



## AGREED LOCAL STRUCTURE PLAN

### STRUCTURE PLAN NO. 21A

#### PART 1 & 2





## AGREED LOCAL STRUCTURE PLAN

### STRUCTURE PLAN NO. 21A

#### PART 1

**BANKSIA GROVE LOCAL STRUCTURE  
PLAN  
PART 1  
(AS AMENDED)**

**ADOPTED: 16 JUNE 2021**

This structure plan is prepared under the provisions of the City of Wanneroo District Planning Scheme No. 2.

IT IS CERTIFIED THAT THIS STRUCTURE PLAN WAS ADOPTED BY RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION ON:

28 January 2008

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In accordance with Schedule 2, Part 4, Clause 28 (2) and refer to Part 1, 2. (b) of the *Planning and Development (Local Planning Schemes) Regulations 2015*.

Date of Expiry: 19 October 2027

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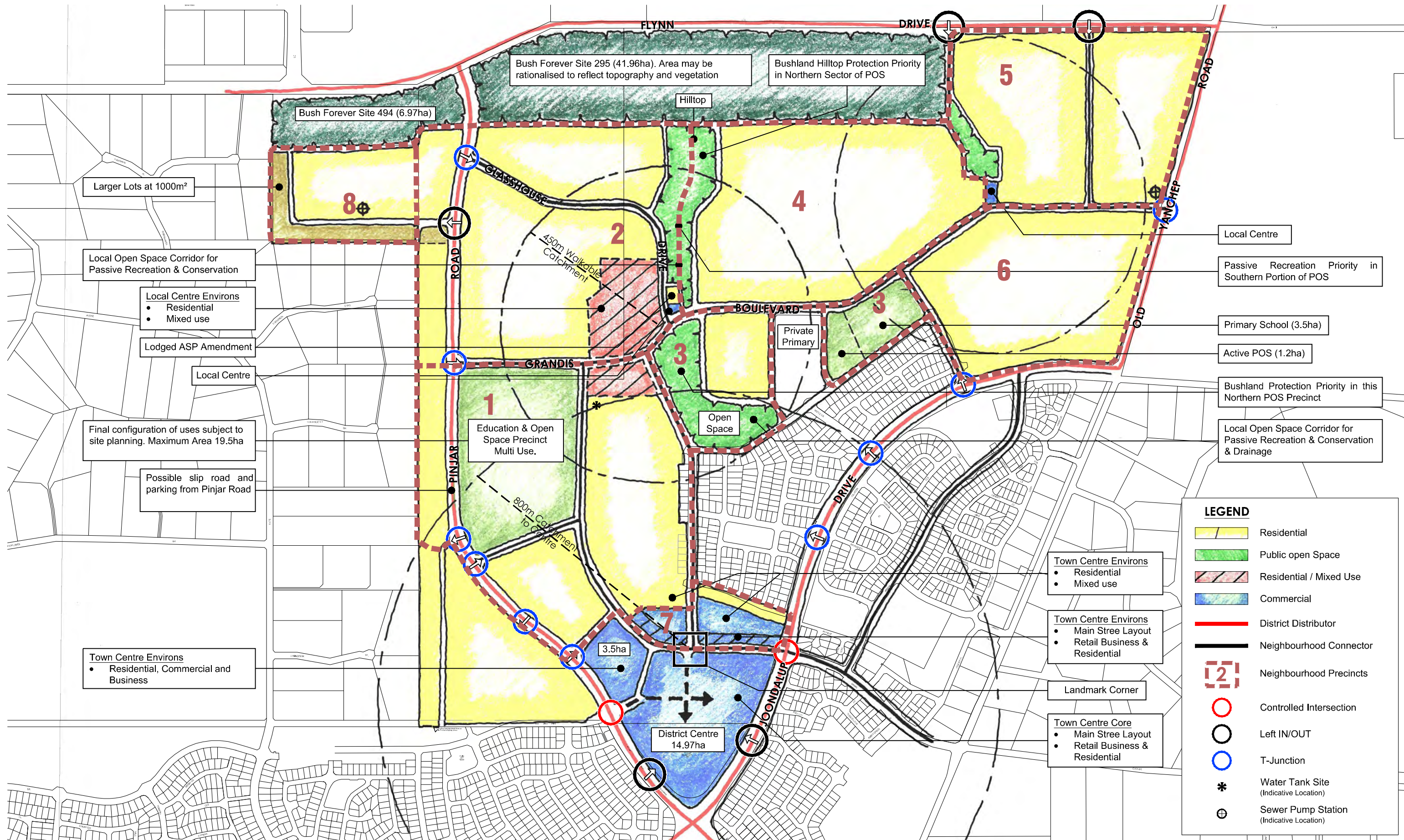
# **RECORD OF AMENDMENTS MADE TO THE BANKSIA GROVE**

## **AGREED STRUCTURE PLAN NO. 21A**

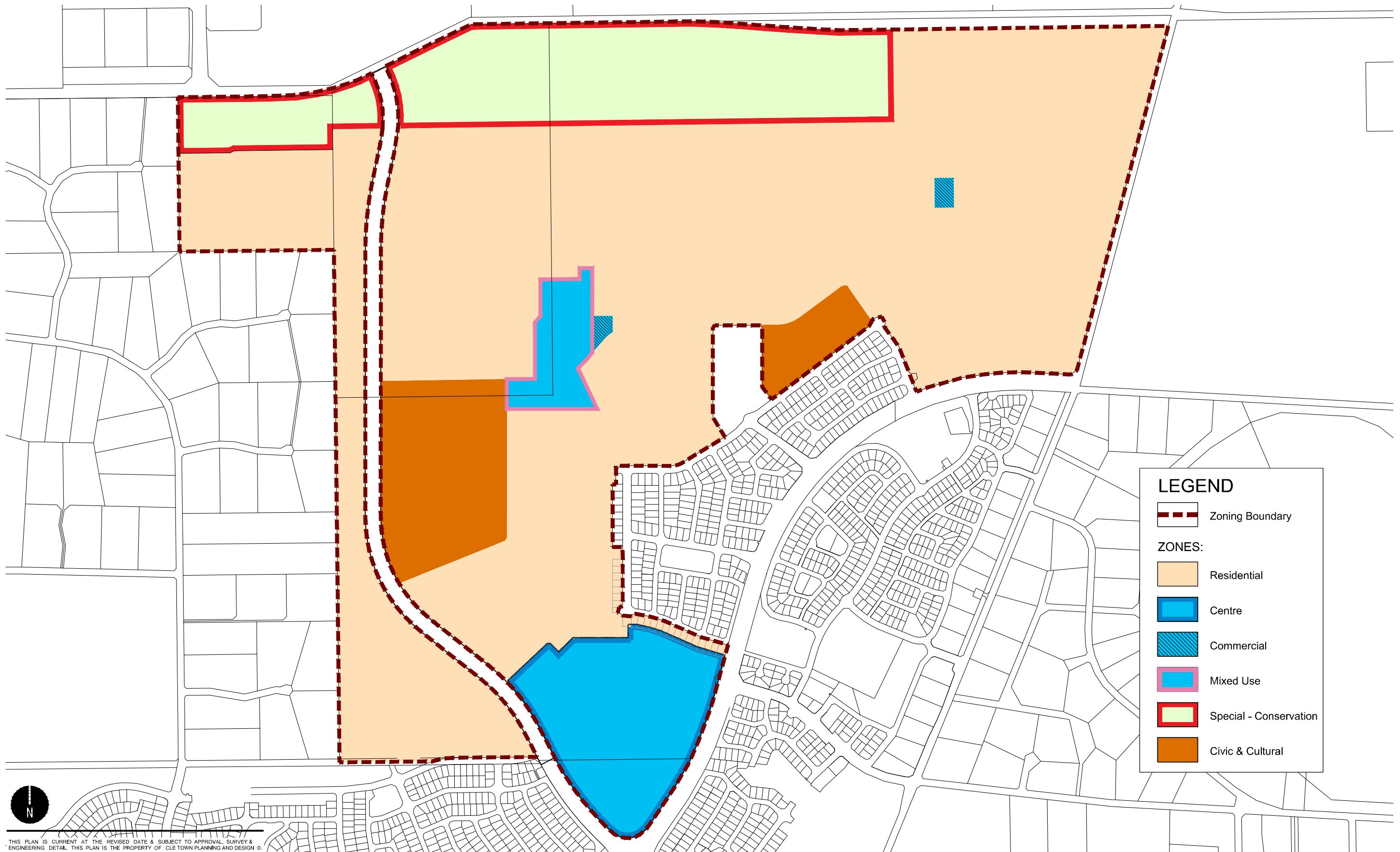
Amendment No.	Description of Amendment	Finally Endorsed Council	Finally Endorsed WAPC
1	Relocates the eastern Primary School site to the west and collocates it with a new active Public Open Space Site.  Consolidates the central and eastern local centres into one local centre zoned 'Commercial' and recodes the two former Local Centre areas from R60 to R30/R60; and,  Rezones the 'Commercial' land directly west of Glasshouse Drive from 'Commercial' to 'Mixed Use';	26.6.12	17.10.12
2	Modifies Map 1 'Agreed Local Structure Plan' by rezoning a portion of the 'Special Residential' zone to 'Residential';  Modifies Map 2 'Zoning Plan' by rezoning a portion of the 'Special Residential' zone to 'Residential';  Modifies Map 3 'R-Code Plan' by recoding a portion the 'Special Residential (SR2)' area from 'Special Residential (SR2)' to 'R10'; and  Inserts Clause 8.7 'Development Controls for R10 Coded Lots' into the Part 1 - Implementation.	15.11.17	16.11.18
3	Amending Map 1 'Agreed Local Structure Plan' to show Lot 802 Glasshouse Drive as 'Residential'; and  Amending Map 2 'Zoning Plan' by rezoning Lot 802 Glasshouse Drive from 'Commercial' to Residential'.	-	07.06.19

Amendment No.	Description of Amendment	Finally Endorsed Council	Finally Endorsed WAPC
4	<p>Modifies Map 1 'Agreed Local Structure Plan' by rezoning a portion of the 'Special Residential' zone to 'Residential';</p> <p>Modifies Map 2 'Zoning Plan' by rezoning a portion of the 'Special Residential' zone to 'Residential';</p> <p>Modifies Map 3 'R-Code Plan' by recoding a portion the 'Special Residential (SR2)' area from 'Special Residential (SR2)' to 'R10'.</p> <p>Modifies Map 3 'R-Code Plan' by creating two sub-precincts of R10 density, namely 'R10-Precinct A' and 'R10-Precinct B'.</p> <p>Inserts new text under Clause 8.7 'Development Controls for Lots Coded 'R10-Precinct A' into the Part 1 – Implementation Section. New text distinguishes 8.7 as being specific to newly created 'R10-Precinct A'.</p> <p>Inserts Clause 8.8 'Development Controls for Lots Coded 'R10-Precinct B' into the Part 1 – Implementation Section.</p>		28 June 2021









**LEGEND**

Zoning Boundary

**ZONES:**

Residential

Centre

Commercial

Mixed Use

Special - Conservation

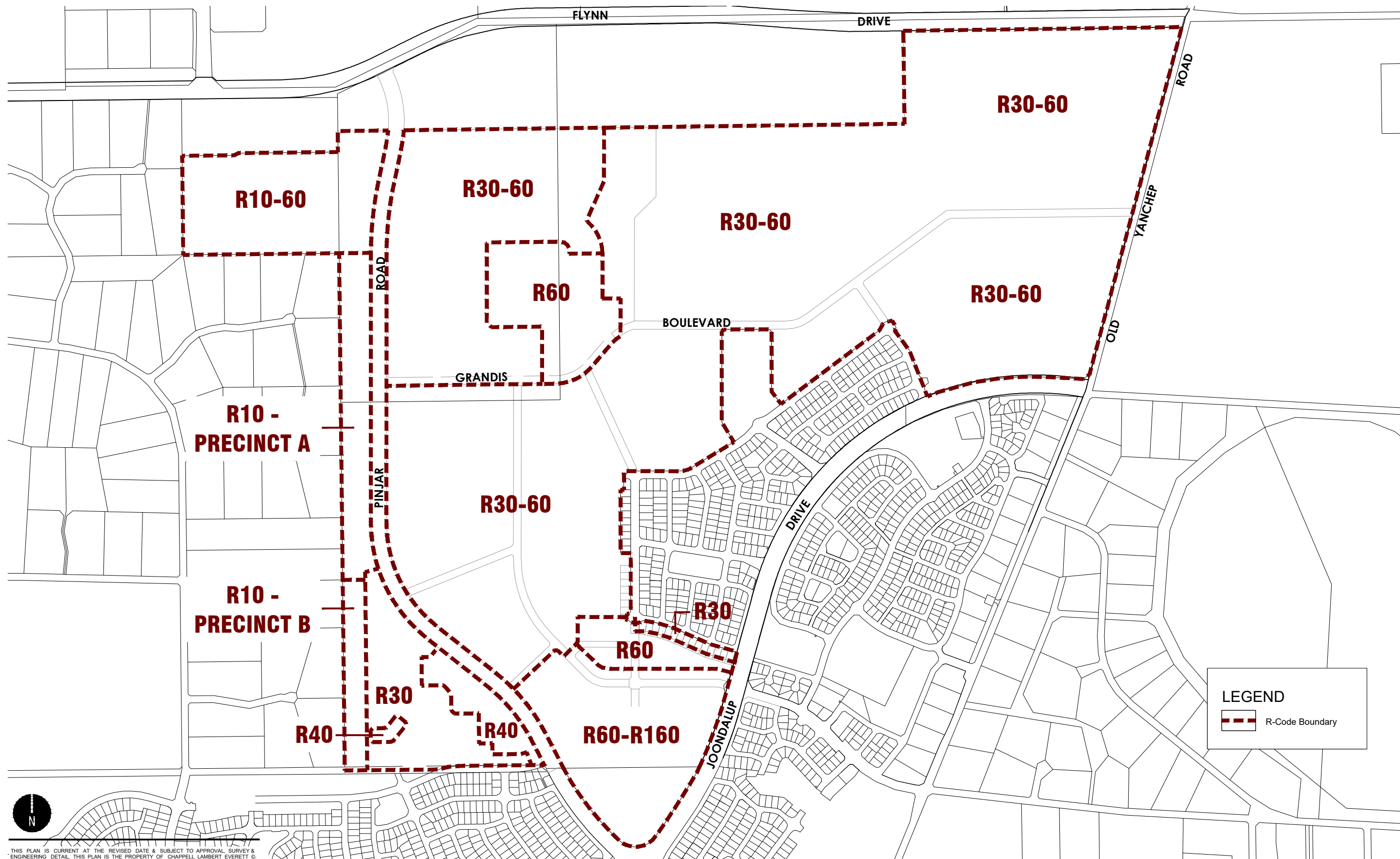
Civic & Cultural

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**BANKSIA GROVE**  
**CITY OF WANNEROO**  
**AGREED LOCAL STRUCTURE PLAN No.21A**  
**MAP 2: ZONING PLAN**

**CLE Town Planning + Design**  
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# BANKSIA GROVE

## CITY OF WANNEROO

### AGREED LOCAL STRUCTURE PLAN No.21A

#### MAP 3: R-CODE PLAN



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phone : (08) 9382 1233 email : admin@cleplan.com.au

21 August 2018

981-261C-01

## **PART 1 - IMPLEMENTATION**

### **1.0 STRUCTURE PLAN AREA**

This Structure Plan shall apply to the Banksia Grove landholding on Lots 1, 10, 9005 and 9023 being the land contained within the inner edge of the broken black line shown on the Structure Plan Map (Map 1).

### **2.0 STRUCTURE PLAN CONTENT**

This Structure Plan comprises the:

- a) Implementation (Part 1);
- b) Explanatory section (Part 2);
- c) Appended Local Development Plans.

### **3.0 INTERPRETATION**

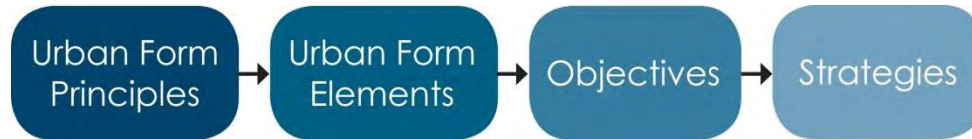
The words and expressions used in this Structure Plan shall have the respective meanings given to them in the Scheme, or where not defined in the Scheme, as set out hereunder:

'The Scheme' shall mean the City of Wanneroo District Planning Scheme No.2 (as amended) or such amendments or modifications thereto that may be current.



#### 4.0 PLANNING PRINCIPLES, ELEMENTS, OBJECTIVES & STRATEGIES

This section details a number of Urban Form Principles, Elements, Objectives and Strategies which are intended to inform and guide the detailed planning process:



The Principles are broad statements derived from Liveable Neighbourhoods and Smart Growth to guide the detailed design and development of Banksia Grove. The various strategies referred to in the Structure Plan shall be implemented as part of the subdivision and development of the Structure Plan area.

#### 4.1 Urban Form Principles

- To create a sustainable development that aims to achieve key 'triple bottom line' outcomes while fostering the development of a strong local identity and sense of place within the Banksia Grove community;
- To create a vibrant, sustainable and interactive community that provides a wide range of residential, recreational, retail, education and mixed use areas within walkable neighbourhoods allowing for a variety of living, employment and leisure opportunities;
- To create an urban form which encourages a wide range of lot and housing types in a variety of density settings enhancing lifestyle and affordability opportunities;
- To provide an efficient movement network which facilitates safe, efficient and pleasant walking, cycling and driving, improving access to public transport systems, local employment, retail and community facilities;
- To provide an integrated approach to the retention of key environmental areas, significant cultural features, urban servicing and design of open space; and
- Identification and articulation of discernible neighbourhoods addressing Liveable Neighbourhoods Policy (as updated from time to time).

## **4.2 Urban Form Elements**

Urban Form Elements within the Banksia Grove Structure Plan are guided by key elements contained within WA State Operational Policy - Liveable Neighbourhoods:

- Movement Network;
- Housing;
- Sustainability, Environment and Open Space;
- Community and Schools;
- Infrastructure; and
- Activity Centres & Employment.

## **4.3 Movement Network**

### **4.3.1 Primary Objectives:**

- a) To provide an interconnected movement network providing convenient and safe linkages for vehicles, cyclists and pedestrians to and throughout the residential areas, activity centres, open space and other areas of interest within or adjoining the development;
- b) To provide a street network and design which creates a pleasant public realm and encourages walking, less reliance on the private car and enhances public transport use; and
- c) To ensure efficient use of land through the application of Liveable Neighbourhoods road design principles and standards.

### **4.3.2 Strategies:**

- a) To locate neighbourhood connectors and major intersection points generally consistent with the locations depicted in the Structure Plan;
- b) A highly interconnected street network to provide focus on the Banksia Grove Town Centre with strong links both within and external to the structure plan area, maximising safety, encouraging walking and cycling, supporting public transport and minimising the impact of through traffic;
- c) To locate a road interface to all areas of public open space, including the Bush Forever site, unless it can be demonstrated in a particular instance that an alternative form of interface treatment is appropriate;
- d) To design the street network in a way that provides for development orientation toward major roads;
- e) Identification of a conveniently positioned bus route network providing maximum accessibility in conformance with PTA policy;

- f) Location of a public transport node and access points within the District Centre as requested by the PTA;
- g) The design and character of major roads, to provide an environment amenable to pedestrian, cyclists, homes and businesses;
- h) Local streets designed and located to create safe low vehicle speed environments embracing Liveable Neighbourhood standards for widths, cross sections, truncations, street trees and other matters; and
- i) Provision of a road network that maximises energy efficiency in accordance with Liveable Neighbourhoods standards.

## **4.4 Housing**

### **4.4.1 Primary Objectives:**

- a) To ensure the provision of choice and a wide range of housing responsive to community needs and sustainability principles;
- b) To promote efficient use of land through the appropriate spatial allocation of densities and site design; and
- c) To realistically reflect the constraints and opportunities posed by landform and topography in the design of subdivision

### **4.4.2 Strategies:**

- a) Preparation of a Banksia Grove Housing and Implementation Strategy for the whole Structure Plan area for the Neighbourhood Precinct which describes a wide range of housing and lot types in a variety of density settings generally consistent with the targets outlined in the City of Wanneroo Housing Strategy;
- b) Allocate higher residential density codings generally consistent with the Structure Plan and in accordance with the criteria below:
  - along neighbourhood connectors supporting bus routes;
  - up to 400 metres of local centres;
  - up to 800 metres of the district centre;
  - Adjacent to public open space; and
  - Other suitable locations as contextually relevant and/or in response to the need to promote diversity.
- c) Higher densities between R60 and R160 will be provided within and around the District Centre. Medium densities between R30 and R60 will be provided elsewhere, with higher density as identified in (b) above. Within medium densities, a transition is to occur, allowing the higher density coded land to abut other areas of higher density;



- d) Support residential design standards which are responsive to site and lot attributes and promote energy efficient, affordable and flexible dwelling design;
- e) Provide for energy efficient development through appropriate subdivision design, R Code variations and purchaser information;
- f) Allow for “aging in place” through provision of a range of dwelling types including those suitable for older residents;
- g) Implement strategies aimed at providing suitable affordable housing product consistent with the Local Housing Strategy; and
- h) Support government and private investor incentives such as GoodStart, Keystart and Aboriginal Home Ownership Schemes to facilitate increased opportunities for home ownership for lower income and disadvantaged community members.

## **4.5 Sustainability, Environment & Open Space**

### **4.5.1 Primary Objectives:**

- a) To deliver triple bottom line sustainability outcomes being;
  - Economic – Commercial success for all
  - Environment – Preservation and response to natural features, energy, water and waste minimisation
  - Social – A vibrant and safe community
- b) To create a range of recreational opportunities within the estate including active and passive recreation spaces, integrated bushland areas within open space, and conservation areas which generally reflect State subdivision policy requirements, Bushforever, Public Environmental Review (PER) Requirements and the City of Wanneroo’s environmental policy framework;
- c) Retention of natural landscape character through local vegetation retention, native landscape themes and the reuse of native vegetation;
- d) Provide for the co location, integration and sharing of public open space areas and recreation facilities with schools;
- e) Create an area of quality community open space within the Town centre;
- f) Locate open spaces to ensure good pedestrian accessibility and to enhance pedestrian movement opportunities throughout the Estate; and
- g) Ensure surveillance of public open space areas to enhance security.

#### 4.5.2 Strategies:

- a) Identification of 41.96ha of natural vegetation as a Bush Forever site from Lots 1 and 9005 and 7ha from Lot 10. The location is to be in accordance with State Policy – Bush Forever, generally as shown on the structure plan map although the boundary may be rationalised through negotiation with DPI to best reflect existing topography and vegetation condition;
- b) Provision of a north-south mixed use public open space corridor as indicated on the Structure Plan providing a conservation and passive recreation linkage to the Bush Forever site. The use, management and development of this link to be finalised in accordance with an approved Vegetation Management Plan;
- c) A minimum of 10% of the gross subdivisible area is to be set aside as POS in accordance with WAPC policy and should achieve the following:
  - Set aside 9ha for conservation purposes within the site. The conserved open space/s should either form an extension to the Bush Forever site and/or be a minimum of 4 hectares and regularly configured with a low edge to area ratio, subject to area and viability issues being confirmed through the preparation of a vegetation management plan;
  - A maximum of 6ha for district open space co located with the westernmost high school and primary school in the location depicted on the Structure Plan;
  - Locate the north-south mixed use open space/vegetation corridor as generally depicted on the Structure Plan;
  - Provide a practical balance between the protection of local vegetation, community requirements and provision of active and passive parkland;
  - Provide a range of passive ‘pocket parks’ with a high amenity focus;
  - Provide good connectivity to and through the open spaces and ensure most residents are no more than 450 metres from an open space; and
  - Integration of drainage into multiple use open space corridors to promote best practice water sensitive urban design. This does not preclude the use of basins where appropriate.
- d) Selectively retain native vegetation in road reserves, public parkland and lower density lots, use native landscape themes for parkland, street trees, private landscape packages and implement reuse and/or strategies for cleared native vegetation.

## **4.6 Community and Schools**

### **4.6.1 Primary Objectives:**

- a) To create a distinctive and responsive built form that enhances the sense of neighbourhood and community identity, place and character of Banksia Grove;
- b) Provision of community facilities and services (including retail, education, health, community centre, recreation, child care etc), a variety of housing choice and a legible street network which facilitates community interaction, supports different needs and lifestyles and provides acceptable levels of safety and convenience for all;
- c) Provision of educational facilities and services that meets the needs of the existing Banksia Grove and future Banksia Grove community;
- d) Promote efficiency of land use through innovative design and site planning solutions; and
- e) Promote the co location of educational facilities and services with, and within, areas of active open space and community uses.

### **4.6.2 Strategies**

- a) To provide two public Primary Schools and one High School (max of 10ha) within the development areas generally located on the Structure Plan map;
- b) Refine the extent of the multiple use precinct as depicted on the Structure Plan, from a maximum size of 19.5ha, to incorporate one primary school, one secondary school, two active playing fields and associated buffers, hard courts, car parking and change rooms;
- c) Provide a second multiple use 3.5ha primary school abutting a junior playing oval to service the eastern catchment of the site as generally shown on the Structure Plan;
- d) All educational facilities are to be designed and located to encourage contemporary urban form outcomes. Buildings will be encouraged to address and integrate with the street and be designed to promote multiple use of buildings by the public and safe access by a range of transport modes with a sufficient size, configuration and topography to accommodate the intended use;
- e) Sharing of school infrastructure with the broader community through partnerships with local government; and
- f) Incorporation of a public art program reflecting the local European and Aboriginal culture as well as responding to the natural environment.

## **4.7 Infrastructure**

### **4.7.1 Primary Objectives:**

- a) To optimise the use of existing infrastructure and assets within and surrounding the site;
- b) To ensure that community, commercial and employment infrastructure plus roads, services and public transport, are provided in an appropriately staged manner as development proceeds; and
- c) To achieve land use and infrastructure efficiency and sustainability through integrated drainage management, consistent with Liveable Neighbourhoods.

### **4.7.2 Strategies:**

- a) Prepare and implement a Community Economic Development Program to investigate maximising the potential of under-utilised community facilities and urban services;
- b) Finalise the preparation of and implement an Integrated Urban Water Management Plan consistent with Liveable Neighbourhoods and DEC Stormwater management manual for WA to incorporate best practice urban water management techniques including, where appropriate, stormwater harvesting, wastewater treatment and reuse (including 3rd pipe technologies), water demand management (including landscaping, POS, nutrient management) and overall water quality management;
- c) Provision of communications infrastructure within Banksia Grove to improve local employment opportunities and establish a community portal; and
- d) Identify the best location for the High Level Water supply tank factoring in all constraints and opportunities.

## **4.8 Activity Centres & Employment**

### **4.8.1 Primary Objectives:**

- a) To establish an accessible and amenable main street based district centre based on TOD principles to best serve the commercial, social and employment needs of the community and act as a focus for community activity and interaction; and
- b) Create a robust urban framework within and around centres which enhances the opportunity for mixed use local based employment and active focal points.

#### 4.8.2 Strategies:

- a) Develop a vibrant Banksia Grove Town (District) Centre incorporating best practice main street design and sustainability principles in the area bounded by Pinjar Road, Joondalup Drive and the extension of Tumbleweed Drive, to act as a focus and attractor for the local community, create a centre for commercial activity and provide opportunities for local employment, consistent with the City's Centres Strategy and Element 7 of Liveable Neighbourhoods;
- b) Designate main street based Local Centres with a maximum retail net lettable area of 1200m<sup>2</sup> in locations central / accessible to their respective catchments in the east and west of the Structure Plan area;
- c) Promote multimodal access to Centres through their location on higher order roads and public transport, pedestrian and cycle routes
- d) Maximise on-street parking at Centres to enable appropriately reduced private parking, make best use of urban land and encourage alternative modes of transport;
- e) Incorporate a diversity of land uses within Centres consistent with their function under the City's Centres Strategy.
- f) Incorporate vertical as well as horizontal mixed use integration;
- g) Concentrate higher residential densities in and around centres to maximise catchment, access to the centres, reduced car dependence and after-hours surveillance and use;
- h) Provide for the location of a 0.5ha multi purpose Community Facility site within the District Centre;
- i) Make sufficient provision for telecommunications infrastructure and a broad range of business premises to cater for a wide variety of employment categories;
- j) Provide a range of programs to facilitate local economic development and employment in accordance with an approved CEDP; and
- k) The finalisation of the Employment Strategy as well as the implementation of the strategy actions arising from the final report to the satisfaction of the City of Wanneroo.

## **5.0 OPERATION OF THE STRUCTURE PLAN**

Subdivision applications shall be consistent with the intent of the Agreed Structure Plan.

At the time of lodging an application for subdivision, the proponent shall provide supporting information pertinent to the relevant Neighbourhood Precinct as identified on Map 1 – Agreed Local Structure Plan to demonstrate how the Objectives and Strategies outlined in Section 4.0 will be addressed. Such information shall relate to the overall precinct and include, amongst other things, supporting Technical Documents including (as relevant) the following;

- Residential Yield & Housing Type Analysis;
- Local Road Network Plan;
- Public Open Space Schedule and justification for drainage credits; and
- Local Development Plan (for the purposes of R Code allocation)

The Local Development Plan (LDP) shall indicate the detailed allocation of the R Codes range consistent with Map 3 – Residential Density Coding. The purpose of this Plan is to further interpret and then apply the specific R Codings to each lot based on the criteria included in Section 4.4 - Housing. As the R Coding range has been advertised and adopted, the LDP, if consistent with the Structure Plan, will not need to be readvertised. Once agreed, the LDP can be approved under delegation by the Manager of Planning and pursuant to the Scheme, included as an addendum to the Structure Plan. The specific R Codings indicated on the LDPs shall then be used for development control purposes.

In some instances and where deemed necessary the City may require these detailed R Code allocations to be formalised by an amendment to the Structure Plan once the subdivision application is approved and final lot boundaries are known.

Where the Plan of Subdivision is inconsistent with Map 2 - Zoning or Map 3 – Residential Density Coding Maps of the Structure Plan, the City or Commission may require an amendment to the Structure Plan pursuant to the requirements of Part 9 of the Scheme. Any such amendment shall be lodged with the City and the Commission concurrent with the subdivision application for the particular Neighbourhood Precinct.

Where amendments are proposed which Council consider do not materially alter the intent of the Structure Plan and are consistent with the requirements of Section 4.0, then pursuant to Clause 9.7 of the Scheme advertising shall be waived.

For all land previously utilised for market gardening purposes, the City of Wanneroo is to recommend the requirement for a Soil and Groundwater Contamination and Remediation Report as a condition of subdivision approval.



## **6.0 ZONES AND RESIDENTIAL DENSITY CODES**

The Zoning Plan (Map 2) delineates and depicts the zones applicable to the structure plan area according to the legend thereon.

The Residential Density Coding Plan (Map 3) delineates and depicts the residential density codes applicable to the structure plan area according to the legend thereon.

The zones and residential density codes designated under this structure plan apply to the land within it as if the zones and residential density codes were incorporated in the Scheme.

All provisions, standards and requirements applicable to the zones and residential density codes in the Scheme shall apply, unless specific provision is made to the contrary in this structure plan.

## **7.0 STRUCTURE PLAN MAP**

The Agreed Local Structure Plan Map (Map 1) outlines the planned pattern of development for the Structure Plan area and depicts the Neighbourhood Precincts. All development should be carried out in accordance with the principles outlined on the Agreed Local Structure Plan Map.

## **8.0 GENERAL PROVISIONS**

### **8.1 Lot 10 Flynn Drive**

A row of residential lots with a minimum area of 1,000 square metres, incorporating a ten metre wide vegetation buffer shall be provided adjoining the Special Rural land;

### **8.2 Residential Design Code Variations**

To assist in achieving more responsive, diverse and affordable housing types, and to encourage solar access and energy conservation practices, variations to the 'Acceptable Development' Residential Design Code provisions as outlined in Table 1 (a) & (b) shall apply to the Structure Plan area.

The provisions of the R Codes apply within the Structure Plan Area subject to those variations included in Table 1 (a) & (b) which take precedence over the relevant R Code standards and thereby constitute Acceptable Development.

Such variations do not require a Planning Approval or consultation/consent with neighbours or other landowners.

### **8.3 Local Centres**

Local Development Plans shall be prepared for each local centre recognising the objectives and strategies in Section 4.0.

**8.4 Mixed Use Zone**

Local Development Plans shall be prepared for each mixed use area recognising the objectives and strategies in section 4.0.

In addition to the uses permitted under the Scheme in the Mixed Use zone, the following shall be 'D' uses in this Zone:

- Individual shops with a nett lettable area of up to 100m<sup>2</sup>

**8.5 Soil Contamination Assessment**

Prior to undertaking any earthworks or development of the land on Lot 1, the landowners shall undertake a Soil Contamination Assessment of the land to determine the presence or absence of soil contamination in accordance with the requirements of the Department of Environmental and Conservation.

Should any soil contamination be identified in the soil contamination assessment, a Site Remediation and Validation Report for the subject land shall be prepared by the developer/subdivider and remediation works shall be undertaken for all identified contamination and should be validated as being free of contamination above Department of Environmental and Conservation acceptance guidelines, prior to undertaking any earthworks or development of the land.

**8.6 Section 70A Notification**

A section 70A Notification under the transfer of Land Act 1893 may be imposed on lots within proximity of the Water Corporation's Water Tank, based on the advice of the Water Corporation.

**8.7 Development Controls for Lots Coded 'R10-Precinct A'**

The following development controls are only applicable to lots designated 'R10-Precinct A' as per Map 3: R-Code Plan and do not apply to lots with a coding range of R10 – R60.

**8.7.1 Minimum Lot Sizes**

Notwithstanding the provisions of Table 1 of the R-Codes, the minimum lot size shall be 1,500m<sup>2</sup>.

**8.7.2 Local Development Plan**

No subdivision or other development shall commence or be carried out on land within the R10 zone until a Local Development Plan has been prepared and approved on that land. The Local Development Plan has been prepared and approved on that land.

- i. Building envelopes;

- ii. Retained natural bushland; and
- iii. Significant trees to be retained.

Development of R10 coded lots shall be contained within the building envelopes. Averaging of the front setback is not permitted.

#### 8.7.3 Frontage Requirements

All dwellings shall have their primary frontage to the western boundary.

#### 8.7.4 Vehicle Access

No vehicle access shall be permitted from Pinjar Road.

#### 8.7.5 Bushfire Protection

A bushfire Management Plan shall be prepared prior to subdivision. Bushfire protection zones and construction standards shall be in accordance with the Bushfire Management Plan endorsed by the City. Compliance with the Bushfire Management Plan is to be demonstrated through the building permit process.

### **8.8 Development Controls for Lots Coded 'R10-Precinct B'**

The following development controls are only applicable to lots designated 'R10-Precinct B' as per Map 3: R-Code Plan and do not apply to lots with a coding range of R10 – R60.

#### 8.8.1 Minimum Lot Sizes

Notwithstanding the provisions Table 1 of the R-Codes, the minimum lot size shall be 1,500m<sup>2</sup>.

#### 8.8.2 Bushfire Protection

The Bushfire Management Plan (BMP) prepared by Bushfire Safety Consulting (dated 10 March 2021) shall be implemented under relevant condition(s) of approval at the subdivision/development application stage.

#### 8.8.3 Retention of Vegetation

A survey to the satisfaction of the City of Wanneroo is to be undertaken prior to subdivision, to identify significant vegetation and trees that can be retained in the lots, whilst maintaining compliance with the BMP's Asset Protection Zone standards for bushfire protection.

#### 8.8.4 Local Development Plan

A Local Development Plan shall be prepared and approved to address the following:

- (a) identification of vegetation (type and location) that is to be retained on the lots, as identified by the vegetation survey under Clause 8.8.3 above;

- (b) minimum rear/front building setbacks as identified by the BMP, under Clause 8.8.2 above;
- (c) building envelopes that provide for bushfire protection and maximise vegetation/tree retention, based on the outcome of (a) and (b) above;
- (d) identification of locations where ancillary structures (including patios, pergolas, decks, swimming pools) would be acceptable in the Asset Protection Zone, to ensure these do not impact on vegetation/tree retention.

Table 1(a): Variations to the R40-R60 R Code Standards

R-Code Element	Clause	Provision			
6.2 - Streetscape	6.2.1 A1.1 (i) & 6.2.2 A2 (i)	<b>Front Setbacks:</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Average</b>
		Porch, balcony, veranda or the equivalent	1.5m	3.0m	Not applicable
		Dwelling	2.0m	4.0m	Not applicable
		<b>Rear Setbacks:</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Average</b>
		Dwelling (abutting 6.0m laneway)	0.5m	Not Applicable	Not Applicable
		Dwelling (abutting 5.0m laneway)	1.0m	Not Applicable	Not Applicable
	6.2.3 A3.1 & A3.5	On front loaded lots, garages and carports are to be setback a minimum of 4.0m from the primary street. This may be reduced where the garage adjoins the dwelling, provided that the garage / carport is at least 0.5m behind the dwelling alignment (excluding any porch, veranda or balcony) located behind the street setback line. On rear loaded lots, garages and carports are to be setback a minimum of 0.5m from the laneway (if the laneway is 6.0m in width) and a minimum of 1.0m from the laneway (if the laneway is 5.0m in width)			
6.3 – Boundary Setbacks	6.3.2 A2 (iii)	Walls on boundary are permitted to both side boundaries of a lot (excluding secondary street boundaries other than to laneways) within the following limits:			
			<b>Max. height</b>	<b>Max. length</b>	
		<b>Single Storey</b>	3.5m*	No limit	
		<b>Two Storey &amp; Above</b>	6.5m*	12m	
		* For terrace-style development with a pitched roof, the height of walls on side boundaries may be increased to the top of the ridgeline where this runs parallel to the front boundary and will abut a similarly configured wall or secondary street, and may be graduated down behind the ridgeline.			
6.4 – Open Space	6.4.1 A1 – Table 1	Minimum open space to be provided is 25%			
	6.4.2 A2	An Outdoor Living Area is to be provided: <ul style="list-style-type: none"> <li>• With a minimum useable space of 24m<sup>2</sup> and a minimum dimension of 4m;</li> <li>• Behind the primary street setback line (it is permitted within the secondary street setback area);</li> <li>• Located on the northernmost or easternmost boundary to maximise solar access; and</li> <li>• To have a least 2/3 of the required area without permanent roof area.</li> </ul>			
	Table 1	No plot ratio restriction applies			
6.5 – Access & Parking	6.5.1 A1	A minimum of one bay per dwelling is to be covered.			

<b>6.8 – Privacy</b>	6.8.1 A1 (i) & (ii)	The setback to the boundary of major openings to active habitable spaces or their equivalent which have a floor level more than 0.5m above natural ground level and positioned so as to overlook any part of any other residential property behind the 3m street setback line which are specified in (i) of Clause 6.8.1 A1 is to be a minimum of 4.5m in all cases other than as specified below.
		<p>The 4.5m privacy setback shall not be required:</p> <ul style="list-style-type: none"> <li>• for any major opening to a active rooms within a wall positioned at an angle of 75 degrees or greater to the boundary;</li> <li>• for a deck, balcony or equivalent incorporating a permanent solid vertical screening to a minimum height of 1.8m above the finished floor level of the deck, balcony or equivalent facing the adjacent boundary.</li> </ul>
<b>6.9 – Design for Climate</b>	6.9.1 A1	The overshadowing provisions (CI 6.9.1 A1) do not apply.
<b>7.1 – Special Purpose Dwellings</b>	7.1.1 A1 (ii) & (iv)	<p>Ancillary accommodation is permitted on lots less than 450m<sup>2</sup> where abutting a laneway.</p> <p>Ancillary accommodation located abutting a laneway with a plot ratio area of not greater than 40m<sup>2</sup> does not require an additional car parking bay on site.</p>
<b>Additional Requirements</b>		<p>In addition to the Acceptable Development standards, for those lots immediately adjacent Public Open Space the following provisions shall apply:</p> <ul style="list-style-type: none"> <li>i) must have a minimum of one habitable room with a major opening facing toward the Public Open Space area - where, for the purposes of this Clause, a “habitable room” means a room that is used for normal domestic activities and includes a living room, lounge room, sitting room, television room, kitchen, dining room, however, does not include a bedroom; and</li> <li>ii) permeable fencing to the public open space boundary to the specification and satisfaction of the City.</li> </ul>



Table 1(b): Variations to the R30 R Code Standards

R-Code Element	Clause	Provision			
6.2 – Streetscape	6.2.1 A1.1 (i) & 6.2.2 A2 (i)	<b>For lots with laneway access, the front setbacks shall be:</b>		<b>Minimum</b>	<b>Maximum</b>
		Dwelling		1.5m	Not applicable
		<b>For lots with laneway access, the rear setbacks shall be:</b>		<b>Minimum</b>	<b>Maximum</b>
		Dwelling (abutting 6.0m laneway)		0.5m	Not Applicable
		Dwelling (abutting 5.0m laneway)		1.0m	Not Applicable
	6.2.3 A3.1 & A3.5	On rear loaded lots, garages and carports are to be setback a minimum of 0.5m from the laneway (if the laneway is 6.0m in width) and a minimum of 1.0m from the laneway (if the laneway is 5.0m in width)			
6.3 – Boundary Setbacks	6.3.2 A2	In determining the acceptable length of any boundary wall pursuant to Clause 6.3.2 A2 of the Codes, the front setback shall mean the setback of the building itself on that boundary.			
	6.3.2 A2 (iii)	For lots with laneway access, walls on boundary are permitted to both side boundaries of a lot (excluding secondary street boundaries other than to laneways) within the following limits:			
			<b>Max. height</b>	<b>Max. length</b>	
		<b>Single Storey</b>	3.5m*	No limit	
		<b>Two Storey &amp; Above</b>	6.5m*	12m	
		* For terrace-style development with a pitched roof, the height of walls on side boundaries may be increased to the top of the ridgeline where this runs parallel to the front boundary and will abut a similarly configured wall or secondary street, and may be graduated down behind the ridgeline.			
6.4 – Open Space	6.4.1 A1 – Table 1	Minimum open space to be provided is reduced to 30% of the site subject to the provision of;			
		(a) A minimum 2.0m setback to major openings to habitable rooms located on the northernmost or easternmost boundaries;			
		(b) Any boundary wall (if proposed) to be built on the southernmost or westernmost side boundary (except where that boundary is to a secondary street) or as otherwise depicted on an adopted Local Development Plan;			
		(c) An Outdoor Living Area designed in accordance with the RD Codes (6.4.2 A2) and:			
7.1 – Special Purpose Dwellings	7.1.1 A1 (ii) & (iv)	i located on the northernmost or easternmost boundary and directly accessible from an internal living area;			
		ii where the Outdoor Living Area is not directly accessible from an internal living area the provision of an additional outdoor living area of at least 20m <sup>2</sup> is to be located on the northernmost or easternmost side boundary of the dwelling. This space may be included under the roof of the main dwelling.			
		Courtyards are permitted within the secondary street setback area			
7.1 – Special Purpose Dwellings	7.1.1 A1 (ii) & (iv)	No plot ratio restriction applies			
		Ancillary accommodation is permitted on lots less than 450m <sup>2</sup> where abutting a laneway.			
7.1 – Special Purpose Dwellings	7.1.1 A1 (ii) & (iv)	Ancillary accommodation located abutting a laneway with a plot ratio area of not greater than 40m <sup>2</sup> does not require an additional car parking bay on site.			

<b>Additional Requirements</b>		<p>In addition to the Acceptable Development standards, for those lots immediately adjacent Public Open Space the following provisions shall apply:</p> <ul style="list-style-type: none"><li>(a) must have a minimum of one habitable room with a major opening facing toward the Public Open Space area - where, for the purposes of this Clause, a “habitable room” means a room that is used for normal domestic activities and includes a living room, lounge room, sitting room, television room, kitchen or dining room, however, does not include a bedroom; and</li><li>(b) permeable fencing to the public open space boundary to the specification and satisfaction of the City.</li></ul>
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## **AGREED LOCAL STRUCTURE PLAN**

### **STRUCTURE PLAN NO. 21A**

#### **PART 2**

#### **EXPLANATORY REPORT**

This Structure Plan is prepared pursuant  
to the provisions of Part 9 of the  
City of Wanneroo District Planning Scheme No.2

**BANKSIA GROVE AGREED LOCAL STRUCTURE PLAN**

**STRUCTURE PLAN NO. 21A**

**PART 2**

**EXPLANATORY REPORT**

**THIS STRUCTURE PLAN IS PREPARED PURSUANT  
TO THE PROVISIONS OF PART 9  
OF THE CITY OF WANNEROO DISTRICT PLANNING SCHEME NO. 2**

**BANKSIA GROVE AGREED LOCAL STRUCTURE PLAN**

**STRUCTURE PLAN NO. 21A**

**PART 2**

**EXPLANATORY REPORT**

**(AS AMENDED)**

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**Project No. 981Rep38A (As Amended)  
2 July 2008**

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▪ Civil Engineers	Parsons Brinckerhoff
▪ Landscape Architects	McNally Newton
▪ Environment & Sustainability	Parsons Brinckerhoff & RPS Bowman Bishaw Gorham
▪ Traffic	Bruce Aulabaugh
▪ Community	Creating Communities
▪ Ethnographic & Archaeological	Tempus Archaeology
▪ Heritage	Ethnoscience



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## GLOSSARY OF TERMS

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CEDP -	Community Economic Development Plan
DAP -	Detailed Area Plan
DHW -	Department of Housing and Works
DPS2 -	District Planning Scheme No. 2
EPA -	Environmental Protection Authority
ESD -	Ecologically Sensitive Design
LWMS -	Local Water Management Strategy
MRS -	Metropolitan Region Scheme
PER -	Public Environmental Review
POS -	Public Open Space
SGAT -	Smart Growth Assessment Tool
SPP -	Statement of Planning Policy
TPS1 -	Town Planning Scheme No. 1
UWMP -	Urban Water Management Plan
WAPC -	Western Australian Planning Commission
WSUD -	Water Sensitive Urban Design

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## **SECTION A**

### **Background to the Structure Plan**



### **1.1.0 INTRODUCTION**

This Banksia Grove Agreed Local Structure Plan No 21A is prepared and lodged pursuant to Clause 9.8 of the City of Wanneroo's District Planning Scheme No. 2 (DPS2). The Part 1 Statutory Report occupies the front section of this document.

This Part 2 Explanatory Report provides a background and establishes a context for the Structure Plan, outlining key statutory planning requirements, together with relevant community, environmental, recreation, commercial, education, traffic and servicing considerations, and a housing and density strategy.

The Report also addresses the objectives of the Local Housing Strategy through the Smart Growth Assessment Tool (SGAT), as applicable to the Structure Plan.

This document has been prepared in consultation with a variety of stakeholders including representatives from the City of Wanneroo, Department for Planning and Infrastructure, Department of Environment, Education Department, Main Roads WA and others.

The Structure Plan was also developed in consultation with representatives from the existing Banksia Grove community who provided extensive comment on the original Concept Plan at the Community Open Day and have been involved through the Joint Venture initiated Banksia Grove Steering Committee. Inputs, views and comments from the key stakeholders have been considered and have assisted in guiding the preparation of the final proposed Banksia Grove Agreed Local Structure Plan.

### 1.2.0 THE SUBJECT LAND

The Part 2 Explanatory Report document examines the planning and development framework for the balance of the Department of Housing & Works (DHW) landholding within the context of the existing Banksia Community which lies to the east and west of Joondalup Drive, and the Carramar Community to the south west. It presents a strategy for community development which integrates the new development with the existing residential areas providing both new and complementary community, commercial, recreation and servicing infrastructure.

Part 1 of the Structure Plan, applies a new statutory planning framework to the 338.5276ha balance of undeveloped DHW Banksia Grove landholding, bounded by Flynn Drive to the North, Carramar Special Residential Estate to the west and Joondalup Drive and the existing community to the east (refer Figure 1, Table 1 and Report Appendices).

TABLE 1 – Certificate of Title and Ownership Details		
Lot Details	Owner	Area
Lot 1 Flynn Drive	DHW	64.7455ha
Lot 9005 Flynn Drive	DHW	273.7821ha
	<b>TOTAL</b>	<b>338.5276 ha</b>

The existing Banksia Grove community is located generally to the west of the Part 1 Structure Plan area coverage and, although not therefore within the statutory component of the Structure Plan, the planning and development philosophies described have been prepared to ensure the integration of the existing community with the new development area.

Including the existing subdivided area west of Joondalup Drive the gross area (which has been used to calculate the POS requirement) is approximately 375ha. The 338.5276ha described in Table 1 is the undeveloped portion of this total. The gross area of the original landholdings (Lot 1 and Lot 2) which together made up Banksia Grove was 450ha.

### 1.3.0 REGIONAL CONTEXT

Banksia Grove is located approximately 27 kilometres from the Perth Central area, 4 kilometres east of the Joondalup Regional Centre and 6 kilometres north of the Wanneroo Townsite (Figure 2).

A defined and operational regional and district road system provides the Banksia Grove locality with good accessibility and connection to the metropolitan region. Flynn Drive, Joondalup Drive and the realigned Pinjar Road provide excellent access west to Wanneroo Road and east via Neaves Road to the Great Northern Highway. Both Flynn Drive and Joondalup Drive will ultimately connect to the Mitchell Freeway.

Banksia Grove together with Carramar and Tapping, is located at the core of the developing residential front where subdivision of land and the ultimate development of the site will assist in addressing the current land shortage currently being experienced within the State.

### 1.4.0 LOCAL CONTEXT

The subject site is surrounded by a mix of residential, rural, future industrial and recreational land uses which provide a unique character and create a sense of identity specific to Banksia Grove (Figure 3). These are the qualities valued by existing local residents. Key planning considerations for future development are;

- The interface in the south west corner with the Carramar Residential Estate which is being progressively developed by Peet Ltd. This corner is the first stage of development where integration and co ordination of services is critical;
- The interfaces with the existing Carramar Special Rural Estate to the west where a transition of 'buffer' Special Residential lots is identified within the City's Town Planning Scheme No.1 (TPS1) and reflected within the proposed Banksia Grove Agreed Local Structure Plan. A typical lot size of 2000m<sup>2</sup> is proposed which will require a separate Town Planning Scheme Amendment;
- The 1000 hectares of Neerabup Industrial Estate north of Flynn Drive, which will create an economic development hub for the North West corridor with the potential to generate 20,000 new jobs. This will greatly benefit the future Banksia Grove community providing easily accessible employment opportunities. The single road connection from Flynn Drive is reflected in this Structure Plan;

- Approximately 42.5ha of land within the Structure Plan on Flynn Drive has been identified within Bush Forever Site 295 (originally 45ha, this site has been reduced in size by the recent gazettal of Pinjar Road realignment and Flynn Drive road widening). The location of this site allows a large representative section of the endemic vegetation to be retained while also acting as a buffer between the Neerabup Industrial Estate to the north and future residential land;
- To the east of the Neerabup Industrial Estate and abutting the northern boundary of the Banksia Grove Estate, is the Wanneroo Golf Course site. This will provide recreational opportunities and attractive outlook for residential land in the north eastern section of the site;
- The eastern boundary of the subject site is defined by the existing Banksia Grove residential community and the more distant rural residential land surrounding Lake Mariginiup. The proposed District Centre and Senior High School within the Banksia Grove Estate will provide for the district needs of these communities;
- The Gnangara Pine Plantation within State Forest is located to the east of the site on Old Yanchep Road.

Of special relevance in considering the Local Context is to examine the relationship between the current community at Banksia Grove and the nature of development on the balance area and how these integrate and relate.

The Banksia Grove Agreed Local Structure Plan considers the needs of the full community, both east and west of Joondalup Drive, when it recommends strategies for the balance area. For example, many of the catchments for both the existing and proposed community facilities, active and passive recreation areas, secondary and primary school sites, and other infrastructure, cover the total Banksia Grove community, beyond the physical constraints imposed by elements such as Joondalup Drive. The special High School/District Open Space precinct will provide a service to the entire community as will the District Centre and associated community infrastructure herein.

For this reason, planning of the balance area needs to understand and appreciate both the requirements of the existing community and the facilities and amenities which already exist and the opportunity for expansion, enhancement or simple recognition.

These community and service infrastructure issues have been addressed more comprehensively in the Community Economic Development Plan (CEDP) which is included within the Technical Appendix and referenced within Section 2.9.0 of this report.

The following Future Local Community and Land Use Audit table lists the breakdown of land uses and key infrastructure items which are proposed within the future development area. In considering Table 2 please also refer to Figure 3 and Figure 19 of the Banksia Grove Structure Plan itself.

<b>TABLE 2: Future Local Community and Land Use Audit</b>	
<b>Future Community &amp; Undeveloped Area</b> <ul style="list-style-type: none"> <li>▪ 3445 Dwellings including single residential and apartments</li> <li>▪ 27.45ha of Public Open Space</li> <li>▪ 42.59ha of Conservation Area Bushland</li> <li>▪ 2 Government Primary Schools</li> <li>▪ 1 Government High School</li> <li>▪ District Centre on 20ha of land</li> <li>▪ Two small local centres, community purpose sites &amp; facilities</li> </ul>	<b>338.5276</b>

### 1.5.0 HISTORY AND BACKGROUND

In understanding the point the project has reached and the nature of the strategies and innovation being proposed, it is important to appreciate the approvals and process history of the development particularly with respect to both the Planning and Environmental processes and approvals.

Prior to 1992 the subject land and all adjacent land holdings in Neerabup were zoned 'Rural' in both the Metropolitan Region Scheme (MRS) and the City of Wanneroo DPS2. The land however was identified in the early 1990s as a major urban expansion area for Perth in Metroplan (1990), the Urban Expansion Policy Statement for the Perth Metropolitan Region (1990) and the North West Corridor Structure Plan (1992).

This Neerabup Urban cell consisted of the following original landholdings (refer Report Appendices and Figure 4);

- Swan Location 2579 – Yatala Holdings – now Peet Ltd. (379ha)
- Lot 2 Flynn Drive – Homeswest (385.4047ha)
- Lot 1 Flynn Drive – R&I Bank – now DHW (64.7455ha)

*(Note: Lots 1 & 2 form the existing Banksia Grove Estate)*

To support the rezoning of these holdings to 'Urban' under the MRS, the first comprehensive Development Plan entitled the **East of Joondalup Urban Development Project Development Concept (1992)** (Figure 5) was prepared jointly by the (then) three landowners. In essence this document provided for the full urbanisation of the Neerabup landholdings with all associated urban infrastructure for 8–9000 dwellings and 24–28000 people at densities of between 10 to 15 dwellings per hectare.

The document was referred to the Environmental Protection Authority (EPA) as part of the proposal to rezone the land to 'Urban' under the MRS and the Level of Assessment set by the EPA for the rezoning was a Public Environmental Review (PER). The PER document prepared by Bowman Bishaw Gorham was advertised and in July 1992 the EPA released Bulletin 637 which found that the proposal was 'environmentally acceptable' (see Report Appendices).



On 21 August 1992 the Minister for the Environment released Statement No. 280 approving the proposal to develop the land (Report Appendices). Following the Ministers decision, MRS Amendment No 840/33 was initiated (in 1992) to rezone the three land parcels to 'Urban' and to Reserve the land required for the realignment of Pinjar Road. The MRS Amendment was approved on 1 September 1992.

In 1998 following rezoning to 'Urban' under the MRS, the City of Wanneroo initiated Amendment No 606 to TPS1 and simultaneously considered Neerabup Structure Plan No 21 – as the statutory Agreed Structure Plan document required under the provisions of the 'Urban Development' zone being proposed. That Structure Plan referred to as the **Neerabup (East Joondalup) Local Structure Plan 1998** (as prepared jointly by Roberts Day Group, Chapman Glendinning and Mitchell Goff and Assoc – Figure 6), provided the next level of Structure Plan detail building on the earlier Development Plan and introduced the enabling statutory provisions into the Scheme.

During the advertising of the above documents, Perth's Bushplan (now BushForever) was released and identified Bushplan Site 295 which stretched across 45ha of the Flynn Drive frontage of Lot 1 and Lot 2 (Figure 7).

Amendment No 606 to TPS 1 was subsequently finalised and all of the land was zoned 'Urban Development' zone. Agreed Local Structure Plan No 21 was then adopted by the City and forwarded to the Western Australian Planning Commission (WAPC), which at its meeting of 14 September 1999 adopted the Structure Plan subject to a number of modifications (refer Report Appendix) some of which affected the subject land including;

- Splitting the Structure Plan in two parts (DHW land and Peet Ltd land);
- Reflecting BushPlan Site 295 in the Structure Plan;
- Design changes to reflect existing subdivision approvals; and
- Introduction of a requirement for the Preparation of a revised Remnant Vegetation Plan to reflect the Public Open Space (POS) changes and the BushPlan site.

*(Following, though unrelated to these decisions, the City of Wanneroo DPS2 was gazetted on 6 July 2001 retaining the same 'Urban Development' zoning over all of the Neerabup land and adopting the same Structure Plans which were operating and/or prepared pursuant to TPS1. The two separate Local Structure Plans (21A & 21B) which were lodged pursuant to the City and WAPC decisions therefore were lodged under DPS2).*

As a result of the requirement to separate into two Structure Plan areas, the Agreed Structure Plan for what was now the Peet Ltd land (Swan Loc 2579) was prepared by John Chapman Planners and lodged in October 2002. It is now referred to as **Local Structure Plan 21B – Carramar South/Tapping North** and was adopted on 11 September 2003 (Figure 8).

The now separated Banksia Grove Local Structure Plan which covered Lots 1 & 2 Flynn Drive (as currently held by DHW and the subject to this review), was lodged as **Local Structure Plan 21A – Banksia Grove** in February 2001 (Figure 9). This was considered by Council at its 22 May 2001 meeting where support in principle was granted (refer Report Appendices). This document and the decision is discussed in more detail in the next section.

Final adoption was delayed as a result of the need to first finalise MRS Amendment 1097/33A which amended the internal alignment of Pinjar Road (refer Figure 10). This was only gazetted in 2006 releasing the potential to finalise the Local Structure Plan. Importantly the WAPC recognising this delay has been prepared to approve ongoing subdivision applications at Banksia Grove providing these were not in vicinity of the realignment.

Whilst Structure Planning has been, and will continue to be, an evolving and improving process for both Structure Plans 21A and 21B, subdivision and development pursuant to all of the relevant planning and environmental approvals has been progressing over both estates for some time. The Peet Ltd Carramar holding is now almost fully developed and similarly a substantial portion of Banksia Grove is also developed with approximately 761 lots titled (around 25% of the total Banksia Grove landholding).

### **1.6.0 BACKGROUND PLANNING CONSIDERATIONS**

#### **1.6.1 Metropolitan Region Scheme (MRS)**

The land is zoned 'Urban' under the MRS wherein development for residential and associated purposes is permitted (Figure 11).

#### **1.6.2 City of Wanneroo District Planning Scheme No. 2 (DPS2)**

The site is predominantly zoned 'Urban Development' under the City of Wanneroo DPS2 (Figure 12).

The objectives of the 'Urban Development' zone are to:

- Designate land for future urban development;
- Provide for the orderly planning of large areas of land for residential and associated purposes through a comprehensive structure planning process; and
- Enable planning to be flexible and responsive to changing circumstances throughout the developmental stages of the area.

A strip of land to the west of the site, adjacent to the Carramar Special Rural Estate, is currently zoned 'Special Residential – SR2'. This zoning currently restricts subdivision of the land to a minimum lot size of 5000m<sup>2</sup> in accordance with approved Development Guide Plans for the zone. A separate Scheme Amendment will be initiated to reduce the minimum lot size for the Special Residential to 2000m<sup>2</sup> and to rezone what was the Pinjar Road reservation to 'Urban Development'.

#### **1.6.3 East of Joondalup Development Concept Plan (1992)**

The East of Joondalup Development Concept Plan was the subject of the original referral to the EPA (Figure 5). Relevant to the subject land it proposed comprehensive urban development of Banksia Grove providing for;

- Residential subdivision over 80% of the holding up to densities of 15du/ha;
- Major portion of the District Shopping Centre;
- Arterial Road alignments;
- Three Primary Schools and a 10ha High School;
- Neighbourhood Shops; and

- 10% Public Open space.

Relevantly the approved plan did not allocate any land for conservation purposes as BushPlan (BushForever) arose later as a planning consideration and not an environmental requirement.

#### **1.6.4 Neerabup (East Joondalup) Local Structure Plan No 21 (1998)**

This was prepared as part of Amendment No 660 to TPS1 and was the initial statutory Part 9 Agreed Structure Plan adopted by the Council in 1999 and conditionally adopted by the WAPC (Figure 6). It covered all of Banksia Grove and the adjacent Peet Ltd land.

The Structure Plan essentially provided more detail and clarification building on the Development Concept Plan by indicating local streets and more refined positions of the schools, open space, residential lots, commercial sites etc. It included a 10ha site for the High School adjacent to the District Centre.

The conditions imposed by the WAPC on adoption of this document are included in full in the Report Appendix. Aside for splitting the Structure Plan into two parts only a few modifications related to the Landstart landholding. These were the incorporation of the Bushplan Site 295, indication of the road design and cyclist pedestrian network and the requirement for the preparation of a revised Remnant Vegetation Plan "...to reflect the changes to the POS areas and the Bushplan Site".

Finalisation of the required modifications and final adoption by the WAPC was then delayed as a result of MRS Amendment No 1097/33A (Figure 10) which modified the alignment of the Pinjar Road Reserve, however, this has now been gazetted.

#### **1.6.5 Banksia Grove Agreed Structure Plan 21A (2001)**

The initial Banksia Grove Agreed Structure Plan 21A (2001) was lodged by Roberts Day responding to the WAPC's requirements for a separate Structure Plan for the DHW land (Lot 1 and 2001 Flynn Drive) and to address those matters described above including recognition of the now BushForever site and the proposal to realign the main north-south route servicing the Structure Plan area (Figure 9).

Aside from recognising the 45ha of BushForever land along Flynn Drive and the new alignment of Pinjar Road, the Plan in most other respects was generally consistent with the Neerabup (East Joondalup) Local Structure Plan (1998) in identifying a 10ha High School Site, two Primary

Schools, portion of a District Centre (13.3ha), two local centres, and areas of public open space over which the subsequent Vegetation Management Plans would be prepared.

Importantly all of the Structure Plans prepared made provision for 10% subdivisional POS throughout the Neerabup cell. The 2001 Structure Plan made provision for 10% within the Structure Plan area west of Joondalup Drive, noting that the first Stage east of Joondalup Drive already provided well in excess of the requirement ensuring that overall Banksia Grove was generously supplied with POS. The same approach is taken in this latest structure planning.

The 2001 Structure Plan was granted "support in principle" by Council in 22 May 2001 (Report Appendices) and formed the basis of the formal request by the City to the WAPC for the amendment to the MRS to alter the Pinjar Road alignment. It has subsequently (and prior to gazettal of the MRS amendment) been use as the basis for subdivision approvals west of Joondalup Drive.

#### **1.6.6 Neerabup Industrial Area Agreed Structure Plan (2005)**

A Neerabup Structure Plan provides for the future development of 1000ha of industrial land which will be developed as an economic development hub for the North West corridor with the potential to generate 20,000 jobs.

The Neerabup Structure Plan (Figure 13) identifies a variety of industrial land uses, proposes internal road network connections and establishes requirements for Design Guidelines, a Landscape Master Plan and permissible uses on the Industrial zoned land.

The location of this Industrial area to the north of the subject site will assist greatly in providing a node for local employment, increasing opportunities for the future Banksia Grove community.

#### **1.6.7 Statement of Planning Policy (SPP) No. 4.2 – Metropolitan Centres Policy**

SPP No. 4.2 identifies Banksia Grove (referred to as Neerabup within the document), as a District Centre with a maximum retail floorspace allocation of 15,000m<sup>2</sup> NLA (in the absence of any Commission endorsed Local Planning Strategy or Centres Plan). The current Structure Plan as with the previous plans continues to make provision for this Centre allocating approximately 14.5ha on the Structure Plan which will be zoned Centre Zone and be the subject of a separate Detailed Area Plan.

### 1.6.8 City of Wanneroo Centres Strategy (January 2005)

The City of Wanneroo revised Centres Strategy, adopted in January 2005, provides a framework for the location, size, land use mix and related matters for all existing and planned future commercial centres within the City of Wanneroo. The Strategy promotes retailing and commercial development throughout the City of Wanneroo, and encourages diverse centres based on 'Main Street' planning principles.

Map 3 of the Strategy (Figure 14) currently describes the potential, not only for a District Centre, but also a Neighbourhood Centre and three Local Shops within the Structure Plan area.

Table 5.2 of the Strategy builds detail on Map 3 and sets the following floorspace limits for each centre;

- District Centre up to 15000m<sup>2</sup> NLA;
- One Neighbourhood Centre of 5000m<sup>2</sup> NLA; and
- Two Local Shops up to 200m<sup>2</sup> NLA (Note: Map 3 depicted three local centres)

Relevant to this Structure Plan exercise the Strategy also concludes that;

*"N13 The Council may wish to review the distribution of neighbourhood centres with a view to allowing more strategic locations. In some instances where developers or owners are reluctant to hold commercial sites not well located it would be better to relocate the floor area..."*

In essence the strategy provides the opportunity for reallocation of Centre floorspace as part of local structure planning. This is clearly the situation at Banksia Grove where more recent retail modelling has identified the need for only two small local shops in addition to the District Centre. In addition, the floorspace allocated to the Neighbourhood Centre can now be directed to the District Centre to improve timing and both short and long term viability.

The Structure Plan therefore adopts a District Centre of 15,000m<sup>2</sup> NLA and two local shops with scope for future expansion.

### **1.6.9 Smart Growth Assessment Strategy**

The City of Wanneroo's Smart Growth Assessment Strategy aims at ensuring that the future growth of Wanneroo takes place in a balanced and sustained manner incorporating economic, social and environmental principles.

The Smart Growth Strategy centres on the following principles:

- Lifestyle & Housing Choice;
- Effective Use of Land & Infrastructure;
- Long Term Health of the Environment;
- Identity, Equity & Inclusiveness;
- Long Term Economic Health; and
- People & Government.

Through the adoption of the City's Smart Growth Policy, the City has the ability to assess proposals in accordance with the principles and associated strategies contained in the Smart Growth Strategy. The preparation of the Banksia Grove Structure Plan has taken into consideration all of the principles of the Smart Growth Strategy. This is demonstrated through the application of the Smart Growth Assessment Tool (SGAT) as detailed in Section D of this document.

### **1.6.10 City of Wanneroo Local Housing Strategy (2005)**

The City of Wanneroo has adopted the above Policy which relative to Banksia Grove is a mechanism to;

- Provide more housing choice
- Provide more affordable housing
- Encourage smart house design
- Respond to a wider demographic needs
- Encourage appropriate housing types and densities close to centres and infrastructure.



The Strategy establishes the housing diversity targets for Wanneroo in 2021 which are as follows:

<b>TABLE 3 : Housing Diversity Requirement: Wanneroo 2021</b>		
<b>Net Household Growth 2001-2021</b>	<b>Preferred Scenario</b>	<b>% Total Housing</b>
Separate Housing	31,942	76.2
Semi-detached, row/terrace, townhouse, etc	6,017	14.4
Flat, unit or apartment in one or more storey block	1,943	4.6
Flat, unit or apartment in a three storey block	1,025	2.4
Flat, unit or apartment in a four or more storey block	865	2.1
Other	114	0.3
<b>Total</b>	<b>41,906</b>	<b>100</b>

Source: Local Housing Strategy

The Strategy also outlines those areas which should be considered for higher density being;

- Public transport with a priority towards rail nodes and bus interchanges;
- Major arterial routes;
- Retail and employment centres;
- Areas of high amenity including public open space and recreational facilities;
- Educational institutions including primary, secondary and tertiary; and
- Community facilities including libraries and medical centres.

Recommendation 9.2.1 (c) of the Housing Strategy sets out a Table to forecast dwelling types by geographic location for use in the SGAT as a guide to future development. These are reproduced below:

<b>TABLE 4: Forecast Dwelling Types by Location</b>							
<b>Geographic Types</b>	<b>Standard</b>	<b>Within 400m of Coastal Node</b>	<b>Within 800m Train Station/ Bus Station or Town Centre with Transport Hub</b>	<b>Within 800m of Town Centre (no transport hub)</b>	<b>Within 400m of Commercial Neighbourhood Centre</b>	<b>Rural</b>	<b>Overall Target</b>
Gross Density (Dwellings per hectare)	10	20	25	25	20	5	
COW Proportion of Dwellings by Location Type (2021)	30.0%	6.0%	21.0%	21.0%	20.0%	2.0%	100%

DIVERSITY HOUSE TYPES							
Single Separate House on lot <400m <sup>2</sup>	21.0%	23.0%	28.0%	28.0%	36.0%	4.0%	26.7%
Single Separate House on lot >400m <sup>2</sup>	66.0%	52.0%	37.0%	37.0%	46.0%	90.0%	49.5%
Semi Detached/ townhouse	10.0%	15.0%	20.0%	20.0%	10.0%	5.0%	14.4%
Flats/ Units/ Apartments/ Other	3.0%	10.0%	15.0%	15.0%	8.0%	1.0%	9.4%
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Source: Local Housing Strategy

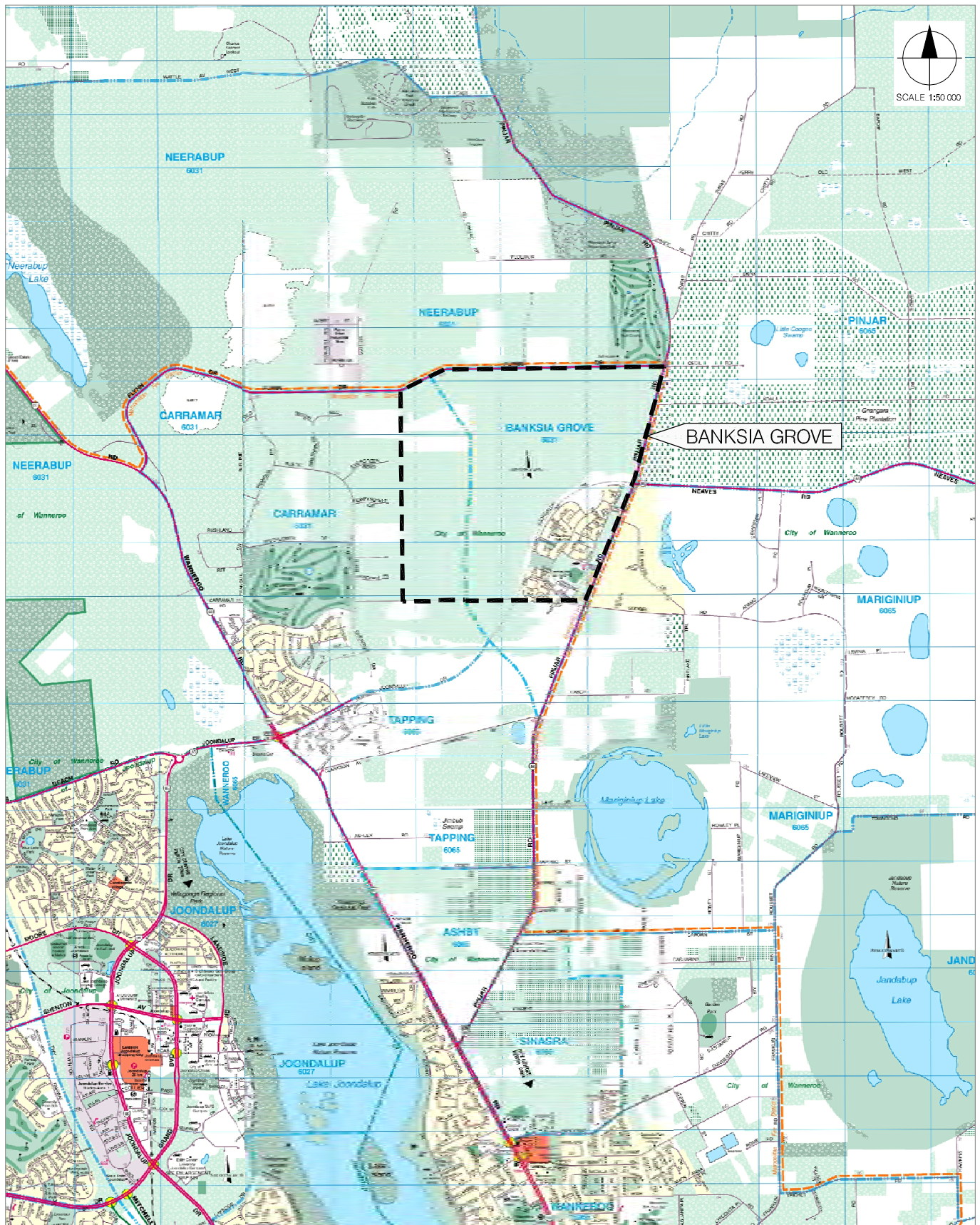
Recommendation 9.2.1 (d) provides a density guide for the City of Wanneroo as follows:

- 12-20 dwelling units/site hectare general residential neighbourhoods
- 20-30 dwelling units/ site hectare within 250metres of main bus routes and 400 metres of small neighbourhood centre;
- 30-40 dwelling units/site hectare within 400 metres of large neighbourhood centres;
- 40 dwelling units/site hectare within 800 metres, and 60 dwelling units/site hectare within 200 metres of train stations and bus stations; and
- 40 dwelling units/ site hectare within 800 metres of town centres.

These densities are not intended to be prescriptive standards but rather as a guide for developers and the City when considering Structure Plans and as a basis for making recommendations to the WAPC on Structure Plans or applications for subdivision.

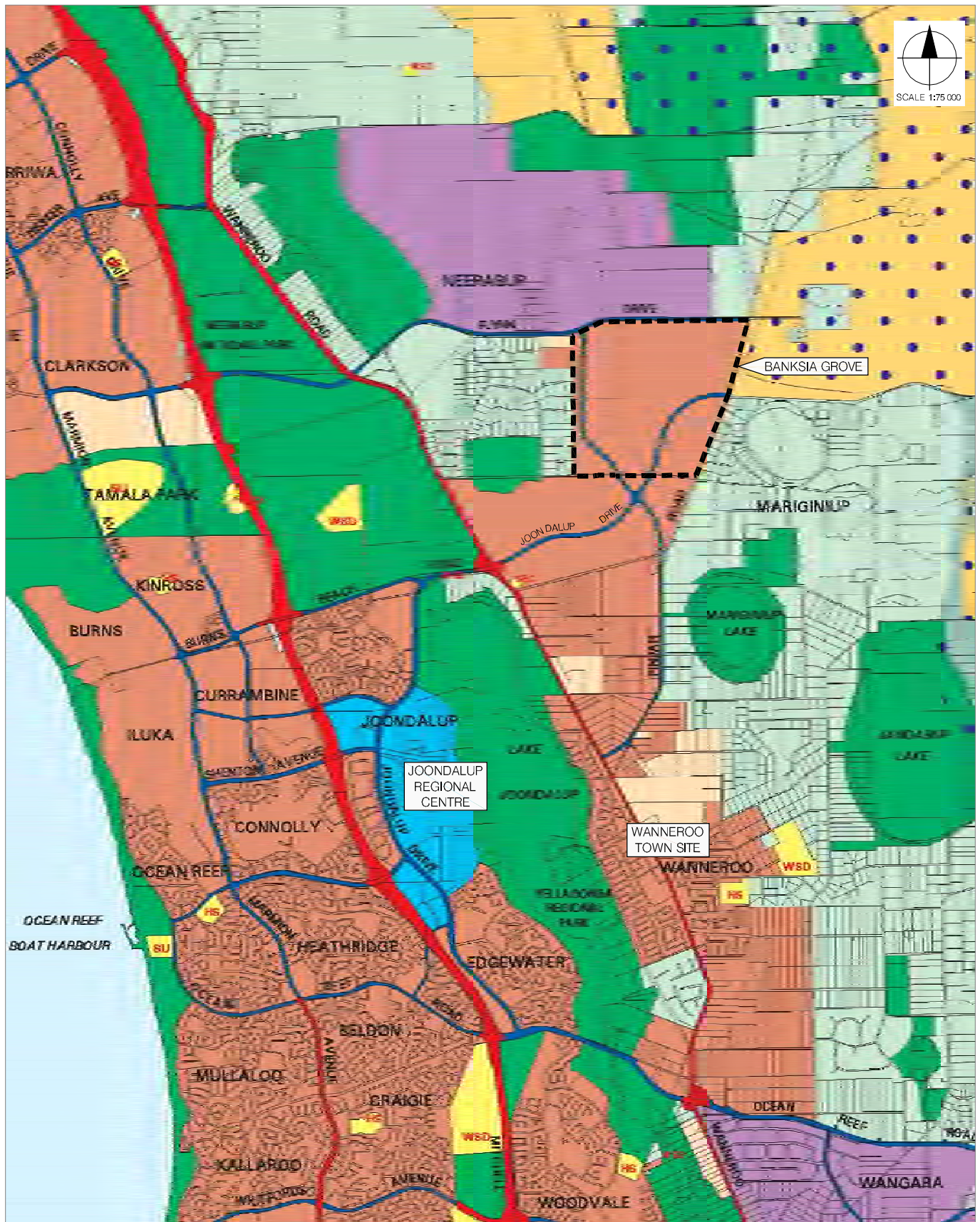
Many factors will influence the degree to which it is possible or practical for a subdivider to achieve these standards. One of the biggest influences is the degree to which existing development has occurred and the density and disposition of these uses. With respect to Banksia Grove the existing developed portions are of more traditional densities (10 dwellings per gross hectare), which already impacts on the practicalities of achieving the targets listed above, particularly around the centres.

This Structure Plan strongly embraces the principles of density and diversity outlined in the Local Housing Strategy and establishes a responsive R-Code regime and accompanying provisions which will guide development to reflect these goals. At the broad Structure Plan level yield estimates have been done (refer section 3.6.4) and have been inputted to SGAT in Section D.



SOURCE: STREET SMART (981-46)





SOURCE: DEPARTMENT FOR PLANNING AND INFRASTRUCTURE (981-47)







Application D130196

WESTERN



AUSTRALIA

1708 383

Volume 1181 Folio 37

## CERTIFICATE OF TITLE

UNDER THE "TRANSFER OF LAND ACT, 1893" AS AMENDED

FOL

I certify that the person described in the First Schedule hereto is the registered proprietor of the undermentioned estate in the undermentioned land subject to the easements and encumbrances shown in the Second Schedule hereto.

VOL

*A. J. Smyth*  
REGISTRAR OF TITLES



Dated 17th October, 1985

ESTATE AND LAND REFERRED TO

Estate in fee simple in portion of Swan Location 2579 and being Lot 1 on Diagram 62965, delineated and coloured green on the map in the Third Schedule hereto, limited however to the natural surface and therefrom to a depth of 60.96 metres.

FIRST SCHEDULE (continued overleaf)

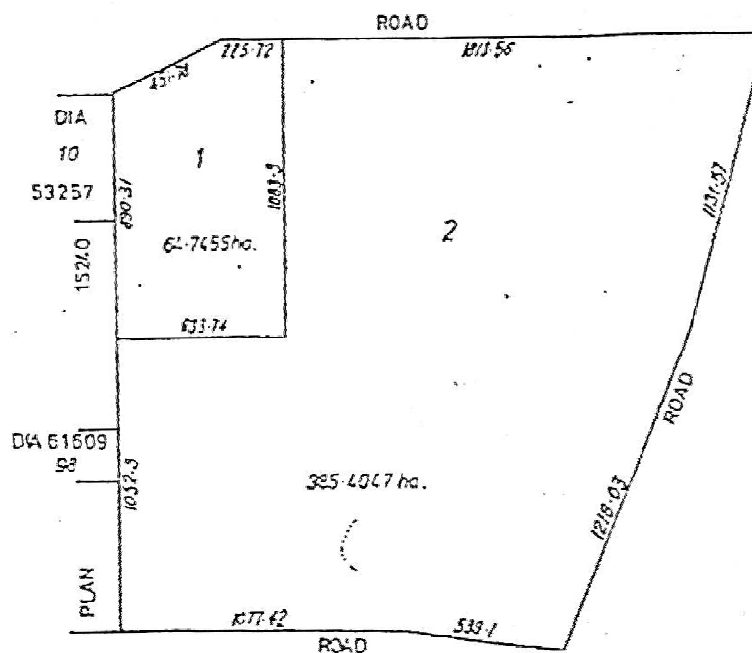
~~The Perth Diocesan Trustees of The Church Office, Cathedral Avenue, Perth.~~

SECOND SCHEDULE (continued overleaf)

NIL

*A. J. Smyth*

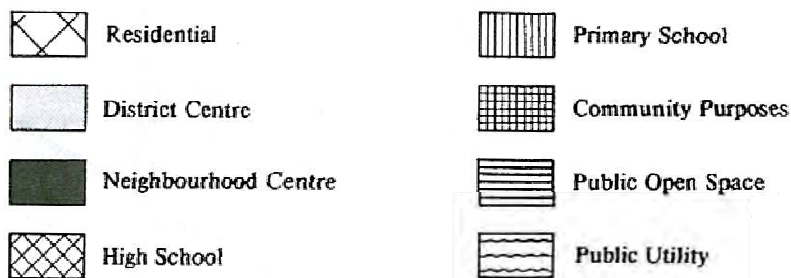
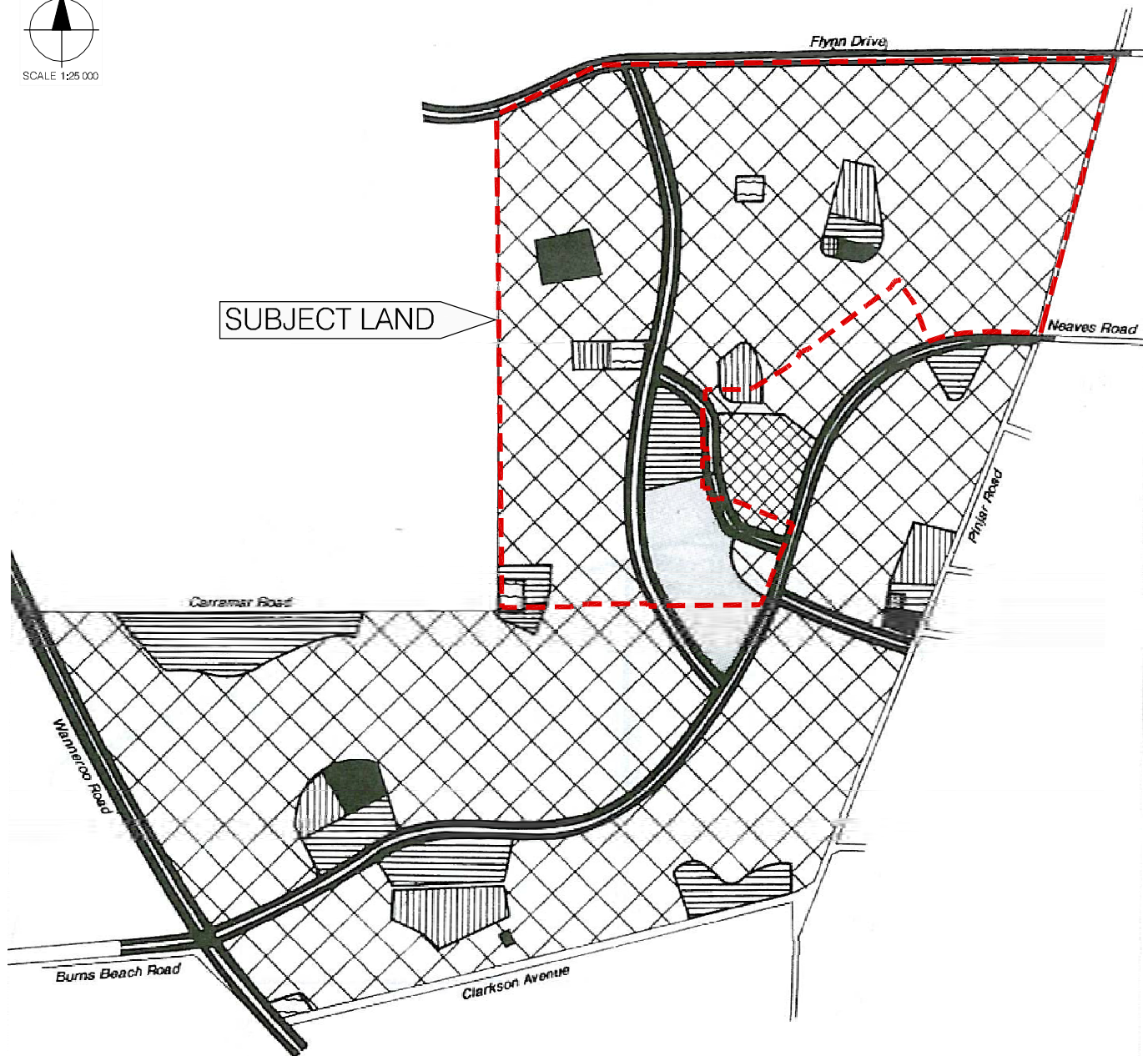
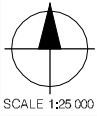
REGISTRAR OF TITLES

THIRD SCHEDULE

SCALE - NTS

SOURCE: DEPARTMENT OF LAND ADMINISTRATION (981-56)





SOURCE: BOWMAN BISHAW GORHAM (981-52)

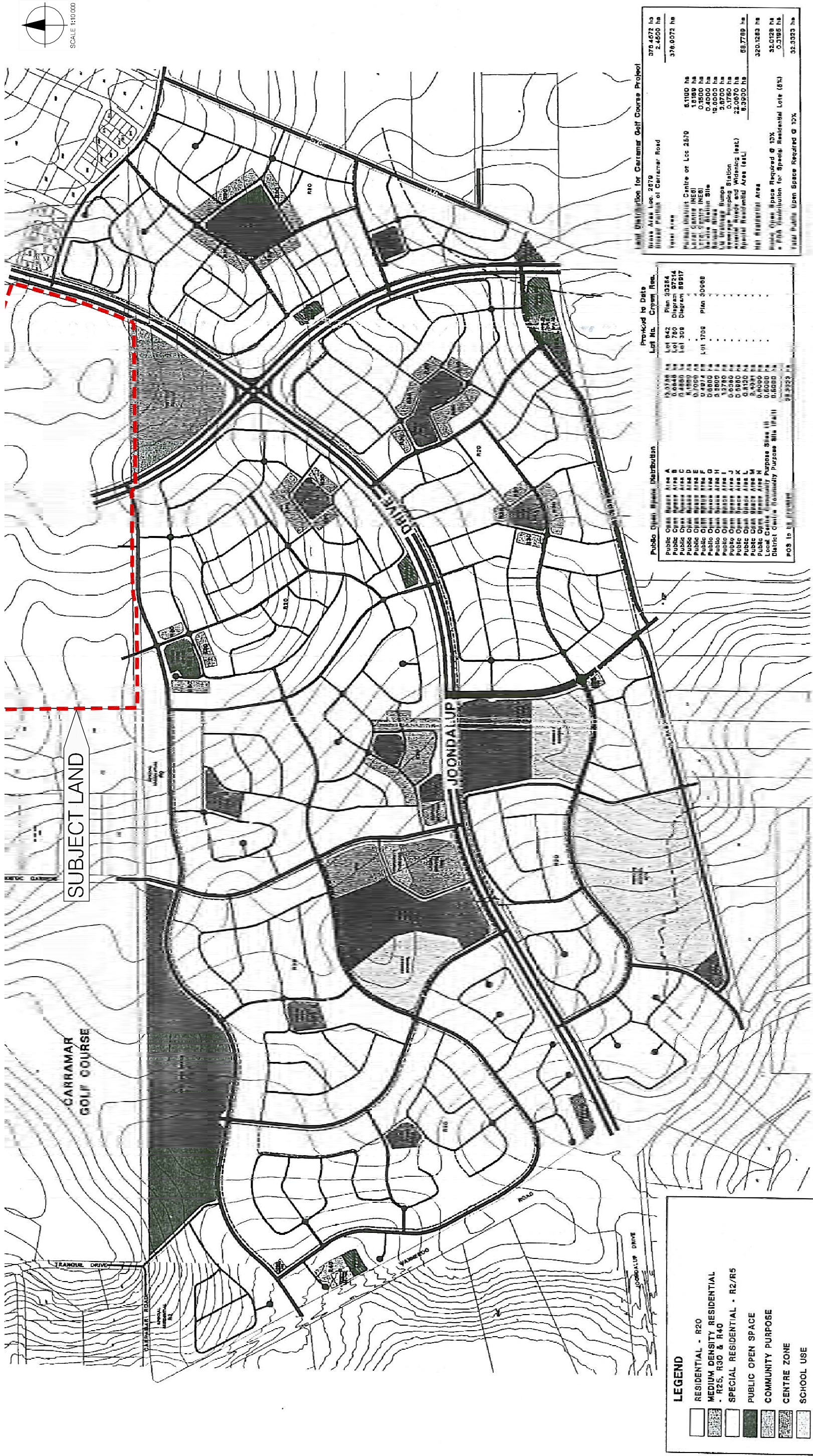


SOURCE: PART OF AMENDMENT No. 606 TO CITY OF WANNEROO TPS No. 1 (981-53)

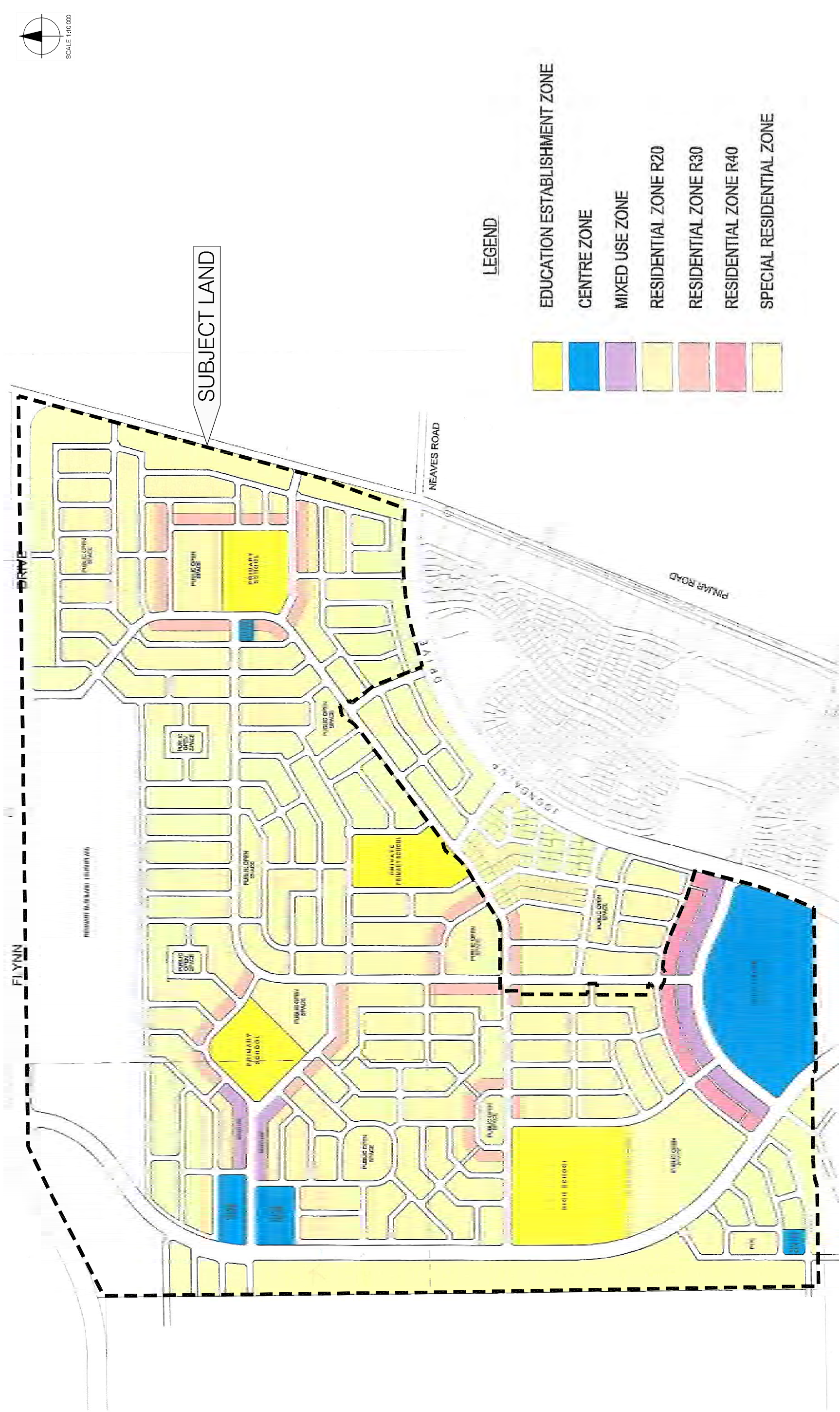






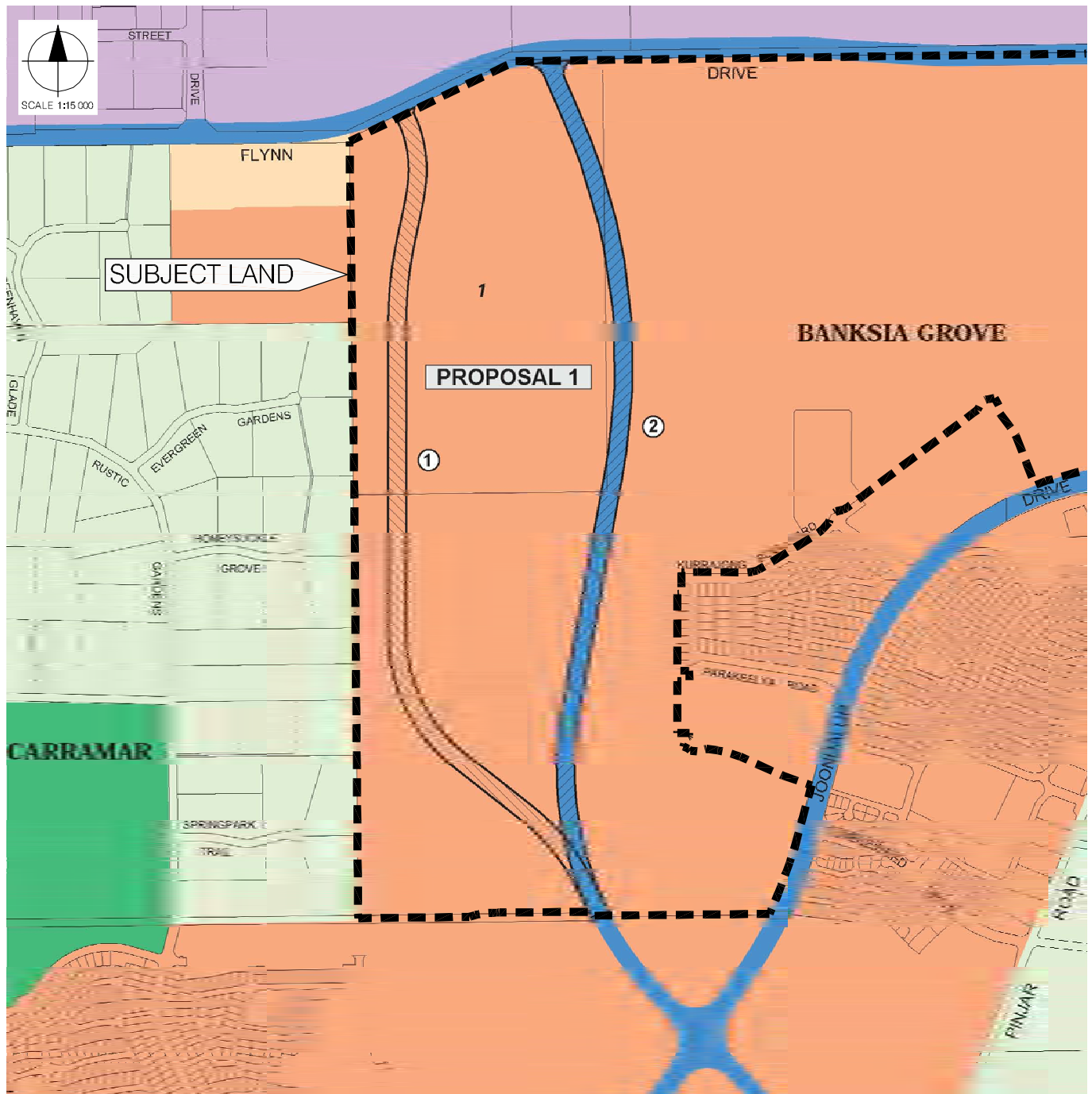






SOURCE: ROBERTS DAY GROUP (981-54)





### Realignment of Other Regional Roads Reservation - City of Wanneroo

9th AUGUST 2005

as advertised

Proposed:

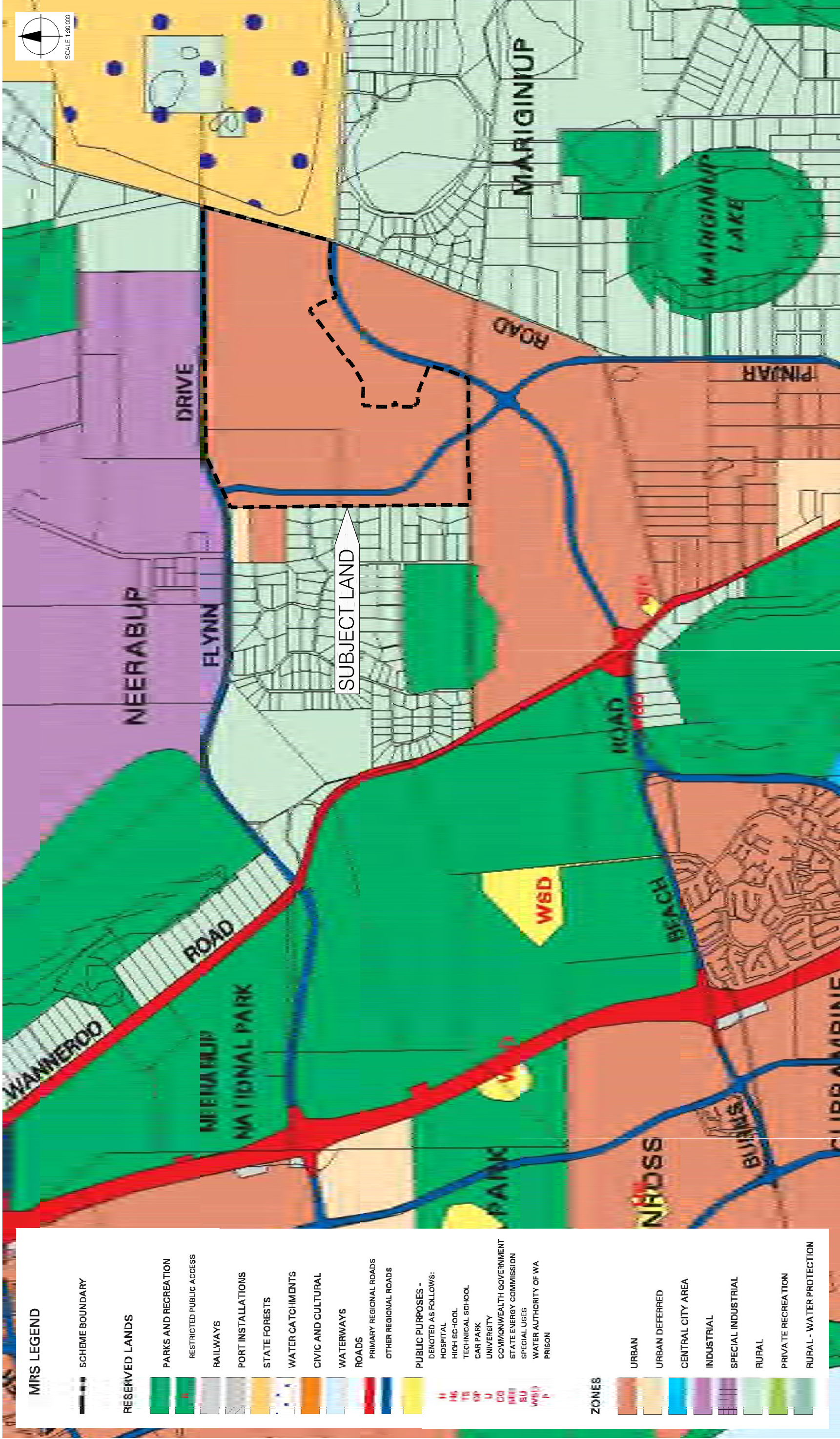
- ① Other Regional Roads Reservation
- ② Urban Zone

Legend  
Existing:

- Urban Zone
- Urban Deferred Zone
- Parks and Recreation Reservation
- Other Regional Roads Reservation
- Rural Zone
- Industrial Zone

SOURCE: DEPARTMENT FOR PLANNING AND INFRASTRUCTURE (981-50)



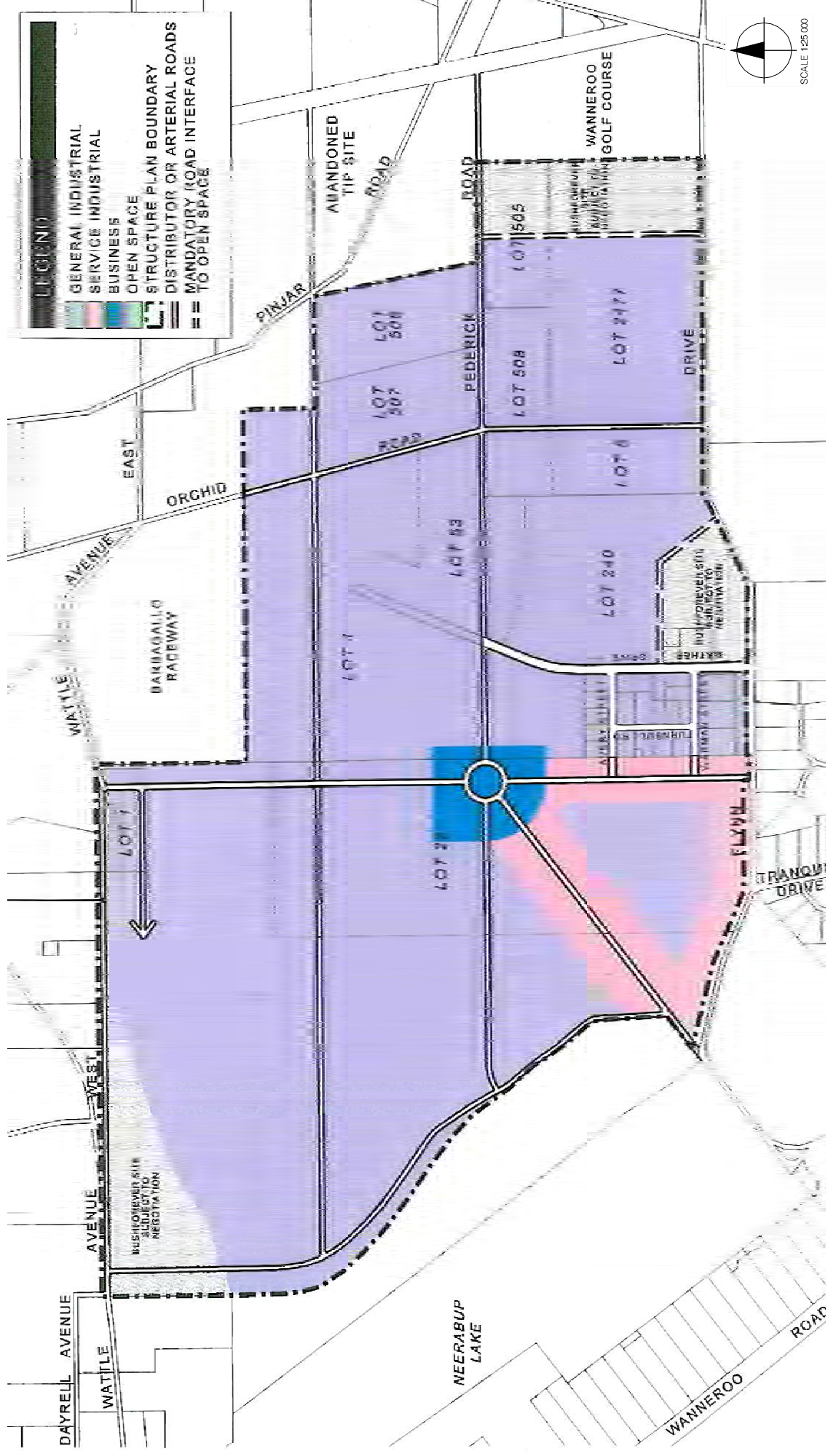


SOURCE: DEPARTMENT FOR PLANNING AND INFRASTRUCTURE (891-51)









SOURCE: TAYLOR BURRELL BARNETT (951-57)



banksia grove

NEERABUP INDUSTRIAL AREA AGREED STRUCTURE PLAN  
FIGURE 13



**Mixed Business Areas**

**MM1** Facilitate provision of mixed business areas at all regional, district and neighbourhood centres in the City of Wanneroo.

**MM2** In Wangara, facilitate mixed business use generally, and business uses on land with Wanneroo Road exposure. Retain Landsdale for industry.

**MM3** Retain the Flynn Drive Industrial Area generally for industry but retain future option of providing a mixed business area on the proposed new east-west spine road.

**MM4** Promote and provide for technology parks and community business parks:

- within or adjacent to centres at all levels in the functional hierarchy;
- on appropriate freestanding sites which:
- are located within 500m of rail stations and public transport termini;
- are located on major arterial roads which are easily accessible and benefit from good exposure;
- have good road access, other services and a high quality physical environment;
- are located so as not to adversely affect the amenity and character of existing residential areas by way of privacy, traffic generation or other consequences incompatible with residential development;
- have minimum and maximum site areas of 4 hectares and 10 hectares respectively.

**Neighbourhood Centres in East Wanneroo**

**NM2** That for purposes of the Centres Strategy to the year 2006, the sizes of neighbourhood centres in the Cells in East Wanneroo and Banksia Grove/Corramar/Tapping are as shown in the Centres Floorspace Guide.

**NM3** That sizes of neighbourhood centres in the structure planning cells in East Wanneroo are considered flexible and subject to review - at least by 2006, in response to development initiatives in the cells.

**NM4** The structure plans for neighbourhood centres should be reviewed with a view to facilitating 'main street' expansion. The identification of single site commercial centres in structure plans, as a matter of course, is not conducive to 'main street' principles or incremental expansion.

**NM5** That the proposal to relocate the neighbourhood centre in Corramar to the intersection of Joondalup Drive and Wanneroo Road is not supported.

**NM6** That the Council in conjunction with the Ministry for Planning review the possibilities for combining and/or relocating neighbourhood centres to more strategic locations, based on 'main street' planning principles.

**Alexander Heights & Garrawheen**

**DM6** Applications for extensions or renewal are considered on their merits.

**DM7** Alexander Heights centre be permitted to current limit of 12,000 m<sup>2</sup>.

**DM8** Garrawheen centre be permitted to current limit of 10,500 m<sup>2</sup>.

**Banksia Grove**

**DM9** The Council consider any proposals for expansion of the centre or the establishment of mixed business in peripheral areas in the context of an approved structure plan based on 'main street' principles.

**DM10** The Ministry for Planning Urban Design Unit is consulted in the formulation of such a structure plan.

**DM11** Any application for development approval of Banksia Grove District Centre to over 10,500 m<sup>2</sup> before 2006 should be subject to an impact statement acceptable to the Council.

**Wanneroo**

**DM1** The Council commit itself to the long term & sustained promotion of development of the Wanneroo town centre.

**DM2** The Council consider any proposals for expansion of the centre or the establishment of mixed business in peripheral areas in the context of an approved structure plan based on 'main street' principles.

**DM3** The Wanneroo town centre be permitted to 30,000 m<sup>2</sup>.

**Local Shops**

**LM1** Insert a new definition in DPS2 for local shops consistent with Table 5.1. Local shops be permitted as outlined in Table 5.2 - Retail NLA for Centres Table. No expansion should be permitted without the preparation of an acceptable centre plan.

**Madeley Centre**

**DM4** No expansion of Madeley Centre will be considered until it is demonstrated to the satisfaction of Council that the population of the centre's primary trade area, and improvement in the trading performance of non-food shops for both this centre and nearby centres has reached a level that according to Council warrants expansion to an area commensurate with Council's Centres Strategy. Any such expansion will not increase the total area above 20,000 m<sup>2</sup> rle. The balance of the site should be subdivided off from the shopping centre site for mixed business and service commercial uses.

**DM5** Any further development of the centre and adjoining mixed business uses shall be subject to an approved revised structure plan.



**MIXED BUSINESS**  
(existing/proposed)

**CENTRE TYPES**

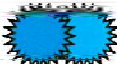
**Local Shops**



**NEIGHBOURHOOD**  
(existing/proposed)



**DISTRICT**  
(existing/proposed)



**REGIONAL**  
(existing/proposed)

**Neighbourhood Centres Generally**  
**NM1** The Council consider any proposals for expansion of a centre or the establishment of mixed business in peripheral areas in the context of an approved structure plan based on 'main street' principles.



NOT TO SCALE

NOTE: Centres locations are shown diagrammatically

# CITY OF WANNEROO CENTRES STRATEGY MAP 3

Centres Strategy - Revised Final

SOURCE: CITY OF WANNEROO (981-58)

January 2005





## **SECTION B**

### **Environment & Sustainability**



## **2.1.0 GENERAL SITE CONDITIONS**

### **2.1.1 Geology**

The site is located in the Spearwood Dunes region within the Swan Coastal Plain which generally comprises the Tamala limestone geological unit.

The Tamala limestone unit is a cemented calcarenite. It is generally creamy white to yellow or light grey and is found as limestone, calcarenite or sand. Much of the formation is cross bedded dune deposits.

The upper layers of the Tamala limestone unit have undergone extensive weathering and sand derived from the limestone is typically encountered above the cohesive limestone.

The geology of the site is generally uniform and the subsurface profile encountered in the Stage 1 investigation boreholes consistently comprised 0.2m of loose, medium grained grey sand overlying medium dense, pale yellow, fine to medium grained sand that became orange yellow and fine with depth. A similar profile is expected for the rest of the development site.

### **2.1.2 Hydrology and Groundwater**

Perth Groundwater Atlas shows groundwater in the area to be located approximately 30m below current site levels.

The project planning will incorporate the Water Sensitive Urban Design (WSUD) principles and techniques in the landscaping and drainage planning and this will ensure that there is little or no adverse impact on the groundwater status quo. The total water management strategy adopted for this project will require surface water and groundwater quality management, utilisation of on-site infiltration, protection of the BushForever site from drawdown and the provision of multiple use corridors.

A key sustainability initiative is the preparation of a Local Water Management Strategy which is discussed later in Section 2.8.0.

### **2.1.3 Vegetation**

The vegetation off the site can generally be described as undisturbed Banksia woodland located on deep Spearwood Sands. This type of vegetation comprises of scattered trees up to

10m tall with interspersed shrubs and grass. A defined area of BushForever, covering an area of some 42.5 hectares, is located on the northern boundary of the development site. Vegetation conservation and management is a key development initiative discussed in detail in this section.

#### **2.1.4 Landform Response**

One of the key drivers in the Local Structure Planning process, which influences land use configuration and final detailed design, is landform. Natural slope and grade presents both opportunity and constraint to design and becomes a key consideration in the siting of uses such as open space, drainage, school sites, roads etc. Many uses are suited to flatter locations whilst the residential component will often benefit and can more readily accommodate steeper grades.

Local Authority and Water Corporation engineering standards for roads, sewers and other infrastructure similarly influence the construction response to landform wherein modifications to natural slopes and vegetated areas becomes inevitable in order to comply with standards.

As a result landform has been very carefully considered in the preparation of the subdivision design, particularly the location of the larger open space areas and the locations where existing vegetation presents the best opportunity for preservation as part of the physical development of the land.

A summary of the topography demonstrating the natural landform elements is included at Figure 15.

### **2.2.0 ENVIRONMENTAL BACKGROUND AND HISTORY**

One of the key principles which underpins this Local Structure Plan, and one which will guide the ongoing development of the Banksia Grove Estate at all phases of development, is the strong focus on sustainability of both the natural and man-made environments. This focus begins at the broadest level of Structure planning and subdivision design, through construction and development, down to the individual lot level. It includes strategies for both the public and private domain and acknowledges the need for a commercially sustainable outcome for the City of Wanneroo in the ongoing management of open space and community facilities.

This will be achieved through the implementation of a number of complementary Management Plans and Strategies (which are detailed in this section), and through this Structure Plan itself and the subsequent detailed planning phases to follow.

At the broadest level the PER, subsequent EPA recommendations and the Ministerial Statement specified that development could proceed subject to an appropriate response to vegetation management and preservation. It is intended however to expand substantially on these commitments to address triple bottom line objectives and deliver a truly sustainable and vibrant community for the long term.

This section details and summarises this approach referencing these key strategy documents, their content and their delivery timetable.

### 2.3.0 PUBLIC ENVIRONMENTAL REVIEW (PER) (1992)

Section A of this report details the history of the Neerabup Banksia Grove approvals with respect to zonings, structure plans and environmental approvals. As previously detailed, the entire site is covered by an approved PER (1992) and Ministerial Statement 280 (1992) which pertained to the MRS 'Urban' rezoning and the accompanying Structure Plan (refer Report Appendices).

The EPA found the proposal was environmentally acceptable and the Minister, through Ministerial Statement 280, granted approval subject to the imposition of the following requirement;

*"The proponents should maximise the amount of native vegetation left on the site. On the land currently covered with bushland, the proponents should, prior to subdivision receiving final approval, produce a remnant vegetation plan. This plan should show:*

- The location of the public open space areas, and the sections which will be left as native bushland;
- The corridors that will be left as native bushland; and
- Any other areas where native vegetation can be left subject to further development.

*Where substantial re-landscaping is necessary, this requirement will not be necessary. However, all species replanted should be those typical of the vegetation types Karrakatta South and Central, according to the requirements of the City of Wanneroo.*

*Each plan is to be developed with advice from the City of Wanneroo."*

With respect to the implementation of the PER and Ministerial Conditions, correspondence was received from the EPA Audit Branch in 2006 (Report Appendices) which advised the proponent that;

*"...it had determined that all of the requirements from the outstanding Conditions have been met and that therefore this Statement can now be considered to be closed"*

A major new environmental initiative since the PER, which was beyond the expectations of that document and the Ministerial Conditions, and one which comprehensively satisfies objectives regarding the retention of native vegetation, was the decision to set aside 45ha (13% of the site) as BushPlan (now BushForever) Conservation, which is also over and above the standard 10% POS required at the time of Subdivision.

In addition, preparation and implementation of the Vegetation Management Plans pursuant to the Statement in association with related Landscape, Drainage and Nutrient Management strategies for the various open space and conservation areas is a critical component of the overall Sustainability initiatives for Banksia Grove now being proposed which relate to the natural environment.

#### 2.4.0 BUSH FOREVER SITE 295 (DEC 2000)

The original Environmental Approval did not include the requirement to set aside any specific areas purely for conservation purposes and this was reflected in the original Structure Plans prepared. However the release of BushPlan, and subsequent BushForever, generated a Negotiated Planning Solution between the Ministry of Housing (now DHW) and the WAPC to set aside approximately 45ha of land along Flynn Drive for Conservation purposes, consistent with BushForever site 295 (refer Figure 7 and Report Appendices). With the gazettal of the realignment of Pinjar Road and widening of Flynn Drive, this area has since been reduced to a total of approximately 42.5ha. This area, however, now provides an important reserve of Karakatta Central and South vegetation complex type.

A major aspect of this new Structure Plan for Banksia Grove is to incorporate this conservation initiative into the overall Estate planning as an addition to the standard 10% POS requirement. In effect preservation of this land plus the land set aside for open space results in more than 20% of the estate being given over to conservation and open space to be utilised for a range of conservation, habitat and recreational activities. This demonstrates the quality platform which exists to implement an environmentally and socially sustainable open space network for Banksia Grove.

In the course of statutory agency assessment of the overall Structure Plan, the combination of the following open space areas and principles needs to be recognised:

- Vegetation retention areas created within the urban development area to satisfy the Minister for the Environment's conditions;
- Bush Forever reserve area 295; and
- Ongoing attention to creating vegetation and habitat linkages using POS areas, and vegetation retention areas within land uses including school sites, as demonstrated by the Structure Plan.

The provision of these areas provide a very high level of response to ensuring environmental and biodiversity protection and management initiatives are meaningfully addressed within the overall sustainability initiatives proposed for the site.

In design terms BushForever creates a strong land use focus for the estate with other key open space areas (and the pedestrian network) linking and interfacing to create those environmental corridors first suggested through the PER process.

### 2.5.0 ETHNOGRAPHIC AND ARCHAEOLOGICAL HERITAGE

The original heritage survey of Banksia Grove area was undertaken by McDonald, Hales and Associates in 1989. The survey did not discover any archaeological sites, including modified trees, in the area.

In June 2006, Tempus Archaeology was commissioned by Ethnoscience (on behalf of the Banksia Grove Joint Venture) to conduct an archaeological inspection and assessment of a putative humanly modified tree that had been identified within the proposed Banksia Grove subdivision.

Kevin Edwards of Tempus Archaeology inspected and archaeologically assessed the stand of Banksia trees on 27 June 2006 with three members of the Bibbulmun Tribal Group. A summary of details for the stand of trees is provided in Table 5.

TABLE 5 : Details of Trees Assessed During Archaeological Inspection				
Tree	Species	Trunk Diameter	Condition	Notes
1	Jarrah	1.6m	Base of western face of trunk severely fire damaged, with inner portion of trunk burned away; large scar on west face of trunk resulting from a branch tear.	The Aboriginal consultants identified what they believed may be a scar on one branch of the tree; however, owing to its elevation and highly occluded state, this could not be confirmed through direct inspection. Tree 1 currently contains an active bee hive.
2	Jarrah	1.5m	Base of western face of trunk severely fire damaged, with inner portion of trunk burned away; large scar on west face of trunk resulting from branch tear.	One Aboriginal consultant believes that a series of small burrs on the trunk of this tree may have been toe-holds cut into the trunk of the tree to facilitate (a) capture of animals or (b) use of the tree as a look-out. These burrs appear to represent former minor branch stems, and are unlikely to be anthropogenic in origin.
3	Jarrah	0.6m	Trunk extensively fire damaged, but essentially intact.	None



4	Jarrah	2.7m	Base of eastern face of trunk severely fire damaged, with inner portion of trunk burned away. Western face of trunk appears to be in good condition.	This tree has an unusual trifurcated trunk, which the Aboriginal consultants believe may have constituted landscape marker or significance feature for Aboriginal groups resident in the area. A small (50cm x 10cm) aperture at the junction of two of the trunks was also seen as evidence that this may have been a habitat tree.
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Source: Parsons Brinckerhoff/Tempus Archaeology

The general assessment is that the stand of trees does not appear to exhibit evidence of being deliberately modified by Aboriginal people (i.e. the scars on the trees are natural and not a cultural phenomenon).

Edwards also notes that the cultural significance attributed to the trees (i.e. their role as significant landscape markers and extra-sensory feelings regarding the spirituality of the place) is not amenable to archaeological assessment.

On the basis of the investigation, the following recommendations were proposed:

- The group of trees identified in the assessment do not appear to exhibit any evidence of having been deliberately modified by Aboriginal people, and as such do not constitute archaeological sites under the meaning of Section 5 of the Aboriginal Heritage Act 1972.
- The following requests from the Aboriginal consultants are considered in the Structure Plan:
  - Retain the trees on environmental grounds within public open space or vegetation buffers; and
  - Undertake additional consultation with Aboriginal elders, regarding the ethnographic significance of the group of trees.

McDonald of Ethnoscience concurred with the assessment, conclusions and recommendations of the Tempus report (which was reviewed in July 2006).

Significantly the Structure Plan protects the stand of trees in a conservation public open space area north of the north east primary school.

### 2.6.0 LANDSCAPE & REVEGETATION STRATEGY

Within Section C the various open space types throughout Banksia Grove, their role, use and main infrastructure components, are detailed. That section also summarises the specific requirements of the City of Wanneroo with respect to the hard and soft recreational and community facilities required.

The Landscape and Revegetation Strategy (refer Technical Appendices) prepared by McNally Newton details some of the more specific landscape initiatives to be undertaken for each of these spaces examining;

- Landscape design principles
- Facilities and playing spaces
- Pedestrian requirements
- Integration of spaces
- Drainage
- Habitat and conservation links
- Plant Species
- Amenities and Infrastructure
- BushForever Interface
- Streetscapes
- Joondalup Drive
- Maintenance and management

The Strategy is intended as a support document which will be refined and finalised in liaison with the Local Authority. It will form the basis for the preparation of the subsequent Landscape Concept Plans for each open space area as part of conditions of subdivision application which will in turn establish the criteria for the Landscape Construction drawings ultimately lodged with the City.

As an example of the type of detail to be provided as part of each Landscape Concept Plan, preliminary plans have been prepared in draft form for the Stage 1 Public Open Space (Area 5) and south central open space (Area 3) and are included at Figures 16 & 17.

All of the Landscape Concept Plans will be developed in parallel with the Vegetation Management Plan(s), the Drainage Management Plan(s) and the Nutrient and Irrigation Management Plan(s).

### 2.7.0 VEGETATION MANAGEMENT PLANS(S)

The protection of natural vegetation areas situated within urban land uses, once the retention areas are located and orientated to optimise the beneficial outcomes desired, requires the implementation of management and maintenance techniques which can effectively control and limit the effects of degrading processes which derive or emanate from the surrounding land use.

Following the approval of this Structure Plan and as part of applications for subdivision which will follow, Vegetation Management Plans for all retained vegetation areas will be prepared by the proponent.

Factors addressed within the Vegetation Management Plans will include the following:

- design proposals for the interface between retained vegetation and adjacent land-uses, in respect to demarcation of the retained vegetation;
- design and operational proposals for any public access which is proposed, for the purpose of passive recreation, or environmental education based on interpretation and scientific learning from endemic species contained within the retained areas;
- proposals for fire management and control and suppression of bush fires which will inevitably occur over the long term;
- proposals for weed control and dieback management;
- rehabilitation/restoration of land within the proposed reserves which will unavoidably be disturbed by the construction operations and post occupancy processes, or has been previously disturbed;
- proposals for enhancement of ecological function, for example the use of installed nesting hollows in mature trees to provide additional nesting habitat for locally or regionally important bush bird species including Carnaby's Cockatoo, or the local Twenty Eight Parrot; and
- proposals for operational and management linkages between the community development program, and local educational institutions science learning programs, and ongoing management of the retained vegetation.

The objective of the Vegetation Management Plans, which will be developed with advice from the City of Wanneroo, will be to set out and describe design and operational techniques which will manage and protect the biodiversity values of the vegetation/habitat reserves whilst also providing the opportunity for the local and regional community participation in passive recreation in a natural setting and environmental education.

### 2.8.0 LOCAL WATER MANAGEMENT STRATEGY (LWMS)

A key Environmental Sustainability initiative at this point in the process is the production and implementation of the overall Local Water Management Strategy (LWMS) for the Banksia Grove Agreed Local Structure Plan area as prepared by Parsons Brinckerhoff. The complete document is reproduced in full in the Technical Appendices.

In summary, the LWMS presents an opportunity to balance water demand with the quantity and quality of supply. It is most effective when undertaken at both the broader subdivision development and the detailed lot levels. Specifically this entails managing the demand for water as well as the opportunity to improve water efficiency and employ stormwater harvesting and re use approaches.

The LWMS for Banksia Grove will aim to achieve the following objectives:

- To manage the water regime so that there is:
  - No net difference in water quality and quantity, such that post-development water quality and quantity conditions are equal to or better than pre-development conditions.
  - Appropriate conditions for development which prevent flooding.
- Management of the urban water cycle as a single system and;
- Achievement of best practice urban water management in relation to:
  - Stormwater management and retention of stormwater onsite/at the source;
  - Water conservation and water efficiency including re-use and recycling of water or utilisation of alternate sources where possible.

Specifically, key drainage design principles to be incorporated within Banksia Grove include;

- Incorporation of the stormwater system into the public open space
- Work to protect vegetation where appropriate and incorporate into drainage solution
- Maximise infiltration and groundwater recharge
- Implement landscape and nutrient management measures to complement drainage design
- Introduce a 3rd pipe to a shared bore as an alternate non-potable supply for householders.

The current drainage sub catchments identified at this time as part of the Structure Plan are depicted on Figure 18.

An Urban Water Management Plan (UWMP) will be prepared pursuant to the LWMS to clearly demonstrate how Water Sensitive Urban Design (WSUD) practices are to be incorporated in each stage of the development. Water quality and quantity targets for groundwater at the site will be identified and reflected within the UWMP and will be developed in unison with the Landscape Concept Plans and Vegetation Management Plans for the Estate.

## **2.9.0 COMMUNITY CONSULTATION AND ECONOMIC DEVELOPMENT PLAN (CEDP)**

### **2.9.1 Community Consultation – Banksia Grove Open Day**

To ensure efficient and representative community consultation, an Open Day was held on Saturday 10<sup>th</sup> December 2005 at the existing Banksia Grove Community Hall to raise awareness among the existing community and to gain feedback and ideas on the initial Banksia Grove Concept Plan. Approximately 650 people attended the Open Day of which 94% were from the local community.

The main purpose of the day was to identify key community issues and concerns and to receive suggestions which would guide design of the final Banksia Grove Agreed Local Structure Plan. The Open Day also allowed for the commencement of community relationships, encouraging the integration of the existing and future Banksia Grove community.

In summary, key themes raised on the day included:

- Desire to retain native vegetation;
- Support for greenspace linkage concept through the estate;
- Provision of more active and passive open space areas;
- Support for a lake or water body within the Estate (similar to Brighton/Ellenbrook);
- Current lack of public transport for the area;
- At grade crossing across Joondalup Drive;
- Need for a District Recreational Facility with multiple use facilities;
- Earlier opening of High School site;
- Strong support for 'Main Street' District Centre as opposed to a shopping centre; and
- Support to Mixed Use/Home Business areas and warehouse concept.

The clear indication from the Open Day was that there is a definite 'community feel' in Banksia Grove that needs to be supported and encouraged.

A subsequent Open Day is planned as part of the public consultation plan for the Structure Plan.

### 2.9.2 Community Economic Development Plan (CEDP)

As part of its commitment to strengthening the existing community, the Banksia Grove Joint Venture initiated a social planning process to collaboratively research and plan community development activities with a view to implementation during the next five to ten years.

To date this has included benchmark research on wellness and quality of life survey, a community audit and a Community Economic Development Plan (CEDP).

Key findings of the Audit and benchmark research included the following:

- The area currently suffers from a lack of good physical connections, few community facilities and services, little continuity between local communities and the absence of a community hub;
- A perceived lack of communal meeting places and spaces;
- A strong demand for activities and facilities to meet the needs of a younger demographic; and
- A very low degree of satisfaction with the provision of public resources.

Since early 2005, stakeholders have been consulted to identify aspirations, needs and core values for community development on the Banksia Grove project. This has involved interviews, meetings with stakeholders and stakeholder groups and the establishment of a Stakeholder Reference Group. During consultation, the community jointly developed the guiding principles for the CEDP.

Central to the success of the CEDP, will be the implementation of a broad range of community and economic initiatives in partnership with key stakeholders:

- “Community first” – creating bridges to local communities
  - Welcome activities with existing residents.
  - Upgrade of existing parks and community centre.
- “Community first” - income generation project
  - Formation of a community choir.
  - Community art projects.
  - Good vehicular, cycle and pedestrian linkages across suburb.

- “At the heart” - Formation of a civic and cultural heart for the locality
  - Cultural heart – in village centre
    - An Ecologically Sensitive Design (ESD) environmental learning centre located at the activity centre.
    - An interactive and educational children’s playground designed around principles of global sustainability.
    - Annual iconic community events held to activate key civic spaces.
  - Civic heart – at district centre
    - Public art in town centre.
    - ESD multi-use Community centre in shops.
    - ESD Multi faith centre in shops.
- “UpStart” – a program for children and youth
  - “UpStart fund” – a fund for children and youth projects.
  - Youth work project to create boardwalks, interpretive signage and nesting boxes in BushForever site.
  - A youth micro-enterprise project.
- “Bringing sustainability home”
  - “The sustainable endeavours fund” – a micro-enterprise project aimed at new sustainability-focused small businesses.
  - Building Green and Living Green workshops for all potential buyers.
  - Environmental precincts of excellence initiative.
  - ‘HomeKit’ of discounted sustainable home products for new residents.
  - Business enterprise information point at community centre.
  - Implementing Greensmart and Waterwise practices.

In summary, the CEDP approach focuses on facilitating integration in Banksia Grove through accessibility to services and facilities, affordability, social interaction, wellbeing, economic opportunities, connection to the natural environment and lifelong development.



### 2.10.0 SUSTAINABILITY STRATEGY

The developers of Banksia Grove are committed to employing sustainability concepts during development of the estate. These commitments are outlined within the Sustainability Strategy included within the Technical Appendices and focus on the efficient use of water and energy and the recovery and avoidance of waste production during development.

#### Efficient Use of Water and Energy

Water use efficiency will be encouraged throughout the Estate through the application of a 3rd Pipe or reticulated non-potable irrigation water supply. Based upon knowledge of the site and a risk-based approach, wastewater reuse is currently not advocated for the estate.

Specific water strategies to be employed within Banksia Grove to reduce water demand include:

- 'In-house' fixtures and appliances - Installing water efficient appliances to reduce potable water demand and decrease the volume of sewage discharges from dwellings;
- Waterwise landscaping/house packages to be offered to new home builders;
- Landscape Master Plan to be prepared for all Public Open Space areas maximising the use of native/endemic plants, minimisation of 'turf areas', use of organic mulches etc;
- National Water Initiative - The developer has recently made application for a Community Water Grant to the Australian Government Water Fund under the National Water Initiative (NWI). This program provides matching (dollar-for-dollar) funding for up to \$250,000 for eligible projects. A decision regarding the grant application for the household installation of 'smart' irrigation controllers is expected in November 2006. If successful, the funding would ensure the first 600 lots of the estate are fitted with state-of-the-art irrigation controllers which would establish a new benchmark for both residential irrigation water and household potable water usage in Western Australia.

The Joint Venture Partners recognise the potential for the estate to demonstrate a culture of energy efficiency for the broader area and as such will collaborate with builders to promote energy efficient housing options. In general, solar access and energy efficient design will be encouraged within Banksia Grove through the following:

- North-south, east-west orientation of road alignments; and
- Greater than 70% of proposed lots are to be oriented  $\pm 20^\circ$  east-west.

In examining the use of renewable energy at the subdivision stage the developer will also consider:

- Options for concealing renewable energy technology from view from the street (eg solar panels, solar hot water heaters, etc);
- Ability to transform renewable energy into an aesthetic feature during the design process; and
- Collaborative funding with the Sustainable Energy Development Office (SEDO) for renewable energy options for community buildings and offices.

#### Resource Recovery

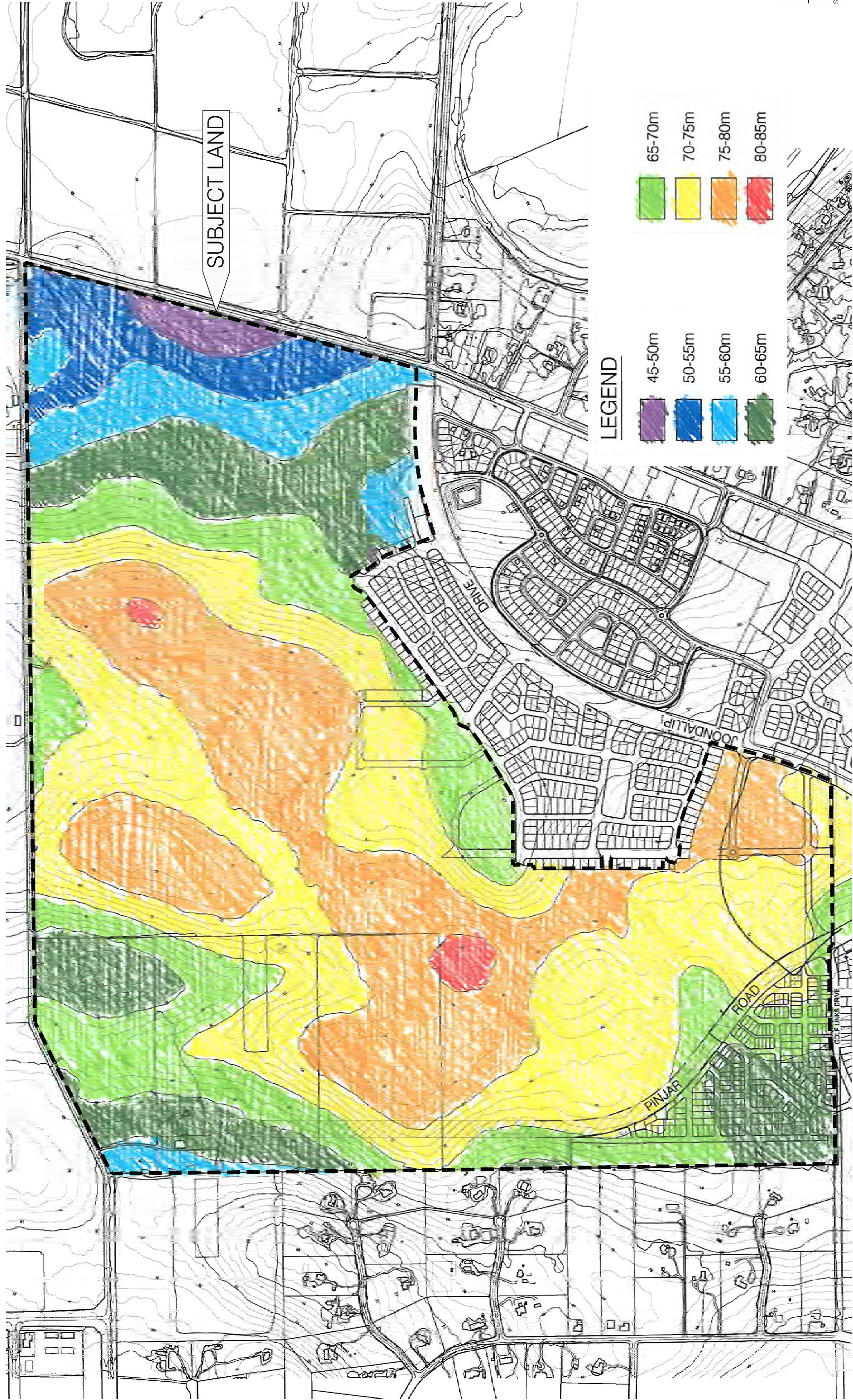
The Banksia Grove development will actively contribute to the waste reduction objectives of the Waste Avoidance and Resource Recovery Bill through the use of a waste management plan during the construction phases of the project.

The waste management plan will consist of:

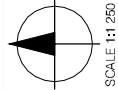
- a list of the materials or types of wastes likely to be encountered on a project
- an estimate of the volumes/quantities of each material/waste
- the reuse/recycling options for each material/waste
- the final disposal location for materials that cannot be reused/recycled.

The implementation of these measures together with the Affordable Housing initiatives will ensure the creation of a sustainable development which achieves the triple bottom line objectives of social, economic and environmental.





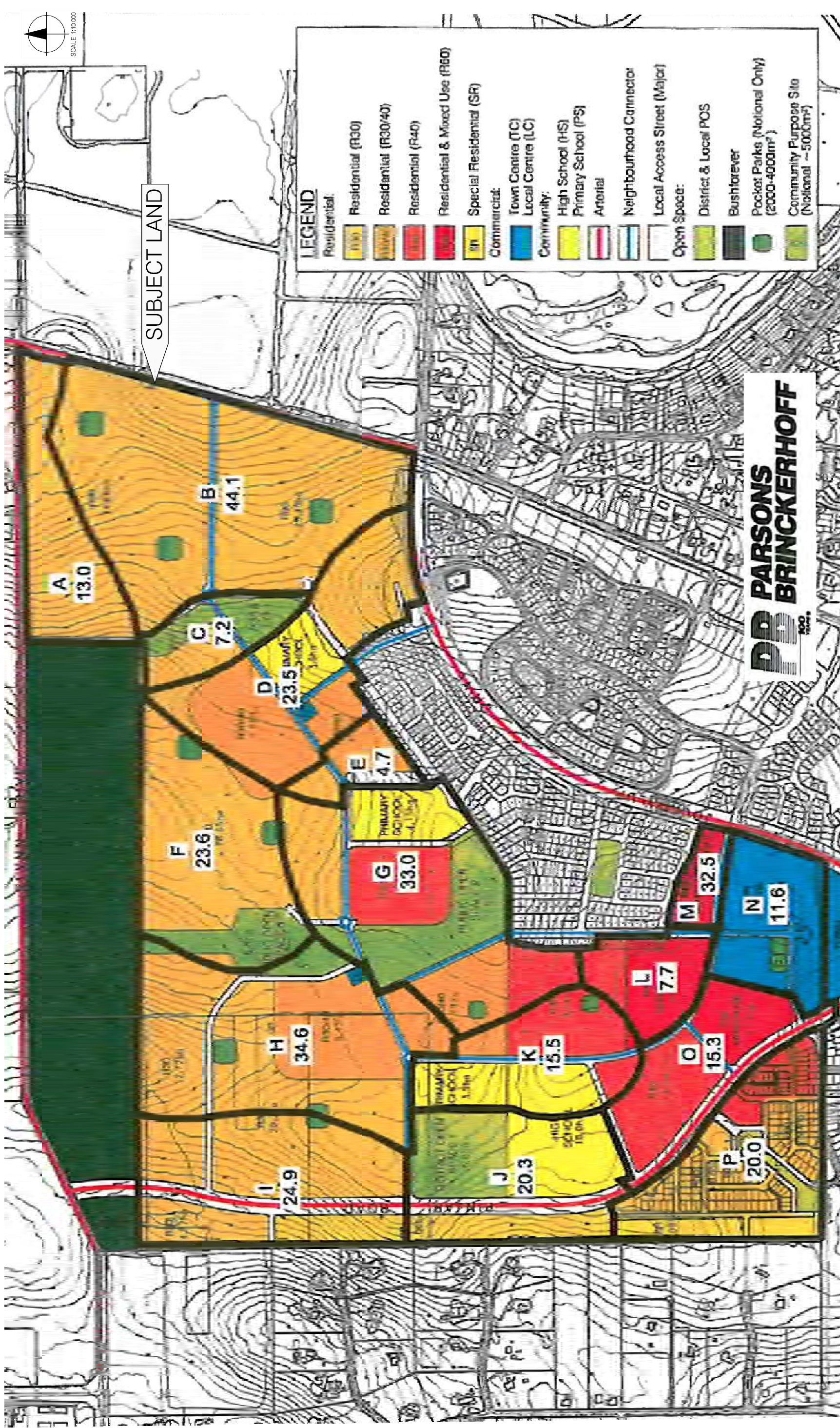












SOURCE: PARSONS BRINCKERHOFF (981-61)





banksia grove

## SECTION C

### The Structure Plan



### 3.1.0 PURPOSE OF THE STRUCTURE PLAN

The purpose of this document is to formally complete a Local Structure Plan process which was endorsed by both the WAPC and the City of Wanneroo following the original rezoning of the Neerabup locality to 'Urban' and 'Urban Development'. The Structure Plan will then provide a statutory and policy framework over the undeveloped balance portion of the Banksia Grove Estate.

Development to date has been consistent with the 'Urban' and 'Urban Development' zonings under the MRS and City of Wanneroo TPS1 and DPS2 respectively and importantly consistent with the Minister for the Environment Ministerial Statement No. 280 which found the proposals for urban development of the broader Neerabup locality to be environmentally acceptable.

Approximately 111.62 ha of Banksia Grove has been developed and provides approximately 760 lots, a private primary school, a Government primary school site and 9.5ha of Public Open Space consistent with the 2001 Agreed Structure Plan.

The key objective now is to embody and better reflect the range of sustainability, best practice and urban form objectives contained in more recent State and Local Government Policies such as the City of Wanneroo Local Housing Strategy, the Smart Growth Policy, State Sustainability Policy, Network City, Liveable Neighbourhoods and others to guide ongoing development.

It also represents an opportunity to re examine;

- Stronger integration strategies to ensure a single community identify and infrastructure equity for all residents;
- The principals upon which the District Centre is developed focussing on Main Street development;
- Improvements in how environmental linkages and integrated open spaces are planned;
- More direct and responsive open space types, locations and function;
- The opportunities for partnerships and the sharing of land and facilities for complimentary uses such as open spaces, primary and high schools;
- Improvements to land use efficiency ;
- Better integrated and co-ordinated road and pedestrian networks;
- More diverse housing and lot types;



- Affordability options to address market equity;
- Generally higher residential densities;
- Enhanced walkability and sustainability and improve solar orientation in the design;
- To better integrate the new areas with the established Banksia Grove community;
- To more comprehensively address sustainability issues;
- More innovation in water cycle management; and
- To implement a more efficient and responsive statutory framework.

In essence there will be a major net improvement to the urban form character, the variety of housing types, the quality of the natural environment, open spaces and environmental sustainability and community equity as an outcome of the implementation of this new Local Structure Plan and supporting strategies.

### 3.2.0 SUPPORTING TECHNICAL DOCUMENTATION

It is the primary purpose of this section to itemise and outline those various supporting Technical Documents that will guide the development and management of the Estate from both an urban form and an environmental sustainability perspective. It is important to first appreciate the role and function of these documents and where they link into the overall approval and development process.

Typically there is an incremental refinement in the level of detail required at the key planning and development phases, from broad structure planning through to works and construction. Table 6 details these key milestones and the Technical Documents which will be lodged with the City of Wanneroo and implemented, as required, at each of the nominated milestones. The Table is not intended to be prescriptive but rather to provide context to all of the documentation.

TABLE 6: Banksia Grove – Supporting Technical Documentation				
Phase/Level	District Level	Neighbourhood Level	Subdivision and/or Works	Individual Lot
Planning	<ul style="list-style-type: none"> <li>Part 9 District Structure Plan (1:5000)</li> </ul>	<ul style="list-style-type: none"> <li>Neighbourhood Precinct Plan – ie supporting report and plans (1:2000)</li> </ul>	<ul style="list-style-type: none"> <li>Subdivision Application</li> </ul>	<ul style="list-style-type: none"> <li>Detailed Area Plans</li> <li>R-Code Variations</li> </ul>
Conservation & Heritage	<ul style="list-style-type: none"> <li>Public Environmental Review</li> <li>Ministerial Statement</li> <li>Ethnographic &amp; Archaeological Assessment</li> </ul>	-	<ul style="list-style-type: none"> <li>Vegetation Management Plan(s)</li> </ul>	<ul style="list-style-type: none"> <li>Advice &amp; Education</li> </ul>
Water Management	<ul style="list-style-type: none"> <li>Local Water Management Strategy (LWMS)</li> </ul>	-	<ul style="list-style-type: none"> <li>Urban Water Management Plan (UWMP)</li> <li>Nutrient &amp; Irrigation Management Plan (NIMP)</li> <li>Implement (DMP)</li> </ul>	<ul style="list-style-type: none"> <li>Advice &amp; Education</li> </ul>

Landscaping	<ul style="list-style-type: none"> <li>▪ Landscape &amp; Revegetation Strategy</li> </ul>	-	<ul style="list-style-type: none"> <li>▪ Landscape Concept Plans and Construction Drawings</li> </ul>	<ul style="list-style-type: none"> <li>▪ Advice, Education &amp; Incentives</li> </ul>
Community	<ul style="list-style-type: none"> <li>▪ Community &amp; Economic Development Plan (CEDP)</li> </ul>	-	<ul style="list-style-type: none"> <li>▪ District Open Space &amp; Schoolsite Concept Plan</li> </ul>	<ul style="list-style-type: none"> <li>▪ Participation &amp; Community Groups</li> </ul>
Housing Lot Type & Affordability	<ul style="list-style-type: none"> <li>▪ Housing Affordability Strategy</li> <li>▪ Smart Growth Assessment Tool</li> </ul>	<ul style="list-style-type: none"> <li>▪ Yield and Housing Type Analysis</li> <li>▪ R-Code Allocation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Final Subdivision Plans</li> </ul>	<ul style="list-style-type: none"> <li>▪ Delivery of Affordability Initiatives</li> <li>▪ Detailed Area Plans</li> </ul>
Traffic, Roads & Pedestrians	<ul style="list-style-type: none"> <li>▪ Transport Plan</li> </ul>	<ul style="list-style-type: none"> <li>▪ Local Road Network Plan</li> <li>- Road Types</li> <li>- Pedestrian Systems</li> </ul>	<ul style="list-style-type: none"> <li>▪ Engineering &amp; Landscape Construction Drawings</li> </ul>	

At this broad level of structure planning the overarching strategies lodged now as support documents to the Structure Plan are indicated in Column 1. These are either included in full in the Technical Appendices or provided as separate documents for consideration in parallel to the Structure Plan. (The SGAT is completed in Section D of this report).

The remaining documents described above are more detailed and will be prepared and lodged either at the Neighbourhood stage, the subdivision stage or as part of formal documentation prior to commencement of works. Some will have a life throughout the project particularly those related to open space management and community development programmes.

### **3.3.0 LAND USE SUMMARY (AREA WEST OF JOONDALUP DRIVE)**

The Banksia Grove Agreed Structure Plan 21A (2006) is included at Figure 19 and as Plan No. 1 in the Part 1 Statutory Report.

The following Land Use Summary applies to the Structure Plan area west of Joondalup Drive. Whilst the Structure Plan philosophies and strategies relate to the entire community (including the existing residential cell), the Structure Plan itself only applies regulatory control to the undeveloped portion. For this reason this section references the undeveloped portion of the Estate including the Land Use Summary below.

For the sake of POS calculations it should be noted that the same land area west of Joondalup Drive is referenced in Table 7 on the following page. The calculation does not include that portion of the District Centre situated on land held by Peet Ltd. The Land Use Summary is based on Structure Plan 981-38i and on analysis at a broad level of detail (1:5000).

TABLE 7: Banksia Grove Land Use Summary

<b>Gross Area <u>West</u> of Joondalup Drive</b>		<b>375.05 ha</b>
▪ Existing Community	36.1624 ha	
▪ Future Development	338.8876 ha	
<b>Non Residential Land Uses</b>		
▪ Bush Forever (excluding Pinjar Reserve)	41.96 ha	
▪ Pinjar Road MRS Reserve	10.00 ha	
▪ Flynn Drive MRS Widening	1.76 ha	
▪ High School	10.00 ha	
▪ Govt Primary School 1	3.50 ha	
▪ Govt primary School 2	3.50 ha	
▪ Private Primary School (Lot 217)	4.16 ha	
▪ Town Centre Precinct	14.49 ha	
▪ Local Centre 1 (West)	1.78 ha	
▪ Mixed Use Area 1 (West) – 50%	2.87 ha	
▪ Local Centre 2 (Central)	1.37 ha	
▪ Mixed Use Area 2 (Central) – 50%	1.27 ha	
▪ Local Centre 3 (East)	1.52 ha	
▪ Mixed Use Area 3 (East) – 50%	0.65 ha	
▪ Sewer Pump Station (NE Precinct)	0.12 ha	
▪ Water Supply Tank Site	0.25 ha	
<b>Total</b>	<b>99.20 ha</b>	<b>99.20 ha</b>
<b>Gross Residential Area</b>		
<i>(375.05 ha less 99.20 ha)</i>		<b>275.85 ha</b>
<i>Includes 11.82ha of Special Residential</i>		
<b>Public Open Space Required</b>		<b>26.99 ha</b>
@10% of 264.03 (Residential)	26.40 ha	
@5% of 11.82 (Special Residential)	0.59 ha	
<b>Public Open Space Provided</b> (refer Table 9)	<b>26.99 ha</b>	<b>26.99 ha</b>

### 3.4.0 ROADS, STREETS & PEDESTRIAN NETWORKS

The Structure Plan has been developed with an integrated approach to the planning for both vehicle and pedestrian networks. Bruce Aulabaugh Traffic Engineering and Transport Planners have prepared a comprehensive Transport Planning Report to accompany the Structure Plan which is reproduced in full in the Report and Technical Appendices.

The Report examines;

- The impacts of the regional road network
- The internal local street network and arterial access
- Bus routes and pedestrian networks
- Traffic forecasts; and
- Access and traffic management at the schools.

Whilst not necessary to repeat the findings here it may be concluded that both the internal networks and connections to arterials can all operate and function in accordance with accepted standards.

Figure 21 the Daily Traffic Forecasts demonstrates the advantages of an interconnected street network and an efficient neighbourhood connector network with internal volumes on non arterials generally not expected to exceed 3000vpd in almost all instances. Clearly this will create the potential for a safe traffic and pedestrian environment and an outcome that will encourage pedestrian movement.

The key figures from the Report are reproduced in this Structure Plan Report as;

- Figure 20 – Road Hierarchy and Arterial Access
- Figure 21 – Daily Traffic Forecast
- Figure 22 – Bus Routes
- Figure 23 – Pedestrian and Cyclist Facilities.

In addition the major pedestrian movement network is indicated on Figure 24 - Public Open Space/ Community/ Bushland and Pedestrian Linkages.

### 3.5.0 PUBLIC OPEN SPACE (POS) AND LANDSCAPE STRATEGY

#### 3.5.1 Introduction

Whilst Banksia Grove as a community generally extends to what is now Old Yanchep Road the focus of the current POS strategy is on the land west of Joondalup Drive and how POS can be arranged and developed to service the local and district level requirements of new residents within the Banksia Grove community.

It is worth noting that the 76.5ha of Banksia Grove developed east of Joondalup Drive is already well endowed with open space. Around 9.5ha of POS has been set aside (plus the Primary School POS) which in total accounts for a technical 'oversupply', based on the standard 10% requirement, of around 4.0ha. (This additional area is not factored into the calculation for POS for the area west of Joondalup Drive given the barrier presented by Joondalup Drive and the limited potential for local crossing and usage particularly for children – this ensures the oversupply of POS for Banksia Grove).

This, like previous Structure Plans, will continue to make provision for the required 10% of POS for the land west of Joondalup Drive, independent of the surplus east of Joondalup Drive. As mentioned previously factoring in all of the POS plus BushForever means that around 20% of the remaining undeveloped portion of Banksia Grove will be set aside for green space in some form.

#### 3.5.2 Objectives & Summary

It is the intent of the Structure Plan, the relevant supporting technical reports and strategies, and the ensuing development, to ensure the provision of a wide range of well located open space types, diverse recreational opportunities, vegetation preservation and the sharing of facilities and spaces. Key objectives are;

- Provide for district and local active spaces and passive spaces;
- Locate vegetation corridors and open space to enhance walkability;
- Protect vegetation within POS and other spaces wherever desirable and practical;
- Integrate a district recreation facility with the High School and Primary School;
- Integrate a second junior playing field with the second Primary School;
- Help facilitate the practical sharing of these spaces;
- Provide a range of passive "pocket parks" with a high amenity focus;
- Accommodate the requirements of BushForever;

- Provide good connectivity and linkage too and thru these spaces;
- Ensure no resident is more than 450 metres from an open space; and
- Fully integrate drainage into the open space to promote best practice WSUD.

### 3.5.3 City of Wanneroo Community Open Space Requirements

To assist in the provision of open spaces and community facilities the City of Wanneroo have prepared a draft Community Sport & Recreation Infrastructure Report. In essence it recommends the following facilities and locational criteria;

TABLE 8: City of Wanneroo Open Space & Community Facilities Requirements		
Preferred Location	Facility Type	Location Criteria
Primary & High School adjacent to Town Centre	1 x District Open Space	Shared use reserves, multipurpose/shared clubrooms and pavilions. Located at high school and primary school #2.
Primary School with adjacent POS	1 x joint use junior sized active reserves	Shared use reserve only. Located at primary school #3.
Primary School or High School	4-6 x joint use outdoor Netball/Basketball/Tennis courts	Shared use hard courts only.
Town or Local Centre	1 x Wheeled Sports Facility	Adjacent to other community infrastructure such as recreation/community centre or town square.
High School adjacent to Town Centre	1 x joint use indoor recreation centre	Shared use facility located at high school.
Town Centre Community Purpose Site	1 x multipurpose community centre	Co-located or located in close proximity to the proposed high school that will be integrated into the town centre. The facility should have main street frontage and located in close proximity to a town square or plaza
Distributed throughout study area	Passive bushland and landscaped parks with supporting amenities	District pedestrian, cyclist and biodiversity linkages.



### 3.5.4 Form of Open Space & Development Response

The Structure Plan allocates five broad open space types to assist in implementing planning, landscape management, drainage design and conservation strategies. These are indicated on Figure 24 Public Open Spaces and are:

- Major Active Spaces (MA) – Focuses on active sports and organised events (Football, Soccer etc);
- Recreation and Habitat (RH) – Focuses on passive pursuits and integration with bushland areas where achievable (kick about areas, barbeques, bushland);
- Conservation and Passive Recreation (CR) – Focuses on bushland preservation and associated passive pursuits (Bushland, Walk Trails, Barbeques);
- Pocket Parks (PP) – Focuses on high amenity recreation and landscape; and
- Bush Forever (BF) – Focuses on conservation and management.

Figure 24 classifies each open space (or portion thereof) accordingly. At the subdivision stage a Landscape Concept Plan for each of the open spaces will be prepared and lodged with the City. To guide preparation of these Landscape Concept Plans, McNally Newton have prepared an overarching Landscape and Revegetation Strategy which addresses the overall philosophy and approach to open spaces. It is included in full in the Technical Appendices.

Preliminary and Draft Concept Plans demonstrating the key design philosophy and approach for Stage 1 and the Central Park have been included at Figures 16 and 17 to indicate the format of these Concept Plans.

### 3.5.5 Description of Open Space Areas on Plan

At this broad district level of detail the Structure Plan only depicts the physical location and size of the major open spaces. The smaller neighbourhood or 'pocket parks' which are generally sized between 2000m<sup>2</sup> and 8000m<sup>2</sup>, have not been allocated a precise location, but are included indicatively on the Structure Plan. They will have their location, size and character specified at the subdivision stage.

Use, development and landscaping of all spaces will be subject to the strategies outlined in the Landscape and Revegetation Strategy and subsequent Landscape Concept Plans and Vegetation Management Plans and where relevant the Drainage Management Plan.

The following major open spaces are indicated on the Local Structure Plan and Figure 24.

**District Open Space (POS 1):**

A site of 6ha is provided abutting Pinjar Road and adjacent the High School and Primary School to facilitate the co location and sharing of district facilities and open spaces. Both the City of Wanneroo and the Department of Education have agreed to this general configuration with only the detail of the various layouts to be co-ordinated and determined. The City have indicated that the arrangement must accommodate;

- two multipurpose active ovals/four square pitches with buffer zones and amenities;
- a joint indoor recreation facility co-located and integrated with the High School to meet both community and school needs incorporating ½ multi purpose hard courts; and
- 4 to 6 multi purpose outdoor hard courts (netball/basketball/tennis).

It is possible that through more detailed planning of this site the land area required may be reduced from the 19.5ha shown on the Structure Plan in view of the efficiencies and overlap potentials of this type of arrangement. The City of Wanneroo, Department of Education and the developer will continue to work together to refine this layout and the land area requirements to deliver a fully integrated facility.

**Active Junior Open Space (POS 4):**

As with the high school the second primary school presents the opportunity for development of an active shared junior space. The City of Wanneroo has indicated the need for this second joint use area to accommodate overflow requirements for junior sport, active sport training and school usage. A 2.0ha open space reserve is therefore indicated adjacent the north-east 3.5ha primary school.

**Major Passive Space and Vegetation Corridor:**

A key recommendation of both the EPA and the Minister for Environment was to protect key areas of remnant vegetation wherever possible in POS and to facilitate green corridors. The Structure Plan is strongly focussed on this outcome by creating a major corridor of multiple use open space through the centre of the site linking and integrating with the BushForever land.

This north-south spine (Areas 2 & 3) comprises approx 13.5 ha and varies in width up to 150m wide. It will be developed for a mix of conservation, water sensitive design, passive recreation and nature based activities. McNally Newton have prepared a Preliminary and Draft

Landscape Concept Plan to indicate one possible option for development of the Central Park which is included at Figure 17 and to indicate current thinking on development.

A second smaller corridor (POS Area 6) is proposed linking the north-eastern primary school (POS Area 4) through to Bushforever in the north-east. This POS protects the site of possible cultural significance identified in the Ethnographic Assessment.

These conservation and passive recreation spaces together with the BushForever site are central to the natural environment sustainability principles embraced in the Structure Plan and will be managed in accordance with the Vegetation Management Plan required prior to subdivision approval.

### **Passive Pocket Parks:**

Whilst no definitive positions are allocated at this level of planning detail (except for POS 5 in Stage 1), these smaller parks are a key to successful neighbourhood formation providing a high quality space for small scale recreation pursuits. Typically the size ranges from 2000m<sup>2</sup> up to 8000m<sup>2</sup> fully landscaped and grassed with playground equipment. These are notionally depicted on the Structure Plan and referenced in Table 9 - POS Schedule and make up the final 10% allocation. Final location, size and function will be addressed at the subdivision stage.

The Preliminary Landscape Concept Plan for Stage 1 has been prepared as part of that subdivision application and is reproduced as Figure 16. Importantly, this preliminary concept protects stands of Banksia where possible, integrates active space with the natural vegetation and provides a 'useable' park for residents.

### **Water Sensitive Urban Design (WSUD) – Drainage in Open Space**

Embracing the principles of WSUD and consistent with those principles described in the LWMS (refer Section 2.8.0) it is proposed to dispose of all drainage within POS areas as functional and useable swales. In view of this integrated approach a full credit has been assumed for all POS areas with a swale. The final configuration will be detailed in the Landscape Concept Plans for each open space area (refer Landscape and Revegetation Strategy in Technical Appendices).

### 3.5.6 Public Open Space Summary

Table 9 details each open space area shown (and numbered) on the Structure Plan and also references the type of Open Space as described within the report and shown on Figure 24:

<b>UPDATED TABLE 9: Public Open Space Schedule (West of Joondalup Drive)</b>			
<b>Subdivision Open Space Required @ 10%</b>			<b>26.99 ha</b>
<b>No.</b>	<b>DESCRIPTION</b>	<b>TYPE</b>	<b>AREA</b>
1	District Open Space	MA	6.0ha
2	Major Open Space (North)	CR/RH	6.5ha
3	Major Open Space (South)	RH	7.0ha
4	Junior Playing Space	MA	2.0ha
5	Stage One POS	RH	1.24ha
6	Minor Corridor	CR	1.35ha
7	Community Purpose Site	(Town Centre)	0.50ha
8	Existing POS	PP	0.96ha
9	Pocket Parks	PP	1.44ha (minimum required)
<b>Sub Total</b>			<b>26.99ha</b>
10	Conservation (Bush Forever)	BF	41.96ha
<b>Total</b>			<b>68.95ha</b>
NB: Any drainage credits needing to be considered by the WAPC at the time of subdivision to be in accordance with DC Policy 2.3 'Public Open Space in Residential Areas'.			

### **3.6.0 RESIDENTIAL HOUSING & LOT STRATEGY**

#### **3.6.1 Introduction**

Banksia Grove presents a special opportunity to provide a wide range of housing & lot types in a variety of density settings reflective of those targets outlined in the City of Wanneroo Housing Strategy (as discussed in Section 1.6.10), and importantly providing a sound basis for promoting affordable housing/land solutions. Importantly the Structure Plan also needs to be flexible enough to respond to changing market preferences which will see different products, both in terms of lot types and building forms/dwellings, pursued over time, and recognising that the ultimate density and mixed use land use outcomes may not be achieved in the first generation of development.

The key planning phase for detailing the delivery of lots and dwellings (and R-Codes) will be at the subdivision design where a more detailed appraisal and description can be completed. At this broad level the Structure Plan establishes a number of mechanisms which will guide both the detail and the densities to be achieved at these phases.

A key feature to achieving density growth and mixed use development over time is to ensure a robust and permeable system of interconnected streets, with adequate on street parking especially in the vicinity of the District Centre.

#### **3.6.2 Residential Categories**

Based on the broad principles of density allocation described in the Local Housing Strategy, the Banksia Grove Agreed Local Structure Plan (Figure 19) identifies and describes six different Residential Categories with a character and density profile based on location and proximity to key infrastructure elements particularly the District Centre and local centres, POS, schools and transport. These Categories acknowledge that the Housing Strategy and Smart Growth Strategy seek to encourage a greater spread of density around these key land use elements and a wider range of housing types particularly within and adjacent to the District Centre.

The Categories depicted on the Structure Plan do not enforce a specific statutory R-Coding but rather outline a density coding range which will apply once introduced via Figure 4 in the Neighbourhood Precinct Plans.

The Residential Categories indicated on the Structure Plan area are described below. The 'Typical Breakdown and Unit Size' is included for information purposes to understand how the Yield Estimates in Table 11 were formulated and to understand some of the assumptions regarding density which have been included in the SGAT (Part D).

#### Residential A

##### *Objective*

To accommodate more traditional forms of low to medium density housing in suburban location areas more removed from centres;

- Zoning: Residential
- Minimum R-Coding: R 20;
- Maximum R-Coding: R 30;
- Typical Breakdown (and Unit size):
  - 70% Traditional (520m<sup>2</sup> to 580m<sup>2</sup>)
  - 30% Cottage and/or Group Dwellings (320m<sup>2</sup> to 360m<sup>2</sup>)

#### Residential B:

##### *Objective*

To accommodate a balanced mix of traditional and medium density forms of housing generally within 400 metres of a Local Centre, and in proximity to Primary Schools, open space and public transport;

- Zoning: Residential
- Minimum R-Coding: R30
- Maximum R-Coding: R40
- Typical Breakdown (and Unit Size):
  - 50% Traditional Lots (520m<sup>2</sup> to 580m<sup>2</sup>)
  - 50% Cottage Lots and/or Group Dwellings (320m<sup>2</sup> to 360m<sup>2</sup>)

### Residential C:

#### *Objective*

To accommodate a wider range of medium to higher density housing and lot types within 850m of the District Centre and support infrastructure including the High School and DOS.

- Zoning: Residential
- Minimum R-Coding: R 40
- Maximum R-Coding: R 80
- Typical Breakdown (and Unit Size):
  - 70% Cottage (320m<sup>2</sup> to 360m<sup>2</sup>)
  - 30% Terrace and/or apartments (166m<sup>2</sup> to 210m<sup>2</sup>)

### Residential D:

#### *Objective*

To make provision for high density housing types surrounding and within the District Centre and to encourage mixed use and home business activities with a more inner city character;

- Zoning: Mixed Use
- Minimum R-Coding: R 60
- Maximum R-Coding: N/A
- Typical Breakdown (and Unit Size):
  - 100% Terrace and/or apartments (166m<sup>2</sup> to 210m<sup>2</sup>)

### Residential E:

#### *Objective*

To provide integrated apartment based housing opportunities at high density within the commercial core of the District Centre to facilitate a functional and vibrant mixed use town centre;

- Zoning: Commercial
- Minimum R-Coding: R60
- Maximum R-Coding: NA
- Typical Breakdown (and Unit Size):
  - 100% Apartments (166m<sup>2</sup> at R60)

### 3.6.3 Lot and Housing Type Profiles

Over the last few years there has been an enormous shift in the range of lot types being developed and the range of standard builders housing product in response. A far stronger design relationship exists now between the lot and dwelling as a result of this diversity and a reduction in average lot sizes.

The average traditional lot size has been reduced to around 550m<sup>2</sup> and a diverse selection of medium to high density lots ranging generally from 210m<sup>2</sup> to 360m<sup>2</sup> have emerged. The latter product has increased substantially as a proportion of total lot types being created, improving density, yield, affordability and sustainability. These trends are well documented in the City of Wanneroo Local Housing Strategy.

At this time it is intended that the Banksia Grove development will embrace a range of these lot and housing types to assist in meeting those targets outlined in the Residential Categories above. Whilst these will change over time and in response to market directions, the dominant product types are described in Figure 25 and Table 10 overleaf.

Table 10 includes a summary indicating the preferred - although not mandatory - locations of each lot/housing type with respect to each Residential Categories and the relevant R-Codes which can apply. Figure 25 outlines the particular typologies and R-Code Variations preferred.



TABLE 10: Banksia Grove – Lot & Housing Typologies by Residential Category						
NON-LANEWAY BASED PRODUCT						
TYPE	LANE	DIMENSIONS (m)		AREA (m²)	R-CODE	Residential Category Preference
		Frontage	Depth			
Homestead	x	19/20	30/32	570-640	R30	A
Traditional	x	17.5/18	30/32	525-576	R30	A, B
Contemporary	x	15	30/32	450-480	R30 - 40	B, C
Victorian A	x	10	25/30	250-300	R40 - 60	C, D
Victorian B	x	12/13	25/30	300-390	R40 - 60	C, D
Studio	x	11/12	18	207-225	R40 - 60	C, D
Four Pack	x	17-21	20	300-430	R30 - 60	A, B, C
Apartments	0	N/A	N/A	N/A	R60+	D, E
LANEWAY- BASED PRODUCT						
TYPE	LANE	DIMENSIONS (m)		AREA	R-CODE	
		Frontage	Depth			
Standard Cottage	✓	12/12.5	28/30	336-360	R30 - 40	A, B, C
Lifestyle Cottage	✓	10/11	28/30	280-330	R30 - 40	A, B, C
Terrace	✓	7.5/8	28/30	210-230	R40 - 60	C, D
Terrace Pair	✓	12.7/13	28/30	360-390	R60	C, D
Mansion House	Optional	19/20	30/32	540-640	R60	C, D, E

**NOTES:**

1. At R30 Homestead lots over 600m² are Duplex.
2. At R30 the minimum site area is 270m²
3. At R60 lots over 360m² are duplexes.
4. Different site development requirements apply for R20 and R30 for site cover, outdoor living and front setbacks.
5. Duplexes.
6. Triplexes.
7. Comprehensive design guidelines and integrated development is desirable.

### 3.6.4 Yield Estimates

At this broad Structure Plan level it is still necessary to estimate practical and reasonable yields even though more detailed planning at subdivision stages will result in refinements. Applying the Residential Category criteria and lot typologies outlined above (and making assumptions on an average lot size site area mix) provides a sound basis for estimates which could then be fed into the SGAT.

In this regard Table 11 Yield Estimates, on the following page, provides a full spread sheet of the yield calculations based on individual land area cells (which are numbered on the Structure Plan for easy reference).

The estimates are determined by simply dividing the total Residential Site Area for a category by the nominated average lot size (or pro-rata portion thereof) which is reflective of the R-Code requirements specified in each Residential Category above. The Residential Site Area (as defined in Liveable Neighbourhoods) is the land for residential lots when all non-residential uses are deducted from the gross area including land for POS, roads and lanes (also deducted).

All of the assumptions are included on Table 11 which also divides the assessment into two key zones, that area within 800m of the District Centre and the balance for SGAT purposes.

TABLE 11 - Banksia Grove: Yield Estimates (Plan 981-38h)

	Special Res.SR (R10) (av. 1000m²)				Res1				Res2				Res2				Res3				Res4				Res5				TOTAL LOTS	TOTAL AREA				
	100% (Combined)				70% Traditional (av. 580m²)				30% Cottage (av. 360m²)				100% (Combined)				50% Traditional (av. 580m²)				50% Cottage (av. 360m²)				Terrace (av. 210m²)				Apartments (av. 166m²)					
Category	NRA		Site Area	Total Lots	70% NRA		Site Area	Total Lots	30% NRA		Site Area	Total Lots	100% NRA		Site Area	Total Lots	50% NRA		Site Area	Total Lots	Cottage less 32.5% rd		NRA	Site Area	Total Lots	Terrace less 35% rd		NRA	Site Area	Total Dwgs				
	Cell	(ha)	less 10% rd		(ha)	less 27.5% rd			(ha)	less 30% rd			Cell	(ha)			(ha)	less 30% rd			Cell	(ha)			Cell	(ha)	less 5% rd							
Within 800m of TC	1	4.16	3.74	37	1	5.95	4.17	3.02	52	1.79	1.25	35					1	3.93	2.65	74					1	3.79	3.60	217						
					2	3.77	2.64	1.91	33	1.13	0.79	22					2	7.58	5.12	142	1	5.02	3.26	155										
																	3	9.07	6.12	170	2	2.83	1.84	88										
Subtotal (Lots)				37					85			57								386				243				217	1025					
Subtotal (NRA)		4.16				9.72	6.80			2.92										20.58			7.85		3.79					46.10				
Subtotal (Site Area)			3.74			4.93				2.04									13.89				5.10		3.60					33.31				
Balance	2	7.99	7.19	72	3	3.92	2.74	1.99	34	1.18	0.82	23	1	7.29	3.65	2.55	44	3.65	2.55	71														
					4	12.33	8.63	6.26	108	3.70	2.59	72	2	8.43	4.22	2.95	51	4.22	2.95	82														
					5	19.79	13.85	10.04	173	5.94	4.16	115	3	5.69	2.85	1.99	34	2.85	1.99	55														
					6	28.36	19.85	14.39	248	8.51	5.96	165	4	7.76	3.88	2.72	47	3.88	2.72	75														
					7	32.73	22.91	16.61	286	9.82	6.87	191	5	5.73	2.87	2	35	2.87	2	56														
					8	26.25	18.38	13.32	230	7.88	5.51	153																						
Subtotal (Lots)				72					1079			720					211			339														
Subtotal (NRA)		7.99				123.38	86.37			37.01				34.90	17.45		17.45											2420		166.27				
Subtotal (Site Area)			7.19					62.62			25.91						12.22		12.22											120.15				
TOTAL LOT YIELDS				109					1164			776				211				339			243				217	3445						
NET RES. AREA (ha.)		12.15				133.10	93.17			39.93				34.90	17.45		17.45		20.58			7.85		3.79					212					
RES. SITE AREA (ha.)			10.94					67.55			27.95					12.22			13.89			5.10		3.60					153					

TOTAL LOT YIELD = 3445

TOTAL NET RES. AREA 212 ha.

TOTAL RESIDENTIAL SITE AREA 153 ha.

NOTES:

1. Nett Residential Area is the area of land comprising residential lots, roads and lanes

2. Residential Site Area is Nett Residential Area less the estimated percentage for the roads & lanes

3. Average (av.) is the assumed average lot size for the category

4. Total Lots is the estimated lot yield based on:

Site Area (m²) / Av (m²)

5. TC = Town Centre

### 3.6.5 R-Codes and Variations

The Part 1 Statutory Report is progressing a more innovative and responsive approach to the allocation of R-Codes recognising it is essentially a development control tool and not a good mechanism for addressing density and housing requirements (R-Codes are simply a means to an end and not the end in it self). The overall approach to density allocation is discussed above. Statements will be incorporated into the Statutory text to serve as the guide for the allocation of these R-Codes at the next level of detail being subdivision.

A Neighbourhood Precinct Plan (NPP) will be prepared and lodged as a supporting report to the proposed Plan of Subdivision. This NPP will include comment on a number of items, specifically providing a figure to allocate R-Codings providing these are consistent with the broader density requirements specified for each Residential Category. This avoids the need for continual Structure Plan amendments to refine R-Codings which invariably result after the detailed design exercise is complete.

Experience has also shown that whilst the R-Codes respond well to the needs of infill development in old suburbs they are very poorly structured to accommodate the type of development now occurring in greenfields sites. They are particularly ineffectual in dealing with small lots where the needs of affordable housing may preclude a two storey approach and overly conservative site cover requirements and setbacks become a major issue for efficient home design and siting. They also lack practical incentives and bonuses for solar efficient site planning.

An excellent model for addressing these shortcomings is in operation at Brighton in the Butler Ridgewood Agreed Local Structure Plan No.27. A few pivotal R-Code variations have greatly improved the development response of lots with respect to solar access and creation of efficient outdoor spaces. The key issues addressed in Structure Plan No.27 provisions are;

- Site Cover increases which are performance based (increases up to 70% for R20/40 and 75% for R60);
- Reduced front setback requirements or a maximum and minimum;
- Increased solar setback requirements to habitable rooms;
- Improved outdoor living standards;
- Boundary wall height and length concessions; and
- Changes to Privacy requirements for R60.

It is proposed to introduce the same standards into this Structure Plan. These are detailed in the attached Part 1 Statutory Report.

### 3.6.6 Affordability

The Banksia Grove Joint Venture is committed to providing opportunities for affordable housing with DHW required to provide 10% of their homes as 'affordable' product. The creation of Affordable Housing within Banksia Grove will need to respond to a number of challenges:

- Addressing the diverse housing needs early in the project;
- Successfully increasing the value of the housing product, yet still providing affordable choices for the public;
- Ensuring that affordability is not seen as cheap, poor or second rate housing;
- Encouraging private investment into affordable housing options; and
- Demonstrating to the market affordable housing options that provide for rental or ownership choices.

Key initiatives which have been considered within the Banksia Grove Agreed Local Structure Plan to overcome these challenges in providing Affordable Housing include:

#### Housing Types and Construction:

- Flexible housing designs or 'Hybrid Housing' incorporating multi use living areas and the flexibility to add/remove rooms internally to meet changing needs of the household;
- Accessory Housing including 'Granny flats' and studio apartments over garages – home based income and long term flexibility throughout the life of a family;
- Apartment housing, or maisonettes - providing the streetscape benefits of a substantial two storey home, while containing 2, 3 or 4 apartments;
- Terrace homes, or row houses - providing an efficient building unit which better utilises roads and services than traditional single detached housing;
- 'Fourpack strata' homes - four independent dwellings opening onto an enclosed common rear yard, reducing maintenance and upkeep and providing a secure area for interaction, while economizing on the overall footprint of the 4 dwellings;
- Warehouse housing – robust design which provides the flexibility to convert ground floor street front space to a shop or office space and the upper area to a self contained apartment, which becomes affordable rental housing or even a separate strata unit;
- Use of alternative building materials - other than standard brick and tile;

- Sustainability credits - for building a two or three bedroom home instead of a four bedroom home, reducing the footprint and construction costs.

#### Government and Private Investor Incentives:

- Demonstration Projects – As the Homeswest rental housing component of 1 in 12 is a mandatory consideration within the project, the 'Spot purchase' program can be implemented, giving the joint venture the opportunity to create images for the wider public, set the tone for development within various precincts, and continue to provide housing choice and housing mix to meet the needs of the Homeswest waiting list.
- Housing Coops - government supported finance is secured in addition to community resources to provide an alternative housing model more focused on community life;
- Sweat Equity – an affordable housing model within which each member enters into an agreement to undertake work over the life of the project in return for an equity based discount on the value of the input provided;
- Shared equity –enabling a purchaser to enter the home ownership cycle on a low base, purchasing an interest in a property. The State Housing Authority then receives a partial rental on the balance owned;
- Joint Venture Rental housing investment - joint venture invests in its own rental stock and maintains a rental presence enabling housing styles and standards to be manipulated to meet marketing objectives;
- Promotion and expansion of Government homeownership schemes - GoodStart, Keystart and Aboriginal Home Ownership schemes have the potential to be an effective way to improve the existing residents' value of the community.

The Joint Venture partners have direct access to in-house Affordable Housing expertise and resources which will ensure the successful implementation of these initiatives.

### 3.7.0 COMMUNITY INFRASTRUCTURE

#### 3.7.1 School Sites and Education

Structure Planning has consistently identified the need for three Primary Schools and a High School at Banksia Grove taking into account also the broader catchments through Carramar and Tapping. The yield estimate at Table 11 confirms this requirement with around 3200 lots estimated for the balance of Banksia Grove which translates into the two new Primary Schools.

The first Primary School at Banksia Grove on Tumbleweed Drive is due to open in 2007. Whilst it is situated outside the statutory Structure Plan area (east of Joondalup Drive), it will take all primary students within the Estate pending completion of a second Primary School (temporary or permanent) opening west of Joondalup Drive.

The Department of Education has confirmed the requirement for an additional two Primary School sites east of Joondalup Drive to service the estimated 3200 lots (it is expected that residents in the new Stage One west of Pinjar Road may utilise the Primary School in Carramar).

The two primary school sites have been located central to their catchments with access from a neighbourhood connector and importantly co located with public open space. The eastern most 3.5ha school site will form a strong community focus being adjacent the park and a small local centre. The City of Wanneroo has indicated that it keen to work with the Education Department to develop a shared playing space on this school site and adjacent POS comprising a joint use reserve for junior sport, active sports training and school usage.

The westernmost 3.5ha school site is part of an overall education and recreation based precinct which seeks to maximise the efficiencies generated by sharing both spaces, buildings and infrastructure generally. This primary school is likely to also comprise an Education Support function and contain part of a junior active playing space of approximately 80m x 65m.

A 10ha High School site is also located within this Precinct with access to both the local and regional road network. There will be a considerable integration of this facility with the adjacent District Open Space particularly with respect to playing surfaces, hard courts, buildings and car parking which presents an opportunity to examine in more detail the actual land requirements which may be reduced from that shown.



There is need for ongoing dialogue and site planning between the City of Wanneroo and the Department of Education to refine these matters. Should it be possible to reduce the overall land requirement, which would be extremely beneficial from an urban sustainability perspective, it is a simple case of shifting the southern boundary of the High School further north which has minimal impact on the Structure Plan

### **3.7.2 Other Community Purpose Infrastructure**

The City of Wanneroo has indicated the following additional community infrastructure needs at Banksia Grove;

- A joint use indoor recreation centre co located with the high school. It must be multi purpose in nature to meet community recreation needs and the performing arts and assembly requirements of the school.
- A multi purpose Community Facility providing such services as a resource centre, volunteer agency office spaces, meeting spaces and employment services. It may include a local wheeled sports facility. Requires a 0.5ha site located on the main street in the Town Centre subject to confirmation.

We anticipate a full range of community facilities will be identified and negotiated with Council as part of the Structure Plan approval process. In addition to the above, the Community Economic Development Plan (CEDP) prepared by Creating Communities (summarised in Section 2.9.2) will be lodged separately as a support document.

### 3.8.0 RETAIL CENTRES

Section 1.6.8 describes the requirements of the City of Wanneroo Centres Strategy wherein three local centres, four neighbourhood centres and the Neerabup District Centre are proposed. Importantly the Centres Strategy encourages the refinement of such allocations through the Local Structure plan process.

This Local Structure Plan is intent on maximising the potential for the early establishment of both a vital and viable District Centre, recognising some of the difficulties posed by location and a broader catchment which is affected by low intensity uses such as rural, special rural, state forest and industry.

Bearing this in mind the Structure Plan proposes to eliminate one of the local centres and remove the 5,000m<sup>2</sup> neighbourhood centre which, being located on old Yanchep Beach Road, would never have been commercially viable (with half a catchment of State Forest) and if nominated would not only struggle but more importantly would compromise the urban form and lot mix and would have a negative impact on the timing and delivery of the district centre.

The allocation of centres therefore has been based on the principles of the Centres Strategy by:

- Retaining and consolidating the Neerabup District Centre as a 'Main Street' based at the intersection of Pinjar Road and Joondalup Drive; and
- Proposing two small local centres on the central neighbourhood connector closer to the primary school with excellent catchment.

These elements are described below:

#### 3.8.1 District Centre

State Planning Policy 4.2 – Metropolitan Centres Policy and all previous local structure planning has identified the 15,000m<sup>2</sup> NLA Neerabup District Centre in the current location proposed in the Structure Plan (it should be noted that the 1997 Metropolitan Centres document, as advertised actually allocated 17,500m<sup>2</sup> NLA of floorspace to this Neerabup Centre).

This Structure Plan allocates a 'Centre' zone over 14ha of the Banksia Grove landholding which when added to the 5.5ha of centre presently situated on the adjacent Peet Ltd land, ultimately results in a total land area for this District Centre of 20ha.

When developed the Centre will be based around 'Main Street' principles and will comprise of the following mix of uses:

- Retail;
- Commercial and business;
- Offices;
- Restaurant and fast foods;
- Tavern/Hotel;
- Entertainment and Recreation;
- Community;
- Residential Apartments; and
- Car Parking and Infrastructure.

Pursuant to the provisions of the Centre zone (which will apply over the land) a more detailed structure planning exercise will be undertaken over this Centre zoned land, either as an Agreed Local Structure Plan and/or a Detailed Area Plan (DAP) pursuant to the Scheme. It is envisaged that the majority of retail floorspace will be provided within the central retail core of the Town Centre along the length of the proposed 'Main Street' located to the north of the Centre zone.

The Detailed Structure Planning Exercise for the future development of the Town Centre will address and allocate:

- Internal road and movement networks;
- Car parking;
- Building footprints;
- Main street elements;
- Access and vehicle movement;
- Broad design criteria; and
- Statutory provisions required for delivery of a 'Main Street centre.

This will be lodged as a separate document which will run in parallel to this Structure Plan.

A key element in this next planning phase will be flexibility to maximise the potential for this Centre to mature and evolve over time from a retail focus, to a true mixed use urban environment. This means that the floorspace limit set now will have reduced relevance in the future as the centre matures. It is important the planning allows for such future expansion and change in use profile to recognise future retail floorspace is likely to exceed the 15,000<sup>2</sup> NLA nominated at the present time.

### **3.8.2 Local Centres**

Two local centres with a maximum floorspace of 200m<sup>2</sup> NLA each have been nominated at key points within the Structure Plan. Both Centres have an excellent walkable catchment and good exposure to the movement economy. It is anticipated these will comprise a home-store or small super deli on lots of between 1,000m<sup>2</sup> and 2,000m<sup>2</sup>.

Being located at the heart of walkable catchments parking requirements will generally be accommodated on the street. The form of development these centres are likely to take will be examined in the more Detailed Area Plan phase.



### 3.9.0 LOCAL EMPLOYMENT

Within the Banksia Grove Agreed Local Structure Plan an assessment of Local Employment figures has been undertaken in relation to the City of Wanneroo's Economic Strategy and Employment Policy. This assessment is detailed further within the Smart Growth Assessment summarised in Section D.

Banksia Grove is ideally located to benefit from the development and expansion of the Neerabup Industrial Estate which abuts the northern boundary of the subject site and is directly accessible from Banksia Grove via Pinjar Road. This Industrial Estate will cover 1000 hectares and is planned to create an economic development hub for the North West corridor with the potential to generate 20,000 new jobs, a large majority of which will be based locally within Banksia Grove.

In addition to employment opportunities created externally to the site, strategy measures for the maximisation of local employment within Banksia Grove include, but are not limited to:

- Facilitating the creation of at least 15,000m<sup>2</sup> NLA of Shop Retail Floorspace in the town centre. Continual re-evaluation of the retail floorspace will be undertaken to see whether additional floorspace can be supported in the future;
- Facilitate the creation of at least 5,000m<sup>2</sup> of mixed use/showrooms, service stations and fast-food outlets along the Pinjar Road and Joondalup Drive frontages as a minimum;
- Encourage the development of office space through diversity in building form along internal roads within the Town Centre;
- Encourage the development of Council-approved home based business and live/work designs throughout the Structure Plan area;
- Ensure legible networks are proposed providing efficient vehicular, cyclist and pedestrian access within Banksia Grove to the Town Centre and externally to the Neerabup Industrial Area;
- Confirm the future availability of broadband services to the Structure Plan area, and encourage its provision as a priority.

City policy identifies a 40% target of new jobs required to be established locally within Banksia Grove. Based on the strategic significance of the District centre in addition to the development of complementary mixed use and office sites, a secondary school and three primary schools and possible health and community service jobs, the target has been easily achieved with a total of 1815 jobs or 46% new jobs created within Banksia Grove.

### 3.10.0 ENGINEERING & SERVICING

The proposed development can meet all the applicable engineering requirements set by the local authority and utilities. Confirmation has been received from the relevant utilities that they are able to supply the bulk engineering infrastructure required by the project. A summary of the main infrastructure components of the project is provided in the sections below.

#### 3.10.1 Siteworks, Earthworks and Retaining Walls

Several low ridges and valleys can be found throughout the development site, with gentle gradients varying between 1% and 5% (refer Figure 15). No major earthworks are required to establish developable areas and earthworks will therefore be limited to the re-contouring of the site to provide "level-lots" or to mitigate flooding risk of low-lying ground. Natural limestone retaining walls will be constructed where required by adjacent property or road reserve restrictions.

The initial geotechnical assessment of the site (*Geotech Report for Banksia Grove Stage 1; Parsons Brinckerhoff, April 2006*) reveals that the in-situ material on the site will be suitable for use as engineered sand fill and therefore no additional imported fill will be required from elsewhere. The same geotechnical assessment indicates that the average ground water level is some 30m below the existing ground level and the re-contouring of the site will therefore not result in groundwater movement to the surface or into road pavement layers.

The final contouring of the site will be designed in such a manner that the natural bushland is preserved to the greatest extent possible, as demarcated on the structure plan.

#### 3.10.2 Drainage

An Urban Water Management Plan (UWMP) will be prepared for each phase of the development in accordance with the LWMS and be submitted to the City of Wanneroo for approval. The preparation of the UWMP and the design of the stormwater drainage system will be in accordance with the provisions of the following guideline documents:

- City of Wanneroo Guidelines for the Development and Subdivision of Land;
- Australian Rainfall and Runoff (Volume 1 & 2); and
- Western Australia Liveable Neighbourhoods 2004.

The overall drainage strategy of the project will aim to dispose of the runoff as high up in the drainage system as possible and not to dispose of the concentrated runoff at a single low-point sump. The use of this method will reduce the capital and maintenance costs of the drainage system and will ensure a balanced recharge of the groundwater. The current Drainage Sub Catchments identified are shown on Figure 18.

The stormwater drainage design will cater for the major and minor events based on the Average Recurrence Intervals (ARI) shown below:

- Minor Event 1:5 year ARI
- Major Event 1:100 year ARI

In general the minor drainage system will entail gutter flow in the roads until either the gutter flow limit of 2.5m width is exceeded, or the flow is required to be diverted by means of side entry pits (SEP) into the pipe system for disposal. It is proposed that the pipe system will be a 'Leaky Pipe' system which will ensure that water is disposed by infiltration throughout the system in accordance with the overall drainage strategy. The minor pipe system will be designed to accommodate the minor flood without surcharging of any drainage structures.

The major drainage system will be overland flow through roads and dedicated drainage ways to the stormwater disposal areas, which are proposed to be incorporated into the overall Public Open Space system of the project. The initial geotechnical assessment of the development site shows soil permeability of between 34-61m per day, which indicates that the soils are highly permeable and free-draining which makes it very suitable for the on-site disposal of stormwater.

### 3.10.3 Sewerage

The bulk infrastructure available to, or required by, the proposed development will be owned, operated and maintained by the Water Corporation (WaterCorp). The site is roughly divided into two main catchments (refer Figure 26), a north-western catchment and a south-eastern catchment, each with several smaller sub-catchments. Only the south-eastern sections of the site have access to existing WaterCorp infrastructure while the remaining sections will drain to two new pump-stations which will be constructed in the north-western and north-eastern corners of the development site. The necessity for the construction of the pump-stations has been approved by the WaterCorp and they have subsequently been included into WaterCorp planning.

The southern and south eastern section of the site can gravitate through the existing Carramar Estate and Banksia Grove sewer reticulation into the existing WaterCorp outfall sewer and pump-station. The northern and western sections of the site will gravitate towards the two new pump stations, from where the effluent will be pumped over the ridge to the south and into the existing reticulation network. Where required, new link sewers will be constructed to extend the existing infrastructure to the site boundary.

Sewer effluent from the development will be treated at the Beenyup Wastewater Treatment Plant.

#### **3.10.4 Water Reticulation**

The proposed development site is located within the Joondalup High Level Supply Zone of the WaterCorp supplied from the Neerabup Reservoir (82m TWL) and the existing Nowergup elevated storage tank (refer Figure 27). WaterCorp planning predicts that this tank will not have sufficient capacity for the existing and future development in the supply area and it is proposed that a new elevated storage tank can be constructed within the proposed development site. It is expected that the new tank will only be constructed in 2016. A preferred site for the High Water Level Tank is shown on the Structure Plan.

The water reticulation in the development will be sized and constructed to take the future elevated storage tank into account. Prior to the construction of the tank the development will be supplied from the existing 300mm-dia water main in Golf Links Drive.

#### **3.10.5 Roadworks**

A detailed traffic impact assessment has been conducted for the project by Bruce Aulabaugh Traffic Engineering & Transport Planning, which indicates the required external road infrastructure and upgrading required for the project (refer Report and Technical Appendices).

All roads within the proposed development will be surfaced between concrete kerbs. The geometric and structural design of the roads will be in accordance with the guidelines contained in the document 'City of Wanneroo Guidelines for the Development and Subdivision of Land'.



The initial geotechnical assessment of the site indicates that the in-situ material (CBR=15) on the site meets or exceeds the minimum subgrade strength requirements (CBR=10) and therefore no remedial subgrade treatment/replacement is anticipated.

The initial geotechnical assessment did not encounter any groundwater and the deep average water table level (30m AHD) indicates that no subsoil drainage will be required to protect the structural integrity of the roads.

### **3.10.6 Underground Power and Telephone**

#### **Underground Power**

Western Power has been informed of the proposed development and has verbally indicated that they have included the project into their network planning and can provide electricity supply from their existing sub-station.

A formal electricity supply application will be lodged at Western Power during the planning of Stage 1 of the project.

The electrical distribution network will be designed and constructed according to the standards prescribed by Western Power.

#### **Telephone**

The proposed development will ultimately be supplied by Telstra, who have been notified of the project. Telstra has confirmed that they have sufficient capacity in their network to accommodate the total development and have included the development in their future network planning. The development will be supplied from existing Telstra buildings in the area and no land is required within the development for future Telstra buildings.

The developer will provide the necessary service sleeves at road crossings to accommodate the future Telstra infrastructure, although the infrastructure will be provided on a stage by stage basis by Telstra, as and when a sufficient customer base is available in each stage of Banksia Grove.

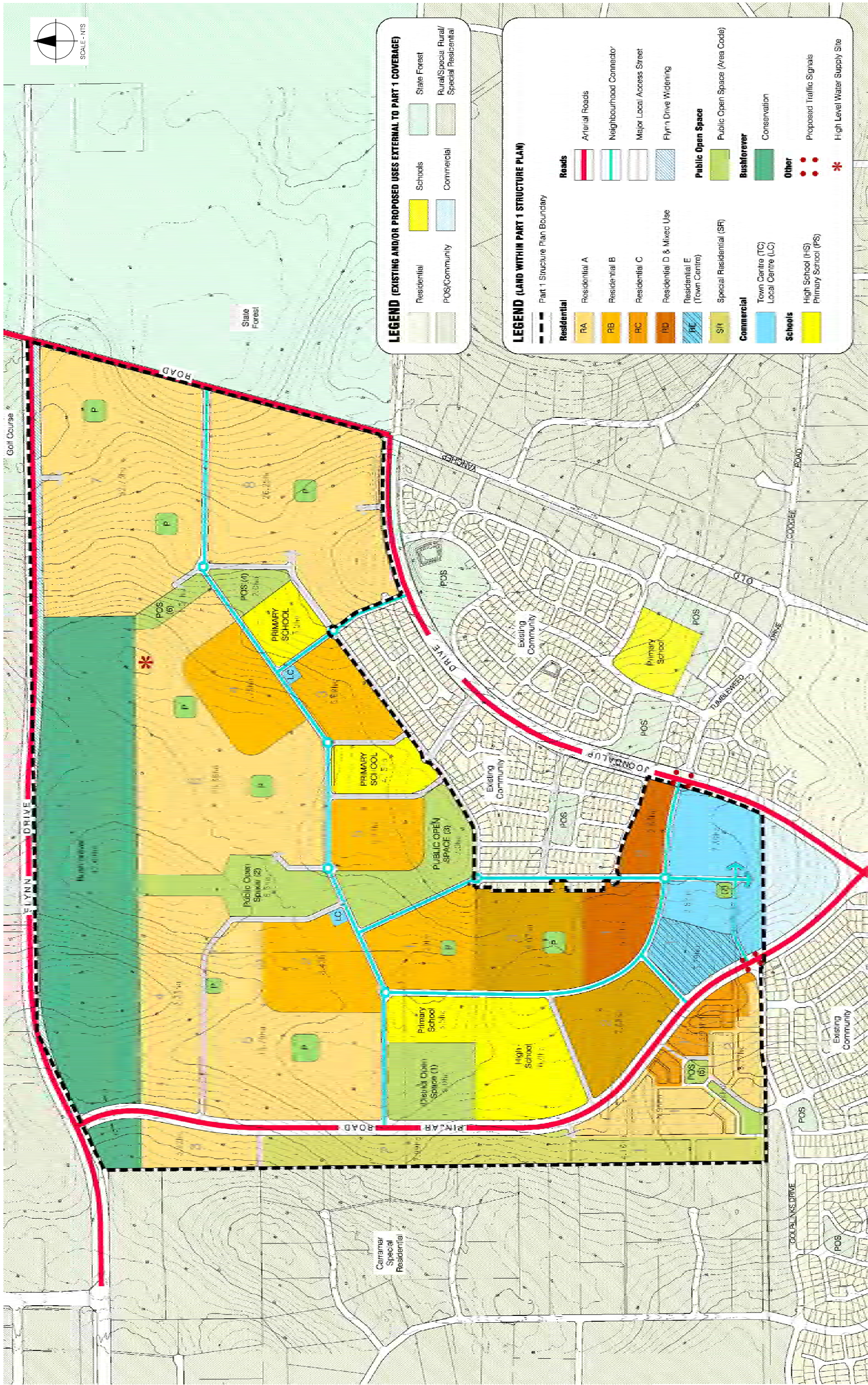
### **MATV/Fibre Optic Connection**

The Joint Venture partners have given a commitment to MATV/Fibre Optic Connection within Banksia Grove for the following reasons:

- Future proof estate
- Reflect Lifestyle
- Job creation
- Home Based employment
- Community portal

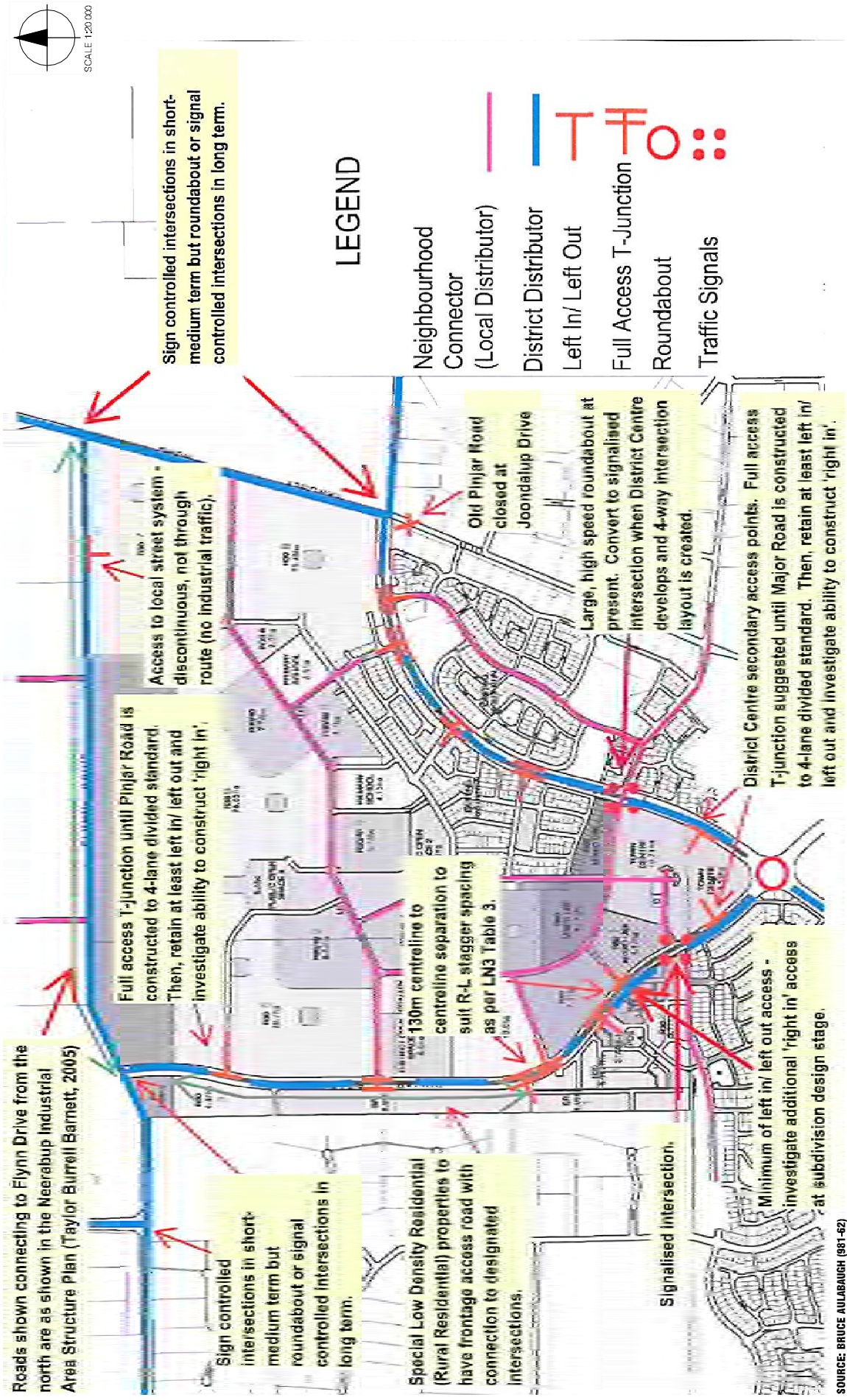
Negotiations are currently being undertaken with Telstra and non-government providers to ensure the efficient provision of MATV/Fibre Optic Connections to the future Banksia Grove community.

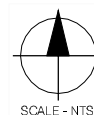
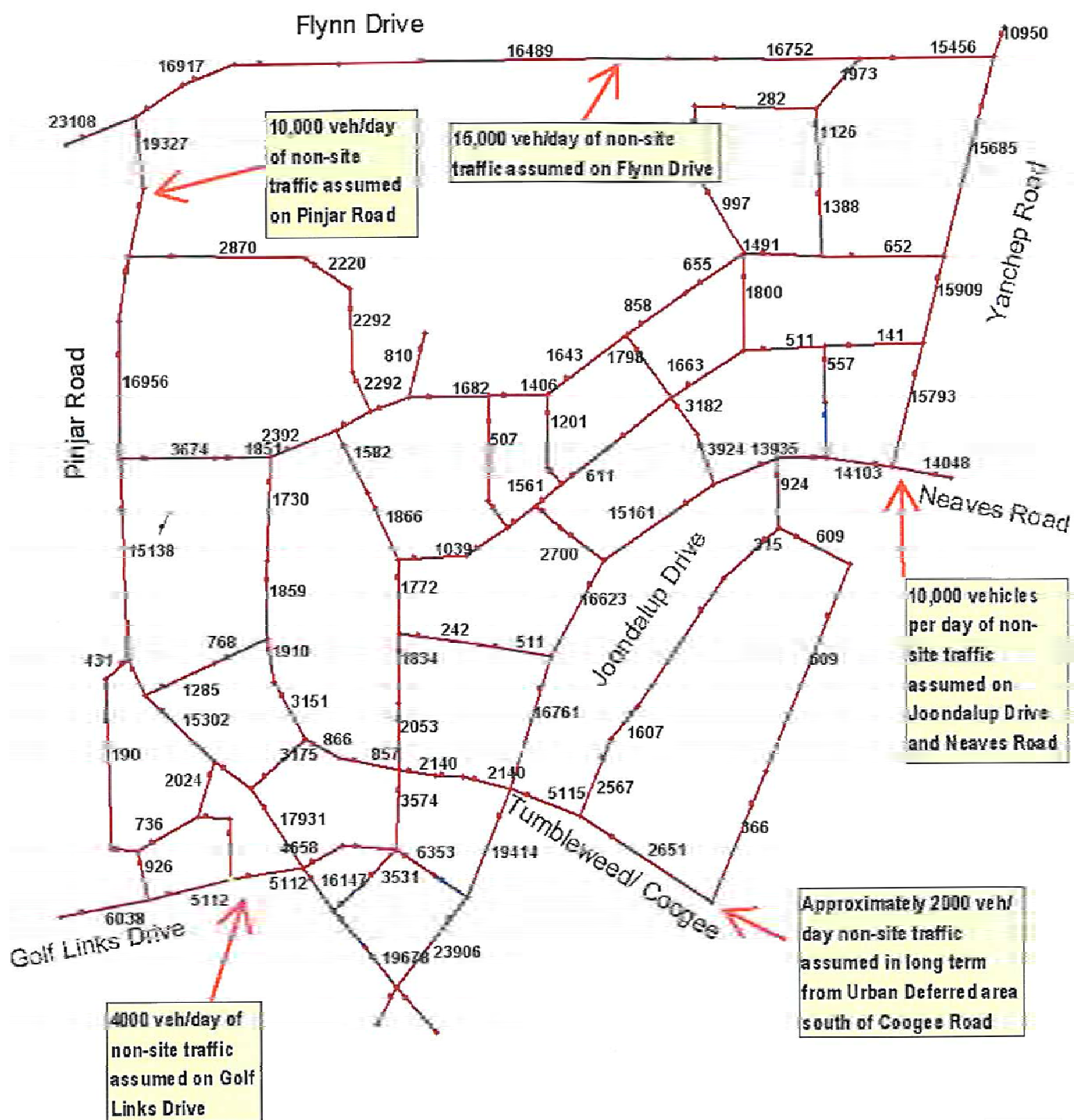




SOURCE 981-70






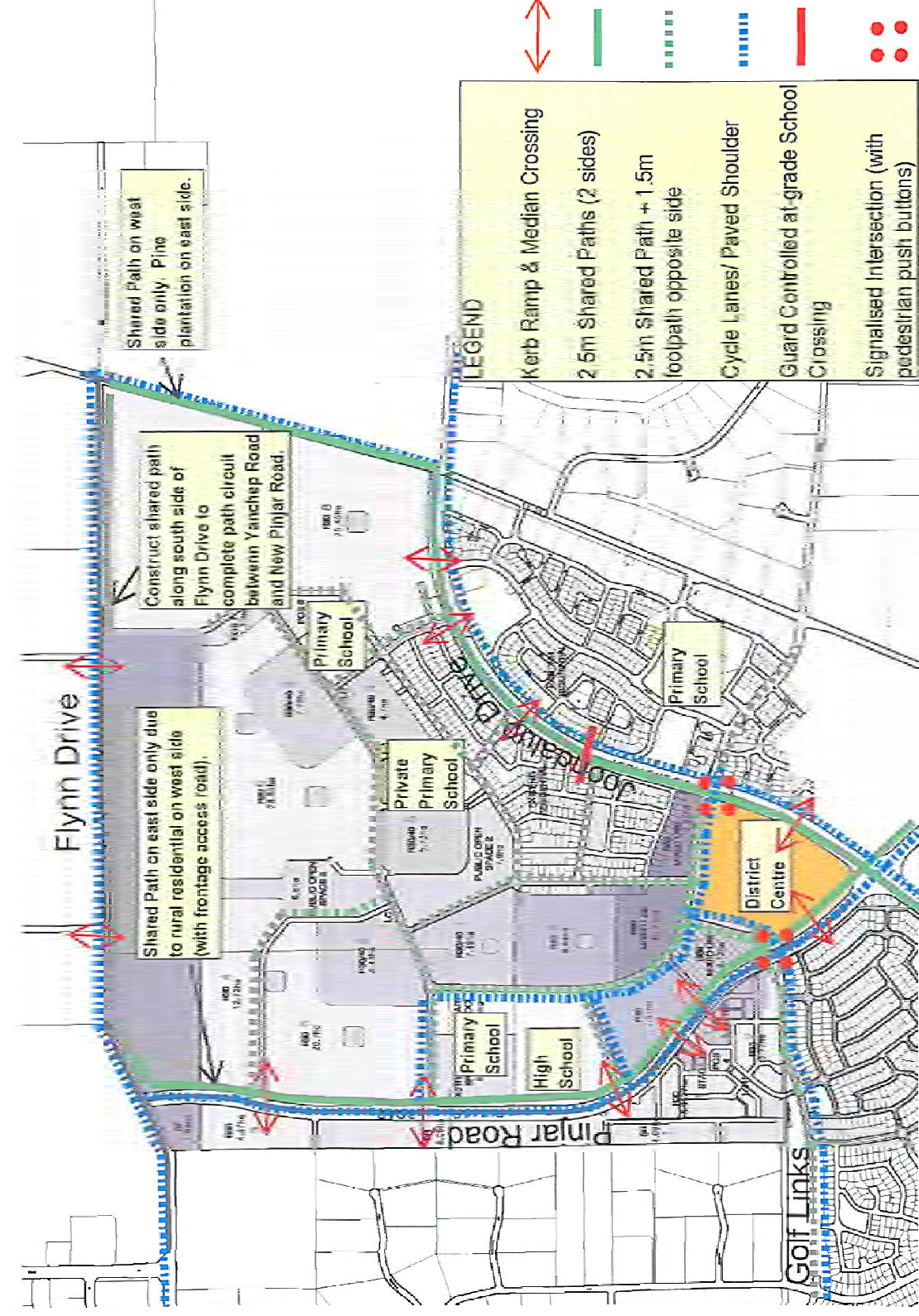


**SOURCE: BRUCE AULABAUGH (981-63)**





SCALE - NTS



**SOURCE: BRUCE AULABAUGH (981-65)**





SOURCE (981-71)



STANDARD LOT TYPE PROFILES

**TRADITIONAL FAMILY (R30)**

CHAPPELL LAMBERT EVERETT

TYPICAL LOT DIMENSIONS		
Width (m)	Depth (m)	Area (m²)
17.5-18	30-32	525-576

R-CODE SETBACKS AT R30		
Primary (m)	Secondary (m)	Other (m)
6.0m/4.0*	1.5	-

\* Min. front setback for du of 3m or 2m with averaging.

R-Code Variations Required	None
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LANEWAY BASED COTTAGE LOTS

**STANDARD COTTAGE (R30/R40)**

CHAPPELL LAMBERT EVERETT

TYPICAL LOT DIMENSIONS		
Width (m)	Depth (m)	Area (m²)
12-12.5	28-30	336-360

R-CODE SETBACKS AT R30/R40		
Primary (m)	Secondary (m)	Other (m)
4	1.5	-

Min. front setback of 2.0m for du with averaging.

SITE COVER AT R30/R40	
Max.	55%

MAIN DESIRABLE R-CODE VARIATIONS		
SETBACKS TO PRIMARY ST.		
Min. (m)	Max. (m)	
1.5	3.0	

SITE COVER INCREASE		
Max. 60%-70%		

NON LANEWAY BASED SMALL LOTS

**VICTORIAN COTTAGE TYPE A (R40/R60)**

CHAPPELL LAMBERT EVERETT

TYPICAL LOT DIMENSIONS		
Width (m)	Depth (m)	Area (m²)
10	25-30	250-300

R-CODE SETBACKS AT R60		
Primary (m)	Secondary (m)	Other (m)
4	1.0	-

Min. front setback of 2.0m for du with averaging.

SITE COVER AT R60	
Max.	55%

MAIN DESIRABLE R-CODE VARIATIONS		
SETBACKS TO PRIMARY ST.		
Min. (m)	Max. (m)	
2.0	4.0	
Verandah	1.5	3.0

SITE COVER INCREASE		
Max. 75%		

BOUNDARY WALLS		
	Max. Height	Max. Length
Single	3.5m	None
Double	6.5m	12m

CONTEMPORARY LIFESTYLE LOT (R30)

CHAPPELL LAMBERT EVERETT

TYPICAL LOT DIMENSIONS		
Width (m)	Depth (m)	Area (m²)
15	30-32	450-480

R-CODE SETBACKS AT R30		
Primary (m)	Secondary (m)	Other (m)
6.0m/4.0*	1.5	-

\* Min. front setback for du of 3m or 2m with averaging.

R-Code Variations Required	None
----------------------------	------

SMALL COTTAGE (R30/R40)

CHAPPELL LAMBERT EVERETT

TYPICAL LOT DIMENSIONS		
Width (m)	Depth (m)	Area (m²)
10-11	28-30	280-330

R-CODE SETBACKS AT R30/R40		
Primary (m)	Secondary (m)	Other (m)
4	1.5	-

Min. front setback of 2.0m for du with averaging.

SITE COVER AT R30/R40	
Max.	55%

MAIN DESIRABLE R-CODE VARIATIONS		
SETBACKS TO PRIMARY ST.		
Min. (m)	Max. (m)	
1.5	3.0	

SITE COVER INCREASE		
Max. 70%		

VICTORIAN COTTAGE TYPE B (R40/R60)

CHAPPELL LAMBERT EVERETT

TYPICAL LOT DIMENSIONS		
Width (m)	Depth (m)	Area (m²)
12-12.5	25-30	300-390

R-CODE SETBACKS AT R60		
Primary (m)	Secondary (m)	Other (m)
4	1.0	-

Min. front setback of 2.0m for du with averaging.

SITE COVER AT R60	
Max.	55%

MAIN DESIRABLE R-CODE VARIATIONS		
SETBACKS TO PRIMARY STREET		
Min. (m)	Max. (m)	
2.0	4.0	
Verandah	1.5	3.0

SITE COVER INCREASE		
Max. 75%		

BOUNDARY WALLS		
	Max. Height	Max. Length
Single	3.5m	None
Double	6.5m	12m

HOMESTEAD (R30)

CHAPPELL LAMBERT EVERETT

TYPICAL LOT DIMENSIONS		
Width (m)	Depth (m)	Area (m²)
19-20	30-32	570-640

R-CODE SETBACKS AT R20		
Primary (m)	Secondary (m)	Other (m)
6.0m	1.5	-

R-Code Variations Required	None
----------------------------	------

TERRACE (R40/R60)

CHAPPELL LAMBERT EVERETT

TYPICAL LOT DIMENSIONS		
Width (m)	Depth (m)	Area (m²)
7.5-8.0	28-30	210-230

R-CODE SETBACKS AT R60		
Primary (m)	Secondary (m)	Other (m)
4	1.0	-

Min. front setback of 2.0m for du with averaging.

SITE COVER AT R60	
Max.	55%

MAIN DESIRABLE R-CODE VARIATIONS		
SETBACKS TO PRIMARY ST.		
Min. (m)	Max. (m)	
2.0	4.0	
Verandah	1.5	3.0

SITE COVER INCREASE		
Max. 75%		

BOUNDARY WALLS		
	Max. Height	Max. Length
Single	3.5m	None
Double	6.5m	12m

ZERO LOT		
Both sides		

FOUR PACK LOTS (R30/R40/R60)

CHAPPELL LAMBERT EVERETT

TYPICAL LOT DIMENSIONS		
Width (m)	Depth (m)	Area (m²)
17-21	20	300-430

R-CODE SETBACKS AT R30/40		
Primary (m)	Secondary (m)	Other (m)
4*	1.5-1.0**	Internal Access Leg 1.5

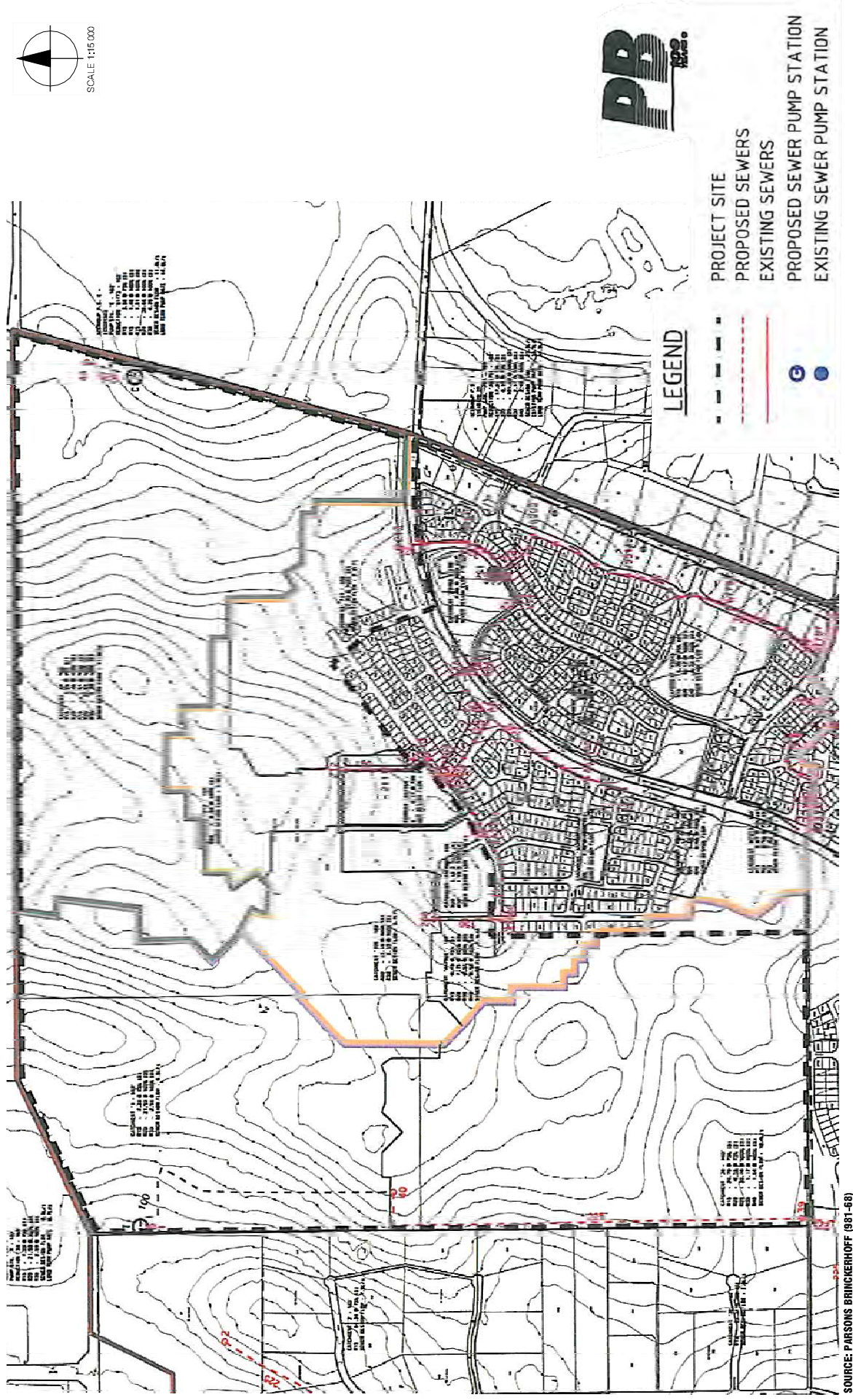
\*Min. front setback of 2.0m for du with averaging.

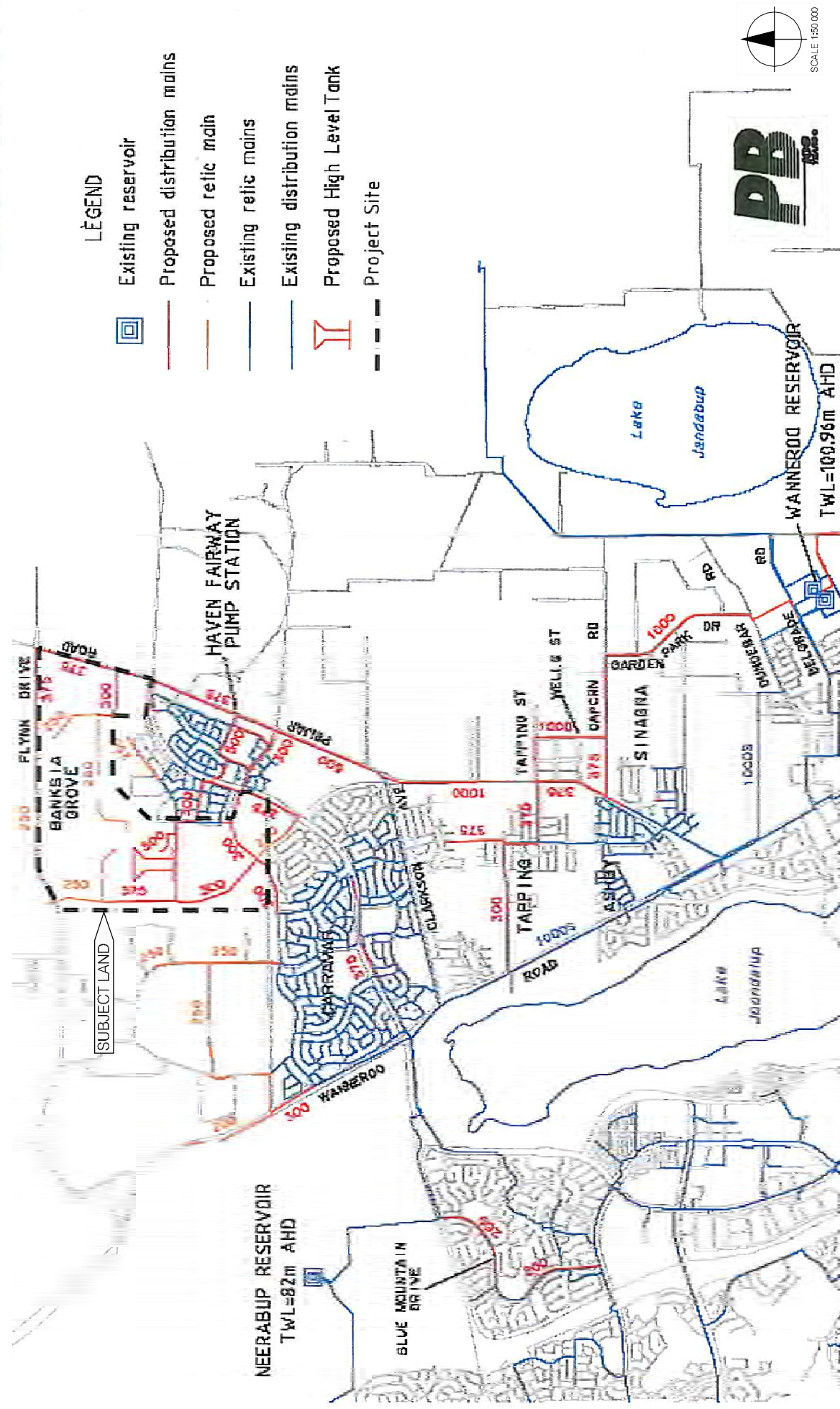
SITE COVER AT R30/R40	
Max.	55%

MAIN DESIRABLE R-CODE VARIATIONS		
SETBACKS AT R30/40 (minimum)		
Primary (m)	Secondary (m)	Other (m) [Internal Access Leg]
2.0	0.5	0.5

SITE COVER INCREASE		
Max. 65% (lots abutting primary streets)		
Max. 60% (Rear Lots)		











## **SECTION D**

### **Smart Growth Assessment Tool (SGAT)**



#### 4.1.0 SMART GROWTH ASSESSMENT TOOL (SGAT)

The City of Wanneroo's Smart Growth Strategy aims at ensuring that the future growth of Wanneroo takes place in a balanced and sustained manner incorporating economic, social and environmental principles.

As part of the Joint Ventures goal to ensure an integrated approach to sustainability in consultation with key government agencies, discussions were entered into with the City of Wanneroo, applying the general Smart Growth Assessment Strategy principles to the initial preliminary/draft Banksia Grove Structure Plan.

Since the first assessment, the Banksia Grove Structure Plan has developed to better locate land uses within the estate to maximise built form efficiencies while also providing a more efficient and sustainable neighbourhood for the existing and future community. Specifically, the draft Banksia Grove Structure Plan was revised to increase the lot mix density within 800m of the Town Centre, improve internal employment generation and identify the need for communication channels between the Joint Venture partners and the State Government in regard to access to public transport.

The Smart Growth Strategy and subsequent Assessment Tool (SGAT) centres on the following principles:

- Lifestyle & Housing Choice;
- Effective Use of Land & Infrastructure;
- Long Term Health of the Environment;
- Identity, Equity & Inclusiveness;
- Long Term Economic Health; and
- People & Government.

The preparation of the Banksia Grove Structure Plan has taken into consideration all of the principles of the City of Wanneroo Smart Growth Strategy, resulting in the preparation of a Structure Plan which reflects range of sustainability, best practice and urban form objectives.



#### 4.1.1 Results

##### Lifestyle & Housing Choice

The Housing framework assessment within the SGAT was based on key objectives contained within the City of Wanneroo's Local Housing Strategy, aiming to promote and provide the following:

- A range of lot sizes to cater for different lifestyle choices;
- A range of housing types in appropriate locations to meet current and future market demands; and
- A variety of quality lifestyle options.

At the broad Structure Plan level yield estimates were undertaken (refer Table 12) and these were inputted into the SGAT. The Housing Framework separates the lot yields into geographic locations (refer Figure 28) as follows:

- Within 800m of a Town Centre (no transport hub);
- Within 400m of Commercial Neighbourhood Centre; and
- Standard

The SGAT applied a target for each of these three areas based on a Gross and not a Nett hectare ratio. The issue with this basis for calculation is:

- Non residential uses will vary from project to project and compromise yield potential to a varying degree; and
- Existing development is a fixed item which may not satisfy targets but is outside the control of the developer.

Regardless of this shortcoming, the efficient urban design density and residential housing types proposed within the Structure Plan and specifically around the Town Centre and Local Centres enable a maximum score of 76% or a '4 star' rating to be achieved. This score is considered to be a maximum score possible given a High School, three primary schools and six hectares of District Recreation are located within the catchment boundaries of the Town and Local Centres.

**TABLE 12 - Banksia Grove: Smart Growth Yield Estimates (Plan 981-38h)**

Category	Special Res. SR (R10) (av. 1000m <sup>2</sup> )				Res1				Res2				Res2				Res2				Res3				Res4				Res5				TOTAL LOTS	TOTAL AREA
	100% (Combined) NRA		70% Traditional (av. 580m <sup>2</sup> )		30% Cottage (av. 360m <sup>2</sup> )		100% (Combined) NRA		50% Traditional (av. 580m <sup>2</sup> )		50% Cottage (av. 360m <sup>2</sup> )		Cottage (av. 360m <sup>2</sup> )		Terrace (av. 210m <sup>2</sup> )		Apartments (av. 166m <sup>2</sup> )																	
	Cell	(ha)	Cell	(ha)	Cell	(ha)	Cell	(ha)	Cell	(ha)	Cell	(ha)	Cell	(ha)	Cell	(ha)	Cell	(ha)	Cell	(ha)	Cell	(ha)	Cell	(ha)	Cell	(ha)	Cell	(ha)						
Within 800m of TC	1	4.16	3.74	37	1	5.95	4.17	3.02	52	1.79	1.25	35	1	3.93	2.85	74	1	3.79	3.60	217														
					2	3.77	2.64	1.91	33	1.13	0.79	22																						
Subtotal (Lots)				37					85			57																						
Subtotal (NRA)		4.16				9.72	6.80			2.92																								
Subtotal (Site Area)			3.74				4.93				2.04																							
Within 400m of LC1																																		
					5	10.78	7.55	5.47	94	3.23	2.26	63	1	7.29	3.65	2.55	44	3.65	2.55	71														
					7	0.95	0.67	0.48	8	0.29	0.20	6	2	8.43	4.22	2.95	51	4.22	2.95	82														
					8	7.07	4.95	3.59	62	2.12	1.48	41	3	5.73	2.87	2.01	35	2.87	2.01	56														
Subtotal (Lots)									164			110					129			208														
Subtotal (NRA)						18.80	13.16			5.64				21.45	10.73														612	40.25				
Subtotal (Site Area)							9.54				3.95						7.51			7.51										28.50				
Within 400m of LC2																																		
					10	16.92	11.94	8.59	148	5.08	3.55	99	4	5.69	2.85	1.99	34	2.85	1.99	55														
					13	5.59	3.91	2.84	49	1.68	1.17	33	5	7.76	3.88	2.72	47	3.88	2.72	75														
Subtotal (Lots)									197			131					81			131														
Subtotal (NRA)						22.51	15.76			6.75				13.45	6.73			6.73												540	35.96			
Subtotal (Site Area)							11.42				4.73						4.71		4.71	4.71										25.57				
Balance	2	7.99	7.19	72	3	3.92	2.74	1.99	34	1.18	0.82	23																						
					4	8.99	6.29	4.56	79	2.70	1.89	52																						
					6	11.37	7.96	5.77	99	3.41	2.39	66																						
					9	4.36	3.05	2.21	38	1.31	0.92	25																						
					11	32.73	22.91	16.61	286	9.82	6.87	191																						
					12	20.66	14.46	10.48	181	6.20	4.34	120																						
Subtotal (Lots)				72					717			478																		1267	90.02			
Subtotal (NRA)		7.99	57.42			82.03																									66.05			
Subtotal (Site Area)			7.19				41.63				17.23																							
TOTAL LOT YIELDS				109					1163			776					211												217	3444				
NET RES. AREA (ha.)		12.15				133.06	93.14		39.92					34.90	17.45		17.45		20.58		7.85		3.79						212					
RES. SITE AREA (ha.)			10.94				67.53									12.22		12.22		13.89		5.10		3.60					153					

**TOTAL LOT YIELD = 3444**

**TOTAL NET RES. AREA 212 ha.**

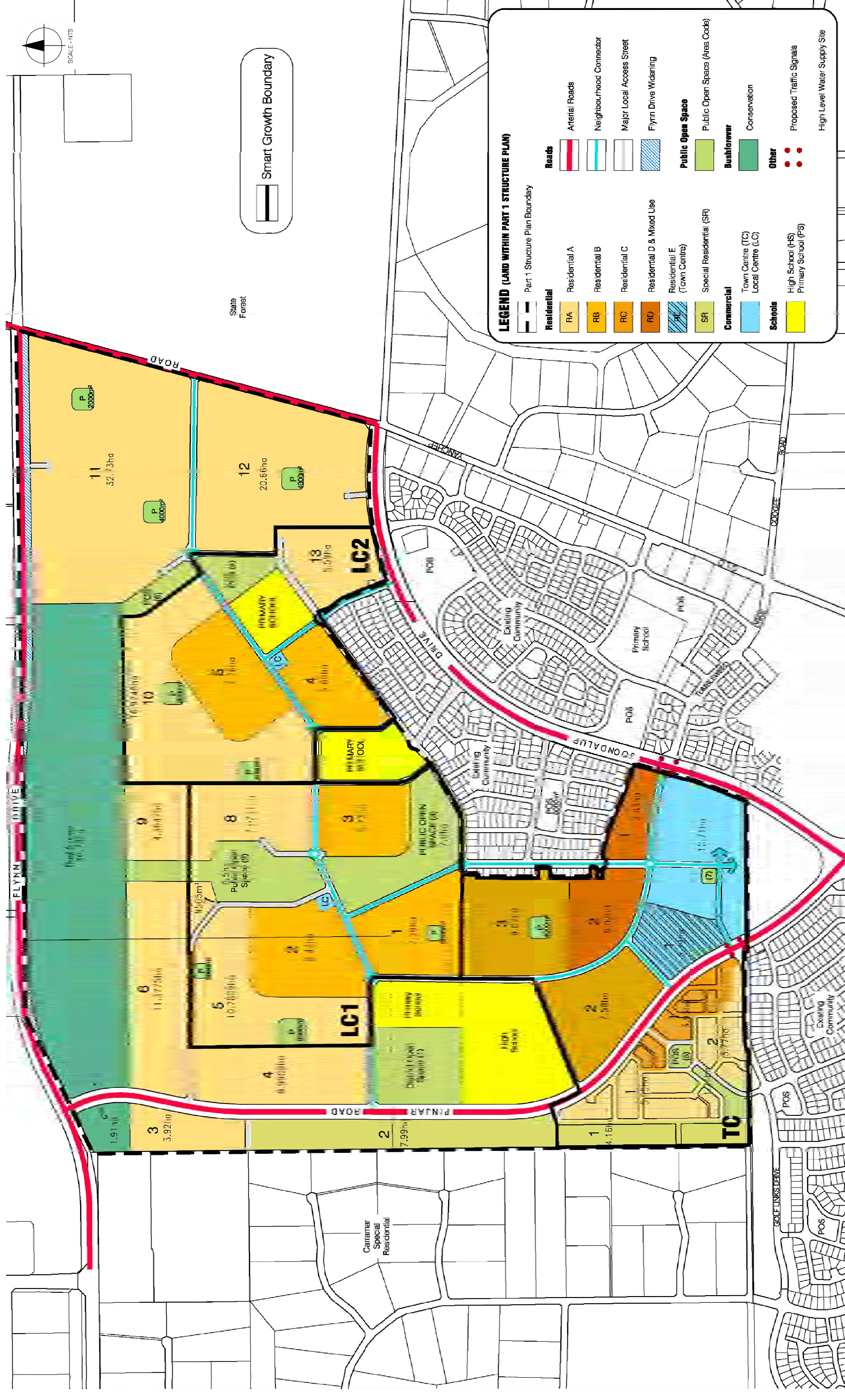
**TOTAL RESIDENTIAL SITE AREA 153 ha.**

**NOTES:**

1. Nett Residential Area is the area of land comprising residential lots, roads and lanes
2. Residential Site Area is Nett Residential Area less the estimated percentage for the roads & lanes
3. Average (av.) is the assumed average lot size for the category
4. Total Lots is the estimated lot yield based on:
 

$$\frac{\text{Site Area (m}^2\text{)}}{\text{Av (m}^2\text{)}}$$
5. TC = Town Centre
6. LC1 = Local Centre 1
7. LC2 = Local Centre 2





SOURCE 981-73

### **Effective use of Land & Infrastructure**

The SGAT assessed the Banksia Grove Structure Plan against the City of Wanneroo's objectives to support and effectively provide for the following:

- Commercial and residential developments that support community facilities, commercial facilities and public transport systems;
- Optimal use of infrastructure and assets;
- Revitalisation of existing areas to meet changing community needs;
- Development of future infrastructure; and
- Promoting urban design that is responsive to the needs of the community.

Due to the high level of walkability within the proposed design, utilisation of existing facilities within the surrounding community, efficient provision of local roads, cycle paths and pedestrian movement systems and maximisation of main headwork's lines, a '5 star' rating was achieved in this category.

### **Long Term Health of the Environment**

In reflecting the State Sustainability Strategy and the City's own Local Environment Strategy, the SGAT assesses the following areas:

- Conserving and enhancing local biodiversity;
- Encouraging community participation in local bush care efforts;
- Promoting more efficient use of water, energy and other resources;
- Encouraging sustainable waste management options and improving resource recovery;
- Promoting a variety of alternative transport choices to reduce energy consumption; and
- Developing integrated water management strategies to increase water efficiency.

The Banksia Grove Structure Plan proposes a number of design and development initiatives which, when implemented, will ensure that Banksia Grove is at the forefront of sustainable and environmentally sensitive urban design.



Within the Structure Plan initiatives such as solar electricity through built-in Photovoltaic systems; third pipe/dual supply technology resulting in realistic water savings for the consumer and the environment; total water cycle management, reducing the demand on regional infrastructure and minimising the import of potable water; and support of multiple use vegetation corridors and habitat retention have been explored. It is hoped that with the support of the City of Wanneroo and relevant State Government agencies that these can be implemented within the development.

Although committed to the 'Long Term Health of the Environment', the Banksia Grove Structure Plan achieves a total of only '3 stars', however, this represents a very good total score of 71% which highlights a failing in the SGAT where the final star ratings may not reflect the percentages attained.

The key area where the Environmental score was reduced was in relation to the reduction in energy emissions. As Banksia Grove is located on the urban/rural fringe with no direct access to a train line or high frequency bus route, it was near impossible to achieve a high rating in this category. In response, discussions will be entered into with the Local and State Government to improve public transport access to Banksia Grove.

### **Identity, Equity and Inclusiveness**

The City of Wanneroo's Community Development Strategy is reflected within the SGAT and is subsequently addressed within the Banksia Grove CEDP. As stated within Section 2.9.2 of the Banksia Grove Structure Plan report, the CEDP identifies the requirements of 'Identity, Equity and Inclusiveness', detailing existing community facilities and amenities which already exist and offering opportunities for expansion, enhancement or simple recognition. The CEDP also addresses the following specific SGAT requirements:

- Social and cultural diversity;
- Social cohesiveness and civic participation;
- Encouraging interconnectedness between neighbourhoods;
- Promoting distinctive and attractive communities;
- Promoting community safety;
- Encouraging and supporting equity for all community members;

- Promoting the appreciation and conservation of heritage sites; and
- Promoting the provision of community facilities and services that meet the needs of the community.

Due to the efficient response to each of these SGAT requirements within the CEDP, a '5 star' rating has been achieved on this category.

### **Long Term Economic Health**

Within the SGAT category of 'Long Term Economic Health', two key objectives are evident: the development of local employment opportunities; and the long term health of the local economy. These objectives are drawn from the City's Economic Development Strategy.

Within the Banksia Grove Structure Plan area, local employment targets have been satisfied through the development of the following land uses:

- District Centre (15,000m<sup>2</sup> NLA retail floorspace and 5,000m<sup>2</sup> NLA showroom);
- Educational Facilities - High School, Government Primary Schools and Private Primary School;
- Health (Medical Centre) and Community Service Facilities

In addition to these uses, housing types will be developed throughout the estate which allow for home business opportunities either in the primary residence or in rear garage-top studio apartments.

A key deficiency of the SGAT is the inability to include external employment opportunities within overall employment calculations. Banksia Grove local employment figures would be significantly bolstered if the Neerabup Industrial Estate, which abuts the northern boundary of Banksia Grove, was included. This Estate is over 1,000ha in area with the potential to generate 20,000 new jobs. This will greatly benefit the future Banksia Grove community providing easily accessible employment opportunities.

In spite of these additional employment figures being disregarded in the Banksia Grove Employment calculations, a '5 star' rating was achieved on this SGAT category. This can be attributed not only to the projected local employment figures resulting from the development and operation of the District Centre etc but also due to the Joint Ventures commitment to the promotion of business assistance and support networks and lifelong learning programs encouraging workforce participation and local employment placement.

### **People and Government**

Within the SGAT, emphasis is placed on building relationships between the Joint Venture Partners and the City of Wanneroo. Within Banksia Grove we have ensured 'inclusive decision making' occurs with local government representation on the Banksia Grove Steering Group, establishment of one key contact point at the City of Wanneroo to maximise communication efficiencies and the establishment of a similar contact at the Department for Planning and Infrastructure to ensure a cohesive and transparent process.

Due to the Joint Venture Partners commitment to the future of the region and development of these partnerships with both State and Local Government, a total of '5 stars' was achieved for this category.

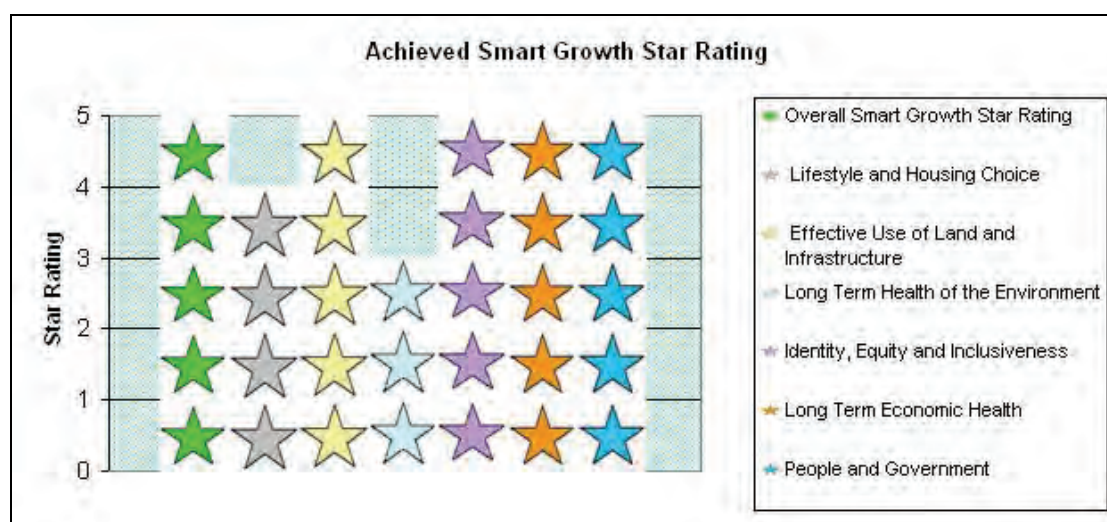
#### **4.1.2 Summary**

The Smart Growth Assessment has been undertaken as a requirement of the City of Wanneroo's Structure Planning process. Although some deficiencies in the SGAT were evident during the application of the Assessment (these will be outlined to the City of Wanneroo in a separate forum), an overall Smart Growth Score of 84% was achieved resulting in a '5 star' rating for the Banksia Grove Structure Plan.

The summary tables are included overleaf:

**SGAT SUMMARY TABLES:**

Smart Growth Assessment	% Achieved	Smart Growth Star Rating	% Negative Score
Overall Smart Growth Score	84%	5	0%
Overall Smart Growth Star Rating	5		
Lifestyle and Housing Choice	75.7%	4	
Effective Use of Land and Infrastructure	86.5%	5	0%
Long Term Health of the Environment	70.6%	3	0%
Identity, Equity and Inclusiveness	92.5%	5	0%
Long Term Economic Health	83.5%	5	0%
People and Government	100.0%	5	0%

**SGAT SPREADSHEETS:**

Each of the Smart Growth Assessment Tool Spreadsheets are included on the following pages:



Local Structure Plan Level					
Smart Growth Assessment Tool - Project Information					
Date Submitted	09.10.06				
Property/Project Name	Banksia Grove Structure Plan				
Name of Company/Individual	Chappell Lambert Everett				
Address of Company/Individual	Lvl 2 36 Rowland Street Subiaco 6008				
Contact Phone Number	9382 1233				
Name of Contact Person	Ian Everett/Nicola Smith				
Version Number (if applicable)					
City of Wanneroo Use Only					
	Case Officer Comments	Officer Initial	Officer Agrees with Applicants Scoring		
Overall			Yes	No	If No, Officers score
Lifestyle and Housing Choice					
Effective Use of Land and Infrastructure					
Long Term Health of the Environment					
Identity, Equity and Inclusiveness					
Long Term Economic Health					
People and Government					
Assessment/Recommendations					
Further Information Required?					
What level of improvement is needed?					
Recommended course of action?					
Other Comments or conditions?					



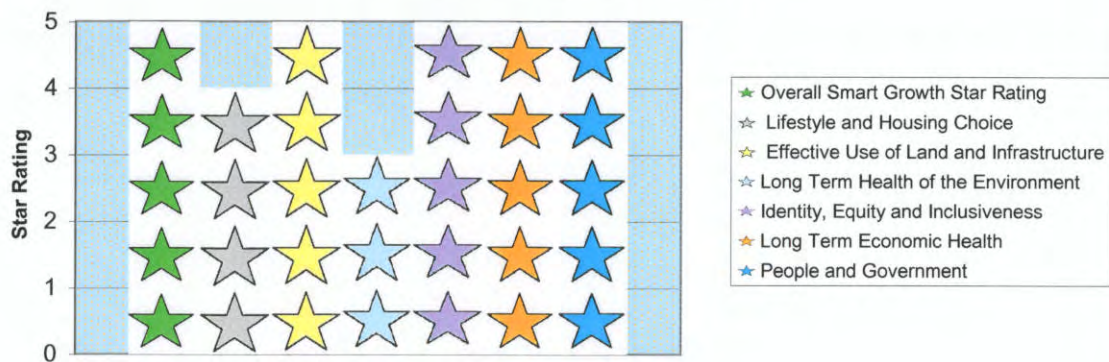
## Smart Growth Assessment Tool - Summary Scorecard

Smart Growth Assessment	% Achieved	Smart Growth Star Rating	% Negative Score
<b>Overall Smart Growth Score</b>	<b>84%</b>	5	0%
<b>Overall Smart Growth Star Rating</b>	<b>5</b>		
Lifestyle and Housing Choice	75.7%	4	
Effective Use of Land and Infrastructure	86.5%	5	0%
Long Term Health of the Environment	70.6%	3	0%
Identity, Equity and Inclusiveness	92.5%	5	0%
Long Term Economic Health	83.5%	5	0%
People and Government	100.0%	5	0%

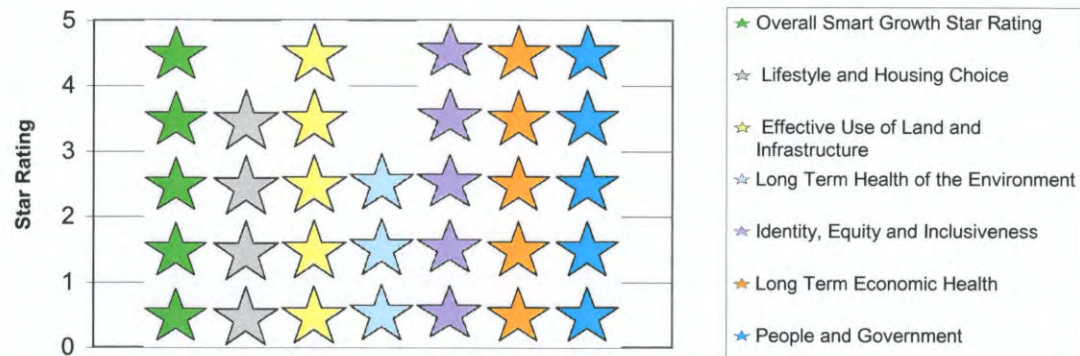
### Star Rating Scale

Pass	50%
1 Star	60%
2 Star	65%
3 Star	70%
4 Star	75%
5 Star	80%

### Achieved Smart Growth Star Rating



### Achievable Smart Growth Star Rating - Subject to No Negative Scores



	Achievable Smart Growth Star Rating*
Overall Smart Growth Star Rating	5
Lifestyle and Housing Choice	4
Effective Use of Land and Infrastructure	5
Long Term Health of the Environment	3
Identity, Equity and Inclusiveness	5
Long Term Economic Health	5
People and Government	5

\*Subject to no negative scores



HOUSING FRAMEWORK											Running Total /186	141	76%
GEOGRAPHIC TYPES	WITHIN 400M COSTAL NODE	WITHIN 800M TRAIN STATION/BUS STATION OR TOWN CENTRE WITH A TRANSPORT HUB	WITHIN 800M OF TOWN CENTRE (no transport hub)	WITHIN 400M OF Commercial N/HOOD CENTRE	RURAL		STANDARD		Plan Reference/ comment	City Officer to Initial if Satisfactory			
What is the land area of development in each location type (hectares)?	0	0	46	74	0	0	90						
GROSS URBAN DENSITY (Dwellings Per ha)	0.00	0.00	22.24	15.11	0.00	14.07							
What is the number of dwellings by type in each location?	Estimated	Target	Estimated	Target	Estimated	Target	Estimated	Target					
	0	0	122	426	557	683	0	0	785	592			
	0	0	443	323	415	535	0	0	476	188			
	0	0	243	230	150	149	0	0	0	90			
	0	0	217	173	0	119	0	0	0	27			
TOTAL DWELLINGS BY LOCATION	0	0	1,025	1,152	1,122	1,485	0	0	1,261	896			
3,408													
How many dwellings are there specific provisions for the following categories?	Estimated	Target	Estimated	Target	Estimated	Target	Estimated	Target					
	0	0	103	103	112	112	0	0	126	88			
	0	0	103	96	112	53	0	0	0	0			
	0	0	21	21	11	11	0	0	0	0			
	0	0	227	219	235	176	0	0	126	88			
Use Landstart proportions													
For how many dwellings are there specific affordable housing programs or provisions?	Estimated	Target	Estimated	Target	Estimated	Target	Estimated	Target					
	0	0	205	205	224	224	0	0	113	113			
What types of affordable housing are anticipated to be present?	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	10% below prevailing market value			
	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes				
	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes				
	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes				
	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes				



HOUSING FRAMEWORK		Table A - Proportions and Results Achieved					
GEOGRAPHIC TYPES	WITHIN 400M COSTAL NODE	WITHIN 800M		WITHIN 800M OF TOWN CENTRE (no transport hub)	WITHIN 400M OF Commercial N/HOOD CENTRE	RURAL	STANDARD
		TRAIN STATION/BUS STATION OR TOWN CENTRE WITH A TRANSPORT	STATION/BUS STATION OR TOWN CENTRE WITH A TRANSPORT				
Proportion of development in each location (land area)	0%	0%	0%	22%	35%	0%	43%
GROSS DENSITY (Dwellings Per ha)	0.00	0.00	0.00	22.24	15.11	0.00	14.07
DIVERSITY							
HOUSE TYPES-							
Single Separate House on lot >440m2	0.0%	0.0%	0.0%	11.9%	49.6%	0.0%	62.3%
Single Separate House on lot <440m2	0.0%	0.0%	0.0%	43.2%	37.0%	0.0%	37.7%
Semi/townhouse etc	0.0%	0.0%	0.0%	23.7%	13.4%	0.0%	0.0%
Apartments/Other	0.0%	0.0%	0.0%	21.2%	0.0%	0.0%	0.0%
TOTAL	0%	0%	0%	100%	100%	0%	100%
ADAPTABILITY & UNIVERSAL DESIGN							
Suitable For Home Based Business	0.0%	0.0%	0.0%	10.0%	10.0%	0.0%	10.0%
Aged/Disability	0.0%	0.0%	0.0%	10.0%	10.0%	0.0%	0.0%
Other	0.0%	0.0%	0.0%	2.0%	1.0%	0.0%	0.0%
TOTAL	0.0%	0%	0%	22%	21%	0%	10%
AFFORDABILITY							
Low Cost Sale	0.0%	0.0%	0.0%	20.0%	20.0%	0.0%	9.0%
Shared Ownership	No	No	No	Yes	Yes	No	Yes
Public Rent	No	No	No	Yes	Yes	No	Yes
Private Rent	No	No	No	Yes	Yes	No	Yes



HOUSING FRAMEWORK							
Table B - Scores Achieved							
GEOGRAPHIC TYPES	Max Possible Score	WITHIN 400M COSTAL NODE	WITHIN 800M TRAIN STATION/BUS STATION	WITHIN 800M OF TOWN CENTRE (no transport hub)	WITHIN 400M OF Commercial N/HOOD CENTRE	RURAL	STANDARD
Proportion of development in each location - Results (%)		0%	0%	22%	35%	0%	43%
GROSS DENSITY (Dwellings Per ha)	61	0.0	0.0	54.6	46.4	0.0	36.4
DIVERSITY HOUSE TYPES-							
Single Separate House on lot >440m2	16	0	0	5	15	0	15
Single Separate House on lot <440m2	16	0	0	13	15	0	13
Semi/townhouse etc	16	0	0	15	15	0	0
Apartments/Other	16	0	0	15	0	0	0
ADAPTABILITY & UNIVERSAL DESIGN							
Suitable For Home Based Business	10	0	0	10	10	0	7
Aged/Disability	10	0	0	10	5	10	10
Other	10	0	0	10	10	10	10
AFFORDABILITY							
Low Cost Sale	6	0	0	6	6	0	6
Shared Ownership	6	0	0	6	6	0	6
Public Rent	6	0	0	6	6	0	6
Private Rent	6	0	0	6	6	0	6
Total Possible Housing Score	186	0	0	163	148	21	123
Housing Score	141	0	0	36	52	0	52



Questions for Smart Growth Principle 2 - Effective use of land and infrastructure	MAX SCORE	Answer	Actual Score	Running Total / 183	158
<b>Smart Growth Strategy 2a. Support commercial and residential developments that support community facilities, commercial facilities and public transport systems.</b>				Plan Reference/ comment	City Officer to Initial if Satisfactory
(i) Is 60% of the area within 400m of a neighbourhood/town centre, accessible by a 400m walk?	11.5	Yes	11.5		
(ii) Is 60% of the area within 800m of a train station/bus station, accessible by an 800m walk?	0.0	Not Applicable	0.0	o train station within si	
(iii) Does the Structure Plan provide public transit oriented development?	11.5	Satisfactory Provision	0.0	h State Government o	
(iv) Does the Structure Plan layout facilitate 5 minute walks to bus stops?	11.5	Satisfactory Provision	5.7	hin existing community	
<b>Smart Growth Strategy 2b. Optimise the use of infrastructure and assets.</b>					
(i) Does the development utilise existing community facilities in surrounding areas?	7.1	Yes	7.1		
(ii) Does the development enhance/revitalise existing open space?	7.1	Yes	7.1		
(iii) Does the development complete links in regional road systems?	7.1	Yes	7.1		
(iv) Does the development complete links in local road system?	7.1	Yes	7.1		
(v) Does the development complete links in path or cycle system?	7.1	Yes	7.1		
(vi) Does the development minimise demolition?	0.0	Not Applicable	0.0		
<b>Smart Growth Strategy 2c. Revitalise areas to meet changing community needs.</b>					
(i) Does the development maintain sufficient per capita standards for POS and community facilities consistent with Liveable Neighbourhoods/City of Wanneroo standards?	5.0	Excellent Standard	5.0		
(ii) Does the development retrofit superblocks and culs-de sac street networks?	0.0	Not Applicable	0.0		
(iii) Does the development integrate underused roads and highways into movement network?	5.0	Excellent Standard	5.0		
(iv) Does the proposal provide increased capacity for public transit orientated development?	5.0	Comprehensive Provision	2.5		
(v) Does the development utilise brown field land, redundant buildings and upper storeys?	0.0	Not Applicable	0.0		
(vi) Does the development provide sensitive proposals for transition from lower to higher density?	5.0	Yes	5.0		
(vii) Does the development provide increased mixed use, non residential development in existing appropriate locations?	5.0	Satisfactory Provision	0.0	le - outside the Structu	
(viii) Does the development provide increased residential development in existing neighbourhood and town centres?	0.0	Not Applicable	0.0		
<b>Smart Growth Strategy 2d. Effectively plan for the development of future infrastructure.</b>					
(i) Are the following services available to the site at the anticipated time of development:					
Regional Roads?	6.6	Yes	6.6		
Local Roads?	6.6	No - But developer will provide	6.6		
Telecommunications?	6.6	No - But developer will provide	6.6		
Power?	6.6	No - But developer will provide	6.6		
Water, Sewerage and Mains Drainage?	6.6	No - But developer will provide	6.6		
(ii) Is the development consistent with MDP programme and location for future growth?	6.6	Excellent Standard	6.6	Edge of developing from	
(iii) Is the development consistent with EDWA standards?	6.6	Excellent Standard	6.6	on/POS facility. Possib	
<b>Smart Growth Strategy 2e. Promote urban design that is responsive to the needs of the community.</b>					
(i) Does the development follow natural contours and natural land form?	3.2	Yes	3.2		
(ii) Does the development minimise bulk earth works/cut and fill?	3.2	Yes	3.2		
(iii) Does the development allow flexibility for future subdivision or amalgamation?	3.2	Yes	3.2		
(iv) Does the development allow high degree of permeability and community safety appropriate to the location?	3.2	Excellent Standard	3.2		
(v) Is the development consistent with minimum standards for pedestrian/ cycle paths, shared use paths (including comfort, weather protection and lighting)?	3.2	Excellent Standard	3.2		
(vi) Does the development include a landscape and POS masterplan consistent with Liveable Neighbourhoods and City of Wanneroo Policy?	3.2	Excellent Standard	3.2	ed which will be to an '	
(vii) Is the development designed to facilitate the following:					
400m neighbourhood radius?	3.2	Yes	3.2		
800m between neighbourhood centres?	3.2	Yes	3.2		
6-9 neighbourhood centres to a town centre?	3.2	Yes	3.2		
no more than 5% street blocks over 180m length?	3.2	Yes	3.2		
no more than 15% culs-de-sacs in each neighbourhood?	3.2	Yes	3.2		
reduction of dwelling construction cost?	3.2	Yes	3.2		
street /public realm orientated development?	3.2	Yes	3.2		
<b>Total Score</b>			158.0		
<b>Maximum Possible Score</b>	183	<b>Total Negative Score</b>	0.00		



Questions for Smart Growth Principle 3 - Long Term Health of the Environment	Max Score	Answers	Actual Score	Running Total/ 142	100	71%
<b>Smart Growth Strategy 3a. Conserve and enhance local biodiversity.</b>				Plan Reference/ comment	City Council to Initial If	
(i) Is the development consistent with measures for protection/enhancement of mapped vegetation/significant land and sea scapes?	2.0	Excellent Standard	2.0			
(ii) Is the development consistent with City of Wanneroo/WAPC foreshore strategy/policy?	0.0	Not Applicable	0.0			
(iii) Is there appropriate weed control measures consistent with State Weed Plan?	2.0	Excellent Standard	2.0			
(iv) If rehabilitation of contaminated or degraded sites is required for future use will it be carried out consistent with State policy?	0.0	Not Applicable	0.0			
(v) Does the development conserve and enhance the sites biodiversity/environmental assets consistent with State policy?	2.0	Excellent Standard	2.0			
(vi) Does the development allow for minimising export of pollutants into receiving water courses?	2.0	Excellent Standard	2.0			
(vii) Does the development promote recharge of ground water?	2.0	Excellent Standard	2.0			
(viii) Does the development promote sustainable land management techniques?	2.0	Excellent Standard	2.0			
(ix) Does the development promote connectivity between conservation areas (green belts)?	2.0	Excellent Program	2.0			
(x) Does the development encourage local community adoption of environmental initiatives?	2.0	Excellent Program	2.0			
(xi) Is the development consistent with the Environment Protection and Biodiversity Conservation Act?	2.0	Exceeds Minimum Standards	1.0			
(xii) Does the development include a flora and fauna survey consistent with State policy guidelines?	2.0	Yes	2.0	it will		
<b>Smart Growth Strategy 3b. Encourage community participation in local bushcare efforts.</b>						
(i) Does the development enable support for local community bushcare activities such as resources provided for bushcare groups?	6.7	Excellent Program	6.7			
(ii) Does development include one or more reserves of significant size (>10Ha) and significant conservation value (ie bushland condition is assessed as "fair" or better)?	6.7	Yes - >10Ha	6.7			
(iii) Does the development provide City of Wanneroo/Department of Conservation and Land Management or other groups, opportunity to acquire/conserv bushland?	6.7	Yes	6.7			
<b>Smart Growth Strategy 3c. Promote more efficient use of water, energy and other resources.</b>						
(i) Does the development promote water sensitive urban design ( including sustainable urban drainage waterwise landscape) solutions?	4.6	Excellent Standard	4.6			
(ii) What % of lots are within the range of N20W to N30 E or E20N to E30S to maximise solar orientation (Input correct %)?	4.6	80%	3.6			
(iii) What proportion (%) of lots are designed to incorporate other renewable energy/resources (Input correct %)?	4.6	60%	2.7			
(iv) Does the design enable 20% reduction of energy emissions over 2001/02 data?	4.6	10%	0.0	train line/high car owners		
(v) Is there an Acid Sulphate Management Plan consistent with WAPC guidelines?	0.0	Not Applicable	0.0			
(vi) Does the development incorporate energy efficient or solar powered public/street lighting?	4.6	Satisfactory Provision	2.3	Relevance?		
<b>options and improve resource recovery.</b>						
(i) Does the development incorporate effective management systems to minimise waste during construction?	8.7	Comprehensive Program	6.5			
(ii) Does the development increase the opportunity for 20% waste reduction/recycling per capita?	8.7	10%	4.3	Council to adopt recycling		
(iii) Does the development meet City of Wanneroo standards for waste management services to all domestic dwellings?	8.7	Exceeds Minimum Standards	6.5	ing bin provided Year 1 - E		
<b>Smart Growth Strategy 3e. Promote a variety of alternative transport choices to reduce energy consumption.</b>						
(i) Is cycle/pedestrian/wheelchair provision safely integrated into road network?	5.4	Fully Integrated Safe Design	5.4			
(ii) Is there a separate safe shared use leisure network and if so how many metres per capita?	5.4	1.2m per capita plus	5.4			
(iii) Does the development incorporate private community transport options as part of a comprehensive movement network?	5.4	No	0.0	tba		
(iv) Does the development provide bicycle racks at commercial, retail and transit centres?	5.4	Excellent Program	5.4			
(v) Does the development include a transit centre such as a bus or train station?	5.4	Yes	5.4			
<b>Smart Growth Strategy 3f. Develop integrated water management strategies to increase water efficiency.</b>						
(i) Has an Urban Water Management Strategy been prepared?	8.5	Yes	8.5			
(ii) Has a Waste Water Re-Use Management Plan been prepared?	8.5	Yes	8.5			
(iii) Does the development facilitate 20% waste water reuse?	8.5	10%	4.2	ology subsurface irrigation		
<b>Maximum Possible Score</b>	<b>142</b>	<b>Total Score</b>	<b>100</b>			
		<b>Total Negative Score</b>	<b>0.0</b>			



Questions for Smart Growth Principle 4 - Identity, equity and inclusiveness	MAX SCORE	Answer	Actual Score	Running Total / 100	93	92%
<b>Smart Growth Strategy 4a. Value social and cultural diversity.</b>				Plan Reference/ comment	City Officer to Initial if	
(i) Does the development recognise and enhance existing or potential local cultural characteristics and identity?	4.0	Yes	4.0			
(ii) Does the development recognise and respond to needs of multi cultural society?	4.0	Yes	4.0			
(iii) Does the development respond to independent needs of the following 6 different age groups and levels of ability 0-14, 15-29, 30-44, 45-59, 60-74, 75+?	4.0	All Age Groups	4.0			
(iv) Has a Disability Access Plan been prepared consistent with the City's Disability Access and Inclusion Plan?	4.0	Yes	4.0	will be		
<b>Smart Growth Strategy 4b. Encourage social cohesiveness and civic participation.</b>						
(i) Does the development facilitate links between industry, business and education?	8.1	Yes	8.1			
(ii) Are there specific programs which maximise opportunities to facilitate/enhance a "sense of place" and "neighbourliness" with appropriate plans and community associations from day 1 of first resident?	8.1	Excellent Program	8.1			
<b>Smart Growth Strategy 4c. Encourage interconnectedness between neighbourhoods.</b>						
(i) Does the development provide appropriate safe and continuous vehicular and non- vehicular movement network between centres?	7.9	Yes	7.9			
(ii) Does the development include opportunities for "green trails" between neighbourhoods?	7.9	Excellent Program	7.9			
<b>Smart Growth Strategy 4d. Promote distinctive and attractive communities.</b>						
(i) Does the design retain/enhance local character in natural and built environment?	3.1	Yes	3.1			
(ii) Does the design use sufficient variety and character of parkland/landscape to define distinctive neighbourhoods?	3.1	Yes	3.1			
(iii) Does the design use visual cues and design elements to assist familiarity/orientation?	3.1	Yes	3.1			
(iv) Does the design develop unique community characteristics?	3.1	Yes	3.1			
(v) Does the design meet requirement for 1% public art to highlight cultural assets(dev. projects over \$500,000)?	3.1	Yes	3.1	qualify		
<b>Smart Growth Strategy 4e. Promote community safety.</b>						
(i) Does the design meet all appropriate CPTED standards or equivalent?	8.4	Exceeds Minimum Standards	4.2			
(ii) Has a transport and traffic safety and management strategy been prepared consistent with Liveable Neighbourhoods?	8.4	Yes	8.4			
<b>Smart Growth Strategy 4f. Encourage and support equity for all community members.</b>						
(i) Is the proposal based on sound demographic/community stakeholder analysis consistent with City of Wanneroo standards?	7.6	Yes	7.6			
(ii) Is the proposal based on sound market analysis?	7.6	Yes	7.6			
<b>Smart Growth Strategy 4g. Promote the appreciation and conservation of heritage sites.</b>						
<input checked="" type="checkbox"/> Not Applicable (where no heritage sites exist within plan)						
(i) Does the development incorporate appropriate, innovative new uses for quality heritage buildings/places?		No				
(ii) Does the development incorporate appropriate treatment for refurbishment of quality heritage buildings/places?		No				
(iii) Does the development incorporate improved community access to quality heritage buildings/places?		No				
(iv) Does the development incorporate appropriate, improved interpretation of community cultural heritage?		No				
(v) Does the development incorporate quality heritage landscape integrated and maintained in structure plans?		No				
<b>Smart Growth Strategy 4h. Promote the provision of community facilities and services that meet the needs of the community.</b>						
(i) Is the Structure Plan supported by an Implementation Strategy and Development Program which allows for the provision of universally accessible community facilities and services that meet the needs of the community within an appropriate timeframe including the following:						
Health Services	1.7	Provided Day 1	1.7			
School	1.7	Provided Day 1	1.7			
Shop	1.7	Provided Day 1	1.7			
Post Box	1.7	Provided Day 1	1.7			
Public Transport Stop	1.7	Provided Day 1	1.7			
Community Events	1.7	Provided Day 1	1.7			
Newsletter	1.7	Provided Day 1	1.7			
Formal and Informal Meeting Places	1.7	Provided Day 1	1.7			
Flexibility for Future Services Upgrades	1.7	Provided Day 1	1.7			
useable parks	1.7	Provided Day 1	1.7	res further discu		
<b>Total Score</b>			93			
<b>Maximum Possible Score</b>	100	<b>Total Negative Score</b>	0.0			



Employment Matrix			Employment Running Total /49	56	115%
Smart Growth Strategy 5a. Build on local industry strengths and opportunities.			Economics Running Total/167	139	83%
Smart Growth Strategy 5f. Encourage workforce participation and local employment placement.			% New Jobs Achieved	City Officer to Initial if Satisfactory	
% New Jobs Requirement Target		40%			
Total Number of Dwellings in the Development		3,408			
Number of Workers		3,953			
Jobs Required to meet Target		1,581	46%		
Questions to estimate Jobs By Industry Type			Jobs		
Floorspace (m2)					
How many m <sup>2</sup> of Retail Trade floorspace		15,000			
How many m <sup>2</sup> of Commercial floorspace		19,000			
How many m <sup>2</sup> of Industrial floorspace		0			
Home Based - calculated automatically based on 10% of dwellings					
How many m <sup>2</sup> of Accommodation, Cafes and Restaurants		1,000			
How many primary school pupils		900			
How many secondary school pupils		1,000			
How many Health and Community Services jobs		estimated jobs			
How many jobs in other industries		estimated jobs			
Total Jobs Achieved			1815		
Total Score Achieved			56		
Max Possible Score			49		
Negative Score			0		



Bonus Economic Checklist - Additional Industries in Desirable Locations										Bonus Running Total /48	15	31%
Smart Growth Strategy 5b. Promote investment consistent with strategic vision.		Smart Growth Strategy 5g. Protect and promote agricultural and productive primary industries.							Economics Running Total/167	139	83%	
Max Possible Score	WITHIN 400M COSTAL NODE	WITHIN 800M TRAIN STATION/BUS STATION	WITHIN 800M OF TOWN CENTRE (no transport hub)	WITHIN 400M OF N/HOOD CENTRE	RURAL	STANDARD	City Officer to Initial if Satisfactory					
48	Is the additional industry included in the desirable location?											
Tourism												
Natural Resources	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>							
Boutique/demonstration	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>							
Visitor Experience based	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>							
Arts Facility	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>							
Manufacturing												
Specialty Goods/niche market			No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>							
Specialist construction products			No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>							
Primary Industry												
Agri-industry					No <input type="checkbox"/> Yes <input type="checkbox"/>							
Enviro-industry					No <input type="checkbox"/> Yes <input type="checkbox"/>							
Specialist food products					No <input type="checkbox"/> Yes <input type="checkbox"/>							
Services												
Home Based	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>	Yes <input type="checkbox"/>						
Professional Services	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/>						
Motor vehicle		No <input type="checkbox"/> Yes <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>							
Research and Development												
Technology Innovation	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>	No <input type="checkbox"/> Yes <input type="checkbox"/>							
Desirables Achieved	0	0	3	1	0	1						
Maximum Desirables	7	8	10	10	13	2						
Score	0	0	14	5	0	24						
Proportion of development in each location (from housing Matrix SGP 1)	0%	0%	22%	35%	0%	43%						
Total Score	15											

Questions for Smart Growth Principle 5 - Long term economic health				Max Score	Answer	Actual Score	Economics Running Total/167	139	83%
Smart Growth Strategy 5c. Advocate provision of communications infrastructure.							Plan Reference/ comment	City Officer to Initial if Satisfactory	
(i) Does the development incorporate provision for broadband and other advances in I&CT?				25.0	Excellent Program	25.0			
Smart Growth Strategy 5d. Promote business assistance and support networks.									
(i) Does the development support/encourage technology transfer?				7.5	Exceeds Minimum Standards	5.7			
(ii) Does the development support locally focused networking?				7.5	Excellent Standard	7.5			
(iii) Does the development support niche training packages?				7.5	Excellent Standard	7.5			
Smart Growth Strategy 5e. Promote lifelong learning and targeted industry training.									
(i) Does the development support education in the community programmes?				7.5	Excellent Standard	7.5			
(ii) Does the development enhance links for all age/ability groups and education, training providers?				7.5	Excellent Standard	7.5			
(iii) Does the development provide employment/training alternatives?				7.5	Excellent Program	7.5			
					Total Score	68			
Maximum Possible Score				70					



Questions for Smart Growth Principle 6 - People and Government	MAX SCORE	Answer	Actual Score	Running Total /154	154	100%
<b>Smart Growth Strategy 6a. Promote inclusive decision making.</b>				Plan Reference/ comment	City Officer to Initial if Satisfactory	
(i) Does the development promote community /stakeholder participation in decision making?	35.8	Yes ▼	35.8			
<b>Smart Growth Strategy 6b. Encourage partnerships that address the changing needs of the community.</b>						
(i) Does the development enable community/stakeholder input to influence positive change in the proposal?	11.9	Yes ▼	11.9			
(ii) Does the development include partnership proposals for medium/long term delivery of facilities and services?	11.9	Yes ▼	11.9			
(iii) Does the development promote partnerships for delivering, managing and maintaining facilities?	11.9	Yes ▼	11.9			
<b>Smart Growth Strategy 6c. Create a commitment to the future of the region.</b>						
(i) Does the Structure Plan enable long term support of community development consistent with the Community Development Plan?	3.2	Excellent Program ▼	3.2			
(ii) Does the Structure plan enable the following:						
stewardship	3.2	Yes ▼	3.2			
sponsorship	3.2	Yes ▼	3.2			
funding studies or research	3.2	Yes ▼	3.2			
mentorship	3.2	Yes ▼	3.2			
business / network support	3.2	Yes ▼	3.2			
apprentice ships	3.2	Yes ▼	3.2			
jobs placement	3.2	Yes ▼	3.2			
work place/ community recreation clubs	3.2	Yes ▼	3.2			
shared facilities eg business services, canteen, open space	3.2	Yes ▼	3.2			
increased defects liability period for public and private works	3.2	Yes ▼	3.2			
events/ awards	3.2	Yes ▼	3.2			
Other	3.2	Yes ▼	3.2			
<b>Smart Growth Strategy 6d. Support the City's internal community, our staff</b>						
(i) Has the appropriate amount of stakeholder consultation been undertaken and relevant approvals received from the following sources:						
City of Wanneroo	2.9	Yes ▼	2.9			
WA Planning Commission/Department for Planning and Infrastructure	2.9	Yes ▼	2.9			
Department of Conservation and Land Management	2.9	Yes ▼	2.9			
Environmental Protection Authority/Department of Environment	2.9	Yes ▼	2.9			
Water and Rivers Commission	2.9	Yes ▼	2.9			
Department of Industry and Resources	2.9	Yes ▼	2.9			
Western Power	2.9	Yes ▼	2.9			
Alinta	2.9	Yes ▼	2.9			
Water Corporation	2.9	Yes ▼	2.9			
Telecom	2.9	Yes ▼	2.9			
Department of Sport and Recreation	2.9	Yes ▼	2.9			
WA Heritage Council	2.9	Yes ▼	2.9			
Other Stakeholders/Community	2.9	Yes ▼	2.9			
(ii) Has a contact person been nominated for City staff to contact?	2.9	Yes ▼	2.9			
		<b>Total Score</b>	<b>154</b>			
<b>Maximum Possible Score</b>	<b>154</b>	<b>Total Negative Score</b>	<b>0.0</b>			



## **SECTION E**

### **Implementation**



### 5.1.0 INTRODUCTION

The statutory element of the Structure Plan will be given force and effect through the provisions of Part 9 of the City of Wanneroo DPS2. Whilst a standard approach, it will embrace a number of specific innovations including;

- More flexible Structure Plan document and associated Maps;
- Provisions which provide statutory guidance to the allocation of R-Codes at Subdivision stage;
- The inclusion of land use statements to guide the preparation of subdivisions; and
- The inclusion of a range of 'as of right' Acceptable Development standards operating as R-Code Variations almost identical to the Brighton Agreed Local Structure Plan;

The key innovation is that the R-Code Plan will be adopted at the time of Subdivision and replaced in the Structure Plan by density guidelines relevant to each of the Residential Categories (as explained in Section C). This establishes the maximum and minimum density which may be applied for each Residential Category (as depicted on the Structure Plan) at the time of Subdivision.

The arrangement described above is a logical planning sequence which reflects the fact that incremental increases in the level of detail occurs at each planning stage and that it is often unnecessary and time consuming to second guess detailed planning outcomes which will become apparent closer to subdivision, rather than at this broader Land Use Structure plan phase.

The innovative Structure Planning process proposed for Banksia Grove will allow for a simplified process, will encourage and improve interaction with Council at varying levels and will ensure flexibility, while retaining a level of surety, for all parties.



## 5.2.0 STRUCTURE PLAN IMPLEMENTATION

### 5.2.1 Introduction

Typically Master Plan based structure planning prepared pursuant to DPS 2 for large Estates (1500 to 6000 lots) has included a comprehensive assessment of opportunities, constraints and desired outcomes which are translated in a statutory form in the Part 1 Statutory Report documentation which has generally included:

- A broadly based Land Use Structure Plan which allocates major uses and infrastructure networks;
- An R-Code Plan which based on the above plan allocates site specific R-Codings over a large area; and
- A Zoning Plan which based on the Structure Plan assigns Zones which are generally consistent with those operating under the Scheme.

It has been recognised that in the more complex and ever changing planning environment in which land is now developed, there are some shortcomings to this approach which tend to manifest themselves as administrative burdens for the Local Authority (as Structure Plans are amended to reflect changes which inevitably occur closer to subdivision) and potential delays for the landowner.

Key problems with this typical approach are;

- The level of detail required to sensibly allocate R-Codes is generally beyond that completed as part of a Local Structure Plan which is prepared at a broad scale of 1:5000 or 1:10000;
- The Local Structure Plan in the first instance is necessarily a broad document which is always refined as part of the more detailed investigations and planning done at the time of subdivision. This has generally resulted in time consuming amendments to the Local Structure Plan to ensure those changing outcomes are statutorily embodied in the Part 1 Statutory Report;
- Generally the Structure Plans do not recognise that there is an intermediate step between a Local Structure Plan (1:5000) and subdivision (1:1000) which is a Plan at 1:2000 that can be utilised effectively to infill detail without incurring the burden of Structure Plan amendments.

It is intended through the Banksia Grove Structure Plan process to outline this crucial step in the process as a supporting document to be prepared in parallel with the subdivision application. The supporting document will provide this next level of planning detail which can address the City of Wanneroo and WAPC Subdivision Policies at the local level, provide a framework for more detailed supporting technical studies if required and most importantly assign final R Codes.

The City can consider the information contained within the supporting report as part of their formal referral response on the subdivision application. The supporting report will give affect to the R-Codings (and if required, can be adopted by Council) but is not a statutory prerequisite to subdivision approval which remains under the control of the WAPC.

The supporting report will also inform the City in its consideration of any subdivision application in much the same way as the Local Housing Strategy does. Adoption or modification (if required) of the supporting report by Council will not involve advertising as it is simply a more detailed reflection of standards and requirements already included in the Structure Plan.

In summary the supporting report provides a more comprehensive Detailed Area Plan (DAP) over a larger subdivision area. In presentation it should be essentially a single Plan with all requisite explanatory and regulatory (in the case of the R-Codes) text, depicted on the Plan itself for ease of use and interpretation. It is not however another Structure Plan document and should not be conceived or treated as such. It is in effect a simple infill of logical planning detail.

### 5.2.2 Matters to be addressed

The Structure Plan provisions list the matters which as a minimum should be addressed as part of the Supporting Report. The matters to be addressed where relevant and applicable to each subdivision area include the following;

- Response to each of the Urban Form Principles, Elements, Objectives and Strategies as outlined in Part 1 of the Structure Plan;
- Residential Yield and Housing Type Analysis;
- Provision of a Local Road Network Plan;
- Preparation of a POS Schedule and explanation of Drainage Credits (detailing the location and function of local open space, including the minimum amount to be provided to ensure the full provision of the 10% requirement over the Estate; and
- Assignment of the R-Codes (the only statutory component);

**5.2.3              Assignment of R-Codes and Residential Categories**

As mentioned the R-Codes which will apply to the subject land and control development (subject to any variations included in the Part 1 Statutory Report of the Structure Plan), will be applied in the Subdivision and adopted by Council. This is not a random exercise however as the Structure Plan (Plan 1) will establish through the Residential Categories and provisions the maximum and minimum R-Codes which shall apply.



### 5.3.0 ACCEPTABLE DEVELOPMENT STANDARDS/ R-CODE VARIATIONS

Section C describes some of the shortcomings involved in the application of the R-Codes in greenfields sites where residential densities are increasing and lot sizes shrinking and there is an imperative to provided legislation which facilitates opportunity for cost effective construction.

These shortcomings relate to:

- Onerous site cover requirements even under R60 which often force a costly two storey response;
- Lack of incentive to design in more useable and efficient private open space in exchange for an increase in site cover;
- Onerous and unresponsive setback requirements which impact on the buildability and efficiency of each lot and the streetscape response;
- Lack of recognition for the different circumstances which apply to front loaded lots versus laneway access lots;
- Onerous Privacy provisions which have been written to apply to infill development and not greenfields sites; and
- Climate provisions which simply do not work for green title subdivision at R60.

All of these issues have already been recognised and addressed at Brighton as part of the Butler Ridgewood Agreed Structure Plan and New Choices Housing Strategy conceived by Chappell Lambert Everett and the details need not be expanded upon. It is simply proposed to transfer these new and efficient standards directly into the Part 1 Statutory Report of this Structure Plan with some minor refinements.

#### 5.4.0 ZONING PLAN

The entire Structure Plan area is presently zoned 'Urban Development' zone (with the minor exceptions of the Pinjar Road alignment and the Special Residential). Within the Part 1 Statutory Report, Plan 2 will introduce more specific zonings over the land to reflect the recommendations within the Structure Plan.

Key points to note are as follows:

- **Residential Zone**

All of the land included within Residential Categories A, B & C is zoned 'Residential'

- **Special Residential**

Reflects the current DPS2 zoning for the land abutting the Carramar Park Special Residential.

- **Centre**

The core District Centre land will be zoned 'Centre' reflecting the intended use. In accordance with the City of Wanneroo Scheme, a separate Structure Plan will be prepared for this site

- **Commercial**

The core area of the three Local Centres will be zoned 'Commercial' reflecting the intended use. Residential development is a permitted use in the 'Commercial' zone. Floorspace limits are addressed in SPP 4.2 and the City of Wanneroo Centres Strategy and not repeated in this documentation. The Structure Plan requires a Detailed Area Plan to be prepared for each Local Centre as a condition of subdivision. It is beyond the level of detail of this Structure Plan to include such detail.

- **Mixed Use**

The 'Mixed Use' zones surround the Local Centre 'Commercial' zones, facilitating residential development but also recognising the potential for small scale commercial and office activities consistent with the provisions of that zone

- **Special - Conservation**

The 'Special – Conservation' zone applies to the BushForever site to the north. This site is pending Reservation under the MRS as 'Parks and Recreation' Reserve at which time DPS2 will be amended to accord with the MRS (refer Department for Planning and Infrastructure correspondence of 9 Oct 2006 in Report Appendices)

- **Civic & Cultural**

The 'Civic & Cultural' zone applies to the School sites and adjacent related active open spaces because the use Educational Establishment is a not a permitted use in the 'Residential' zone. Once the sites are accurately defined and created on separate title through the subdivision process then the School sites should be amended in the Structure Plan or on the Scheme Maps as 'Reserve - Public Use'.

#### **6.1.0 AMENDMENT NO.1 – EXPLANATORY REPORT**

See overleaf.





banksia grove

## **SECTION F**

### **Amendment No.1**



**BANKSIA GROVE AGREED LOCAL STRUCTURE PLAN AMENDMENT**

**STRUCTURE PLAN NO. 21A**

**PART 2  
EXPLANATORY REPORT**

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October 2011

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## **FIGURES**

Figure 1 – Map 1: Local Structure Plan

Figure 2 – Map 2: Zoning Plan

Figure 3 – Map 3: R-Code Plan

## **APPENDICES**

Appendix 1 - Banksia Grove Local Centre Floor Space Requirements – Shrapnel Urban Design (30 July 20 08)

Appendix 2 - Banksia Grove – Retail Floor Space in Local Centres – Shrapnel Urban Design (11 May 2010)

Appendix 3 – Banksia Grove – Primary School Concept Plan – CLE (August 2011)

## 1.0 INTRODUCTION

This Amendment to the Banksia Grove Agreed Local Structure Plan No. 21A is lodged pursuant to the provisions of the Clause 9.7 of the City of Wanneroo District Planning Scheme No. 2 (DPS 2) and relates to a redesign of the north east portion of the Structure Plan. The need for the redesign and this Amendment has arisen as a natural consequence of the ongoing development of the project, and provides an updated public open space summary, more work on centre distributions and a more detailed appreciation of the site and its topographic constraints in this area. The latter in particular has impacted on the selection of an alternative site for the Primary School.

The final design outcome which will arise as a consequence of this Amendment is an improvement on the current Structure Plan as it will:

- Consolidate two small local centres into a more centrally located and larger local centre providing an improved level of service to the local community;
- Shift the Primary School west on flatter land, and;
- Refine the alignment of central east west road by shifting it slightly northward to account for topography and grade requirements at the Old Yanchep Road intersection.

The Amended Banksia Grove Agreed Structure Plan No. 21A (LSP) will form the basis for future subdivision applications, preparation of Detailed Area Plans and development applications for the remaining undeveloped area of the LSP.

It will facilitate a more site responsive design outcome for the Primary School and collocated public open space, whilst consolidating the new local centre and 'conservation' public open space site ensuring a high standard of amenity for the surrounding community.

## 2.0 EXISTING STATUTORY PLANNING FRAMEWORK

The current operative LSP consists of three statutory plans:

- Map 1: Local Structure Plan (Figure 1)
- Map 2: Zoning Plan (Figure 2)
- Map 3: R-Code Plan (Figure 3)

All three statutory plans are affected by this Amendment and the changes proposed in the north east precinct are discussed below:

### *Map 1: Local Structure Plan*

This presently depicts:

- Two small local centres with a maximum NLA of 1200m<sup>2</sup>. One is located on the corner of the central neighbourhood connector Grandis Boulevard and Old Yanchep Road and the other on the corner of Grandis Boulevard and Elderiana Link;
- Small areas of Residential/Mixed Use around the two local centres;
- A 3.5ha primary school co located with 1.5 ha of POS adjacent the central local centre;
- A designated POS area for recreation and cultural purposes linking into the Bush Forever site No. 295;
- A recommended local distributor network, and;
- Residential land use over the balance.

### *Map 2: Zoning Plan*

The Zoning Plan applies a Commercial Zone over the local centres with small areas of Mixed Use zoning surrounding the local centres. The Bush Forever Site No. 295 is zoned Special – Conservation and the primary and high school sites are zoned Civic and Cultural with the balance of the land zoned Residential.

### *Map 3: R Code Plan*

The R Code Plan applies an R60 coding over the Commercial and Mixed Use zones with a split R30/60 coding elsewhere. Final codings (within the split code range) are assigned at the time of subdivision and approved after subdivision approval received consistent with Clause 6.4.2 & 6.7

All three statutory plans are being amended to reflect the new LSP design however no text changes are proposed. This amendment also addresses some more minor administrative matters which are discussed later.

### **3.0 DESIGN REVIEW**

The design review over the north east precinct of the Banksia Grove Agreed Structure Plan No. 21A (LSP) has resulted from the more detailed analysis of this area of the estate in the lead up to the preparation of subdivision designs. Engineers have highlighted issues associated with the steep topography which has required a design review. This work has been complemented by a review of the retail floorspace allocation, centre catchments, public open space distribution and a new preferred primary school location and enabled a new initiative for the north east portion to be completed within a comprehensive planning review framework.

Importantly this design review has been guided by the Principles, Elements, Objectives and Strategies of Part 6 of the LSP and the new design outcome better achieves these ends by providing; a stronger more commercially viable location for the local centre, and a better topographical location for the Primary School and collocated public open space within the north eastern precinct of the estate.

The new design is well integrated with the exiting development within the LSP as a result of this holistic design analysis.



## 4.0 LOCAL CENTRES AND RETAIL REVIEW

### 4.1 Banksia Grove Agreed Local Structure Plan No. 21 A

The LSP currently provides for a District Centre (which has a maximum floorspace of 20,000sqm as defined in the City of Wanneroo's Centres Strategy January 2005) and three local centres each with the potential for a maximum retail floorspace of 1200m<sup>2</sup> in accordance with Clause 6.4.2. Although no overall maximum retail floor space is provided within the LSP, an analysis undertaken by Shrapnel Urban Planning for Banksia Grove in July 2008 (refer to Appendix 1), indicates that the three Local Centres combined should have a total floor area of 1,700m<sup>2</sup>. The recommended distribution of this floorspace between the three local centres (refer to Figure 2) was as follows:

- North West Local Centre: 400-500 m<sup>2</sup>
- Middle Centre: 1,000-1,100 m<sup>2</sup>
- North East Local Centre: 200 m<sup>2</sup>

The North West Local Centre is a small centre of 400 to 500 m<sup>2</sup> located within 1 km of the District Centre. It has received subdivision approval.

The Middle Centre is the largest centre of the three reflecting its location further away from the district centre and well located in terms of its catchment population, accessibility and location opposite a Primary School on Grandis Boulevard.

The North East Local Centre is located on the outer extremities of Banksia Grove along Old Yanchep Road and is the smallest of the three. The centre vicinity is significantly compromised as it only has half a catchment due to the western side of Old Yanchep Road being Pine Forest and its close proximity the much larger Middle Centre.

### 4.2 Local Structure Plan Amendment

The Amendment to the north east precinct includes a review of the Banksia Grove local centres by Shrapnel Urban Planning in May 2010 (refer to Appendix 2) and focuses on the Middle and NE local centres. The review revealed that:

- The NE Local Centre is marginal because it is located at the outer extremity of Banksia Grove with only half a catchment, and is close to the 'planned' larger Middle Centre. The review notes that local centres in such vulnerable locations are rarely viable because, in a competitive environment, half a catchment is simply insufficient unless there is some countervailing factor such as, for example, a tourist/recreations focus at a coastal location.

- The Middle centre which is further away from, and less directly connected to, the district centre has the potential to be the largest of the planned local centres with the ability to service an independent supermarket of approximately 600 to 800 m<sup>2</sup> and several local specialty shops, plus personal services such as a hairdresser due to its surrounding population catchment.

The Review also acknowledges that it is urban design planning principles which should drive centre location and not modelling and that it is necessary to strike a balance between endeavouring to ensure both commercial viability and a high level of convenience for the local community.

In this instance the Amendment is driven by urban design principles and the need to maintain a strong focal point in the north east precinct with both a community and commercial focus. As such it became apparent that the Middle Centre would be better shifted slightly east (co located with the 'conservation' public open space) to serve as the new community focal point for the north east area.

In doing so this consolidates the functions of two centres with the floorspace from the very marginal eastern centre being reallocated and this centre removed.

In summary this Amendment:

- Delete the NE Local Centre;
- Shifts the Middle Centre further east along Grandis Boulevard, co locating it with the 'conservation' public open space;
- Reallocates the 200 m<sup>2</sup> of retail floor space to the Middle Centre to maintain catchment integrity.
- Reduces its amount of land zoned "Commercial" to more accurately reflect land required for a small 400-500m<sup>2</sup> local centre.

The Amendment of the LSP now provides two local centres within Banksia Grove and allocates retail floorspaces to each of the local centres as indicated below:

- NW Local Centre: 400-500 m<sup>2</sup>
- Middle Centre: 1,200 m<sup>2</sup>

As mentioned above this Amendment rationalises Commercial and Mixed Use zones for the North West Local Centre. The LSP identifies over 1.3 ha of Commercial zoned land for the local centre which has a retail floorspace of 400-500 m<sup>2</sup>. The 1.3 ha includes 4,800 m<sup>2</sup> east of Glasshouse Drive (adjoining public open space) and two sites west of Glasshouse Drive totalling 8,100m<sup>2</sup>.

The Amendment will confine the local centre to the 4,800m<sup>2</sup> site east of Glasshouse Drive which works well with the local centre benefiting from the amenity of the surrounding public open space. Consolidating the small commercial land uses within a smaller site improving functionality and its key location on the corner of Grandis Boulevard and Glasshouse Drive.

The remaining Commercial zoned land has been rezoned Mixed Use to provide flexibility for land use around the local centre and is consistent with the existing zoning in the area.

## 5.0 ENGINEERING CONSIDERATIONS

Engineers have been able to prepare the bulk earthworks response, examine road, intersection and lot levels, revise drainage catchments and advise on topographic implications for the primary school and collocated public open space. Relevant to this Amendment the new location recognises these constraints and:

- Allows for the new Primary School site to locate on what will be one of the flatter parts of the site (following earthworks);
- Located the collocated public open space where it can more readily absorb cross fall, and;
- Suggests the shift of the east west road alignment slightly north of the current alignment in the LSP to overcome topography constraints and drainage provision of the Old Yanchep Road intersection.

Other engineering matters will be resolved at the time of subdivision.



## 6.0 TRAFFIC CONSIDERATIONS

The redesign of the north east precinct of the LSP area has not resulted in the removal or addition of any vehicular access points into or out of the LSP area. It was found that access points proposed in the operative LSP work well in the context of the site and its surrounds providing a high level of traffic movement into and out of the north east precinct. These connections also work well with the new design.

Flynn Drive, Old Yanchep Road and Joondalup Drive are constrained by existing access points and future traffic infrastructure which both limit the potential for any new access points into the north east precinct. This is the case along Joondalup Drive whereby the future roundabout at the intersection of Joondalup and Viridian Drive prevents additional access off Joondalup Drive into the LSP due to insufficient separation distances.

Due to the site responsive nature of the amendments to the north east precinct both access to the site and key neighbourhood connectors have been maintained providing a highly interconnected street system within the north east precinct.

Other local traffic matters will be addressed at the time of subdivision as transport analysis will continue to be updated and form part of supporting documentation.

## 7.0 PRIMARY SCHOOL

The current LSP relocates the 3.5 ha eastern primary school westward collocating with 1.21 ha of public open space which includes a junior oval.

A significant part of the design review focussed on a school site location to ensure a more developable site is provided.

Following discussions with Department of Education (DoE) the new preferred location was supported as per this Amendment. The site works well as:

- The landform is gentler and can be graded to meet DoE criteria;
- The school retains its location on the local distributor network achieving good traffic circulation;
- The primary school site is 3.5 ha and 1.21 ha of co-located public open space.
- The school still performs the important community focus function with collocated active public open space, and;
- The school relates well to the collocated public open space providing a functional space for active recreation facilities including change rooms;

## 8.0 PUBLIC OPEN SPACE

The redesign of the north east precinct has focussed strongly on providing the Department of Education an appropriate school site given the areas undulating topography.

The steep terrain which occupies most of this portion of Banksia Grove is challenging and even with earthworks mitigates against the use of large land areas for land uses requiring flat space. As a result the Primary School and co located public open space has been relocated slightly westward but still maintaining its frontage to Elderiana Link and Grandis Boulevard.

The new site has a number of constraints in terms of the already constructed road reserve and infrastructure for Laricina Bend, Alpina Turn and the Elderiana Link roundabout. as these roads and infrastructure are already constructed. This has resulted in a 3.5 ha Primary School site being provided and a 1.21ha co-located public open space. A concept plan has been prepared demonstrating how the collocated public opens space has sufficient area for a junior oval, change rooms, associated car parking and buffers to the road, refer to Appendix 3.

Public open space through Banksia Grove is well provided at 27.85ha, 4ha over the minimum 10 per cent requirement of 23.49ha.

The north east precinct also refines the location and configuration of the 1.3ha 'conservation' public open space consistent with the requirements of Clause 6.5.2 of the LSP. The grouping of the local centre and 'conservation' public open space allows for a number of user synergies which can arise providing a better functional link from the core of the precinct up to the Bushforever site.

The following tables update the 'Land Use Summary' within Banksia Grove based upon current subdivision approvals and amendments to the LSP.

## 8.1 Land Use Table

The following Land Use Summary is an update of Table 7 in the Local Structure Plan Report. It applies to the whole of the Local Structure Plan area west of Joondalup Drive but does not include the existing Banksia Grove community, in accordance with the WAPC approval of the Banksia Grove Agreed Structure Plan No. 21A in 2008. This update reflects both the LSP and existing approvals with 'as constructed' details of public open space applied by the project engineers.

TABLE 1: Banksia Grove Land Use Summary		
<b><u>Gross Area West of Joondalup Drive</u></b>		
• Future Development	338.89 ha	
<b><u>Non Residential Land Uses</u></b>		
• Bush Forever (excluding Pinjar Reserve)	41.96 ha	
• Pinjar Road MRS Reserve	10.00 ha	
• Flynn Drive MRS Widening	1.76 ha	
• High School	10.00 ha	
• Govt Primary School 1	3.5 ha	
• Govt Primary School 2	3.5 ha	
• Private Primary School (Lot 217)	4.16 ha	
• Town Centre Precinct	18.16 ha	
• Local Centre 1 (West)	0.48 ha	
• Local Centre 2 (Central)	0.50 ha	
• Sewer Pump Station (NE Precinct)	0.31 ha	
• Water Supply Tank Site	0.34 ha	
• Stage 16 Sump	0.54 ha	
• Drainage Deductions 1:1 year	1.2 ha	
• Drainage Deductions 1:5 year	1.66 ha	
<b>TOTAL</b>	<b>98.07 ha</b>	
<b><u>Gross Residential Area</u></b>		<b>240.82 ha</b>
338.8876 ha less 98.07 ha (This figure also includes 11.82ha of Special Residential)		
<b><u>Public Open Space Required</u></b>		
@10% of 229.00 (Residential)	22.9 ha	<b>23.49 POS</b>
@5% of 11.82 (Special Residential)	0.59 ha	<b>Required</b>
<b><u>Public Open Space Provided</u></b>		<b>27.8431 ha</b>
		<b>Provided</b>



## **9.0 AMENDMENT STATUTORY PLANS**

Part 1 of the LSP will be modified to incorporate the amendments to the north east portion of the structure plan area. The modified plans are included in the figures section of this Report and include:

### **9.1 Map 1: Agreed Local Structure Plan**

The LSP Map reflects all the elements of the design review documented for the north east precinct. In addition there are three minor changes relating to the location of the pump station, mixed use zone and density allocation.

The location of the pump station within Lot 10 Flynn Drive has been shown in its actual location as the site has received subdivision approval and detailed design of drainage has required the pump station being located slightly east.

The location of the eastern pump station has been moved south to the corner of Grandis Boulevard and Old Yanchep Road which reflects the detailed drainage design undertaken for the north east precinct.

### **9.2 Map 2: Zoning**

The Zoning Plan allocates the new middle local centre within the Commercial Zone with floorspace still controlled by Clause 6.8.2 which sets the 1200m<sup>2</sup> limits. The Mixed Use zoning will not be replicated as experience has demonstrated that there is no practical or useful purpose in the application of this zone in this context. Realistically all retail will be contained within the Commercial zone.

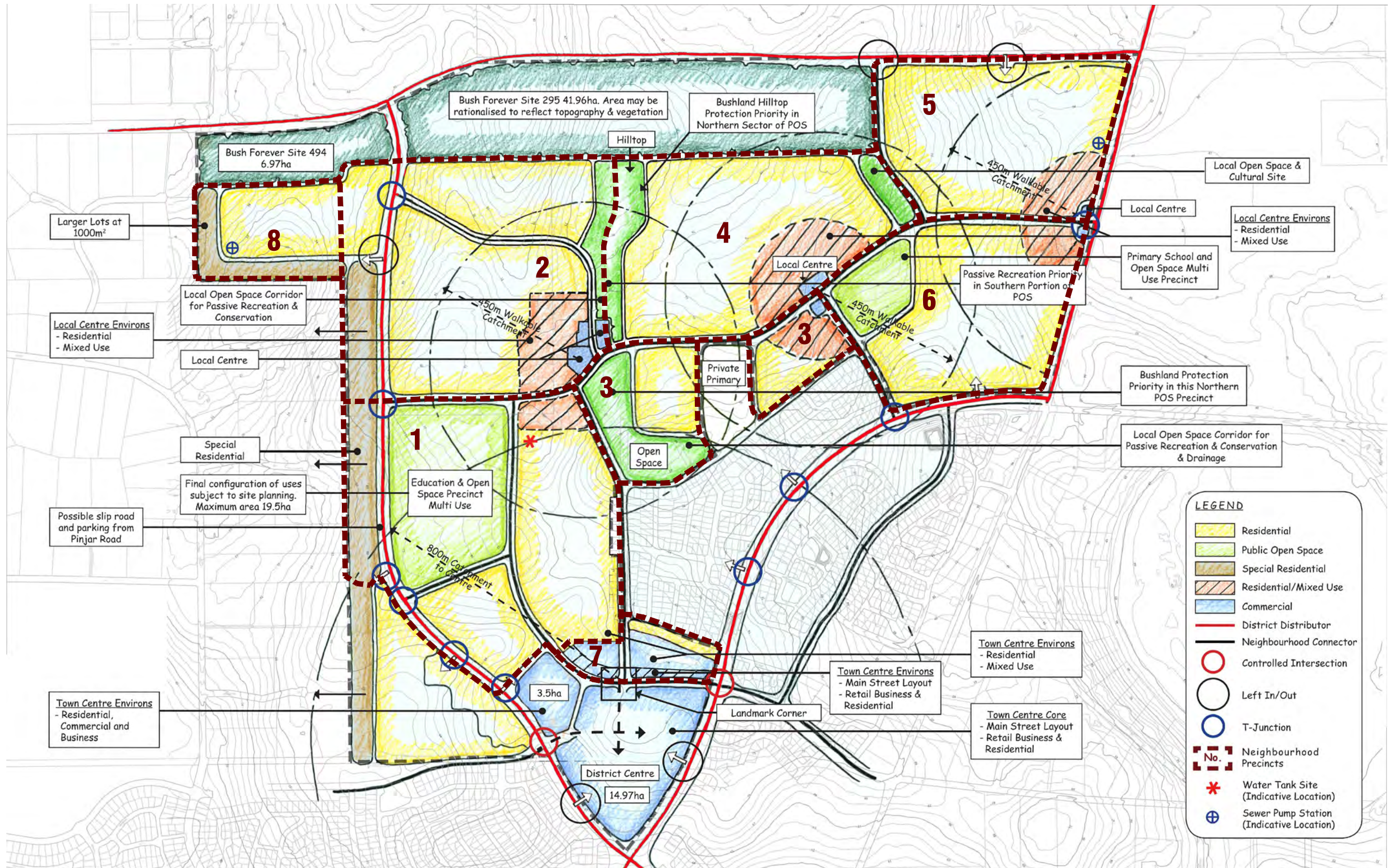
The Commercial zone west of Glasshouse Drive has been rezoned to Mixed Use zone consistent with the surrounding area.

### **9.3 Map 3: R Codes**

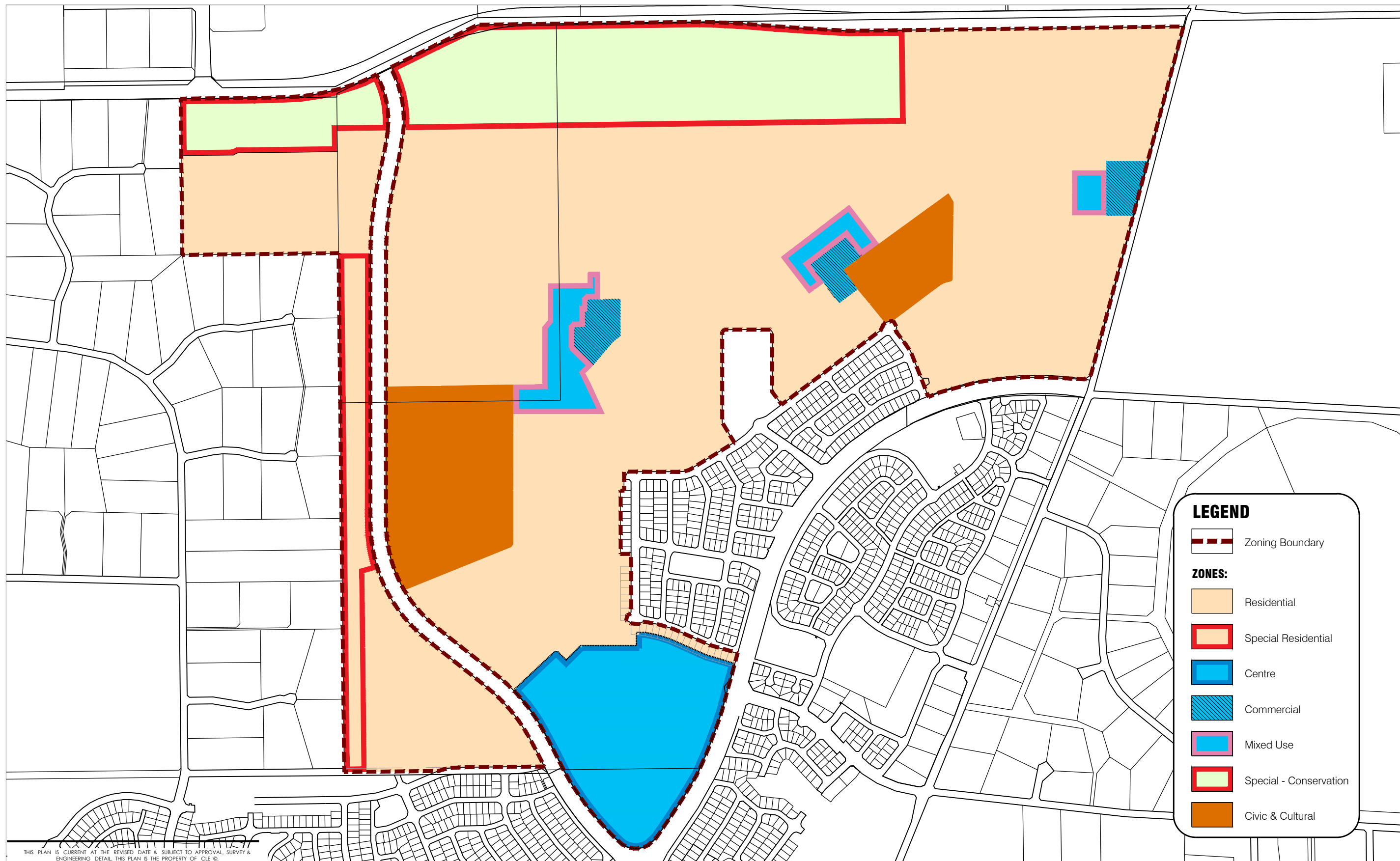
The Amendment proposes to simplify the coding by applying a blanket R30/60 split code and relies on the criteria under existing Clause 6.4, 6.7 and 7.0 to assign specific codings at the time of subdivision. This is the current situation and it provides for greater design flexibility and avoids the need for future Local Structure Plan amendments.

## AMENDMENT No.1 FIGURES









**LEGEND**

--- Zoning Boundary

**ZONES:**

Residential

Special Residential

Centre

Commercial

Mixed Use

Special - Conservation

Civic & Cultural

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# BANKSIA GROVE

## CITY OF WANNEROO

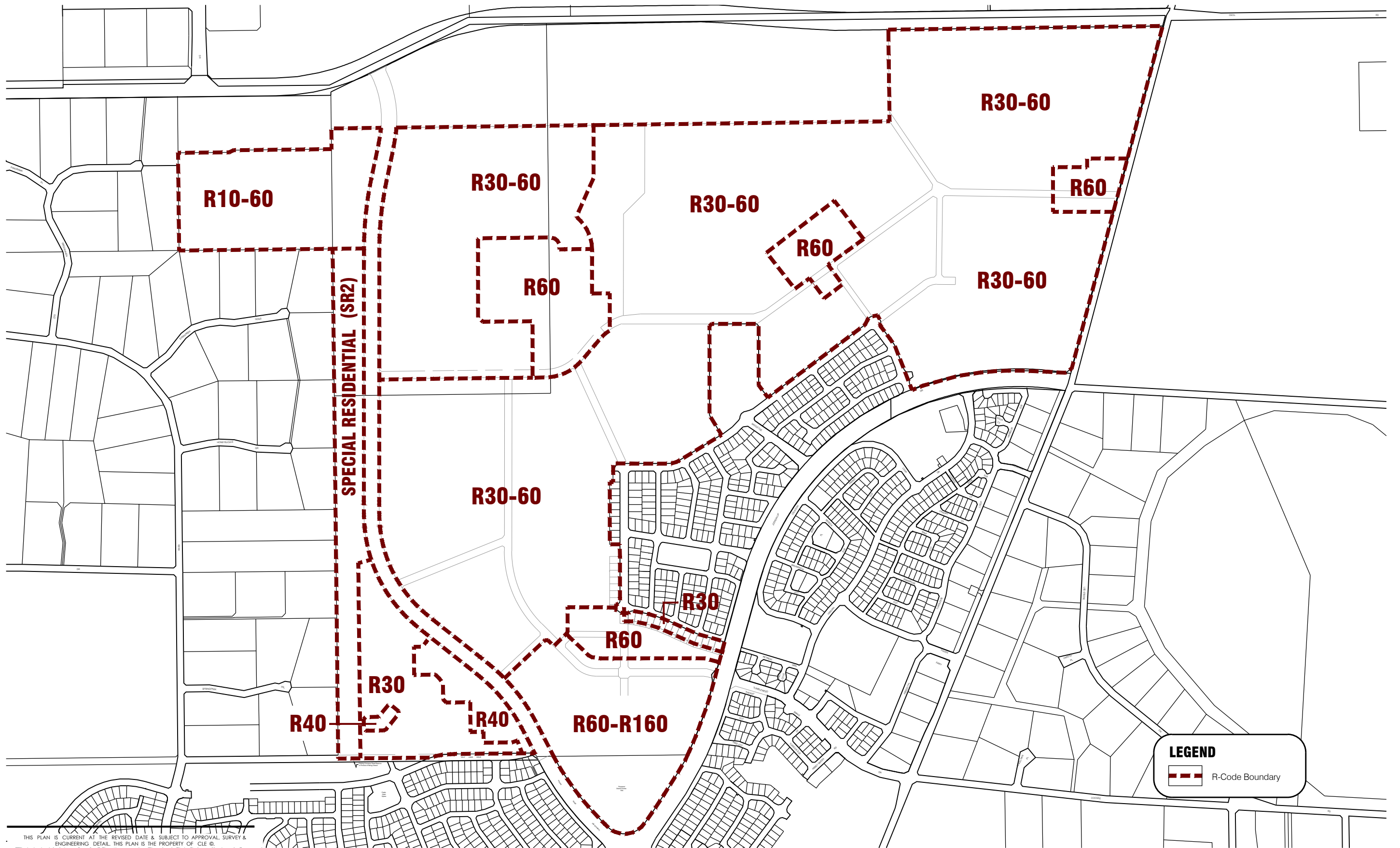
### AGREED LOCAL STRUCTURE PLAN No.21A

#### MAP 2: ZONING PLAN



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 phone : (08) 9382 1233 fax : (08) 9382 1127 email : admin@cleplan.com.au  
 10.03.08 981-117E-04





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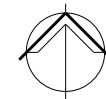


# BANKSIA GROVE

## CITY OF WANNEROO

### AGREED LOCAL STRUCTURE PLAN No.21A

#### MAP 3: R-CODE PLAN



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