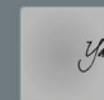


# YANCHENG CITY CENTRE ACTIVITY CENTRE STRUCTURE PLAN



## Part Two - Explanatory Report

April 2015



*Yancheng bench joint venture*



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## YANCHEP CITY CENTRE ACTIVITY CENTRE STRUCTURE PLAN

### PART TWO - EXPLANATORY REPORT

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2214Rep157B  
April 2015

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Yanchep Beach Joint Venture

**PROJECT TEAM**

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Landscape Design - Emerge Associates



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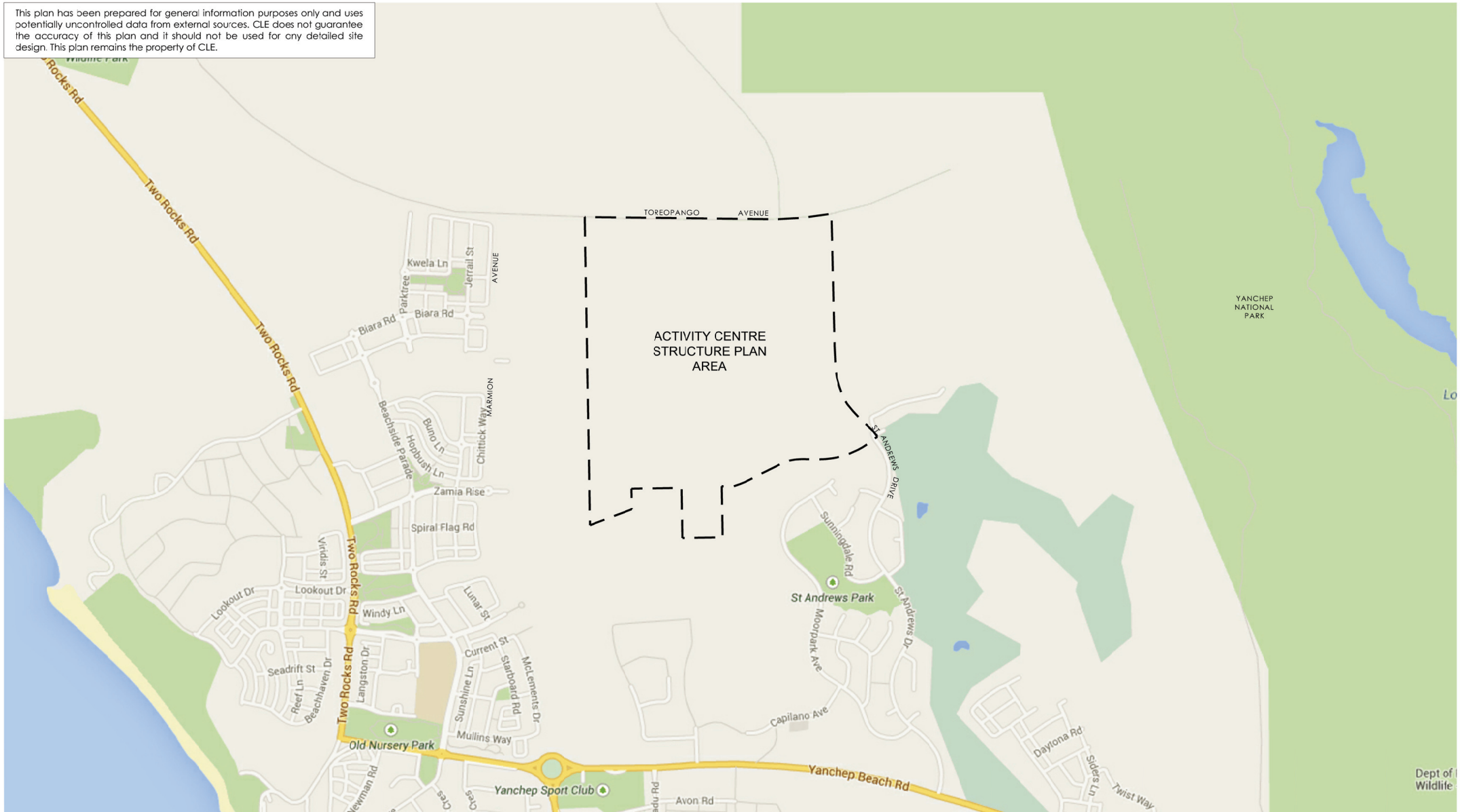
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# Yanchep City Centre Activity Centre Structure Plan Part Two - Explanatory Report

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Source: Google Map

2214-134-01 (17.10.2014), 1:20,000@A4



LOCATION PLAN

Figure 1

## 1.0 INTRODUCTION

As Perth's population increases towards an estimated 3.5 million by 2031, urban expansion within the north-west corridor continues progressively north. The Yanchep City Centre Activity Centre Structure Plan (ACSP) provides the statutory framework to guide development of the primary centre to service this region within a mixed use, transit oriented city centre environment. The ACSP applies to the area identified as 'Strategic Metropolitan Centre 'A' within the Yanchep Two Rocks District Structure Plan (ASP43) and as 'Centre' within the Yanchep City Local Structure Plan No.68 (ASP68).

The ACSP was commissioned by the Yanchep Beach Joint Venture (YBJV) and was prepared by a team of consultants comprising:

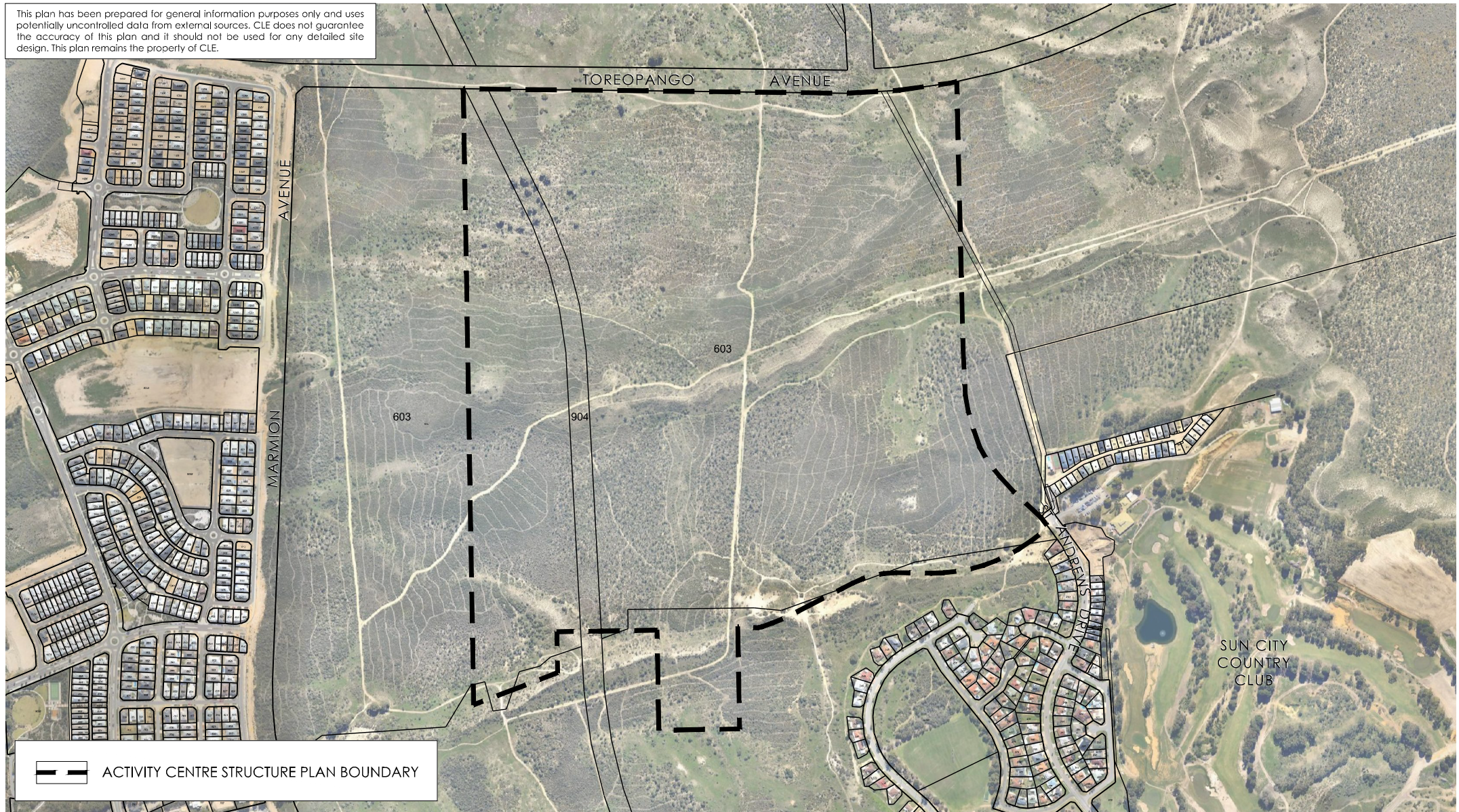
- Mike Allen Planning – Project Management
- CLE Town Planning + Design – Planning and Urban Design
- Shrapnel Urban Planning – Economic and Employment Analysis
- Jacobs – Traffic and Transport Planning
- JDSi – Civil Engineering
- Emerge – Landscape Design

The document was prepared in consultation with state and local government agencies including:

- The Department of Planning;
- The Department of Transport;
- The Public Transport Authority;
- Main Roads WA;
- The Department of Education; and
- The City of Wanneroo.

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## 2.0 SITE DESCRIPTION, BACKGROUND AND PLANNING CONTEXT

### 2.1 Site Description

The ACSP area comprises a 106ha land parcel immediately south of Toreopango Avenue, Yanchep. It is located approximately 1.1km north of Yanchep Beach Road, 0.4km east of Marmion Avenue and 3km west of the Mitchell Freeway reserve (refer Figure 1 – Location Plan). The Indian Ocean is located 1.8km to the west.

The site comprises portion of Lot 603 Toreopango Avenue and portion of Lot 904 Yanchep Beach Road (refer Figure 2 – Site Plan). It is in the process of being created as a discrete lot through subdivision application WAPC 150231 which was issued conditional approval in December 2014.

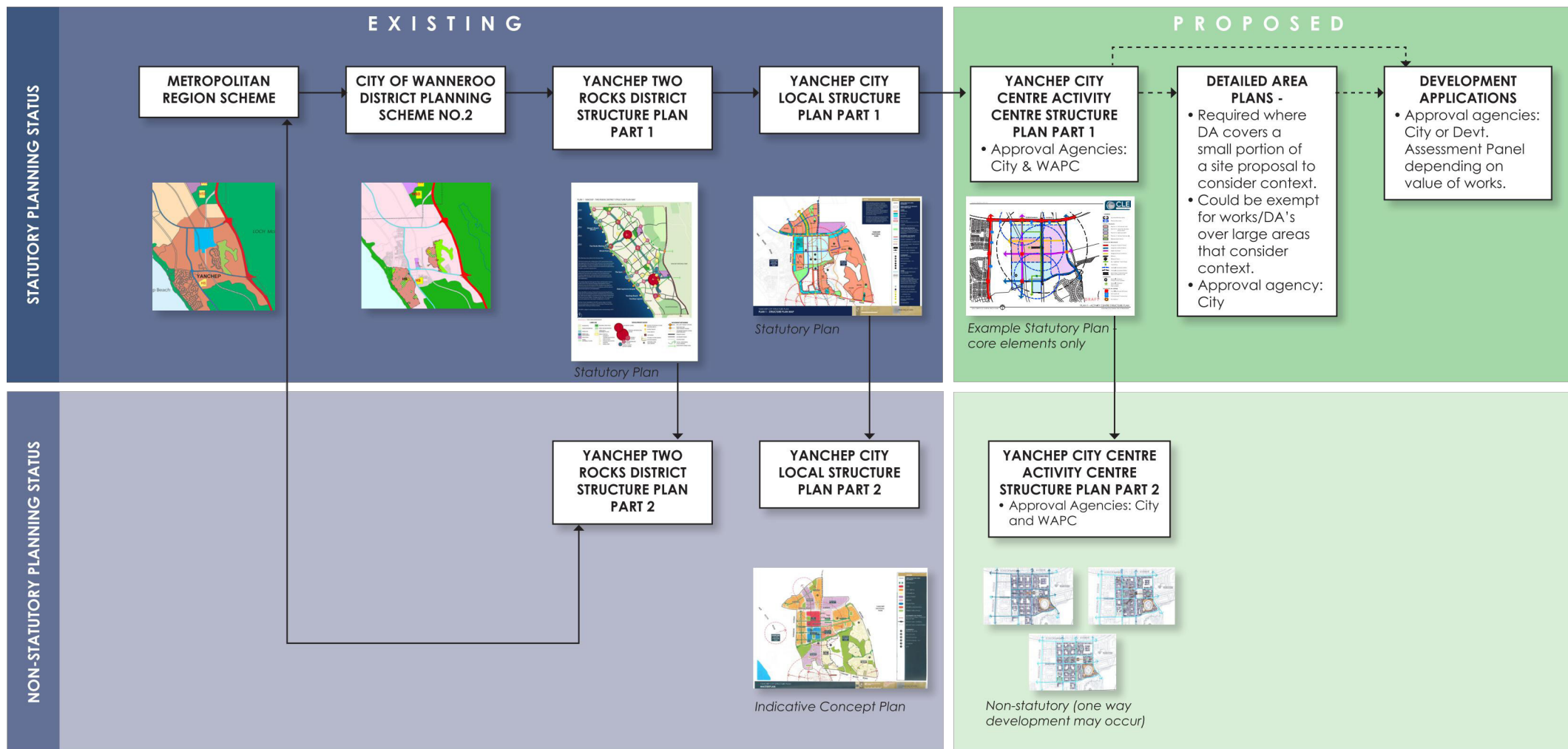
Lot 603 is owned by the St Andrews Private Estate and New Orion Investments Pty Ltd, who together act as Yanchep Beach Joint Venture. Lot 904, which is a long narrow lot aligning with the original railway reserve through the area which previously traversed the site, is currently owned by the Western Australian Planning Commission. Refer section 2.3 for further detail on the treatment of the Railway Reserve.

Table 1: Land Ownership

Lot	Description	Area of Lot (Total)	Area of Lot within YCCACSP	Ownership	Vol/Folio
603	146 Toreopango Avenue, Yanchep	332.6ha	101.4ha (approx.)	½ Share of Lot 603: St Andrews Private Estate	2688/585
				½ Share of Lot 603: New Orion Investments Pty Ltd	2688/586
904	150 Yanchep Beach Road	9.1ha	4.2ha (approx.)	Western Australian Planning Commission	2097/796

Certificates of Title are provided at Appendix 1.

This table has been prepared for general information purposes only and provides a summarized over view of the key statutory documentation applicable. This table remains the property of CLE.



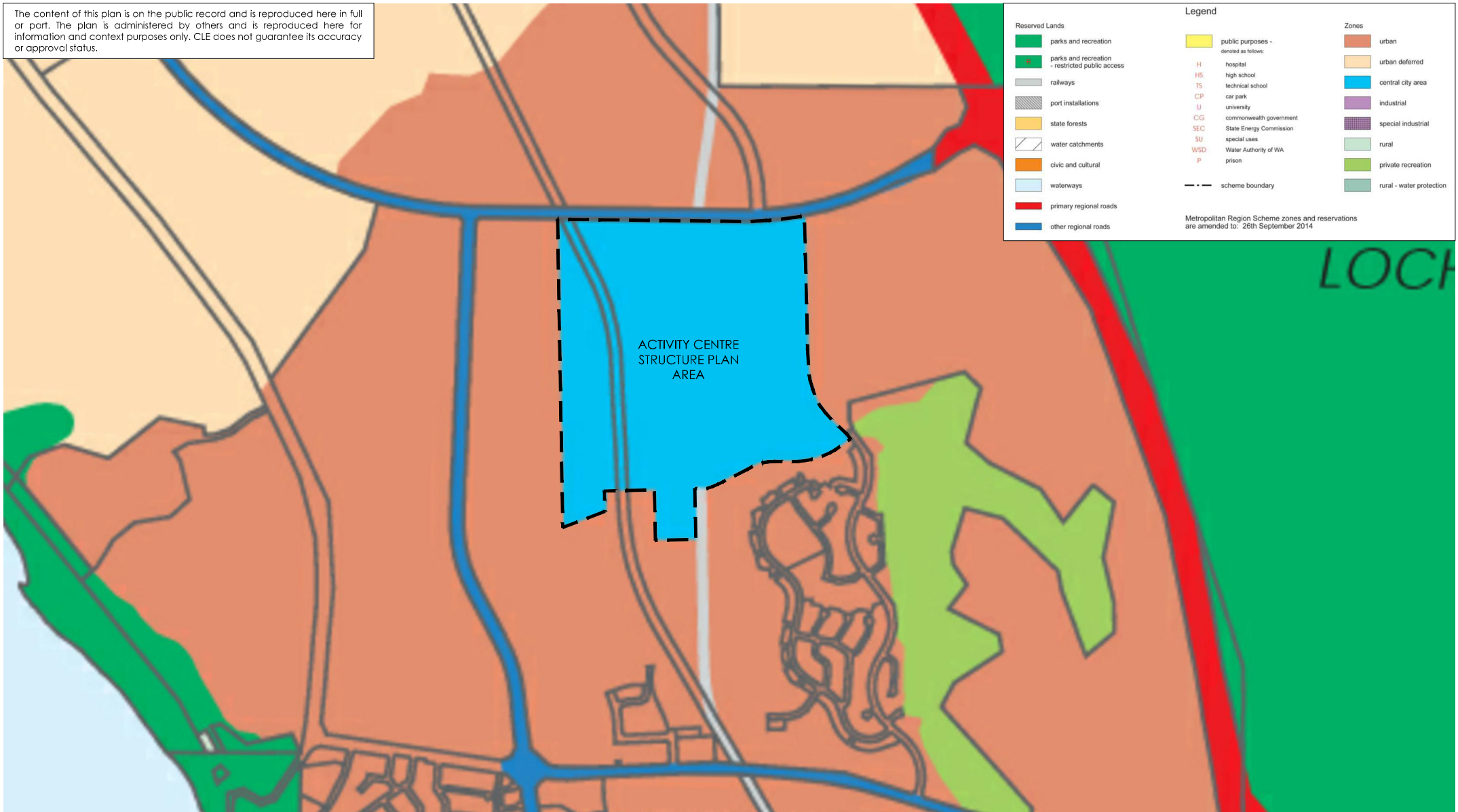
## 2.2 Background

With the exception of the WAPC owned Lot 904, the entire ACSP area and much of the surrounding land is owned by the St Andrews Private Estate Pty Ltd (a subsidiary of the Tokyu Corporation) and New Orion Investments Pty Ltd. Together, as the Yanchep Beach Joint Venture (YBJC), these landowners have been working in conjunction with state and local government to establish the framework to realise a new metropolitan expansion area around Yanchep-Two Rocks ultimately accommodating around 155,000 people and 55,000 jobs. To date, the process has involved:

- The signing of a Strategic Cooperation Agreement between the State Government, the City of Wanneroo and the landowners to work together to progress the project;
- The establishment of the IDEAs project to facilitate economic development and employment creation to support more sustainable and contained urban expansion;
- The conduct of a number of design workshops and charettes led by national and international urban design experts to establish the basic planning framework and layout for the area;
- The preparation and endorsement of the Yanchep Two Rocks District Structure Plan; and
- The preparation and endorsement of the Yanchep City Local Structure Plan No 68.

The Yanchep City Centre is recognised within all of the above documents as a critical element in the realisation of the vision established for the region. This ACSP (and Detailed Area Plans adopted under it) will represent the final planning layer to enable its progressive development as a major focal point and primary commercial and service node for the growing Yanchep-Two Rocks community.

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## 2.3 Planning Context

### 2.3.1 Metropolitan Region Scheme

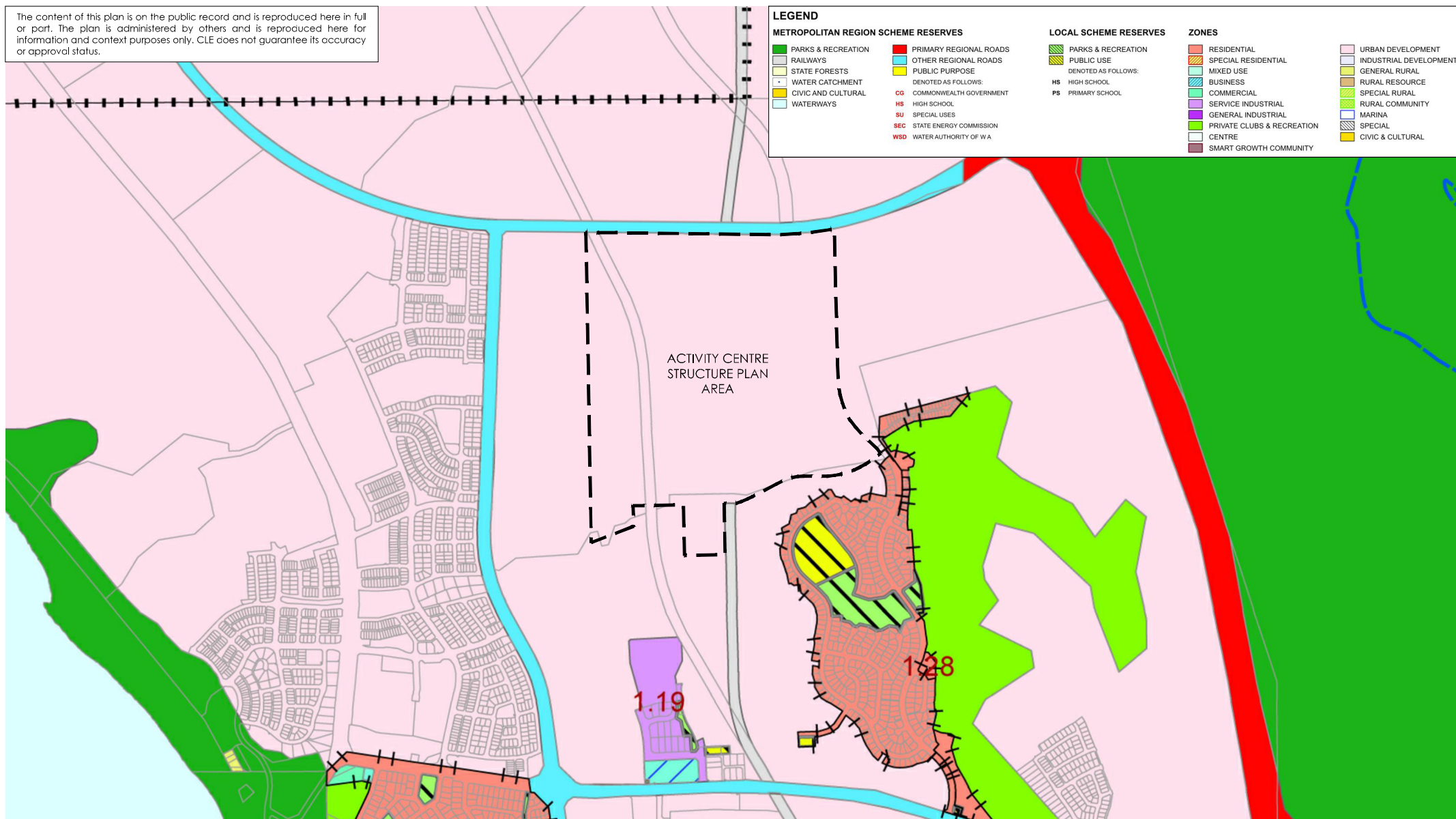
The ACSP area is zoned 'Central City Area' under the Metropolitan Region Scheme (refer Figure 4 – Metropolitan Region Scheme Zoning). The boundaries of this zone were recently modified through Amendment 1248-57 to align with the agreed City Centre boundary following its more precise definition through approval of the Yanchep City Local Structure Plan, discussed below.

The surrounding area is zoned 'Urban' with the exception of the Marmion Avenue and Toreopango Avenue road reserves, which are reserved for 'Other Regional Roads', and the 'Railways' Reserve which extends from the site's northern and southern boundaries but no longer traverses the site. The 'Railways' Reserve previously extending through the site over Lot 904 was deleted through Amendment 1248-57 to reflect the agreement that the rail line through the ACSP area be subterranean, within a lot effectively 'reserved' below ground surface.

Development of the site as a City Centre accords with its zoned purpose.

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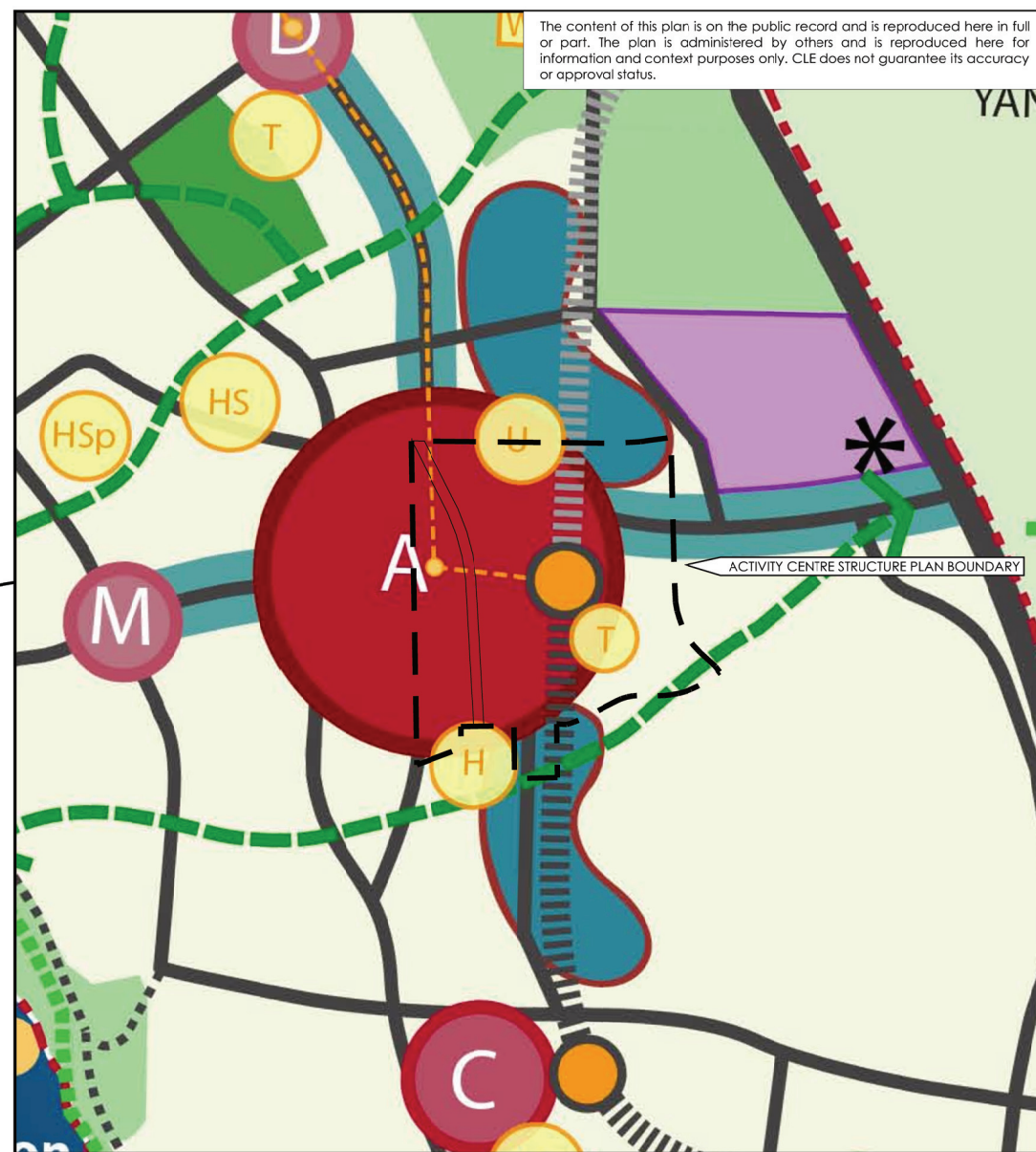
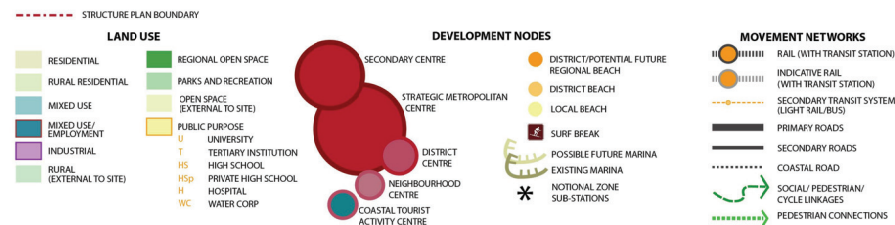
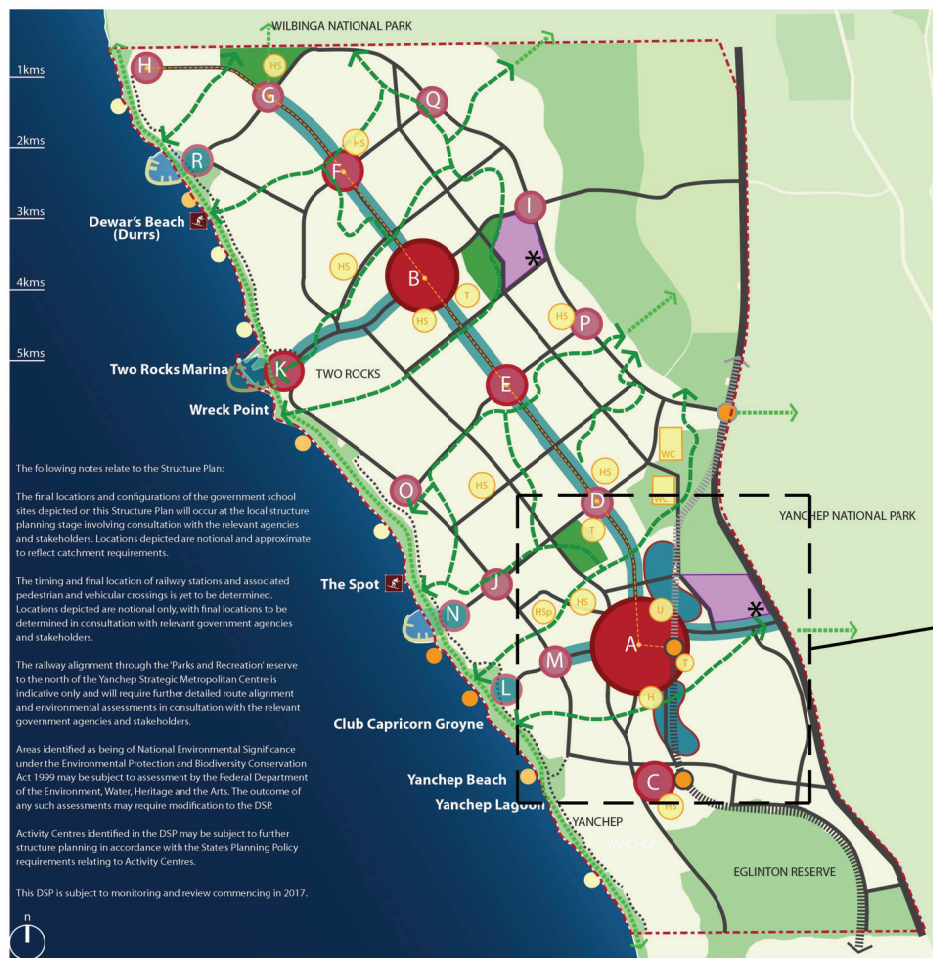


### 2.3.2 City of Wanneroo District Planning Scheme No. 2

The site is zoned 'Urban Development' under the City of Wanneroo's District Planning Scheme No. 2 (refer Figure 5 – City of Wanneroo District Planning Scheme No. 2 Zoning) with the MRS reserves (including the abutting Toreopango Avenue Reserve) reflected in the Scheme.

District Planning Scheme No. 2 provides for the development of land zoned 'Urban Development' to accord with a Local Structure Plan prepared and adopted under Part IX of the Scheme.

# Yanchep City Centre Activity Centre Structure Plan Part Two - Explanatory Report



Source: City of Wanneroo

2214-138-01 (21.10.2014), Nts



YANCHEP - TWO ROCKS DISTRICT STRUCTURE PLAN (ASP No. 43)

Figure 6

### 2.3.3 Yanchep Two Rocks District Structure Plan No. 43

The Yanchep Two Rocks District Structure Plan (DSP) provides a broad development framework for 7,550ha of land surrounding the Yanchep and Two Rocks settlements. It stretches from the Eglinton Reserve in the south up to the boundary of the Metropolitan Region Scheme, and Wilbinga National Park to the north, and from the Indian Ocean in the west to Yanchep National Park in the east. The DSP was endorsed by the WAPC and City of Wanneroo in 2010, and reflects over 5 years of cooperative planning endeavour.

The DSP provides for the residential development of the area anchored and supported by a hierarchy of activity centre nodes, employment precincts and industrial land. The Plan also provides for a range of open spaces and service and community infrastructure. It is structured around the planned extension of the Joondalup passenger rail line and a central transit corridor flanked by mixed use development extending to the northern boundary (refer Figure 6 – Yanchep Two Rocks District Structure Plan).

The DSP envisages ultimate (long term) development of 67,000 dwellings housing 155,000 people, with 55,000 local jobs.

The DSP designates a high order 'Strategic Metropolitan Centre 'A' as the primary centre to service the region, acting as the anchor for the mixed use transit corridor and a series of lower order activity centres along it. Centre 'A' is shown to incorporate a new rail station as a central component, as well as a hospital, university and TAFE, and is the subject of this ACSP.

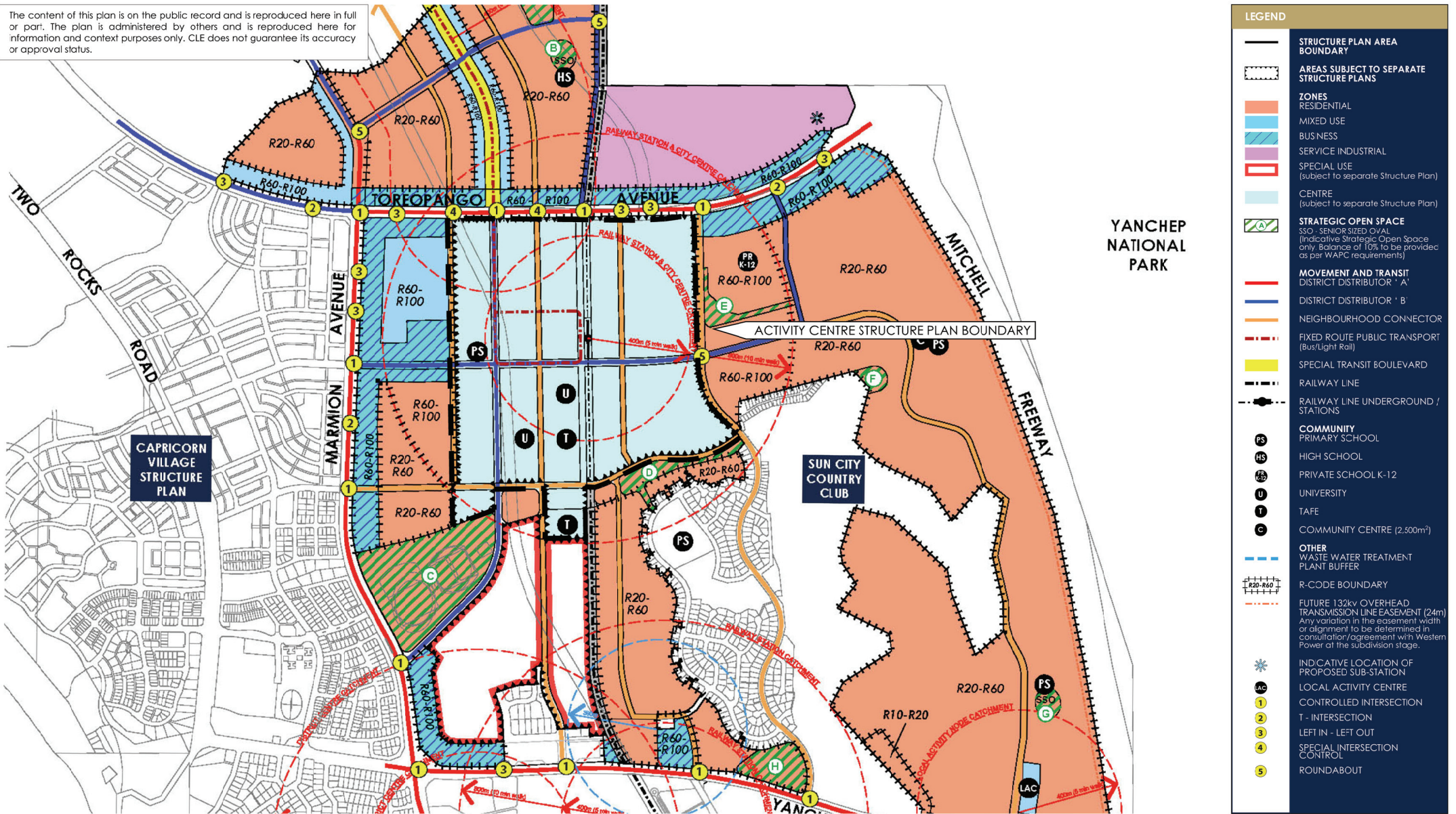
The DSP is strongly focussed on providing a high proportion of local employment and services to reduce the need for residents to travel outside the DSP area. It is also underpinned by an integrated transport network to reduce car travel dependence.

This ACSP provides more detailed planning framework to enable development of the Strategic Metropolitan Centre 'A' in accordance with the DSP. Consistent with the DSP, it:

- Integrates the proposed rail extension and Yanchep City railway station within the heart of the City Centre;
- Identifies a transit corridor extending from the station northward, providing for strong public transport connection between both the Centre and rail line, and future catchment to the north;
- Promotes the Centre as a mixed use city centre environment providing for a wide range of retail and commercial services, jobs, education and health facilities and high density residential;
- Accommodates the 15,000 jobs projected for the City Centre by the DSP;

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- Accommodates the 71,800m<sup>2</sup> of retail floor space and 458,867m<sup>2</sup> of total employment generating floor space modelled for the Centre under the DSP;
- Designates sufficient land to accommodate regional health and education facilities including a regional hospital, university and TAFE;
- Provides for the achievement of the minimum average density target of 50 dwellings per site hectare within the Centre;
- Establishes a strongly integrated land use transport framework which places heavy emphasis of walking and cycling as well as public transport as alternatives to private car travel; and
- Promotes a range of environmentally sustainable initiatives including application of 'green' technology to building and construction.

#### 2.3.4 Yanchep City Local Structure Plan No. 68

The Yanchep City Local Structure Plan No.68 ('YCLSP' or 'ASP68') was prepared for the 612ha surrounding and including the City Centre. It was prepared to accord with, and build upon the detail provided by the DSP. The YCLSP defines the City Centre through application of a 'Centre' zone, which requires a further Activity Centre Structure Plan to be prepared in accordance with the City of Wanneroo's District Planning Scheme.

The YCLSP was endorsed by the City of Wanneroo and WAPC in 2013.

In addition to precisely defining the boundaries and location of the City Centre, the YCLSP also provides for:

- Development of a Special Use 'Enterprise Park' or precinct adjoining the Centre to the south;
- Development of Mixed Use and Business areas west of the Centre to Marmion Avenue, along Toreopango Avenue and abutting the northern transit corridor provided for by the DSP;
- Preservation and development of Strategic Open Space areas including one immediately to the south-west of the Centre;
- Residential development of much of the remainder of the plan area; and
- Application of residential density targets including a minimum average of 50 dwellings per site hectare within 400m of the Yanchep City Railway Station (refer Cl.6.2).

Both the YCLSP and supporting (non-statutory) explanatory figures provide an indication of potential layout and land use within the City Centre but acknowledge that these are conceptual and that the urban form of the Centre is subject to a separate Activity Centre Structure Plan, which function this document provides.

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This ACSP has taken many of the principles and structuring elements derived from DSP and YCLSP and provides for their application and implementation through development within a robust statutory framework. The ACSP aligns with the YCLSP in that it:

- Reflects the boundaries set for City Centre;
- Places the Yanchep City railway station at the heart of the centre with defined 'ped-sheds' around this;
- Reflects the endorsed road hierarchy, network and access controls specified within the YCLSP;
- Provides for the routing of the fixed route public transport (light rail or similar) from the Yanchep City Station north to northern transit corridor extending from Toreopango Avenue;
- Identifies a Primary School in the west of the Centre;
- Provides for development of a range of tertiary education facilities in the south-west of the Centre;
- Sets aside sufficient area to enable the future development of a sports arena / stadium and a range a heath facilities within the east of the centre; and
- Accommodates stipulated residential density targets within a mixed use environment.

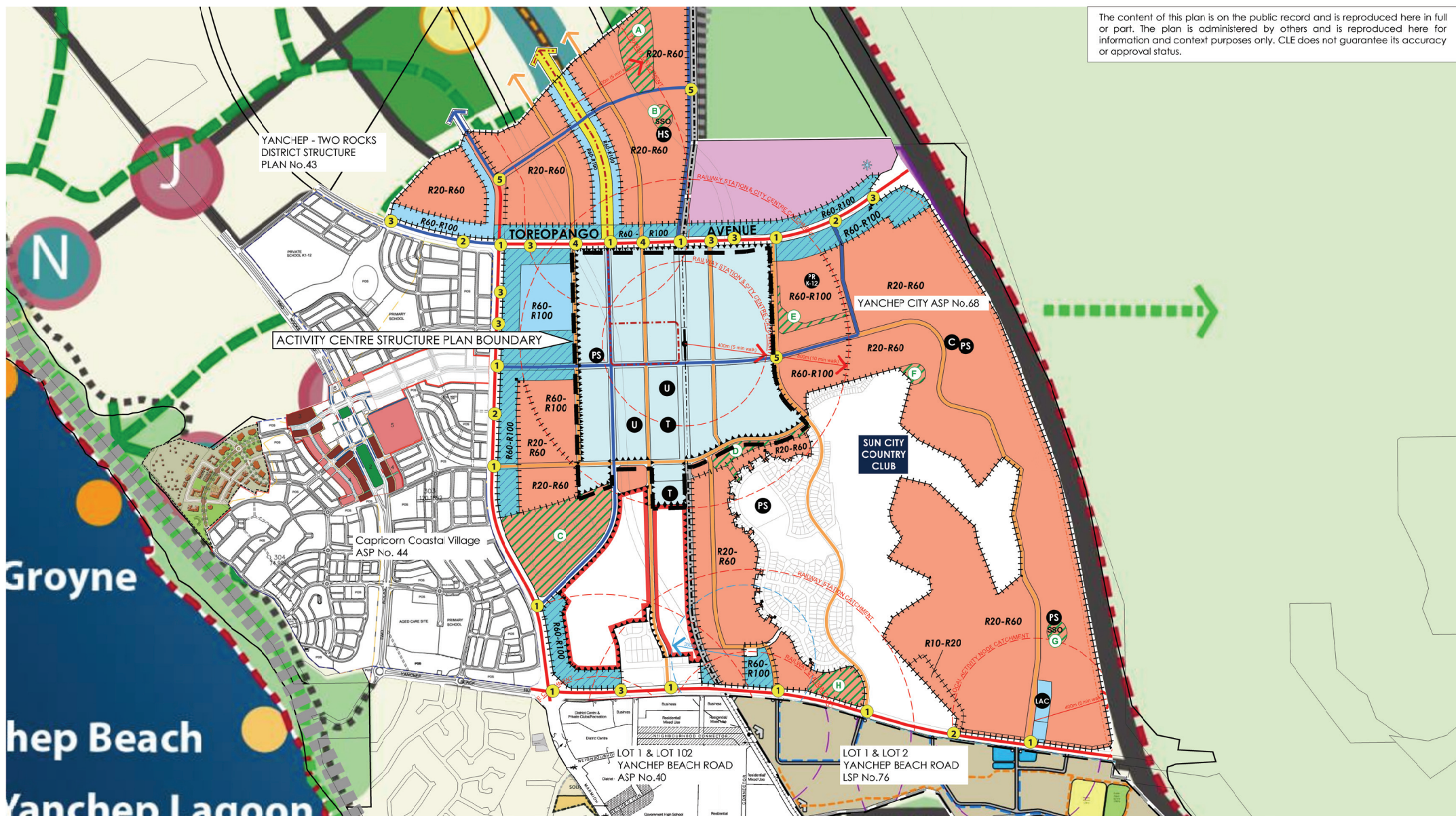
### 2.3.5 Environmental Approvals

Amendment 787 to City of Wanneroo's previous District Planning Scheme, which put in place the current 'Urban Development' zoning over the site and surrounding area, was subject to formal Environmental Review under Section 48 of the *Environmental Protection Act 1986*. This considered the potential impacts of the rezoning on the environment and identified appropriate management responses. Approval of the rezoning was made subject to a number of environmental conditions which are included within Schedule 12-2 of the District Planning Scheme. Those issues pertinent to the City Centre area have been addressed prior to or during the preparation of the YCLSP.

Copies of the Yanchep City Centre Structure Plan Vegetation and Fauna Management Strategy and Local Water Management Strategy which address some of the environmental conditions as they apply to this area are provided at Appendices 2 and 3.

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### 2.3.6 Surrounding Context

The land immediately surrounding the site is undeveloped, aside from the Strategic (District) Open Space specified by the YCLSP immediately south-west of the site, which is scheduled for construction in 2015. Ultimately, it is planned that:

- Adjoining land to the west will be developed for residential, business and mixed use development in accordance with the YCLSP;
- Land north of Toreopango Avenue will accommodate business / service commercial along the Avenue with residential development to the north of this (in accordance with the YCLSP), flanking the DSP's mixed use transit corridor connecting the Centre with a series of smaller activity nodes running north;
- Land north-east of the Centre abutting the Freeway reserve will provide for future service industry (in accordance with the YCLSP);
- The Mitchell Freeway will have an interchange with Toreopango Avenue;
- Land east and south-east of the Centre will accommodate residential uses, a private school and an area of strategic open space (in accordance with the YCLSP). This area is currently being developed;
- The Sun City Golf course will remain to the south-east;
- Much of the south-west boundary of the Centre will be flanked by the Strategic Open Space referenced above, which incorporates district recreation, vegetation, landform and an aboriginal heritage site which the YCLSP and subsequently prepared civil works plans preserve; and
- South of the Centre, the YCLSP promotes development of a Special Use Enterprise Park. This Special Use area will be subject to its own separate structure plan. It will work in conjunction with the Centre to maximise employment and economic development opportunities in the area, and potentially interplay with research and development activities with the planned tertiary education within the City Centre.

Outside the YCLSP, urban (predominantly residential) development is already occurring with the Capricorn Village area to the west (which is subject to Agreed Local Structure Plan No. 44) and Jindowie to the south (which is subject to Agreed Local Structure Plans No. 40 and No.76). This latter estate also accommodates a District Activity Centre, the first stage of which is complete, and the proposed Yanchep South railway station.

The older residential part of Yanchep to the south-west of the site is well established.

With the exception of the Two Rocks settlement and a small rural-residential subdivision, land to the north of the site is predominantly undeveloped. The land is appropriately zoned urban development in accordance with the DSP, and is likely to commence within the short to medium term.



All of these local structure plans fit within the broader framework provided by the DSP and allow for coordinated use and development of land. Where specified, existing or planned road connections provide structuring elements to be tied into the ACSP.

South of the DSP area, the Alkimos Eglinton District Structure Plan provides a similar framework for development of land parcels within its 2,626ha boundary. Local structure planning and development of this area is well progressed through a range of discrete land parcels and estates.

The Alkimos Regional Centre is identified as a Secondary Centre under the Centre hierarchy established by State Planning Policy 4.2, and as such, is lower in the hierarchy of centres than the Yanchep City Centre.

### 2.3.7 Strategic Planning Framework

#### Directions 2031 and the North-West Corridor Sub-Regional Structure Plan (draft)

The Directions 2031 Strategic Plan for Perth and Peel provides strategic direction to guide the development of the metropolitan and Peel regions. This is currently being reviewed to take into account recent predictions of a population increase to 3.5 million by 2051.

Directions 2031 is supported by a series of Draft Sub-Regional Strategies, which elaborate on the key principles of Directions 2031. The draft Sub-Regional Strategy for the north-west corridor identifies the Yanchep Two Rocks area as 'Urban' and

'Urban Deferred' land capable of accommodating substantial growth, and designates the location of the Yanchep Strategic Metropolitan Centre (i.e. the City Centre) and rail station. As such, this ACSP accords with the Draft Sub-Regional Strategy.

#### State Planning Policy 4.2 – Activity Centres for Perth and Peel

State Planning Policy 4.2 (SPP4.2) – Activity Centres for Perth and Peel provides direction on *“the broad planning requirements for the planning and development of new activity centres and the redevelopment and renewal of existing centres in Perth and Peel. It is mainly concerned with the distribution, function, broad land use and urban design criteria of activity centres and with coordinating their land use and infrastructure planning.”*

SPP4.2 establishes a centre hierarchy for all of the larger existing and planned activity centres within the metropolitan and Peel areas. SPP4.2 identifies the Yanchep City Centre as an 'Emerging Strategic Metropolitan Centre'. Strategic Metropolitan Centres are high order centres, ranked beneath the Perth City Centre only, in terms of their role in the centre hierarchy. SPP4.2 defines the role of Strategic Metropolitan Centres as *“...multipurpose centres that provide a diversity of uses. These centres provide the full range of economic and community services necessary for the communities in their catchments.”*

SPP4.2 includes a Model Centre Framework (MCF) setting out a suite of guidelines for the planning and design of activity centres, promoting their development as multifunction centres with a strong focus on design and transport integration as well as land use. The MCF includes an Assessment Checklist, which has been completed for the Yanchep City Centre and is contained at Appendix 5.

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The core design considerations from SPP4.2 relevant and applied to the Yanchep City Centre are:

- Centres should comprise a mix of uses and services that encourage activity outside of normal business hours, provide local employment opportunities, a high amenity public realm and encourage multi-purpose trips rather than being a single purpose shopping centre;
- A main street layout is the preferred format for planning and development of centres with large format enclosed 'malls' discouraged;
- Strategic metropolitan centres should deliver a mix of land uses including department stores, supermarkets, speciality shops, major offices and government agencies. This is readily achievable for the Yanchep City Centre based on DSP mixed use floor space modelling;
- The centre should be structured around a grid of streets;
- The amount of land allocated to car parking should be minimised. The predominant built form should allow the majority of buildings to be accessed via the public realm rather than separated from the street via large areas of car parking;
- Mixed business and bulky goods retailing should be located within but on the periphery of centres accessible from the regional road network; and
- Centre plans should optimise the potential for residential density with a minimum target of 30 dwellings per gross hectare and a desirable target of 45.

The proposed ACSP complies with all these objectives.

More specifically, in relation to land use diversity, the Mix of Land Use floorspace targets specified in Table 3 of SPP4.2 are exceeded by the targets specified for the Centre under the DSP and reflected in the ACSP. The Policy requires that a Centre with above 50,000m<sup>2</sup> but under 100,000m<sup>2</sup> of 'Shop retail' floorspace should provide a minimum 40% of non-'Shop-retail' commercial floorspace to ensure a diversity of land use and services. Employment targets stipulated by the DSP require a high proportion and diversity of commercial uses. Modelling undertaken in support of the ACSP (detailed in Appendix 6) indicate that the employment targets established for the Centre would translate into Shop-retail making up approximately 15% of non-residential floorspace, achieving a Mix of Land use of 85%. If manufacturing, storage, service industry, accommodation and utilities were excluded from this calculation, the proportion of Shop retail would increase to 19%, achieving a balance of 81% of uses listed as comprising 'Mix of Land uses' under the policy, well in excess of the 40% target.

City of Wanneroo Local Planning Policy 3.2 Activity Centres

The City's Activity Centres Policy provides additional guidance on the implementation of SPP4.2 within the City. It recognises the Yanchep Strategic Metropolitan Centre (City Centre) and its intended function. The ACSP accords with the Policy in that it:

- Is consistent with the adopted District and Local Structure Plans applicable to the site;
- Includes an Employment (economic) Strategy which is consistent with the modelled floor space volumes and distribution determined through the higher order structure plans;

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- Includes a main street and street block lengths of less than 200m;
- Provides for a robust and interconnected street network which is pedestrian friendly;
- Provides an integrated cycle network;
- Incorporates a town square / public space in close proximity to the main street;
- Provides for integrated and coordinated parking provision, which does not dominate the streetscape;
- Provides for (ultimate) employment self sufficiency in excess of the 60% specified by the Policy (to achieve the higher targets specified by the DSP of 75%);
- Reflects housing density targets stipulated in the agreed DSP and local structure plan (ASP68);
- Incorporates provision for community facilities in accordance with the agreed strategy;
- Promotes an appropriate and diverse mix of land use through the designation of land use precincts within the Centre;
- Accommodates larger format retail uses (i.e. showrooms) on the periphery of the Centre; and
- Incorporates direction on staging, including concept plans illustrating how the Centre might evolve (recognising that the ultimate development of the City Centre will occur over a longer time horizon than for smaller centres).

Built form provisions align with the direction of LPP3.2 and will be supplemented by Detailed Area Plans providing additional detail.

#### Other State Planning Policies and Instruments

A number of other state and planning policies have relevance to the City Centre including:

- The WAPC's Structure Planning Guidelines and the City of Wanneroo's draft Local Planning Policy in relation to structure plans;
- State Planning Policy (SPP) 5.4 - Road and Rail Transport Noise and Freight Considerations in Land Use Planning, which requires assessment and management of impacts potentially associated with the rail line through the Centre;
- State Planning Policy (SPP) 2.7 – Public Drinking Water Source, SPP 2.9 – Water Resources, and the WAPC's Better Urban Water Management Guidelines, which inform the approach taken to drainage, nutrient and water management, and under which the Yanchep City Local Water Management Strategy has been prepared to guide their application to the YCLSP area.

The implications of each of these policies and the ACSP response is addressed throughout Section 4 of this report.



### 3.0 SITE CONDITIONS

Site conditions have been addressed in detail as part of the YCLSP. This ACSP is a refinement for the 'Centre' zone identified by the YCLSP in terms of planning framework, however site constraints and environmental conditions remain the same as those previously addressed. The below sections summarise the previous findings in relation to the site's attributes and characteristics and confirm its capacity to accommodate development of the City Centre. Further information is available within the YCLSP Vegetation and Fauna Management Strategy and Local Water Management Strategy provided at Appendices 2 and 3.

#### 3.1 Topography and Landform

The area is on the western portion of the Swan Coastal Plain and demonstrates the typically undulating landform associated within the coastal areas. Ground levels within the ACSP area vary from approximately 48m AHD in the south east corner to 29m AHD in some northern portions, with the landform characterised by a dunal system of peaks and troughs. There are no unique landform features worthy of retention within the ACSP area.

Re-contouring of the site will be required to facilitate the more intensive form of urban development sought and facilitate ease of pedestrian movement.

#### 3.2 Soils and Geomorphology

The Swan Coastal Plain consists of undulating lowlands which underlie the ACSP area, extending from the Darling Gingin Scarp in the east to the coast in the west. It contains several different geomorphologic systems and associated soil types including:

- Quindalup and Spearwood Dune systems;
- Bassendean Dunes;
- Pinjarra Plain; and
- Ridge Hill Shelf.

The ACSP is within the Spearwood Dune System. This is the geomorphic expression of the Tamala Limestone geological unit. Underlying soils originally contained calcium throughout however leaching by rainwater has removed carbonate from upper levels of the dunes and deposited below to form hard, calcretised 'cap rock'. The balance of the upper soil levels mainly consists of brown to yellow sand covering the limestone in most areas.

The soils and geomorphology within the ACSP are well suited for high density urban development by virtue of their stable and porous nature, allowing for minimal ground works and efficient draining of stormwater.

#### 3.3 Hydrology and Groundwater

The ACSP area is devoid of any wetlands or water courses and is unconstrained in this regard. Furthermore, groundwater is located approximately 23m below the natural surface, ensuring that rising ground water levels and subsequent flooding is not a constraint to development.



Groundwater exists within three hydrological units underlying the study area:

1. The Tamala Limestone is the shallowest aquifer in the area and is overlain by calcareous dunal sands within the ACSP area. Water in this superficial aquifer is directed from direct recharge from rainfall. Saltwater from the ocean intrudes into parts of the aquifer near the coast. The Gngangara Mound is a large groundwater deposit located to the east of the area. It lies between 20-50m above the level of the water table in the Tamala Limestone aquifer.
2. The Leederville formation is the most important confined hydrogeological unit underlying the area. Most water within this formation is held within thin bands of sand and is recharged from the overlying Tamala Limestone aquifer which overlies it to the north of the structure plan area.
3. The Yarragadee formation is a massive confined aquifer that underlies much of the Swan Coastal Plain. It comprises a series of sandstone, siltstone and shale. The majority of water within the formation is held within sandstone beds up to 30m deep. Recharge of the Yarragadee aquifer is from the leakage from the Leederville formation and superficial aquifer.

The subject site and surrounding area is located within a Priority 3 groundwater source protection area. These are declared where water supply sources need to or have been deemed capable of co-existing with other land uses such as residential and urban development, and is therefore not a constraint to development in the form proposed by this ACSP.

### 3.4 Vegetation

There is no vegetation that is significant and requires retention in the City Centre area. No vegetation within the ACSP area has been identified as being in 'Pristine' or 'Excellent' condition and no vegetation complexes are of regional significance.

Retention of existing vegetation is not feasible within the City Centre environment, however opportunities to recognise existing vegetation within areas of open space will be considered at detailed design stage.

Vegetation types are scattered across the YCLSP area and consist of the following. A more detailed summary of the vegetation types and vegetation condition is included in the Environmental Assessment undertaken in support of the YCLSP.

- *Eucalyptus gomphocephala* Woodland to Open Forest (Eg)- A small pocket of Tuart Woodland exists in the north west corner of the Structure Plan area and was assessed as being in 'Good' condition;
- *Banksia attenuate* Low Open Forest (Ba)- This vegetation type includes a variety of associations based mainly on the dominance of four low tree species being *Banksia attenuate*, *B. Menziesii*, *Eucalyptus todtiana* and *Allocasuarina fraseriana*. While there is a range of understorey shrub types on site, there is no clear division into distinct groupings. This is the predominant vegetation type within the ACSP area and exists in conditions ranging from 'Completely Degraded' to 'Very Good';

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- *Melaleuca systena* Closed Heath (Ms) – This vegetation type generally occurs on rolling parabolic dunes and commonly include *Conostylis candicans*, *Hibbertia racemosa*, *Diplopeltis huegelii*, *Phyllanthus calycinus* and *Gastrolobium nervosum*. A small pocket of this vegetation type exists in the south west corner of the ACSP area and has been assessed as being in a 'Very Good' condition. A narrow linear strip also exists through the centre of the Structure Plan area which has been assessed as being in a 'Degraded' to 'Good' condition;
- *Dryandra sessilis* Heath to Closed Heath (Ds) – This vegetation type covers a large portion of the ACSP area which can be the sole dominant species or can be found with others such as *Hibbertia hypericoides*, *Acacia pulchella*, *Hakea trifurcate*, *Calothmus quadrifidus* and mixtures of these dominants. Where this vegetation type occurs within the ACSP area, it has been assessed as being in a 'Very Good' condition.

### 3.5 Karst

Karstic features are surface or subterranean features that are formed by the dissolution of soluble rock, such as limestone, over time. These can vary in scale dramatically from microscopic to hundreds of metres, and can include underground cavities.

Assessment of stages 1-3 of the DSP area, including the ACSP area, indicates that no major karstic features are present. This view was confirmed through the preliminary geotechnical investigations undertaken in relation to the YCLSP, as appended to the Engineering Services Report provided in Appendix 4.

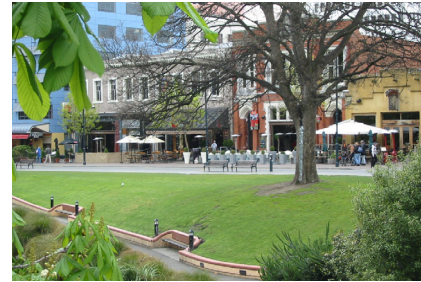
### 3.6 Heritage

The site contains no known sites of European heritage significance.

An Aboriginal Heritage Management Plan was undertaken by Ethnoscience in support of the YCLSP to comply with the requirements of Schedule 12 of the City's District Planning Scheme. This indicated that one recorded archaeological site exists south-west of the City Centre area, within the Strategic Open Space. The Management Plan outlines the recommended approach to management of that site, and the broader requirements which apply to discovery of any potential artefacts, but poses no issue or restriction to development within the City Centre.

### 3.7 Unexploded Ordnance

The ACSP area and surrounds were formerly used as a military training area by the Commonwealth during the 1940s to the late 1960s. As a result, an Unexploded Ordnance (UXO) Field Validation Survey was undertaken on Lot 603 and 9501. The field survey for UXOs was undertaken to investigate 10% of the site to a depth of 300mm. From this survey, only one piece of Exploded Ordnance (EO) was found. Spent civilian munitions and scraps including fragments of grenade detonator plugs were found and disposed of offsite. It was concluded that the risk of UXO on site is very low thus no further UXO investigations were required.





## 4.0 STRUCTURE PLAN

### 4.1 Overview, Approach and Philosophy

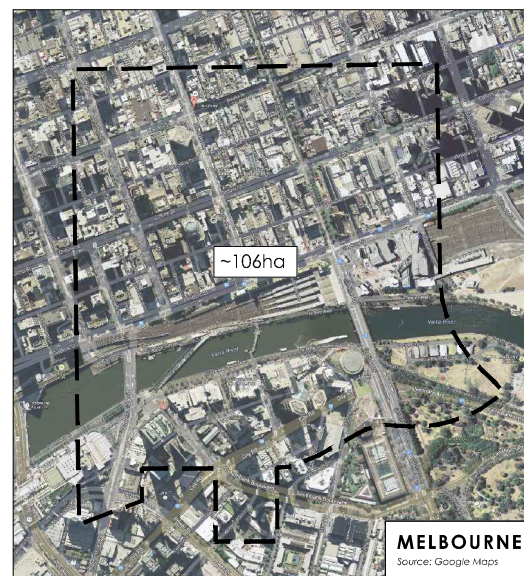
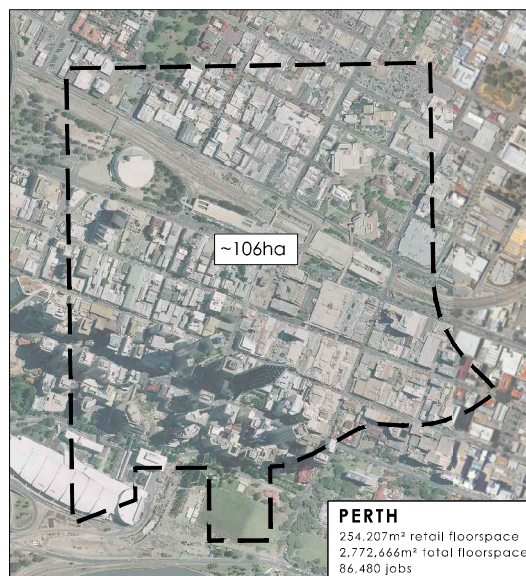
***“The Yanchep City Centre will deliver integrated commercial, retail, employment, health, education, sport and community uses in a high amenity, walkable and transit-oriented development. The Centre will set new benchmarks in urban design, sustainability initiatives, community identity and multi-modal transport options. The Centre will be robust and inherently flexible in its design and statutory framework, allowing the place (including land use, building form and public realm) to evolve and mature over time.”***

The Part 1 statutory component of the Yanchep City Centre ACSP provides the framework for staged development of the Yanchep City Centre to enable early delivery of key elements and its evolution and maturation over time as a genuine, mixed use urban environment providing a wide range of services, facilities and amenities to its catchment community.

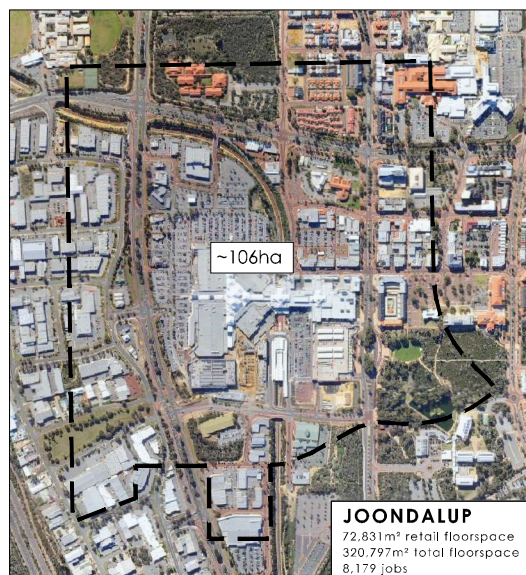
The ACSP aligns with the direction established for the City Centre through the Yanchep Two Rocks District Structure Plan (DSP – ASP43) and Yanchep City Local Structure Plan (YCLSP – ASP68). The ACSP will deliver a high intensity, street based centre, with a very high degree of amenity, particularly to pedestrians and cyclists, and fully integrated public transport and access.

The ACSP has taken lessons from a range of national and international examples which suggest that fundamental requirements for creating great cities include:

- A robust, interconnected and legible street structure within which development can occur (“good bones”);
- Provision for a diverse and vibrant range of land uses, spaces and attractions, catering for a wide variety of people;
- Integration of multi-disciplinary design considerations in recognition that the best places have both functional land use and transport networks within attractive settings in which people want to be. A balance of sometimes competing objectives is necessary to achieve this;
- An ability to evolve and reinvent over time; and
- A policy framework that is subject to regular review and refinement to both drive and respond to external influences (including economic ones) and design development.



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— ACSP boundary overlaid on comparison centres



#### 4.1.1 Case Studies

The ACSP covers 106ha. Figure 12 provides a visual comparison of this scale compared with established centres of Perth CBD, Melbourne CBD, Joondalup and Fremantle.

In contrast to the physical size comparison, the floor space objectives for the Yanchep City Centre, as defined by the DSP, suggest that its scale in terms of retail will be comparable with Joondalup and Fremantle, but that it will ultimately be expected to provide approximately double the overall employment generating floor space of those centres and double the employment. This illustrates the intensity and more diverse commercial mix required, and the high benchmark set for employment. It also gives an indication of the practical development timeframe likely to achieve these objectives, given the experience of Joondalup in particular which, as a master planned centre, has taken over 30 years to evolve to its current form and is still far from full maturity.

By contrast, many international examples (including central Paris, Singapore and Barcelona) accommodate higher intensity development than is anticipated within Yanchep within the current planning horizon of 50 years, but have reached their current scales over much, much longer time frames (and with many external forces at play).

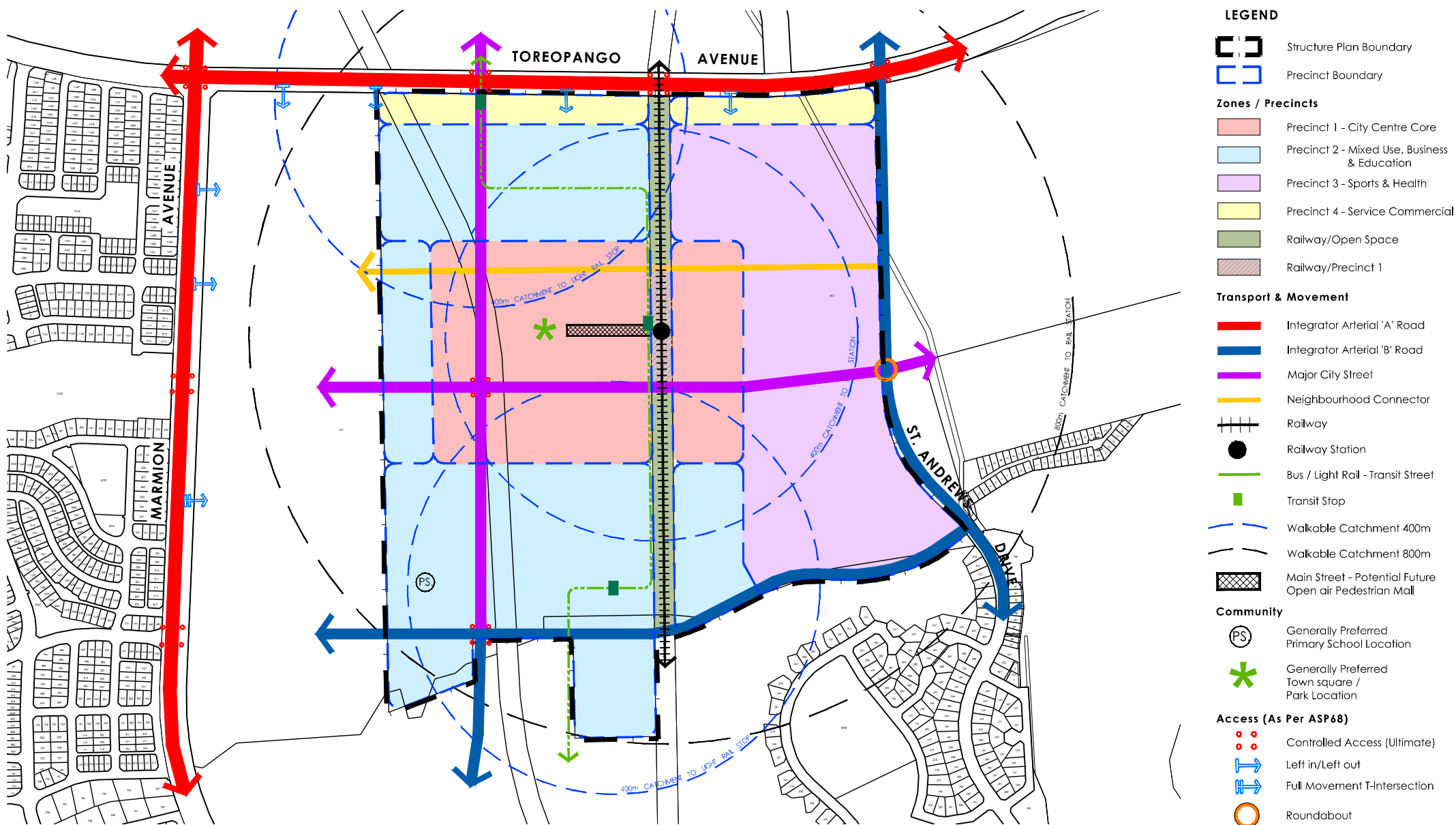
Development of Yanchep City Centre is likely to evolve over the longer term (50+ years) and go through progressive iterations to achieve its 'ultimate' form. Flexibility and support for private investment is crucial to facilitating this process and promoting early investment, as is public investment in infrastructure.

#### 4.1.2 Plan Overview

The Plan takes many of its core structuring elements from the prior work undertaken in the planning of the area. Its boundaries, road access, rail alignment, floor space objectives, density targets, key land uses and community facilities have been defined to a large degree by the existing DSP and YCLSP. The ACSP is therefore focused on refinement and delivery of these elements.

The Yanchep City Rail Station is located within the heart of the City Centre, maximising the access it provides both to and from the Centre via walk on, bus and park and ride. The rail line and station are both proposed to be subterranean with a 'cap' to connect to and integrate with the City Centre. Landscaping of much of the rail line as a linear central park (somewhat similar to an at-grade 'High Line' parkway) is proposed and could ultimately be developed with built form.

A fixed route public transport link, potentially light rail, connects with the rail station and proposed bus interchange to create a central transit node. Both buses and the transport link connect the City Centre with its broader catchment. The fixed route is defined through the Centre on a generally north-south alignment servicing sub-precincts within the Centre before extending out to connect with the planned Enterprise Park to the south, and mixed use transit corridor extending through the DSP area to the north.



**LEGEND**

- Structure Plan Boundary
- Precinct Boundary
- Zones / Precincts**
  - Precinct 1 - City Centre Core
  - Precinct 2 - Mixed Use, Business & Education
  - Precinct 3 - Sports & Health
  - Precinct 4 - Service Commercial
  - Railway/Open Space
  - Railway/Precinct 1
- Transport & Movement**
  - Integrator Arterial 'A' Road
  - Integrator Arterial 'B' Road
  - Major City Street
  - Neighbourhood Connector
  - Railway
  - Railway Station
  - Bus / Light Rail - Transit Street
  - Transit Stop
  - Walkable Catchment 400m
  - Walkable Catchment 800m
  - Main Street - Potential Future Open air Pedestrian Mall
- Community**
  - Generally Preferred Primary School Location
  - Generally Preferred Town square / Park Location
- Access (As Per ASP68)**
  - Controlled Access (Ultimate)
  - Left in/Left out
  - Full Movement T-Intersection
  - Roundabout



The ACSP specifies higher order streets, and provides additional guidance on structuring elements through the plan text which specifies, amongst other things, a maximum 180m street block length consistent with SPP4.2 and LPP3.2. This ensures provision of a robust, functional and interconnected street network whilst allowing precise street block delineation to be formulated as part of Detailed Area Planning and subdivision when further detail on development requirements for each should be available.

The Part 1 Statutory Structure Plan map designates four broad land use precincts, each with slightly differing roles, foci and standards. These include:

1. City Centre Core, around the rail station and transport interchange;
2. Business, Mixed Use and Education, abutting the Core to north, south and west;
3. Sports and Health within the east of the Centre; and
4. Service Commercial along the northern boundary.

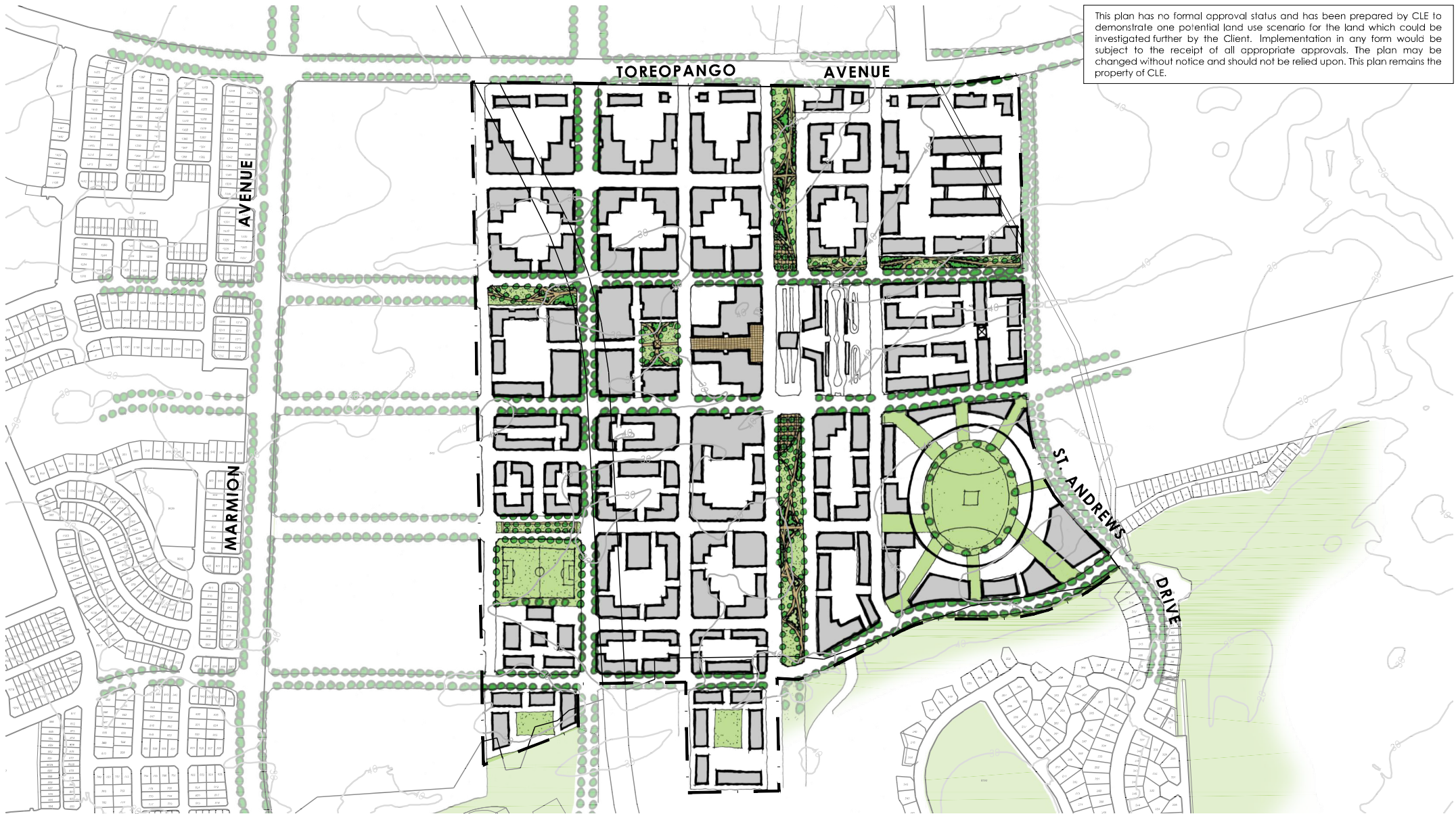
The boundaries of the Precincts are not, however, intended to be rigid, or land use variation very strongly marked between precincts. Rather the precincts are intended to assist in defining the core principles of:

- Consolidation and concentration of more intensive development and retail-based land uses within the City Centre Core, centring around an open air main street / mall connecting to the railway station;

- A gradual transition in intensity from the Core through adjoining Business / Mixed Use areas;
- Location of larger format uses such as the proposed sports arena, hospitals and associated uses east of the rail within a discrete area; and
- Location of more car-based service commercial uses, not appropriate within the core, on the periphery of the Centre, on the northern boundary.

The ACSP promotes clustering of industry groups (such as retail uses within Precinct 1, health-based services within Precinct 3, and education facilities within Precinct 2) in order to encourage synergies between uses. Overall however, considerable land use flexibility is provided to encourage the development of the Centre as a genuinely mixed use environment with a diverse range of businesses and services intermixed with high density residential.

Figure 14 illustrates one possible manner in which the Centre might develop in accordance with the principles and requirements of the ACSP at ultimate development.



#### 4.1.3 Approach

The statutory section of the ACSP outlines a range of general objectives and requirements to guide decision-making across the Centre, supported by more detailed precinct-specific guidance and development standards on key issues. It establishes the framework for preparation and application of Detailed Area Plans to provide an additional level of detail on the physical delivery of the Centre to enable implementation to occur with the appropriate level of guidance at the appropriate juncture. This approach is beneficial for several reasons:

- Firstly, it places the multiple objectives applicable to the Centre as central within the decision-framework for all development within the Centre. This should ensure that the many, complex, interconnected elements of place-making are constantly considered with reference to the overall vision and outcomes for the Centre, and decisions are therefore made in a holistic manner. Objectives have been made as clear and tangible as possible;
- Secondly, the timeframe for development of the Centre in its ultimate form is over 50 years. As such, the planning framework needs to be robust and responsive enough to operate for this period of time, and respond to the evolution which will inevitably occur over time, whilst also retaining its structural integrity and a clear guiding vision;

- Thirdly, the complexities of design detail within a City Centre environment require a coordinating structure which can consider and lock in quite fine detail at the appropriate stage, without pre-empting this detail too early in the process giving flexibility for innovation;
- Lastly, the landowner has indicated an intention to retain ownership of the Centre and coordinate its development through leasehold (or similar mechanism). This provides an additional tier of coordination to feed into the development coordination process based around concrete development proposals, and providing for a more efficient outcome.

The philosophy behind this approach is that the creation of great places of the complexity and intensity of city centres takes time, patience and attention to detail though a constant process of review, refinement and iteration (as opposed to preparation of a single, stagnant plan). As such, key structural elements have been defined within the Structure Plan along with a detailed series of objectives which essentially act as performance controls or guiding principles to ensure appropriate development. These controls act in concert with the requirement for DAPs to layer detail onto the ACSP at the appropriate time, and ensure that coordination across blocks and sites is achieved.





## 4.2 Land Use

The mixing of uses is actively promoted to cater for the range of services and uses appropriate to the highest order centre, as is the evolution and change in land use mix over time.

Floor space projections derived from the targets set within the DSP suggest ultimate development of approximately 460,000m<sup>2</sup> of employment generating land use. The framework proposed by the ACSP will assist to deliver employment generating land uses as envisaged by the DSP, with a modelled breakdown of the ACSP by Planning Land Use Code provided in the Yanchep City Centre Employment Strategy (the Strategy) provided at Appendix 6. There is naturally some capacity for variation in these ultimate breakdowns, and a high likelihood of variation over time. However, the Strategy confirms that adequate land and floor space is provided for within appropriate locations to accommodate the jobs and land use mix projected by the DSP.

### City Centre Core

The City Centre Core is at the heart of the Centre, well serviced by higher order streets leading into and through the Centre as well as both the Yanchep City Rail Station and proposed fixed route / light rail service. Retail uses (including department stores, supermarkets and speciality retail) will concentrate within this area, and are expected to line the designated main street.

This precinct is also anticipated to accommodate a wide range of other commercial uses including offices, as well as catering for high density multiple dwellings.

### Mixed Use, Business and Education

The Mixed Use, Business and Education precinct will provide a transition from the intensity of the Core outwards. It is expected to accommodate a significantly lower proportion of retail than the core area, and conversely, a higher proportion of residential development. It incorporates a street-based university and TAFE precinct (most likely in the south) as per the DSP.

The potential for synergies between tertiary education and the Enterprise Park to the south have previously been documented. Integration of shared-use regional community facilities including a library, performing arts centre and aquatic centre within the university quarter has also been proposed.

### Sports and Health Precinct

Health related uses including the anticipated public and private hospitals as well as the proposed regional sports arena are provided for within the Sports and Health precinct east of the railway. The ACSP enables co-location of medical uses, and provision of adequate space for the larger (8-12ha) footprints these uses require. Incorporation of mixed use business and residential within this precinct is also promoted to integrate these uses into the fabric of the Centre, and maximise land use diversity throughout.

### Service Commercial

A strip of service commercial is proposed along Toreopango Avenue to cater for lower intensity, car based uses which are better located out of the centre core, and have perhaps lesser capacity (or likelihood) to integrate with non-car based travel. These include showrooms, trade centres and drive-through food outlets. This approach is entirely consistent with SPP4.2.



### 4.3 Residential

Residential development is regarded as a critical component of a thriving city centre in order to establish a permanent presence and sense of 'life' and ownership within it. A residential population also contributes to the viability of the Centre by providing immediate catchment to commercial operations and services, as well as providing further patronage for key infrastructure (including public transport) and amenities offered within the Centre. Inclusion of a component of residential uses within the Centre also maximises public access to amenities and enables a diversity of housing choice available within the broader area.

The DSP and YCLSP set a minimum density target of 50 dwellings per site hectare within the 400m catchment of the railway station, which was roughly calculated to equate to 3000 dwellings. Review of this target against the current Development Concept suggests potential for a slightly higher yield of potentially 3650 dwellings. The density target stipulated within YCLSP has been reflected and included within this Structure Plan.

Multiple dwellings are permitted throughout the Centre (excepting the Service Commercial precinct) with concentrations expected to be highest within the Mixed Use precinct. Active ground floor uses are promoted within Precinct 1, particularly in proximity to the station, with ground floor residential uses within this and other precincts required to include design features facilitating retrofit to commercial in the longer term once commercial viability is established.



#### 4.4 Built Form Principles

The Centre Concept is main street based. Front setbacks have been minimised throughout the Centre Core, Mixed Use and Sports and Health precincts with active street frontage promoted. In the small Service Commercial precinct along Toreopango Drive more flexible provision has been made for car parking within the front setback in recognition of the trading requirements of this type of development, and the character of Toreopango Drive, as a higher order vehicle route.

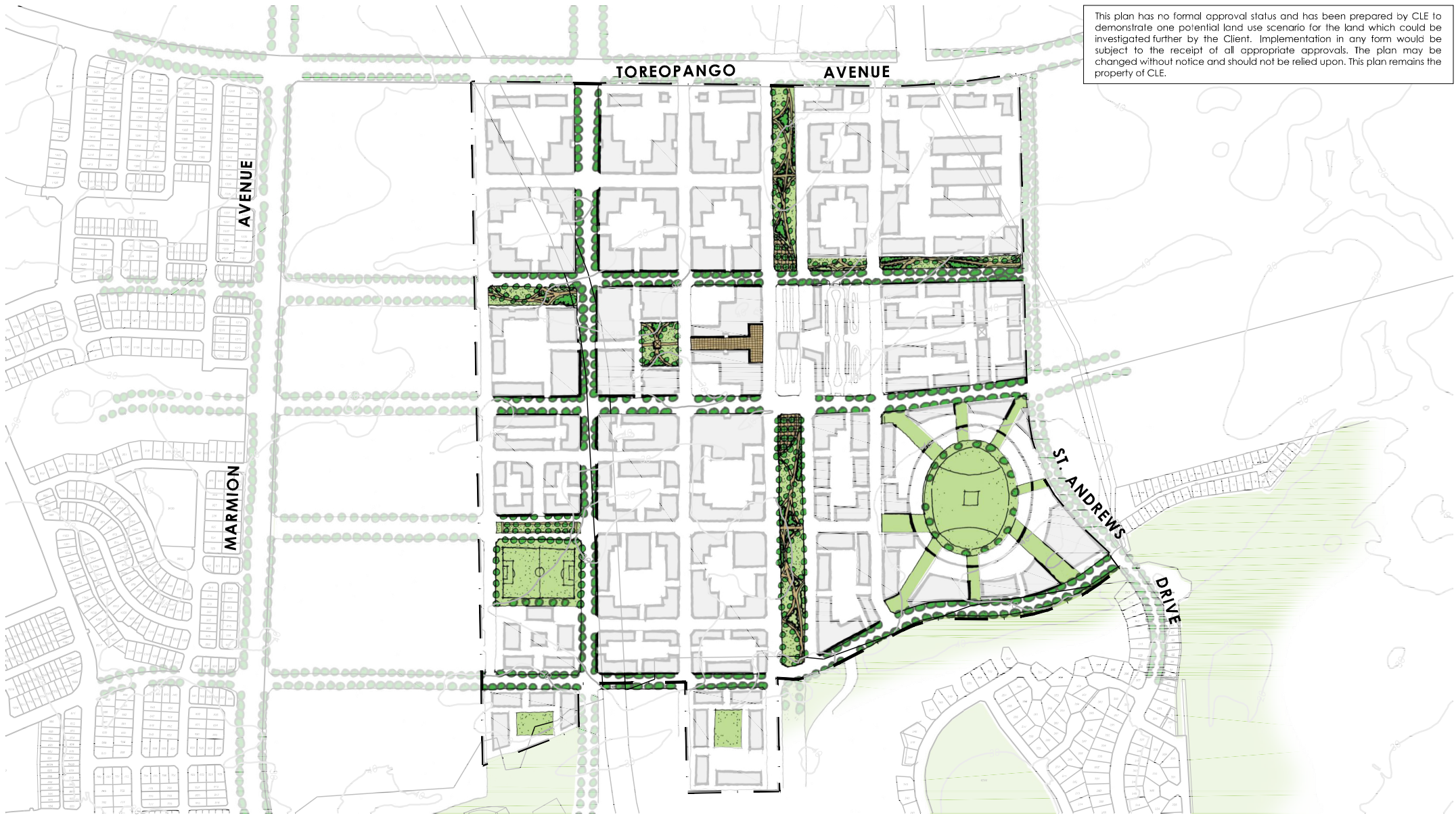
Buildings are required to provide their principal pedestrian access from the street, with parking and access coordinated between buildings in accordance with an approved strategy.

High proportions of glazing are required to ground floor building frontages to promote activation and surveillance of the street, with continuous building frontage promoted and required along the main street.

A minimum two storey height is required along the main street to achieve an urban character on this key street from inception. No maximum building height has been imposed.

Plot ratio controls are proposed to regulate the provision of floorspace across the centre and promote most intensive development within the centre Core. The plot ratio controls for the various precincts included in Part 1 will enable the floorspace targets stipulated in the DSP to be met but should be subject to periodic review to ensure that they keep pace with the market and promote investment.

The delivery of built form objectives will be further controlled through Detailed Area Plans, which will be required to both comply with the higher level built form direction provided by the ACSP and to elaborate on the detail to ensure a fully integrated outcome. Delivery of ACSP objectives will be defined even further through individual Development Applications within which detail of architectural character and site-specific building operation and initiatives will be delivered.



This plan has no formal approval status and has been prepared by CLE to demonstrate one potential land use scenario for the land which could be investigated further by the Client. Implementation in any form would be subject to the receipt of all appropriate approvals. The plan may be changed without notice and should not be relied upon. This plan remains the property of CLE.



#### 4.5 Open and Civic Spaces

Public and civic spaces (both public and private) are critical elements to creating an enjoyable and amenable city centre environment. These collectively provide spaces of interest in which to relax, explore, recreate and / or 'escape', and also for 'green relief' within the built up environment. Public spaces can accommodate formal and informal activities including markets, performance spaces, al fresco dining, entertainment and sports, and can operate at a range of scales.

As intensity of use and activity is a critical element of the City Centre, well linked and intimate spaces are important. Public open space provision across the YCLSP area has been specified at 10%, with the City Centre area providing a proportion of this. This is specified within the ACSP to be a minimum of 5% of the ACSP area, with a strong emphasis on the quality of spaces created. The complementary roles that different spaces can play in achieving open space objectives should also be recognised as well as acknowledging the role and value of privately provided open spaces.

A range of public open and civic spaces are proposed within the Centre including:

- A central park or square within the City Centre Core;
- The linear open space above the rail corridor;
- The oval associated with the primary school, which should be accessible to the public outside of school hours;
- The sporting arena, which should similarly be accessible when not in use, and will also incorporate a range of civic spaces and forecourts around it;
- Streetscapes and linear parks along these; and
- A series of smaller local parks and civic spaces (both public and private).

These spaces accommodate a range of users and demands including:

- Local residents;
- Business employees (eg on lunch breaks, or after work);
- Visitors to the Centre, exploring the centre, or taking a break from their shopping or business;
- Recreational visitors seeking to attend specific events within open space within the Centre;
- University, TAFE and school students; and
- Commuters travelling along the Principal Shared Path abutting the central open space spine.

**Table 2: Public Open Space Schedule** (all areas are in hectares)

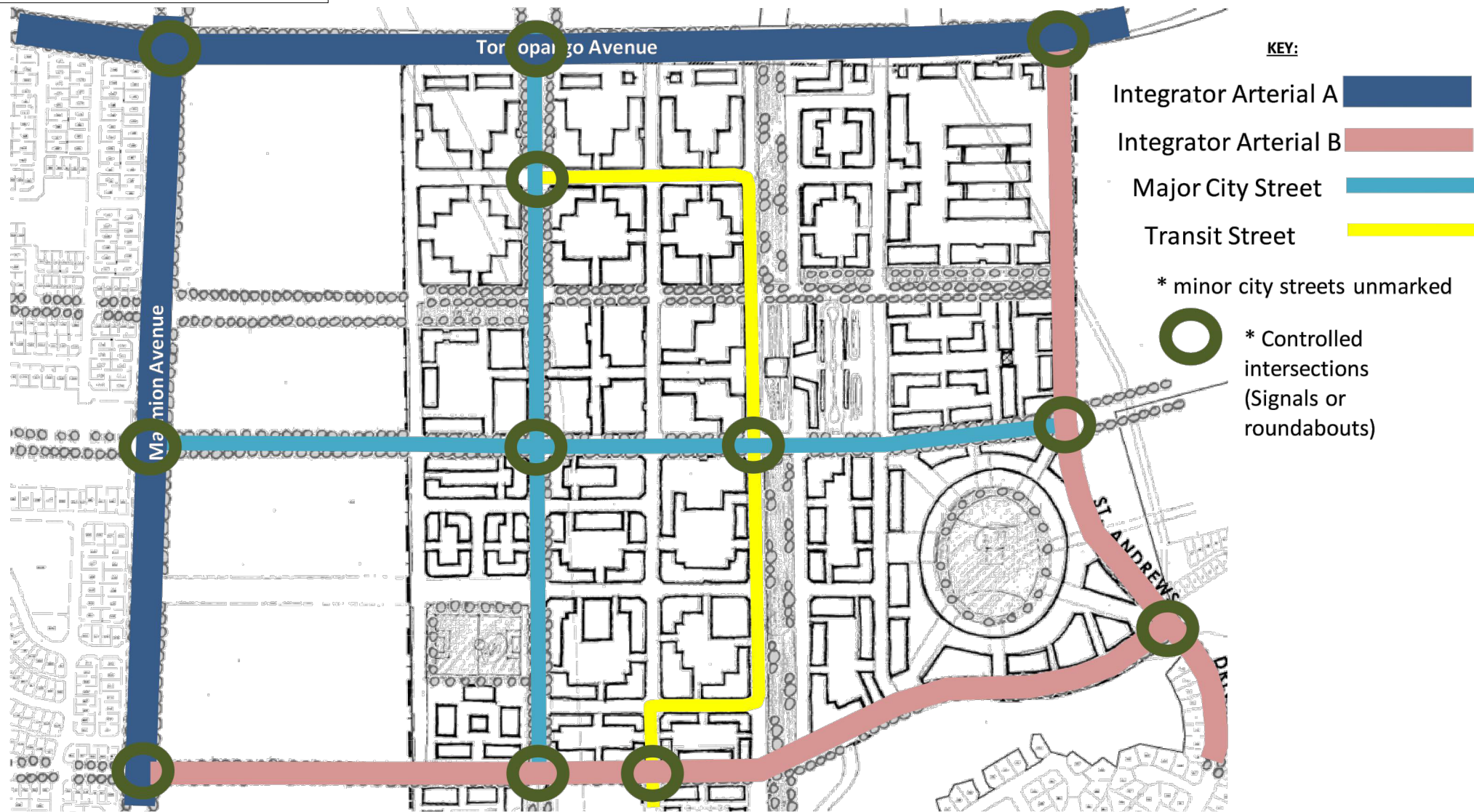
Item	Area	% of Site Area
Site Area	106.00	
Less Exclusions & Deductions		
Rail Reserve	4.20	
Toreopango Ave Widening	0.85	
Transport Interchange	2.32	
Primary School	3.64	
TOTAL DEDUCTIONS	11.01	
Gross Subdivisible Area	94.99	
POS @ 10%		
Public Open Space @ 10% (conventional residential standard)	9.50	10
May Comprise:		
Min 80% unrestricted POS	7.60	
Max 20% restricted POS	1.90	
Public Open Space @ 5% (as per ACSP standard)	4.75	5
May Comprise:		
Min 80% unrestricted POS	3.80	
Max 20% restricted POS	0.95	
Public Open Space Proposed		
Rail Park North	1.34	
Rail Park South	1.85	
Town Square	0.53	
Stadium Oval	2.72	
Shared School Oval	1.11	
Linear Open Space	1.89	
TOTAL POS PROPOSED (ha)	9.43	9.93



Whilst a number of these spaces are nominated on the Structure Plan and ensure that all sites within the ACSP area are within walking distance of POS, the details of open space areas are to be determined as planning progresses and context is better defined through the DAP process. To assist within this process and the detailed planning of public spaces, an Open Space Strategy has been prepared for the Centre (refer Appendix 7) which outlines the hierarchy, role and design considerations for these, as well as providing illustrative examples of these open space types.

Whilst details of public open space provision and credit will be determined at subdivision, Table 2 provides a breakdown of key open spaces shown within the Development Concept. This demonstrates how the 5% minimum requirement proposed for the YCC could be achieved.

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#### 4.6 Movement Network and Streetscapes

An Integrated Transport Strategy has been prepared for the Centre by Jacobs - refer Appendix 8. The Strategy:

- Outlines national and international trends in travel within cities;
- Defines assumptions based on these trends incorporated in transport modelling;
- Summarises modelled travel demand by both volume and mode share, over both the medium and longer term;
- Proposes a street hierarchy, networks and facilities for different modes and a series of street sections to reflect these; and
- Provides the framework and principles on which the required Centre Parking Strategy is to be based.

The Strategy demonstrates that the road network and urban form is capable of supporting the traffic volumes forecast at ultimate development, and optimising use of alternative transport modes.

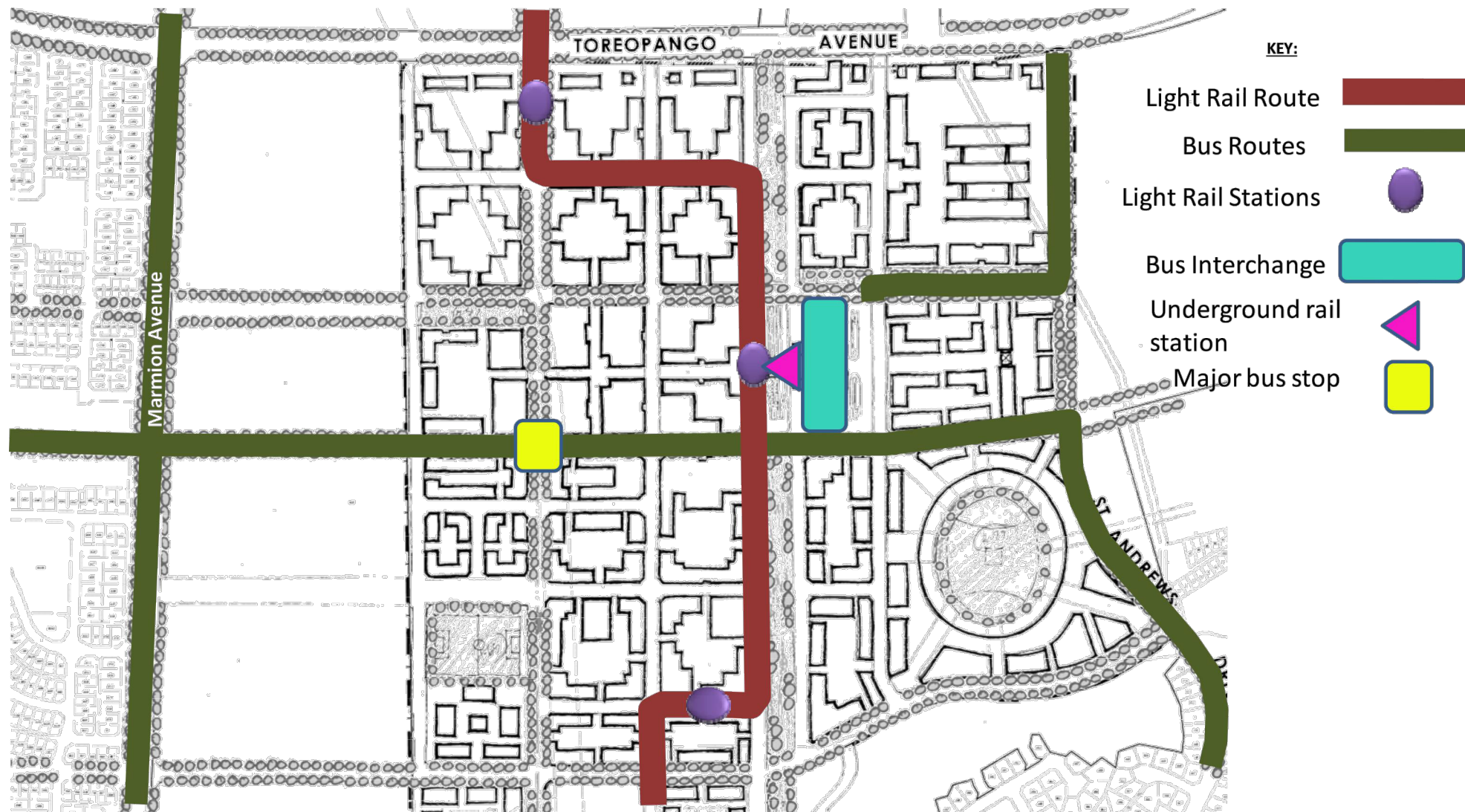
In summary, the Transport Strategy recommends that:

- An interconnected network of streets be provided to maximise route choice and spread traffic load;
- Intersection controls (in the form of traffic lights) internal to the Centre can be limited to three intersections, located on the higher order Major City Streets (refer Figure 16) with Give Way or Stop sign control appropriate to others;

- Parking should be coordinated across the City Centre through a detailed Parking Strategy to maximise efficiency of use, appropriate placement, management and operation in keeping with the broader principles applicable to the Centre. Site-by-site provision in the traditional approach is not appropriate;
- On-street parking is to be provided on most streets to maximise accessibility and provide side friction to traffic;
- Public transport is provided for in the form of the rail line and station, proposed light rail link and bus routes. These will interconnect at a central transit node provided at the railway station;
- 'Copenhagen-style' cycle lanes on the kerb be provided on designated streets (Major City Streets and above) to provide convenient, direct and accessible cycling whilst minimising conflict with both pedestrians and vehicles. Extension of the Principal Shared Path along the rail alignment and through the Centre will also accommodate provide for regional movement to and through the Centre;
- Wide footpaths are proposed on both sides of most streets to accommodate high volumes of pedestrian movement, provide comfort and adequate width for shade trees;
- Street sections and layouts will be tailored to the demands on each road, balancing traffic with urban design considerations. Indicative sections for many street types are provided in Appendix 9.

The Strategy is strongly focused on provision of more balanced transport usage in line with the direction of the DSP, and therefore seeks to ensure full integration of the various modes.

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#### 4.6.1 Road Hierarchy and Traffic Volumes

To ensure robustness, the Strategy takes a conservative approach to ensure that sufficient road capacity is available to accommodate ultimate volumes. The proposed City street hierarchy is outlined of Figure 16. A series of street sections illustrating one potential layout is provided at Appendix 9.

The Strategy concludes the following key points:

- There could be up to 180,000 trips to and from the Yanchep City Centre and immediately surrounding areas at ultimate development (2050+);
- Between 50,000 and 60,000 of these trips are expected to be by a car driver which could result in peak car travel of about 5000 vehicles per hour;
- Daily travel by other modes has been estimated to include:
  - 22,000 trips by car passenger;
  - 40,000 by public transport;
  - 45,000 by foot; and
  - 16,000 by cycle.
- With the exception of Marmion Avenue (which is outside the Centre Structure Plan area) and Toreopango Drive, all roads are anticipated to carry traffic volumes of less than 15,000vpd;
- These volumes of traffic can be accommodated within one vehicle lane travelling in either direction, facilitating more pedestrian friendly streets.

#### 4.6.2 Public Transport

The ACSP will facilitate multiple modes of public transport, including heavy (passenger) rail, light rail, and feeder bus services. The Yanchep City rail station will serve as a multi-modal transit node, providing a centralised hub for the transfer of passengers from one mode to another, as well as a key gateway to the City Centre. Further detail on each of the proposed public transport modes is outlined below.

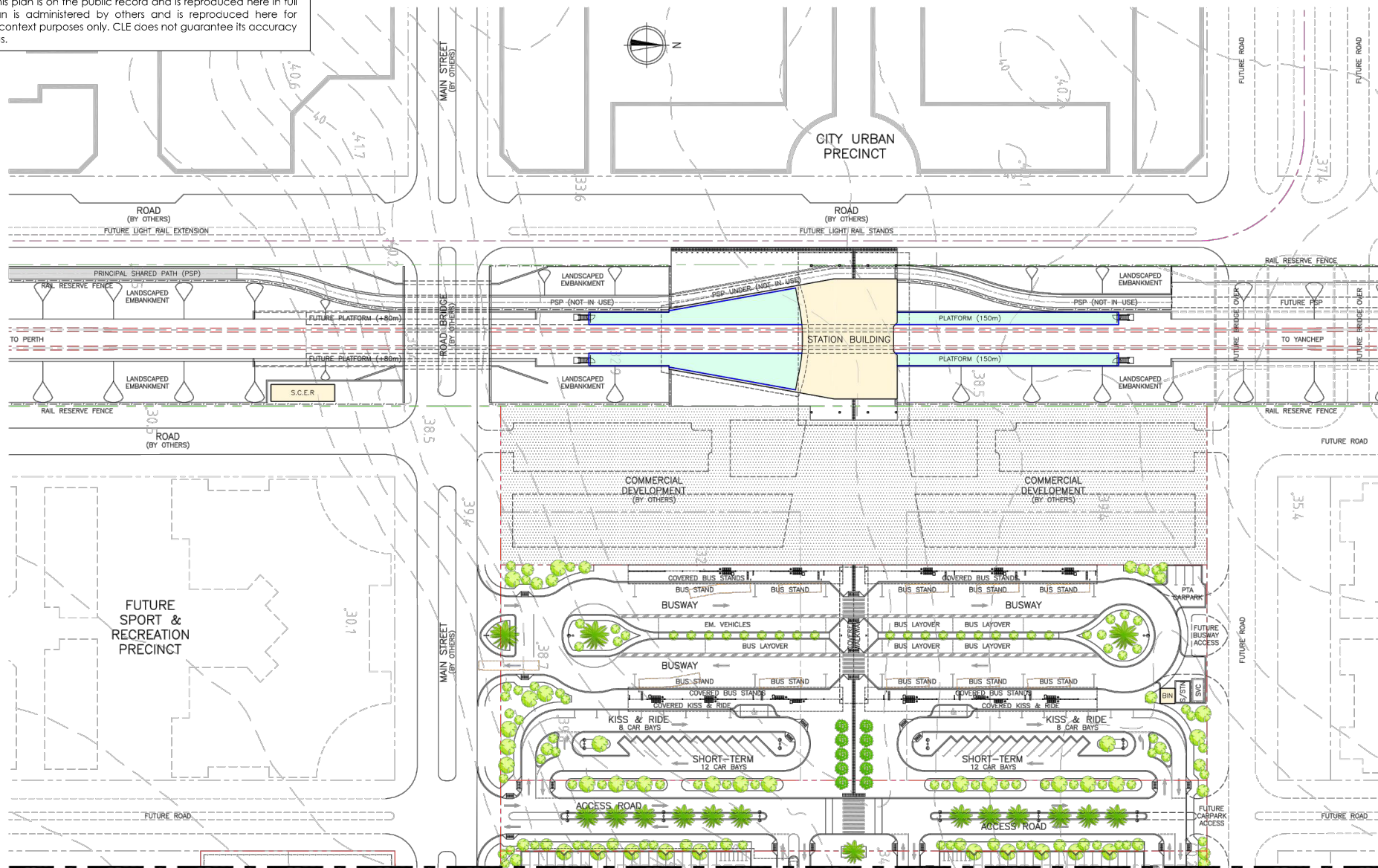
##### Passenger Rail

Extension of the existing passenger rail service and construction of the Yanchep City Station is assumed to occur within the medium term - ideally by 2020, but certainly before 2031. Early provision of the rail is critical to supporting the establishment of the Centre and realisation of DSP targets, especially employment self-sufficiency. The Station provides an anchor point to the Centre, as well as critical infrastructure to attract businesses to the area. The rail and station will also attract a wide range of visitors, initially in the form of commuters, as well as a service to the growing residential catchment. Initially, use is likely to be skewed towards commuters leaving the Centre to access employment however, as employment and services within the Centre grow, the balance will be reversed.

The placement of the rail underground avoids the constraint to movement that the line could otherwise create across the Centre, and will limit acoustic impact on nearby sensitive land uses. The rail corridor can then be used as parkway and cycle linkage.

# Yanchep City Centre Activity Centre Structure Plan Part Two - Explanatory Report

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### Light Rail

Consistent with the DSP, the rail station is integrated with the north-south fixed route (light rail) alignment, which provides a more localised service, and extends north to service the larger DSP area.

Additional light rail stops within the City Centre area provide convenient access to and from the university precinct, retail and business precincts, and into and out of the Centre. A stop is identified abutting the rail station on the western side, with two further stops provided north and south of the precinct, within 400m (or less) of the central station. This will be confirmed as part of detailed transport planning.

Initial service along the route might be via buses, with any surplus road reserve area available for interim uses such as pop up stores, street art and landscaping.

### Buses

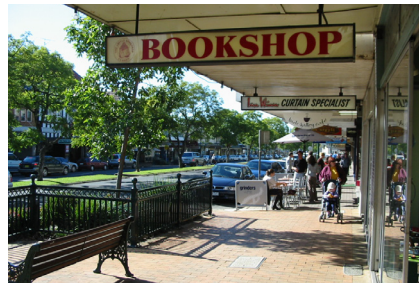
Bus routes are proposed to provide a supplementary service into the Centre, and connection to the rail and light rail links. A bus interchange is proposed on the eastern side of the rail station accessed by almost all bus routes along the single east-west aligned Major City Street. Use of this centralised route through the Centre allows for provision of bus priority along it, improving service, and makes use of services simpler to navigate for passengers.

### Transport Interchange

All public transport modes will feed into a multi-modal transport interchange. Preliminary discussion regarding the configuration of this has commenced with the Public Transport Authority (PTA) with a street-based stop for the light rail proposed on the west side of the rail station and a 'dog bone' layout for buses proposed on the east. A preliminary layout concept is shown at Figure 17.

### Park n Ride

Initial provision for transit parking of around 1,000 bays is anticipated as a necessary interim step, whilst the Centre and station establish, and ahead of the future 'park n ride' station proposed by the DSP north of the centre. The placement of some of the interim transit parking at the western end of the main street has been touted, to encourage pedestrian traffic and, potentially, patronage along it. The detail of 'park n ride' provision will be further negotiated with relevant state and local government agencies as the timing for delivery of the rail station becomes clearer.





#### 4.6.3 Pedestrian and Cyclist Provision

Pedestrian and cyclist volumes within the Centre are projected to be substantial. Provision of infrastructure to accommodate this use, reducing congestion and car dependence and creating a pleasant 'walkable' centre environment are both necessary and desirable.

Generous verges of between 4.5m and 7.0m will accommodate a footpath on either side of the street and street trees. On designated routes, verges will also provide separate cycle lanes travelling parallel with abutting vehicles, but off-street. In developing street sections, consideration has been given to the quality of the environment being created, its capacity to provide a comfortable environment, shade, and separation. Street widths proposed are sufficient to accommodate their role and range of functions but are not excessive to the point of creating an unnecessarily wide separation between the two sides of the street, and promoting higher vehicle speeds.

Street sections, treatments and layouts are subject to detailed design in consultation with transport agencies and the City as part of implementation process.

Provision for cyclist parking and end of trip facilities will form a key component of the City Centre Parking Strategy.

In addition to creating convenient and attractive environments for walking and cycling further initiatives can be introduced including provision of electric bikes available for hire or use throughout the Centre.

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#### 4.7 Water Management

As documented in the Local Water Management Strategy, the site's soils and groundwater separation are well suited to Water Sensitive Urban Design, in line with WAPC and Department of Water Guidelines.

The Engineering Servicing Report prepared for the Centre (provided at Appendix 4) outlines the principles applicable to the Centre and how these are likely to be delivered in practice, through detailed Urban Water Management Plans (UWMP) at subdivision. This includes:

- Maximising stormwater recharge of the shallow aquifer through the dispersion and infiltration of runoff. Methods could include porous paving, diversion of runoff into median or verge swales / landscaping, drainage soakwells, infiltration basins and underground infiltration units;
- Optimising the quality of water recharge via pollution controls (both structural and non-structural);
- Integrating water management into the design of the public and private realms (including streetscapes and public and private open spaces);
- Promoting sustainable use of water resources.

Drainage collection and conveyance will be designed to cater for storm runoff up to a 1 in 5 year recurrence interval. Infiltration basins will be designed to store runoff from up to 1 in 10 year storms, with roads and POS designed to cater for the surface overflow for more severe storms. Building pad levels will be set at least 300mm above the 1 in 100 year flood or storage level.

Use of underground infiltration units is likely to be required to supplement aboveground facilities because of the relative intensity of development being promoted within the Centre.



## 4.8 Educational Facilities

### Tertiary Facilities

Both the DSP and YCLSP identify potential for inclusion of tertiary education facilities within the City Centre, with a University and TAFE campus proposed. These tertiary facilities will be street based campuses, and will integrate with other non-educational uses within the Centre. Proactive engagement with potential university partners has already been initiated by the landowner to further explore opportunities and facilitate earlier delivery of these facilities.

The ACSP is consistent with the vision of the DSP in that it identifies provision of street based tertiary education facilities with an urban character as a key objective of Precinct 2, and provision for these facilities as an overall objective within the Centre. Clause 5.3.2.2 of Part 1 of the ACSP requires provision for these within Precinct 2, with the precise location and detail to be confirmed as part of a DAP.

### Primary School

The YCLSP indicates location of a primary school within the City Centre. The primary school is intended to service residents within the City Centre (recognising that these are likely to house a lower proportion of school aged children than single residential lots), and the abutting residential area to the west, up to Marmion Avenue.

Because of its context within the City Centre and the importance of achieving land use efficiency within this area, a tighter format school is anticipated than the traditional 4ha model, with the Indicative Development Concept (Figure 14) illustrating a notional 2.5ha site abutting a 1ha oval.

More consolidated models like this currently operate within the metropolitan area including Subiaco and Highgate Primary Schools which successfully operate on approximately 3ha and 1.8ha respectively.

The principle of an urban school campus has been discussed with representatives of the Department of Education, however the details of the precise location and size of the school is to be defined following further exploration of options at the time of either need for the school, or when development within the Precinct requires the detailed definition of the school site parameters in accordance with Clause 5.3.2.2 of the ACSP Part 1.

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#### 4.9 Community Infrastructure

Community infrastructure requirements have been considered in the preparation of both the DSP and the YCLSP (which included a Community Facilities Needs Assessment), and are accommodated within the ACSP. The range of facilities for which potential demand has been identified include:

- A primary school with shared use oval: proposed within the western portion of the City Centre area;
- A regional library: proposed to be accommodated as part of a shared use facility with the university;
- An indoor recreation and / or performing arts facility: also flagged to be accommodated within the university precinct under a shared use arrangement;
- Health facilities including a 8-12ha hospital / health campus and an infant health clinic: proposed to be accommodate within the health precinct in the east of the centre;
- A child care centre: which can be privately provided anywhere in the Centre, based on demand, with potential to co-locate with or adjoin the school;
- A 'shop front' community centre to accommodate community meetings and activities: this is best located with reference to other centres outside the City Centre, most likely in the west of the Centre, and potentially collocated with the Town Square or primary school. Its 'Civic' use is permitted or discretionary throughout the Centre;
- A church or churches: which use can also be accommodated throughout the Centre; and
- An employment services facility: for which a wide range of locational options also exist, but which would benefit from high accessibility, potentially within Precinct 1.

The primary school and oval would typically be given up free of cost at subdivision, or acquired and provided as required, with costs recouped through levies on subdivision.

The shared use library and recreation infrastructure proposed within the university have been supported in principle but are subject to further definition and negotiation. This will need to occur in conjunction with the identification of the university provider, and detailed campus planning, with funding arrangements secured through a formal agreement. The facility can, however, be accommodated within the City Centre area both through the zoning and development controls proposed, and the land area available to accommodate the various land uses and facilities identified.

Items such as child care centres, churches and employment centres are typically acquired by the relevant private or government entity as a need is identified and funding becomes available. The Centre provides more than sufficient space and flexibility to accommodate these facilities with no significant constraints requiring their pre-identification on the plan.

In summary, the plan allows for all identified infrastructure to be accommodated within it, meeting community need and enlivening the Centre, with further details to be determined in conjunction with the City as part more detailed area planning, and negotiation on joint facilities.

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#### 4.10 Economic Development and Employment

The ACSP identifies suitable land for a wide range of employment generating land uses. Detailed modelling indicates that the ACSP is capable of providing the 15,000 jobs envisaged by the DSP at ultimate development.

Employment self sufficiency is a key consideration for urban growth within the north-west coastal corridor, and the DSP establishes a self sufficiency target of 75% across the whole DSP area.

Employment targets and approaches to economic development have been explored and defined through a range of documents and activities including the DSP and Syme Marmion report and the subsequent YCLSP. Strategic initiatives have been undertaken through the Strategic Cooperation Agreement (SCA) between the WAPC, State Government, Tokyu Corporation, City of Wanneroo and Yanchep Sun City Pty Ltd, and the IDEAS project.

The Employment Strategy (refer Appendix 6) outlines how the employment targets stipulated by the DSP can be accommodated within the Centre, and models potential staging based on continued growth within and around the Centre feeding demand, and boosted by public and private investment in key facilities. The Employment Strategy concludes that:

- The ACSP provides an appropriate framework to ensure that the DSP employment self-sufficiency target (as distinct from a self-containment target) of 75% can be met.
- Continued pursuit of the existing suite of strategic measures to attract employment generating land uses to the area is necessary to achieve this target.

- The City Centre will be critical in achieving DSP objectives through provision of:
  - a diverse range of goods and services;
  - a superior business environment;
  - superior locations for major institutions;
  - an exceptional physical and social environment; and
  - a range of housing and lifestyle opportunities.
- In addition to the population based businesses that will follow residential growth to service it, the Centre (and abutting Enterprise Precinct) can attract the following knowledge based industries:
  - Health and biosciences;
  - Environmental sciences and technology;
  - Information and telecommunications technology
  - Advanced manufacturing; and
  - Clean technology.
- Creation of a very attractive environment including investment in major public infrastructure will however, be necessary to attract footloose businesses, for which many locations are competing.
- Ultimate employment projections of 15,000 jobs for the City Centre area can be realised within the long term (nominally 50 years).

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- The land areas provided within the Centre structure plan are sufficient to accommodate the employment estimates / targets established under the DSP.
- Achievement of self sufficiency targets will require:
  - Development of residential land in and around the Centre at the maximum rate possible;
  - Development of the City Centre at the maximum rate possible;
  - On-going active liaison with high-level decision-makers responsible for provision of significant cultural facilities;
  - On-going active liaison with all levels of government to promote provision and extension of infrastructure, services and facilities to the City Centre, with particular priority on the railway; and
  - Development and implementation of an active marketing campaign at the appropriate time to attract business investment.

#### **4.11 Service Infrastructure**

The review of engineering services has been undertaken (refer attached Appendix 4), which confirms that the City Centre is capable of being serviced with essential infrastructure. This includes sewer, water, electricity, telecommunications and gas, all of which are available via extension of existing service infrastructure within the locality.

Sufficient capacity exists within the current infrastructure to accommodate initial stages of development, with upgrades available to meet additional demand within the medium term as development progresses. Robustness for growth and expansion of services is critical to the City Centre as land use intensifies.

The following summarises the findings of the Engineering Service Report.

##### 4.11.1 Waste Water

The City Centre area will initially be serviced by the temporary pump station located on the corner of Bloodwood Crescent and Marmion Avenue, which was recently upgraded to a type 180. It includes 7.5k of Pressure Main to the new Alkimos Wastewater Treatment Plant to the south. The pump station will ultimately require further upgrade once flows increase in the locality within the medium term.

Ultimate planning for the City Centre area is for all effluent to be directed south via a DN1200 trunk gravity sewer along the eastern side of Marmion Avenue extrusion with a series of gravity mains feeding into it.

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#### 4.11.2 Water Supply

The initial stages of the City Centre will be connected to a DN600 steel water main which has recently been extended to the intersection of Marmion Avenue and Yanchep Beach Road and will also connect to the existing mains to the west within Capricorn Village. These extensions from existing mains are considered sufficient to supply the Centre.

A new Two Rocks reservoir storage facility is planned by the Water Corporation north of the City Centre. This will ultimately link with the Yanchep storage tanks to supply the entire Yanchep Two Rocks area. Some of the mains required to link these two reservoirs will traverse the City Centre and will be funded by the Water Corporation.

#### 4.11.3 Power

Previous studies within the locality have confirmed that the existing network within Yanchep Beach Road has spare capacity to support the initial stages of development of the City Centre.

Western Power has undertaken a broader servicing planning study to extend the 132kV power lines north from Alkimos to the Yanchep Two Rocks area that will provide service to the entire City Centre area beyond the spare capacity of the existing network. Two options are being considered, as follows:

- Option 1: extension of the existing 132kV overhead power lines from the Romeo Road sub-station within a service corridor adjacent to the western boundary of Mitchell Freeway reserve;

- Option 2: extension of the existing 132kV overhead power lines from the Pinjar sub-station across intervening rural properties to the Mitchell Freeway reserve, then south along the reserve.

Either option is capable of sustaining the demands of the City Centre.

#### 4.11.4 Telecommunications

An existing infrastructure agreement between the Yanchep Beach JV and Telstra allows for telecommunications infrastructure to be provided to the City centre via the extension of the existing network in the vicinity.

Telstra has recently upgraded the exchange in Glenrothes Crescent located south of the City Centre, which allows it to receive additional fibre optic cables.

#### 4.11.5 Gas

Reticulated gas is not considered an essential service. The proponent is nevertheless proposing to provide gas infrastructure to the development.

#### 4.11.6 Siteworks and Earthworks

A preliminary bulk earthworks design indicates that earthworks will be predominantly cut to fill to recontour to achieve acceptable grades for urban development. This will incorporate a minimum RL30m to achieve sewer service.

Preliminary geotechnical investigations undertaken over the area indicate that excavated fill (ie 'cut') from within the site is suitable for use as structural fill elsewhere.

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#### 4.12 Development Contributions

The City of Wanneroo has recently amended its District Planning Scheme to provide for Development Contributions for community infrastructure. The Yanchep Two Rocks Development Contribution Area (identified as DCA 2 on the Scheme map) has been established to implement the 'Yanchep Two Rocks Development Contribution Plan – Community Facilities' outlined within Schedule 18 of the Scheme. This provides for a per dwelling contribution requirement towards a range of district community facilities including:

- A Surf Lifesaving Club at Yanchep Lagoon;
- Coastal Node Facilities at Capricorn Coastal Node; and
- Public Open Space (Active) in (or abutting) the Yanchep Metropolitan (City) Centre.

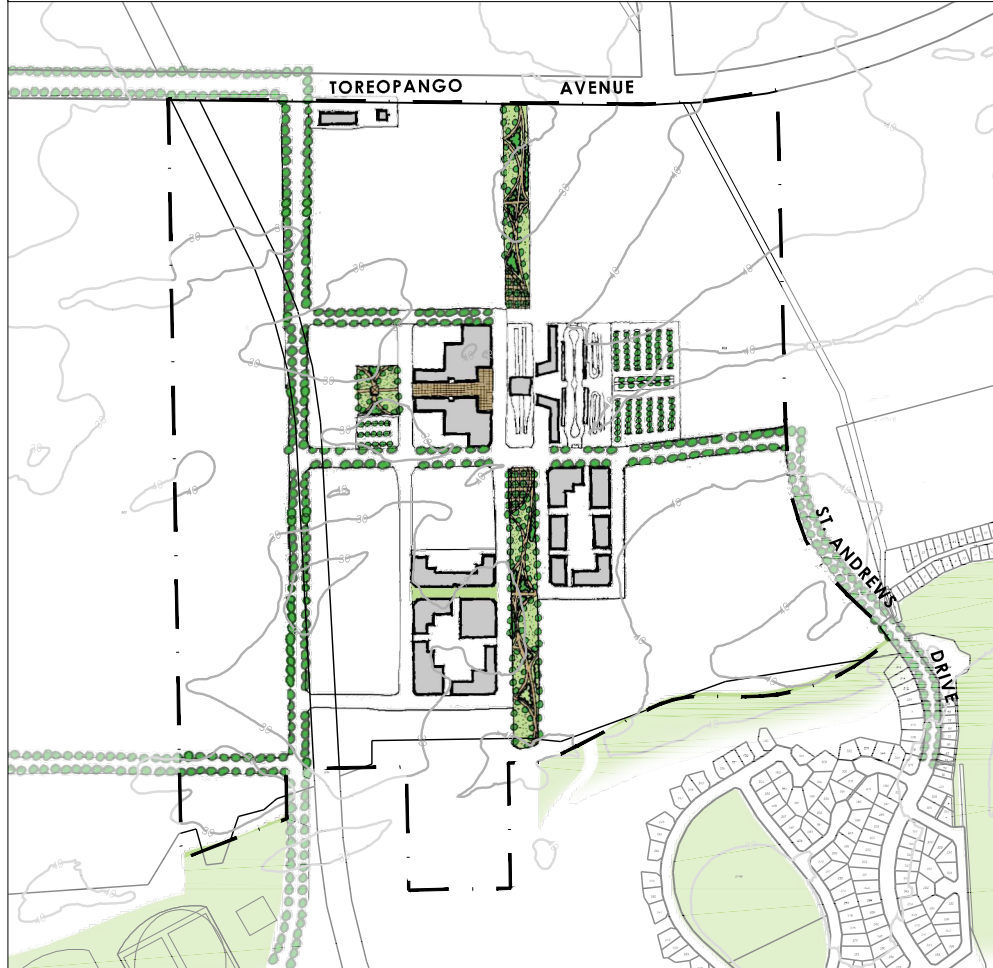
Contributions in accordance with the Scheme requirements would typically be payable upon subdivision of the land.

Other contributions may practically be achieved through, for example, the provision of shared purpose facilities within the planned university. The timeframe and details for this remain uncertain and are likely only to become apparent upon confirmation of a university development partner and advancement of the campus planning. External funding for additional facilities may also become available in due course through, for example, state or federal government grants.

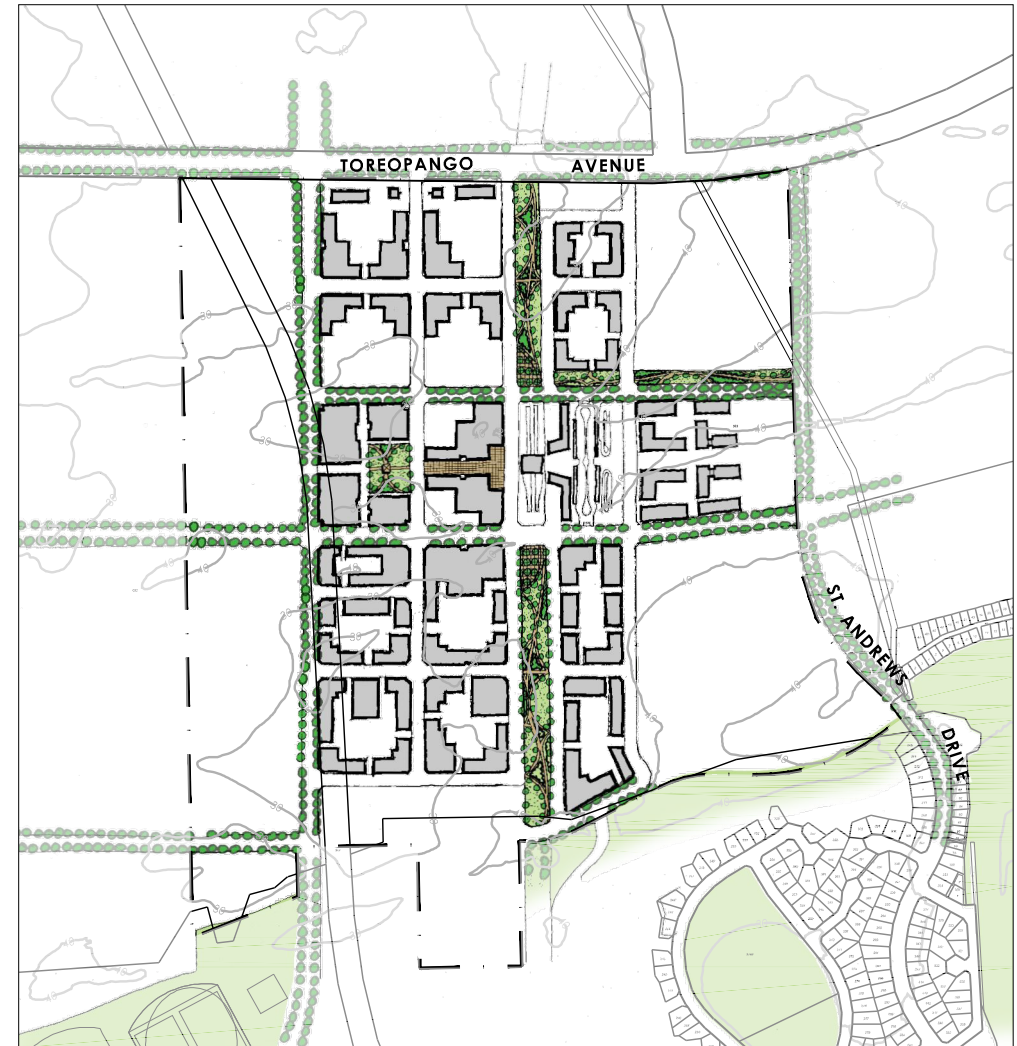
The landowners have also been pursuing separate negotiations with the City to achieve joint objectives (in keeping with the principles of the Cooperation Agreement and their shared interests), with the current construction of the District Open Space to the south of the Centre providing a tangible outcome of less formal processes.

Service infrastructure provision will be coordinated through the usual mechanisms established by service agencies and do not require any formal contribution scheme or additional mechanisms given the consolidated ownership of the site and surrounding land parcels.

This plan has no formal approval status and has been prepared by CLE to demonstrate one potential land use scenario for the land which could be investigated further by the Client. Implementation in any form would be subject to the receipt of all appropriate approvals. The plan may be changed without notice and should not be relied upon. This plan remains the property of CLE.



**RAIL + 5 YEARS**



**RAIL + 25 YEARS**

INDICATIVE DEVELOPMENT CONCEPT - POSSIBLE STAGING





#### 4.13 Implementation and Staging

As is acknowledged within the DSP and YCLSP, development of the City Centre to its 'ultimate' form is likely to take many years, and depend on a complex range of factors, including:

- Rate of development of the Centre catchment;
- Provision of key infrastructure (including the rail extension and Yanchep City Rail Station);
- Service demand, strategic priorities and budget allocation for major services (including tertiary education facilities and major health care providers); and
- Private investment decisions.

Discussion and negotiation with key stakeholders including the State Government, PTA, health agencies and universities, amongst others, is on-going.

The landowners' intention to retain ownership of the site and coordinate development through leasehold or similar mechanisms provides a significant and useful mechanism to coordinate development in conjunction with the Centre Structure Plan, though the Plan does not depend on this.

Initial development is likely to occur within the City Centre Core around the railway station precinct and main street to provide a central point of focus, and establish / consolidate this precinct. 'Infill' development around this is then likely to occur, with some satellite development to meet demand for, for example, service commercial along Toreopango Avenue, as the residential development front moves north, and to provide suitable sites for major facilities such as tertiary education facilities.

An indicative staging sequence is provided in Figure 19 illustrates how development might evolve towards the Ultimate Concept provided at Figure 14.

Construction of the District Open Space to the south of the Centre is currently underway, with construction of the key road access linking this with Marmion Avenue and through to the Centre being considered.

In addition to the staged horizontal expansion of the City Centre, its development may be staged vertically and / or in terms of intensity. For example, initial stages of development might be low rise and / or cover only portion of a street block, with further storeys and/ extensions to the building footprint around the perimeter of the block occurring as future 'infill' or redevelopment. This reflects the manner that city centres have traditionally evolved, and maximises potential for early investment and establishment of the Centre. The framework provided for within the ACSP facilitates this form of staged development, providing for the coordination of issues such as 'ultimate' access, parking and land use mix to be addressed within Detailed Area Plans even within early stages of development. This planning framework facilitates the evolution of the Centre over time whilst optimising the built form, land use and transport outcomes available in the interim.