, whilst limiting impacts of car movements on pedestrians in the core of the city centre
- A staging plan should be developed to meet users' needs through the different phases of the development of the city centre.

The Parking Strategy recommends maximum, minimum and a target range of parking should be developed and agreed with the City of Wanneroo and the Department of Planning to meet car parking demand for a car mode share of 62% (45% car driver) to the City Centre.

It is proposed that the City via the Part 1 Statutory Section of this ACSP enforce the standards in the Parking Strategy. This is subject to further discussions with the City and Department of Planning.

3.4.4 Pedestrian and Cycle Network

Principal Shared Paths (PSP's) are planned along the rail line and along the freeway. These facilities are generally provided by State Government Agencies. The Alkimos City Centre path network is designed to integrate with the proposed PSP's. The local path and cycle lane planning uses the following guidelines (summarised from Liveable Neighbourhoods):

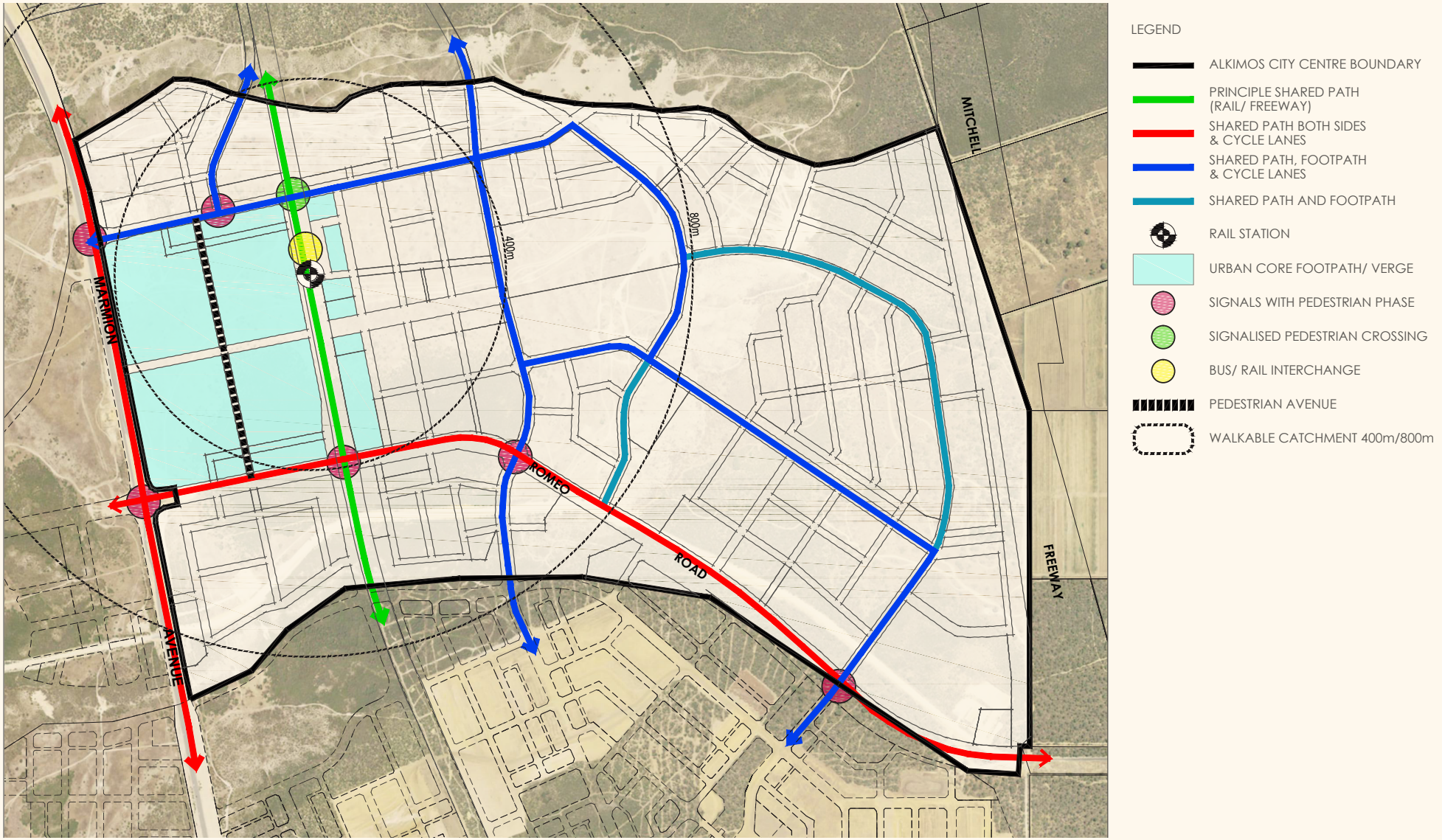
- Integrator Arterial Type A Roads: Shared paths and cycle lanes are provided on both sides
- Integrator Arterial Type B Roads: Shared path one side, footpath opposite side, cycle lanes both sides.
- Neighbourhood Connectors (traffic > 3000 veh/day): Shared path one side, footpath opposite side, cycle lanes both sides.
- Neighbourhood Connectors (traffic < 3000 veh/day): Shared path one side and footpath opposite side.
- City Centre Access & Circulation Streets: Urban verge footpath both sides.
- Residential Access Streets: footpath on at least one side.

Pedestrians will cross Marmion Avenue and Romeo Road at signalised intersections where pedestrian button signal activation will be available. Within the local street network, high use pedestrian crossings in commercial/ retail areas may justify pedestrian priority and 'pedestrian signals' or 'zebra crossing treatments' will be considered during subdivision and detailed design stage. Most local road crossings will however be unmarked and will have kerb ramps and pedestrian gaps in medians.

The above standards may be varied in consultation with the City and other Government agencies.

Refer to Appendix F for further information.

Figure 24: Pedestrian + Cycle Network



3.5 Water Management

The Local Water Management Strategy (LWMS) for the Alkimos City Centre has been developed in accordance with Better Urban Water Management (DOW 2008), State Planning Policy 2.9 Water Resources (WAPC 2006) and Planning Bulletin 92 Urban Water Management (WAPC 2008). Refer to Appendix H. The LWMS has also considered the objectives and principles detailed in the Draft Alkimos-Eglinton District Water Management Strategy (DWMS) (GHD 2011), which is still to be approved by the City of Wanneroo and Department of Water. Water will be managed using an integrated water cycle management approach, which has been developed using the philosophies and design approaches described in the Stormwater Management Manual for Western Australia (DOW 2007).

The key principles of integrated water cycle management that have guided the water management approach at the Alkimos City Centre development include:

- Considering all water sources, including wastewater, stormwater and groundwater
- Integrating water and land use planning
- Allocating and using water sustainably and equitably
- Integrating water use with natural water processes
- Adopting a whole of catchment integration of natural resource use and management.

The overall objectives for integrated water cycle management for residential development are to minimise pollution and maintain an appropriate water balance. The Alkimos City Centre LWMS design objectives seek to deliver best practice outcomes using a Water Sensitive Urban Design (WSUD) approach, including detailed management approaches for:

- Potable water consumption
- Flood mitigation
- Stormwater quality management
- Groundwater management.

The LWMS provides a comprehensive summary of the existing environmental values of the site, which are based on site-specific studies undertaken. The characteristics and environmental values of the site and guidance provided by National and State policies and guidelines relevant to urban water management have guided the design criteria and propose a contemporary best practice approach to achieving the design objectives for water management.

The WSUD approach and measures that are proposed for the Alkimos City Centre include:

- Maintaining existing flow regimes by retaining all runoff within the site.
- Treatment of surface runoff prior to infiltration to groundwater.
- Bio-retention areas incorporated into POS areas.
- Major event flood storage requirements addressed within POS areas.
- Co-location of flood storage areas with natural landforms and native remnant vegetation wherever possible.
- Adopting appropriate non-structural best management practices.
- Adopting a fit-for-purpose water use approach.
- Minimising use of both scheme and non-potable water.

As at November 2012, a recycled effluent scheme capable of supplying a third pipe system to dwellings and commercial premises had not been agreed. The installation of a third pipe network is considered an opportunity for the Alkimos City Centre. In accordance with the Environmental Sustainability Strategy ongoing assessment of opportunities for a third pipe system will continue to be undertaken.

The LWMS demonstrates that the design approach for the Alkimos City Centre is consistent with a best practice WSUD approach, that the water management objectives for the site can be achieved within the spatial allocation of the ACSP, and that the requirements of the relevant State and local government policies and guidelines will be satisfied.

3.6 Education Facilities

The Alkimos-Eglinton DSP does not indicate any schools with the ACSP area. However, the ACSP plan makes provision for 4.5ha school site co-located and a 5.5ha recreation area, if the Department of Education chooses to locate a school within the City Centre. Due to the smaller land area the school will have to be 'urban' in nature (e.g. multi-storey and compact). There is also the opportunity to provide tertiary education uses within t he ACSP area.

3.7 Activity Centres and Employment

3.7.1 Local Economic Strategy

A Local Economic Strategy (LES) has been prepared to support the ACSP (refer to Appendix I). The purpose of this LES is to define the likely future size, composition and character of economic activity in the Alkimos City Centre and provide a framework and indicative action plan for stakeholders to facilitate this growth and evolution over time.

The Alkimos City Centre will evolve as a fully functional social and economic hub. This will be achieved when the Alkimos City Centre achieves its status as a major Secondary Centre in the growth corridor providing services, facilities and employment. The maximisation of all available opportunities will be required to meet the 60% employment self-sufficiency target with the provision of state infrastructure (most notably public transport, health and education) critical in this regard.

Alkimos City Centre has the following key economic drivers:

- Centrality in a high growth corridor;
- Planned rail connectivity;
- Current and proposed road connectivity;
- Relative proximity to the coast and relationship with Alkimos South and potential marina;
- Opportunity to capture benefits of business agglomeration and economies of scale;
- Opportunity for greater levels of economic and employment diversification; and
- Proposed Government investment.

These economic drivers, if successfully captured and delivered, will underpin the economic health of the Alkimos City Centre and support the creation of a dynamic local business, investment and growth.

RPS has assessed three distinct floorspace and employment Scenarios in this Local Economic Strategy:

- Scenario 1 – Economic Potential: representing the underlying economic potential of the Centre, not constrained by Government infrastructure investment or policy decisions;
- Scenario 2 – Private Health and Education Only: assuming that no tertiary level public health and education facilities (hospitals, TAFE, university etc) are provided by the Government in the Secondary Centre. Smaller private tertiary health and education only; and
- Scenario 3 – No Tertiary Health and Education: assuming that no tertiary health and education facilities are provided by either the public or private sector in the Secondary Centre.

The results of the analysis is summarised in the table below with more detailed tables provided in the LES. Note that these figures include employment in the Gateway Precinct, as requested by the WAPC.

Table 7: Alkimos City Centre Employment, By Scenario

Measure	Catchment Build-Out
Scenario 1	14,943
Scenario 2	13,681
Scenario 3	11,997

When the population of the Centre's broader catchment (extending beyond the Alkimos Eglinton District itself) reaches residential build out (90,000 to 110,000 people by catchment build out - estimated at 2031 - with 55,000 to 65.000 residing in the District), it is estimated that the City Centre (including the Gateway Centre) will accommodate between 11,997 and 14,943 EFT jobs (depending on the scenario).

As expected, employment generation is highest under Scenario 1. The reduction in jobs in Scenarios 2 and 3 relative to Scenario 1 not only reflects loss of direct employment in tertiary health and education but also indirect impacts, particularly in the viability of commercial office floorspace provision (due to a loss of public sector anchor tenants and supply chain opportunities).

Assuming a workforce share of total residential population of 50% (in line with corridor averages and accounting for the demographic breakdown of the population) and the 60% employment self-sufficiency rate, there will need to be approximately 18,000 jobs provided within the Alkimos Eglinton District (and 30,000 in the broader Catchment). This is illustrated in the table below.

Table 8 : Alkimos Eglinton District and Catchment Employment Requirement

Measure	AE District	Catchment
Population	55,000 to 65,000	90,000 to 110,000
Labour Force	30,000	50,000
Jobs Required (60% ESS)	18,000	30,000

This means that Alkimos City Centre has the potential to contribute to the employment need of the District of between 67% and 83% and to the need of the Catchment of between 40% and 50% by Catchment build out, depending on the Scenario.

As a Secondary Centre, the Alkimos City Centre should account for approximately three quarters of employment in the District and approximately half in the Corridor. Of the Scenarios analysed, only Scenario 1 meets/exceeds this threshold. Scenarios 2 and 3 contribute less to District and Catchment employment, due to reductions in higher order health and education facility and service provision and corresponding supply chain and agglomeration benefits.

The Alkimos City Centre will cover 212ha of land east of Marmion Avenue. Excluding the Gateway precinct, the City Centre will have a gross employment density at Catchment build out between 55 and 69 EFT jobs per hectare. This is a high concentration of employment, reflecting the primacy of the Centre in the District and broader Catchment economies. It also demonstrates the importance of tertiary education and health facilities for maximising the efficiency of local land use.

The absence of effective Government investment in higher order education and health uses in the City Centre raises serious questions as to the capacity of the Alkimos Eglinton District and broader catchment to meet proscribed employment self-sufficiency targets.

Further information can be found in the LES.

3.7.2 Retail Sustainability Assessment

Alkimos City Centre is identified as a "Secondary Centre" in State Planning Policy 4.2 and Directions 2031. This places the centre second only after Yanchep and Joondalup in the retail hierarchy of the North West Corridor of metropolitan Perth, meaning it requires appropriate investment and planning and policy support by all levels of Government to achieve this designated role and function. This includes maintenance of the designated roles of lower order centres within the Corridor, to ensure that the future potential of the Alkimos City Centre is not eroded, causing a net community loss in the long-term.

The outer suburbs of our major cities that were established in the 1970s and 1980s exhibited low levels of employment self-sufficiency (often in the range 30% to 40%). For a range of reasons including transportation costs, traffic congestion and time spent commuting it is now considered essential that our new communities have higher levels of employment self-sufficiency with 60% the benchmark across much of the country. This is the target level of employment self-sufficiency for the North West corridor.

In practice this means that the new centres that service the future population will need to be more than the retail dominated places that were established in the past. This is demonstrated with many established lower orders centres in the north-west corridor only being planned as retail places that are surrounded by residential. This established built form means that the centres are now incapable of expansion or modification to allow higher levels of local employment.

A lesson that is learned by review of other centres throughout Australia is that each activity centre needs to be planned from the bottom up with a controlling principal being how best to maximise employment and services for the target community. This tailored approach reflects the strengths and opportunities available to each precinct/centre and is essential if the region is to achieve the target 60% employment self-sufficiency benchmark. Simply put, some centres with key market, geographic or other advantages will need to develop a strong employment and service base in order to compensate for those precincts and centres that do not have the same advantages. Thus, in order to achieve a benchmark 60% employment self-sufficiency it is considered prudent that each centre be scaled to host sufficient employment to enable 75% employment self-sufficiency to be achieved. In practice, some centres and precincts will fall short of the mark while other better located, planned and marketed precincts will achieve the high target. This will ensure that the overall target of 60% is achieved.

While it is tempting to fully plan our emerging communities and centres, in reality there needs to be a degree of flexibility to enable these centres to evolve in response to the investment of local business and the needs of the community. This can best be achieved by initially "over scaling" the retail and employment components of each centre. Any unused components of which can be developed as residential at some point in the future in response to market demands for employment and other uses. If initially established as residential this flexibility is denied.

The Alkimos/Eglinton Retail Assessment provides for 65,000m2 of retail space and 20,000m2 of bulky goods retail space within the Alkimos City Centre precinct. As discussed in Retail Sustainability Assessment (Appendix I), the present proposal is for 75,000m2 of retail space and 80,000m2 of bulky goods retail space. Consequently, this assessment will consider the implications and impacts of the additional 10,000m2 of retail space and 60,000m2 of bulky goods floorspace.

Trade Areas

The Alkimos City Centre will trade primarily to residents of Alkimos and Eglinton, with a secondary trade area to the south (STA S) comprising residents of Jindalee and Brighton and a further secondary trade area to the north (STA N) comprising Yanchep and Two Rocks. With population growth in the North West Corridor occurring from south to north, Alkimos will reach capacity well before Yanchep and Two Rocks in the north. As such the Alkimos City Centre will borrow the STA N until such a time that the Yanchep Strategic Metropolitan Centre and the Two Rocks Secondary Centre are more developed.

At capacity there is total demand for approximately 388,200m2 of retail floorspace and approximately 231,400m2 of bulky goods floorspace in the identified trade areas. It should be noted that this demand for retail floorspace is considered to be conservative as it does not account for real growth in household income and expenditure levels as well as demand generated by employees in the trade areas for retail uses.

The combined trade areas will have a population of approximately 102,000 people by 2031, increasing to approximately 235,000 people at capacity. This represents:

- Alkimos City Centre will host 19% of the retail floorspace required by the total catchment (75,000 / 388,000).
- Alkimos City Centre will host 34% of the bulky goods floorspace required by the total catchment (80,000 / 231,000).
- The PTA represents 24% of the population of the total catchment at capacity (57,000 / 235,000).

Centre Hierarchy

The Alkimos City Centre is designated as a Secondary Activity Centre under the Perth and Peel activity centre hierarchy. Yanchep to the north of Alkimos is designated as a Strategic Metropolitan Centre and will be the highest order centre in the designated North West Corridor. With Alkimos reaching capacity well before Yanchep and Two Rocks in the north it will service a large catchment at this time. As a result the Alkimos City Centre will evolve into a larger Secondary Centre in terms of scale than Two Rocks and Clarkson. This will be necessary to support the growing local and regional population as well as helping to meet the North West Corridor employment self sufficiency targets.

It is important to note that a secondary centre (while serving a smaller catchment than the strategic metropolitan centres), are not differentiated by use or inclusion when compared to the higher order centre. That is to say the centre is to be scaled to the needs of the identified catchment with the inclusions delivering the services needed by the community and the employment opportunities demanded by the 60% employment self-sufficiency target.

Even at a greater scale than other Secondary Centres in the North West Corridor the proposed Alkimos City Centre will still serve and maintain its intended function without jeopardising the role and function of the larger Yanchep Strategic Metropolitan Centre which will be established to the north after Alkimos is completed.

Retail Floorspace Demand

The Alkimos City Centre will play a key role in serving the resident populations of the North West corridor. The market share assessment and contained assumptions are detailed in the table located in Appendix 4. Key issues that can be derived from this data include:

- In 2036 the Alkimos City Centre will be serving a population in excess of 120,000 people in the form of one primary and two secondary catchments.
- The combined centres located in Alkimos-Eglinton will capture 90% of the household expenditure from the PTA, 25% from the secondary trade area south (driven mainly by proximity) and 25% from the
- secondary trade area north.
- The market shares derived from the secondary trade area north will peak in the early years of development (2015 - 2021) due to the lack of retail services in Yanchep/Two Rocks. Over time this market share will decline as retail services are established in that area. This trade will be replaced (in part) by an expanding population in the PTA .
- 62% of the expenditure directed to the centres in Alkimos-Eglinton will be captured by the Alkimos City Centre with the remainder directed to all other centres in that area. This market share analysis has been utilised to reflect the anticipated patronage patterns of corridor residents. This analysis confirms that the proposed 75,000 Sq M of retail floorspace to be contained within the Alkimos City Centre is justifiable on the basis of trade area populations, shopping patterns and demographic characteristics.

The proposed 75,000m2 of retail floorspace represents an increase of 10,000m2 when compared with the level proposed in the Alkimos Eglinton retail assessment. This proposed increase will not materially affect the intended role and function of the Alkimos City Centre nor will it impact on the role and function of any other existing or proposed locality.

Bulky Goods Floorspace Demand

By 2036 there will be a demand for approximately 120,000m2 of bulky goods floorspace generated by the residents of the primary trade area and the two secondary trade areas. By the time the catchments reach population capacity this demand will have increased to approximately 230,000 Sq M. A plausible distribution of this floorspace is:

- Brighton - 30,000m2 (as proposed)
- Alkimos - 80,000m2
- Yanchep / Two Rocks - 120,000m2

The proposed allocation of 80,000m2 of bulky goods floorspace within the Alkimos City Centre is significantly greater than the allocation of 20,000m2 contained in the Alkimos Eglinton retail assessment. As has been demonstrated by the data and analysis contained in this report, the North West corridor will generate significant demand for bulky goods floorspace. This is to be expected of a series of growing residential communities as many bulky goods retailers focus on the construction of the house and the establishment of the home.

The proposed allocation of 80,000m2 of bulky goods floorspace will not change the role and function of the centre nor impact on the role and function of any other planned or existing centre. The increased allocation of bulky goods floorspace simply recognises the actual level of community demand that will be generated in this growing corridor. Over time, a large bulky goods precinct(s) at Yanchep/Two Rocks will be established to service that population as anticipated by its designation as a Strategic Metropolitan Centre.

Employment

An employment self-sufficiency rate of 60% is the goal for the wider North-west sub-region which includes both the Joondalup and Wanneroo local government areas. At capacity this equates to a total of approximately 160,000 jobs needed to meet this target. Employment in retail is an important aspect of this. The Alkimos City Centre including the bulky goods will provide approximately 3,800 jobs. The Town Centre will also provide a further 12,063 jobs in other employment lands (such as commercial and community uses). This combined with other employment uses in Alkimos will see a total of approximately 16,000 jobs created.

This accounts for only 10% of the total jobs needed in the North-west sub-region at capacity to reach the targeted level of employment self-sufficiency.

In order for the North-west sub-region to reach its employment self-sufficiency target a higher level of employment self-sufficiency (e.g. 75%) should be sought across each employment centre across the corridor. This will help to ensure the self-sufficiency target of 60% is still possible should any centre be found to have constraints which may affect its employment contribution level for the corridor.

Impact

The Alkimos City Centre is proposed to be developed over a number of stages in line with population growth and demand for retail uses. It will provide proximate higher order retail and bulky goods uses for the local community including those residents in the early stages of development in Yanchep and Two Rocks. Without these uses local residents will need to travel further afield to Joondalup placing increased pressure on transport corridors and infrastructure. Whilst these uses will also eventually be provided as part of the Yanchep Strategic Metropolitan Activity Centre, there is sufficient demand and need for these uses to be developed in the Alkimos City Centre by 2031 in the early stages before Yanchep and Two Rocks reaches capacity.

Whilst the level of retail and bulky goods floorspace in the Alkimos City Centre is above that as stated in the Alkimos/Eglinton Retail Assessment there will be no adverse affect nor impacts on any existing or proposed centre. Each centre (such as Yanchep and Two Rocks) will have the capacity and opportunity to be developed as planned and fulfil their function and role in the retail hierarchy.

Conclusion

Given the long time frames of regional development, with the north-west corridor reaching capacity sometime after 2060, it is essential that flexibility be built into every step of the planning, design, development and redevelopment of the designated activity centres. The delivery of key employment nodes will respond to the energies of the private and public sectors and the level of infrastructure developed. It is essential to recognise at the planning stage that each of the larger centres within the north-west corridor (strategic metropolitan and secondary centres) should have the capacity to host a significant amount of employment generating uses beyond that which is normally attributed to the demand generated by the local catchment population. This is a departure of philosophy and delivery when compared with many of the activity centres established in the period from 1970 to 2010 as these were little more than shopping centres with a direct correlation to the demands of catchment households.

Population growth patterns in the North West Corridor will see Alkimos contain a greater quantum of retail floorspace than other Secondary Centres such as Clarkson and Two Rocks. The Alkimos City Centre will also assist the North West Corridor in achieving its desired level of employment self-sufficiency (60%). The Alkimos City Centre will not adversely affect the Yanchep Strategic Metropolitan Activity Centre nor any other centre in the retail hierarchy from reaching their intended size and function.

3.8 Infrastructure Coordination, Servicing and Staging

3.8.1 Wastewater

Waste water service can be provided through the extension of gravity mains from the existing Quinns Main Sewer and Alkimos Waste Water Treatment Plant. A portion of the Alkimos City Centre catchment cannot be connected through gravity sewers to the Quinns Main Sewer, these areas will be managed through the construction of a permanent waste water pump station in accordance with the Water Corporation's waste water scheme and the south eastern portion of land contributing to the existing waste water pump station located south of the site in Trinity. The proposed 1050mm diameter branch main in Alkimos City Centre is sized to receive future flow from three separate waste water pressure mains; these represent 90% of the contributing flow. The Water Corporation is yet to finalise its preferred option for the discharge point of the pressure mains into the 1050mm diameter sewer and how these pipes will cross the railway reserve. Cossill and Webley has prepared a strategy which meets the conveyance requirements of the Water Corporation and the vertical separation required by the PTA at the railway crossing, although we are awaiting comment on this proposal from the Water Corporation.

As at November 2012, a recycled effluent scheme capable of supplying a third pipe system to dwellings and commercial premises had not been agreed. The installation of a third pipe network is considered an opportunity for the Alkimos City Centre. In accordance with the Environmental Sustainability Strategy ongoing assessment of opportunities for a third pipe system will continue to be undertaken.

Refer to Appendix K for further information.

3.8.2 Water Reticulation

Initial water supply can be provided from the existing pipe infrastructure in Marmion Avenue, with the balance of the proposed development serviced through progressive staged expansion of the trunk water main network. The Water Corporation has plans to develop a local network of groundwater supply bores and a local groundwater treatment plant to supply treated water to the Carabooda reservoir and distribution network.

Refer to Appendix K for further information.

3.8.3 Power

Initial electrical supply can be provided from the existing high voltage HV underground infrastructure in Marmion Avenue, with the balance of the proposed development serviced through progressive staged expansion of the trunk electrical network. It is likely within approximately ten years (subject to individual dwelling loads and rate of development) the capacity of the Romeo Road (Yanchep) Zoned Substation will be exceeded and a new substation will be required to be constructed in Eglinton as planned through the Alkimos Eglinton District Structure Plan. A 132kV overhead line will be required to be installed on the western boundary of the Mitchell Freeway to provide supply to the new Eglinton Zoned Substation.

Refer to Appendix K for further information.

3.8.4 Gas

The existing high pressure gas network has been extended from Butler to Yanchep by the gas supply operator, Atco. The same gas network extension has provided branch service connection to the Shorehaven development and Amberton (Eglinton) development north of the Alkimos City Centre. Atco the gas service provider has indicated the high pressure main installed in Marmion Avenue will have capacity for development in the Butler, Jindalee, Alkimos and Eglinton.

In general terms it is expected the gas reticulation network will be progressively extended from Marmion Avenue through the Alkimos City Centre and linked north and south into the adjoining developments as they proceed. There are not expected to be any gas supply capacity issues.

Refer to Appendix K for further information.

3.8.5 Telecommunications

Telstra has an existing exchange building adjacent to Marmion Avenue approximately three kilometres south of the Alkimos City Centre. Telstra has been providing fibre to the home services for Butler (Brighton) and other developments in the Alkimos Eglinton area. It is likely this same infrastructure will be used as part of the Federal Governments National Broadband Network (NBN) as this system is rolled out. It is not clear yet whether the NBN will develop a second exchange / headend in the Alkimos City Centre or surrounding suburbs, this will depend on the demand and final design of the system.

Refer to Appendix K for further information.

3.9 Developer Contributions

The Alkimos Eglinton Development Contributions Plan has been advertised but is yet to be endorsed by the WAPC, however the facilitates included in the draft DCP have been accommodated. Local Planning Policy 3.3: Northern Coastal Growth Corridor Developer Contributions is an interim measure to ensure the appropriate contributions are provided. The contributions are applicable to residential development only.

3.10 Sustainability

The Environmental Sustainability Strategy (ESS) (Appendix L) is one of three key sustainability documents for Alkimos City Centre. Other documents address social sustainability and economic sustainability. Ongoing workshops between the three disciplines will ensure that integration occurs as is required to maximise the indirect benefits each provides to the other. Environmental Sustainability Strategy has interdependencies with the other strategies in these areas:

- Energy efficiency and demand management outcomes will allow for lower cost of living outcomes for Alkimos residents supporting affordable living objectives.
- Various energy efficiency and non-car transport outcomes require implementation through the urban design process and governance through the design code and covenant process.
- Transport initiatives aimed at minimising long distance car travel for commute requires deliver of economic sustainability initiatives targeting high proportions of local job creation and telecommunications services to support increased work from home outcomes.
- Transport initiatives aimed at supporting high levels of walking and bike riding trips over short distances requires integration with the active living strategy.

The basic structure of the ESS breaks Environmental Sustainability into the key areas of natural environment, carbon and water. Under each area the strategic approach, guiding objectives and targets are set out together with the series of proposed strategic initiatives for each area.

3.11 Community Development

The purpose of the Community Development Strategy (Appendix M) is to outline key strategies to achieve community outcomes in the ACSP. The ACSP area will include commercial, retail and mixed- use space that provides opportunities for employment and economic diversification. While the residential and business communities will require different specific initiatives the framework for delivery and core program areas of participation, partnerships and governance are applicable to both.

LandCorp and Lend Lease's vision for Central Alkimos and the Alkimos Secondary Activity Centre is a community of citizens that are:

- Connected and engaged
- Creative and innovative
- Diverse and inclusive
- Healthy and safe

The approach to implementing the Community Development Strategy will be facilitative, responsive, contextual, adaptive, integrated and aligned with local priorities. Consultation with key stakeholders has informed the development of the strategy, including identification of early services and infrastructure for delivery, and opportunities to develop partnerships and build on existing programs and initiatives.

Two main strategies underpin the delivery of community development outcomes for the ACSP area:

1. *Design and built form:* decisions regarding design and the built form play an important role in fostering community development. Design and built form have the potential to encourage interaction; promote health and wellbeing; provide amenity and services; and, increase safety. Transport, landscape design, affordable housing, environment and economic development furthermore contribution to community development outcomes.
2. *Programs and initiatives:* targeted programs and initiatives will be delivered that: encourage participation and interaction; support stakeholders to participate in decision making about the community; and promote partnerships.

4.0 IMPLEMENTATION

4.1 Staging

The urban development of the Alkimos City Centre area will be implemented in stages over a period of time the duration of which will be dependent on the demand, for retail and commercial land, residential housing and the services and facilities that are associated with it.

The provision of engineering infrastructure will also need to be staged to suit the development demand and a detailed program for this will need to be prepared as a part of ongoing detailed planning and design of the infrastructure.

The current estimate for development growth of the Alkimos City Centre area includes commencement in 2015.

4.2 Planning Process

The implementation of the LSP will follow the typical development process followed with Western Australian, being:

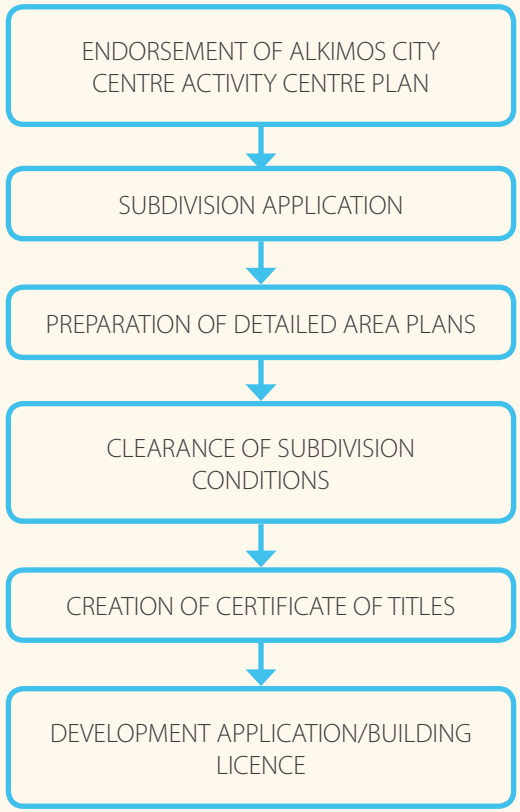
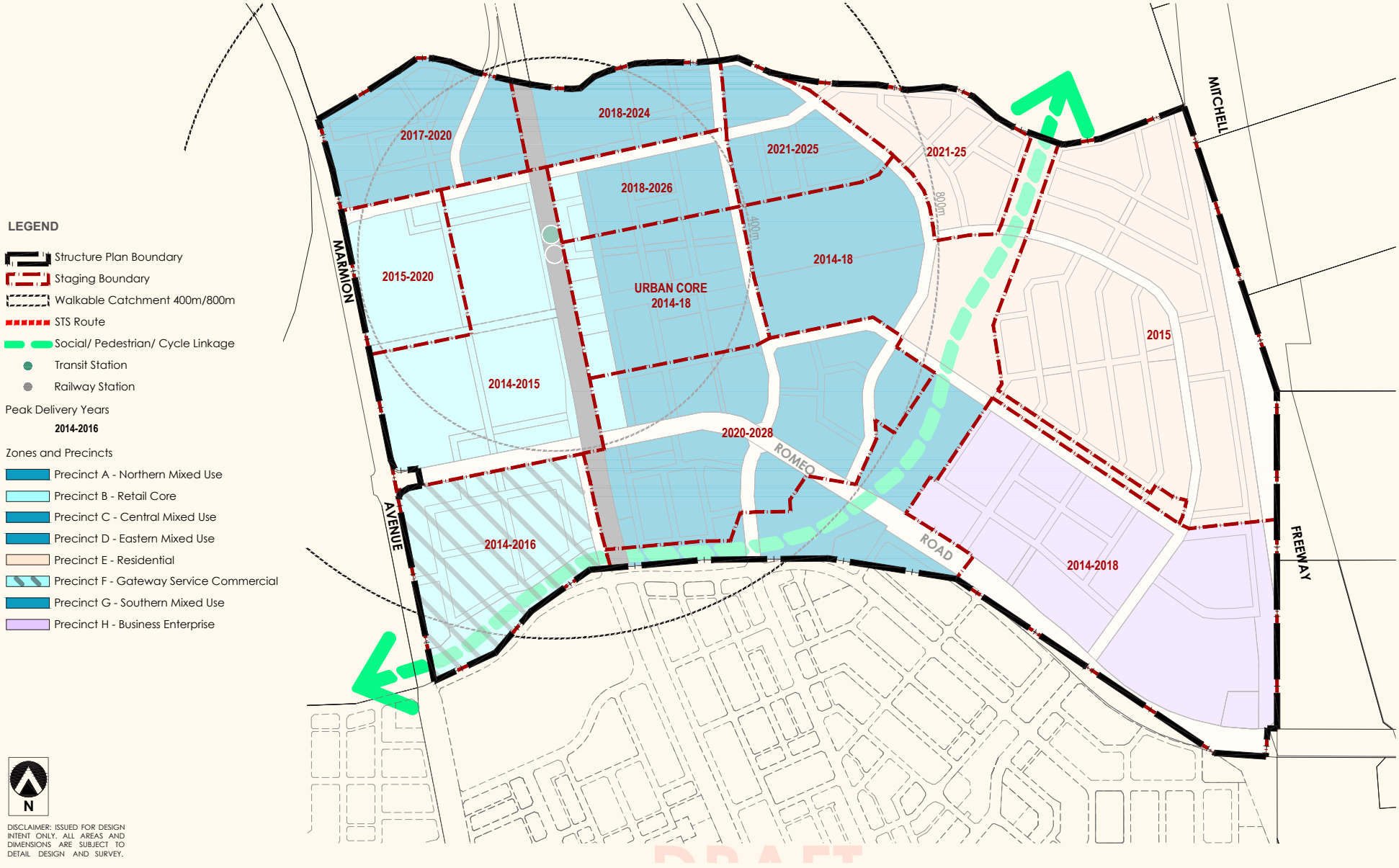


Figure 25: Staging Plan



5.0 ALKIMOS-EGLINTON DISTRICT STRUCTURE PLAN – COMPLIANCE TABLE

Sustainability Compliance Table

DSP Strategies	Compliance	LSP Strategy
S 1 LSPs to prepare a Sustainability Strategy outlining the implementation path and measures that will be taken to achieve the sustainability objectives, in line with this DSP.	Complies	Environmental Sustainability Strategy has been prepared by Lend Lease– refer Appendix K and Section 3.10 of the Alkimos City Centre Activity Centre Structure Plan (ACSP).
S 2 LSPs to include a Local Water Management Strategy that incorporates best practice water sensitive urban design principles and which is in line with the district water management design objectives and standards in this DSP.	Complies	To ensure best practise, a Local Water Management Strategy has been prepared by Emerge – refer Appendix G and Section 3.5 of the ACSP
S 3 LSPs to conserve and enhance local biodiversity through design facilitating the retention of significant natural features in POS areas, road reserves, Social/Pedestrian/Cycle linkages or provide suitable justification otherwise.	Complies	ACSP provides for: • Retention of portions of the parabolic dune; and • Retention of remnant vegetation. Refer: * ACSP Section 3.2
S 4 LSPs to provide for Secondary, District, Neighbourhood and Local Activity Centres and employment corridors, generally as depicted on the DSP Map 1.	Complies	The ACSP facilitates the subdivision and development of the Alkimos Secondary Centre Refer: • ACSP Part 1 - Structure Plan • ACSP LSP Part 2 – Sections 3.7 * Local Economic Strategy – Appendix H
S 5 LSPs to provide for development of the coastal nodes into Activity Centres, incorporating beachside facilities, retail, employment and economic activity generators and non-retail activities such as hospitality.	N/A	The ACSP is located east of Marmion Avenue and therefore does not contain coastal nodes.
S 6 LSPs to investigate opportunities for effective waste management (reduction, reuse and recycling) in construction and domestic/ commercial consumption through alternative technologies, products and services.	Ongoing	ACSP waste management strategies are outlined in the Environmental Sustainability Strategy – refer Appendix K

Community Development Compliance Table

DSP Strategies	Compliance	LSP Strategy
S 1 LSPs to prepare a Community Development Plan outlining the implementation path and measures that will be taken to achieve the DSP Community Development Objectives as outlined in Clause 7.5.	Complies	Community Development Plan has been prepared by the Arid Group – refer Appendix L
S 2 LSPs to investigate and facilitate collaboration between the developers, City of Wanneroo, community-based organisations, local business, local residents and State Government agencies to explore community fostering and early delivery of services programs.	Complies	Refer to Community Development Plan – Appendix L
S 3 LSPs to undertake facilities planning and make provision for community facilities that accommodate a range of uses to maximise civic participation and accommodate changing community needs and showcase leading practice sustainable building and landscape design.	Complies	Refer to Community Development Plan – Appendix L
S 4 LSPs to provide sites for high schools, in locations, generally in accordance with that described on the DSP Map 1, based on the Department of Education and Training (DET) criteria and embracing good urban design outcomes, including: • Provision for sites of a sufficient size, configuration and topography to accommodate the intended use. • Promotion of safe access by a range of transport modes. • Promotion of multiple use of school infrastructure by the broader community through co-location of facilities and partnerships with relevant authorities. • Sites for primary schools, whilst not shown on the DSP Map 1, need to be provided for at the LSP stage.	Complies	There are no school sites identified on the DSP Map 1 for the ASCP site.
S 5 LSPs to make provision for private schools.	Complies	There is the potential for a private school to be located in Precinct D. Refer to Section 3.1.1.
S 6 LSPs to investigate opportunities for co-location of educational facilities with other community, retail and recreational infrastructure.	Complies	There is the potential for the co-location of educational facilities with other community, retail and recreational infrastructure.in Precinct D. Refer to Precinct D Objectives in Part 1 and Section 3.1.1
S 7 LSPs to investigate opportunities to create synergies between civic and educational institutions, such as: • Extended hours activity/ creativity precincts around tertiary institutions; • Collaborative research between Government and Industry of initiatives in association with tertiary institutions; • Co-locating open space, performing arts venues and libraries with secondary or tertiary institutions; • Where appropriate, encouraging partnerships that enable joint provision and shared-use of infrastructure.	Ongoing	Refer to Community Development Plan – Appendix L
S 8 The school site location will need to be determined through LSP upon the advice of the Department of Education and Training and to the satisfaction of the City of Wanneroo and the WAPC.	Complies	The DET has been consulted in respect to ACSP and advised that no school sites were required.

Economy, Employment and Activity Centres Compliance Table

DSP Strategies	Compliance	LSP Strategy
S 1 LSPs to develop Economic and Employment Strategies, in partnership with State and Local Government, which, amongst other things, clearly define roles and responsibilities in the delivery of employment, and provide a clear process and set of milestones, which can be used as performance monitoring for employment development.	Complies	Refer to Part 1 clause 9.4, Part 2 Section 3.7 and Local Economic Strategy – Appendix H
S 2 LSPs to incorporate appropriate sites for employment nodes and corridors, in locations generally as depicted on the DSP Map 1.	Complies	The ACSP facilitates the subdivision and development of the Alkimos Secondary Centre Refer: • ACSP Part 1 - Structure Plan • ACSP LSP Part 2 – Sections 3.7 * Local Economic Strategy – Appendix H
S 3 LSPs to provide appropriate sites for Regional, District and Coastal Activity Centres, in locations generally in accordance with those depicted on the DSP Map1.	N/A	The Alkimos Eglinton DSP does not identify a regional, district or coastal activity centre on the ACSP site.
S 4 LSPs to make provision for a diversity of land uses within the Activity Centres, including higher density residential developments and employment generators.	Complies	The ACSP provides for: • A range of land uses within the site. • Increased density within and around the proposed rail station. Refer: • ACSP Part 1 - Structure Plan. • ACSP LSP Part 2 – Sections 3.3 and 3.7 * Local Economic Strategy – Appendix H
S 5 LSPs to facilitate access to the Activity Centres by a variety of transport modes, especially public transport.	Complies	Refer: • ACSP Part 1 - Structure Plan. • ACSP Part 2 – Section 3.4; and • Traffic and Movement Network Report - Appendix F
S 6 LSPs to accommodate generally the scale and allocation of retail, commercial, community service and associated floorspace as indicated in this DSP.	Complies	Refer: • ACSP Part 1 - Structure Plan. • ACSP Part 2 – Sections 3.7 • Local Economic Strategy – Appendix H • Retail Sustainability Assessment – Appendix I
S 7 The size and function of centres to be consistent with the State's Policy on Activity Centres.	Complies	The size and function of centres are consistent with the State's Policy on Activity Centres.

Transport and Movement Compliance Table

DSP Strategies	Compliance	LSP Strategy
S 1 LSPs to provide for the Regional Road network to reflect the road alignments shown in the Metropolitan Region Scheme.	Complies	Refer: • ACSP Part 1 - Structure Plan. • ACSP Part 2 – Section 3.4; and • Traffic and Movement Network Report - Appendix F
S 2 LSPs to identify neighbourhood connectors and major intersection points in locations generally in accordance with those depicted on the DSP Map 1.	Complies	Refer: • ACSP Part 1 - Structure Plan. • ACSP Part 2 – Section 3.4; and • Traffic and Movement Network Report - Appendix F
S 3 LSPs to provide for integrated road, rail, bus, pedestrian and cycle access at key nodes within the development (Alkimos Town Centre, Eglinton District Centre, Activity (employment) Corridors), the three proposed Coastal Activity Centres and railway stations.	Complies	Refer: • ACSP Part 1 - Structure Plan. • ACSP Part 2 – Section 3.4; and • Traffic and Movement Network Report - Appendix F
S 4 LSPs to provide for the location of the three railway stations to integrate and activate the Alkimos Town Centre, Eglinton District Centre and park and ride/activity node located between the Regional and District Centres.	N/A	Refer: • ACSP Part 1 - Structure Plan. • ACSP Part 2 – Section 3.4; and • Traffic and Movement Network Report - Appendix F
S 5 LSPs design to optimise integration between the transport system and the land uses which it supports.	Complies	Refer: • ACSP Part 1 - Structure Plan. • ACSP Part 2 – Section 3.4; and • Traffic and Movement Network Report - Appendix F
S 6 LSPs to identify a secondary public transportation route capable of accommodating a variety of transportation modes and thereby maximising resident access to the rail infrastructure and local employment opportunities.	Complies	Refer: • ACSP Part 1 - Structure Plan. • ACSP Part 2 – Section 3.4; and • Traffic and Movement Network Report - Appendix F
S 7 LSPs to establish a road hierarchy which clearly emphasises, in the longer term, the Mitchell Freeway for regional trips, Marmion Avenue and east - west roads for district trips, all supported by a local road network, to improve efficiency in the use of transport infrastructure and services.	Complies	Refer: • ACSP Part 1 - Structure Plan. • ACSP Part 2 – Section 3.4; and • Traffic and Movement Network Report - Appendix F
S 8 LSPs to integrate higher densities and diversity of development near public transport stops, to maximise the convenience, efficiency and usage levels of public transport.	Complies	Refer: • ACSP Part 1 - Structure Plan. • ACSP Part 2 – Sections 3.3 and 3.4; and • Traffic and Movement Network Report - Appendix F

DSP Strategies	Compliance	LSP Strategy
S 9 LSPs to incorporate design measures for both high volume roads within Activity Centres and local roads to ensure the street environment is safe and amenable to pedestrians, cyclists, home and business.	Complies	Refer: • ACSP Part 1 - Structure Plan. ACSP Part 2 – Section 3.4; and • Traffic and Movement Network Report - Appendix F
S 10 LSPs to define a robust walk/cycle network that will aim to: • Encourage reduction in the private car dependency for residents. • Increase accessibility to employment and other urban activities. • Reduce adverse environmental impacts of transport. • Increase resource efficiency in a multi modal transport system. • Provide a healthy, safe and interesting lifestyle.	Complies	Refer: • ACSP Part 1 - Structure Plan. • ACSP Part 2 – Section 3.4; and • Traffic and Movement Network Report - Appendix F
S 11 LSPs to design a road network which responds to the topography and environment of the project area, whilst recognising the need to facilitate an urban road framework that enables energy efficient housing orientation.	Complies	Refer: • ACSP Part 1 - Structure Plan. • ACSP Part 2 – Section 3.1 and 3.4; and • Traffic and Movement Network Report - Appendix F • Engineering and Servicing Report Report - Appendix J
S 12 LSPs to provide on-street cycle lanes and off-street shared paths on all district distributors and access streets to have shared paths/ footpaths in order to create cycling and walking networks that are continuous, connected, convenient, attractive and safe and are linked to key destinations.	Complies	Refer: • ACSP Part 1 - Structure Plan. • ACSP Part 2 – Section 3.4; and • Traffic and Movement Network Report - Appendix F
S 13 LSPs to investigate strategic agreements with the Public Transport Authorities for the provision of public transport between all activity centres and for feeder bus systems to be developed in residential neighbourhoods.	Ongoing	Refer to Traffic and Movement Network Report - Appendix F
S14 LSP to ensure a road, open space or appropriate land use interface occurs with the above ground railway reserve and sensitive land uses such as residential development to address noise amenity issues, or provide suitable justification otherwise.	Complies	The ACSP design incorporates appropriate interface measures between the railway reserve and adjoining land uses. A Noise Attenuation study has been prepared by Herring Storer and identifies the appropriate measures to ensure the amenity of future residents is not adversely affected by noise (Appendix B).
S 15 Roads to be in accordance with Liveable Neighbourhoods.	Complies	The road cross-sections are generally in accordance with Liveable Neighbourhoods. Refer to Traffic and Movement Network Report - Appendix F

Ecology, Public Realm and Open Space Compliance Table

DSP Strategies	Compliance	LSP Strategy
S 1 LSPs to reflect the Regional Open Space reserved under the MRS, with a further area of 114ha to be preserved for conservation purposes within the Waste Water Treatment Plant buffer, generally as depicted on the DSP.	NA	There is no Regional Open Space in the ACSP site
S 2 LSPs to include an overall strategy for the provision and form of public realm including green linkages, active POS and passive POS including conservation areas, beaches and recreational facilities.	Complies	Refer: • ACSP Part 2 – Section 3.2
S 3 Public Open Space within LSPs must provide a mix of active and passive open space in accordance with WAPC Policy DC 2.4 'Public Open Space in Residential Areas' and/or Liveable Neighbourhoods.	Complies	Refer: • ACSP Part 2 – Section 3.2
S 4 LSPs to identify significant landscape features, such as ridge lines and dunal formations, and significant natural features, such as locally significant vegetation and fauna habitat (as is defined by the WALGA/ Perth Biodiversity Project's Local Government Biodiversity Planning Guidelines of the Perth Metropolitan Region 2004), and integrate these either within POS or with a suitably controlled and managed, highly landscaped responsive form of development or provide suitable justification otherwise.	Complies	Refer: • ACSP Part 2 – Section 3.2
S 5 LSPs to investigate and facilitate interlinking recreational areas, environmental reserves, landscaped streetscapes and local POS to provide 'stepping stones' from hinterland to the coast generally in accordance with the Social/Pedestrian/Cycle linkages shown on the DSP (Map 1) and the Guidelines in this DSP.	Complies	Refer: • ACSP Part 2 – Sections 3.1 and 3.2
S 6 Foreshore Management Plans (FMPs) are to be generally prepared in consultation with the Department of Planning's Coastal Planning section, with setbacks to be in accordance with SPP No. 2.6 Coastal Planning Policy and will address the following: • Support for the development of the coastal nodes into Activity Centres • Community access and beachside facilities and focal points • Conservation values • Linkages • Dune stabilisation • Perpetual management • Recreation opportunities • Pedestrian access • Fauna habitat retention	N/A	The ACSP site is located to the east of Marmion Avenue and therefore does not impact the coastal foreshore.
S 7 LSPs and / or FMPs to provide for a continuous foreshore shared path and identify appropriate locations for public beach access and facilities.	N/A	The ACSP site is located to the east of Marmion Avenue and therefore does not impact the coastal foreshore.

DSP Strategies	Compliance	LSP Strategy
S 8 LSPs to identify conservation areas, such as conservation public open space, or passive open space with a conservation function, and design these in such a way so that they remain viable (as defined by the WALGA/ Perth Biodiversity Project's Local Government Biodiversity Planning Guidelines of the Perth Metropolitan Region, 2004).	Complies	Refer to ACSP Part 2 Section 3.2.2
S 9 Landscape plans for public spaces to utilise local indigenous plant species, or provide suitable justification otherwise, and their use to be encouraged in private landscapes.	Complies	Refer to ACSP Part 2 - Section 3.2
S 10 LSPs to include a Vegetation Management Strategy, which will include, where appropriate, a vegetation survey, fauna survey, fauna habitat survey, highlight the areas of vegetation and habitat to be retained and highlight opportunities for existing vegetation to be retained in the landscape through measures such as local seed provenance and retention in public space.	Complies	Refer to Environmental Assessment and Justification Report – Appendix C
S 11 LSPs to provide for co-location, such as schools with public open space, and multiple uses, such as conservation and passive recreation, where practicable.	Complies	Refer to ACSP Part 2 - Section 3.2

Built Environment Compliance Table

DSP Strategies	Compliance	LSP Strategy
S 1 LSP and subdivision design to be robust and be able of being intensified over time.	Complies	Refer to ACSP Part 2 - Section 3.1
S 2 LSPs to prepare a Housing Diversity, Residential Yield and Density Analysis Plan allocating densities consistent with the City's Housing Strategy.	Complies	Refer to ACSP Part 2 - Section 3.3
S 3 LSPs to allocate higher residential density codings generally consistent with the DSP and in accordance with the criteria below: • A minimum average density of 50 dwellings per site hectare within 400 metres from the centre of regional activity centres; • A minimum average density of 30 dwellings per site hectare within 400 metres from the centre of district activity centres; • A minimum average density of 25 dwellings per site hectare within 400 meters from the centre of neighbourhood centres and along neighbourhood connectors; supporting future public transport routes; • A range of densities in other locations in order to deliver housing diversity.	Complies Partially complies NA Complies Complies	Refer to ACSP Part 2 - Section 3.3

DSP Strategies	Compliance	LSP Strategy
S 4 LSPs to develop residential design standards that are responsive to site and lot attributes and facilitate energy-efficient, affordable and flexible dwelling design.	Complies	Part 1 establishes requirements for future DAPs and key site planning and building design considerations. The Environmental Sustainability Strategy (Appendix K) identifies energy efficiency requirements for housing to meet.
S 5 LSPs to provide for energy-efficient development through appropriate subdivision design and R-Code variations.	Complies	Part 1 establishes requirements for future DAPs and key site planning and building design considerations.
S 6 LSPs to provide for built form that incorporates the opportunity for passive solar design, energy and water efficiency principles.	Complies	Refer to Local Water Management Strategy (Appendix G) and Environmental Sustainability Strategy (Appendix K)
S 7 LSPs to allow for 'ageing in place' through the provision of a range of dwelling types, including those suitable for the elderly.	Complies	Refer to ACSP Part 2 - Section 3.3
S 8 LSPs to develop and implement strategies for affordable housing product and to facilitate increased opportunities for home ownership.	Complies	Refer to ACSP Part 2 - Section 3.3
S 9 LSPs to provide for housing types in accordance with the City's Housing Strategy.	Complies	Refer to ACSP Part 2 - Section 3.3
S 10 Local and Centre structure plans and/or detailed area plan shall demonstrate how the scale and allocation of retail, commercial, community service and associated floor space will be delivered by: • Delivering a robust street network that can accommodated an increase in intensity of built form and use over time; • Providing adaptable building design capable of multifunctional ground floor use and the provision of additional levels without the need for demolition; and • Enabling generational change to occur as a right in certain circumstances without the need for further planning approval.	Complies	Part 1 establishes requirements for future DAPs and key site planning and building design considerations.

Resources, Infrastructure and Services

DSP Strategies	Compliance	LSP Strategy
S 1 LSPs to demonstrate how funding arrangements, including the endorsed Alkimos Eglinton Developer Contributions Plan, are to be implemented, in order to provide for the efficient and equitable delivery of infrastructure and services.	NA	The Alkimos Eglinton Developer Contributions Plan is yet to be endorsed by the WAPC. Local Planning Policy 3.3: Northern Coastal Growth Corridor Developer Contributions is an interim measure to ensure the appropriate contributions are provided.
S 2 LSPs to make provision for infrastructure and essential services to development areas.	Complies	All essential services are able to service the site. Refer to Engineering and Servicing Report – Appendix J
S 3 LSPs to investigate opportunities for communications infrastructure.	Complies	Refer to Engineering and Servicing Report – Appendix J
S 4 LSPs to explore opportunities and initiatives for energy efficiency.	Complies	Refer to Environmental Sustainability Strategy – Appendix K

Staging

DSP Strategies	Compliance	LSP Strategy
S 1 LSPs shall demonstrate that the establishment of residential areas, activity centres, employment-generating uses, transport systems, infrastructure, public spaces and community facilities within that LSP will be staged in a way that efficiently and effectively caters for the needs of the community. This includes the prioritisation of new retail and commercial development within centres over that of the adjoining areas or along corridors, within the LSP area.	Complies	A staging plan has been prepared to demonstrate that the ACSP meets this strategy.