



CITY OF COCKBURN  
**THE LAKES**  
**REVITALISATION**  
**STRATEGY**

**MAY 2016**

[www.cockburn.wa.gov.au](http://www.cockburn.wa.gov.au)

## Contents

---

**Introduction 3**

---

**Study area and scope 4**

---

**Background 6**

---

**Analysis findings 7**

---

**Summary of recommendations 10**

---

**Program 1 – Encourage and support appropriate development and diverse housing options 11**

---

**Program 2 – Promote sustainable transport options and easy ways to move in and around the Lakes area 26**

---

**Program 3 - Improve the Lakes Public Spaces 30**

---

## Introduction

---

The Lakes Revitalisation Strategy aims to guide the delivery of residential development across the suburbs of South Lake, Bibra Lake (East) and parts of North Lake.

A key objective is to promote diverse dwelling types and enable current and future residents to make appropriate housing choices into the future.

A key focus is to ensure the Lakes area is an attractive place to live and visit into the future.

A revitalisation strategy for the Lakes is required to:

- Provide opportunities for further housing growth, meeting the needs of existing and future households;
- Contribute towards State Government urban infill aspirations;
- Ensure adequate services and infrastructure including promoting pedestrian orientated streetscapes:
- Allow for a variety of housing types and designs to encourage flexibility and affordability, and;
- Preserve the natural environment and identify opportunities to enhance the character of the Lakes area.



**The information gathered through 4 community visioning forums has directly informed the recommendations of the Strategy.**

## Document structure

---

Part 1 of the Strategy provides a discussion as to why the Strategy was prepared, process undertaken, a summary of the analysis findings and key recommendations.

Part 2 details the recommendations and Implementation Program.

The Background Report, under separate cover, demonstrates the analysis work conducted, directly informing the Strategy outcomes detailed in Part 2. The Background Report details:

- The relevant planning framework and policies to be considered, and an explanation of the R-Codes;
- The Regional and local context analysis;
- A transport assessment;
- A streetscape and open space assessment;
- Urban infill and medium density development lessons learnt by the City and, Stakeholder consultation outcomes.

## Key Strategy Stages

---

### Stage 1 Preparation and research

February 2015

Background research and preparation including context analysis of local attributes and issues.

### Stage 2 - Community visioning

June - July 2015

The Lakes residents and property owners survey (almost 1100 received by the City).

Two community visioning sessions attended by 270 people. The Background report provides a summary of the process and outcomes and appendix 1 Background Report provides a full account of the 2 evenings.

### Stage 3 - Draft Strategy preparation

July - December 2015

Develop strategies based on outcomes of stages 1 and 2 and report to Council seeking support to advertise the Strategy.

### Current stage

### Stage 4 - Community consultation period

January – March 2016

60 day consultation period in which all residents and property owners are asked to provide comment on the Draft Strategy.

### Stage 5 - Final preparation and adoption of Strategy.

May – June 2016.

Review and assessment of submissions provided by the community and a final Strategy document prepared for Council adoption.

### Stage 6 - Implementation

Refer to implementation plan (page 46)

## Study area and scope of the Strategy

---

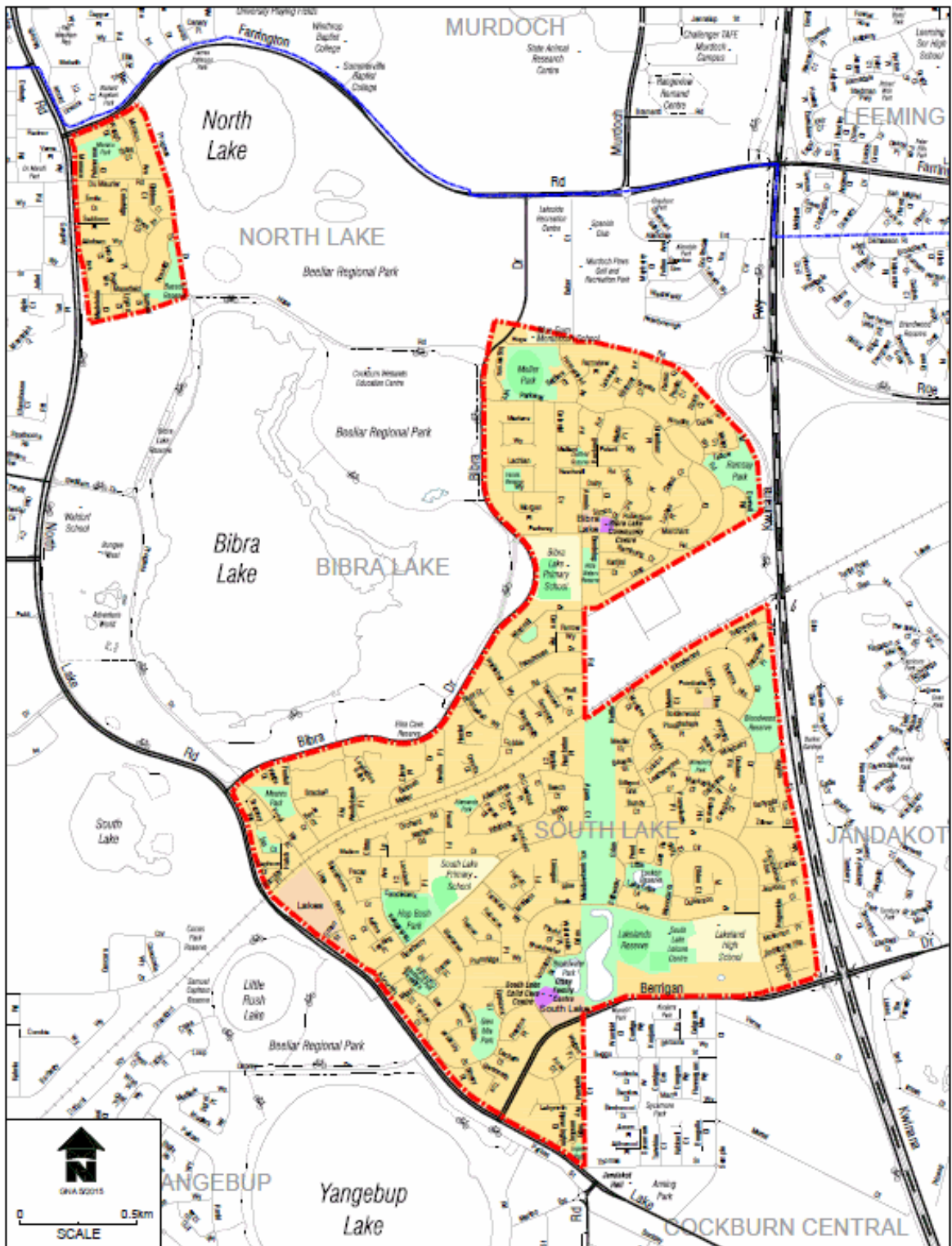
Figure (opposite page) illustrates the extent of the study area – South Lake, Bibra Lake East and parts of North Lake.

The Strategy reviewed the western portion of Bibra Lake and found that given the age of the residential areas on the eastern side of the Lake (as compared to the Western side), that a revitalisation focus should be provided to the east in the first instance.

While the Strategy does make recommendations for streetscapes in and around the 3 local commercial centres, the scope of the Strategy does not extend to recommendations regarding the centres themselves. This is a result of the centres being owned under separate, multiple strata owners and the City having limited ability to influence these privately owned developments.

Further, the Strategy does not provide extensive discussion regarding the proposed Roe Highway extension. Rather, any impacts on residents will require a response from State Government. It is noted however the City, consistent with local community views, continues to not support the Roe Highway extension and will continue to lobby against the delivery of this project with the State Government.

For additional information about the project, please contact South Metro Connect Website: [www.southmetroconnect.com.au](http://www.southmetroconnect.com.au)



Above: Study area

## Background

The Western Australian Planning Commission ('WAPC') in 2015 released the draft Perth and Peel@3.5million suite of strategic land use planning documents of which identify the need to accommodate 3.5 million people by 2050.

This latest metropolitan plan seeks to guide the future growth of Perth and Peel, building on the current *Directions 2031 and beyond: Metropolitan planning beyond the horizon* ("Directions 2031").

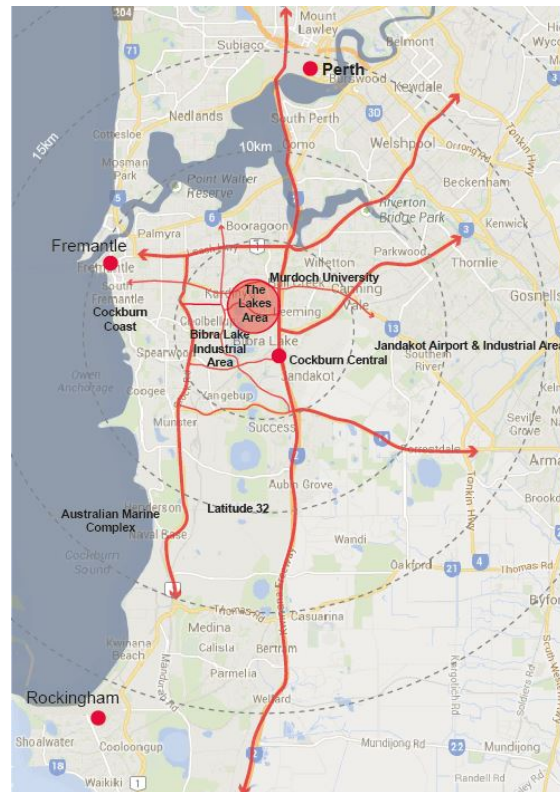
This forecast demonstrates the need to reduce the negative impacts of urban sprawl through accommodating further residential development through urban infill.

This includes identifying further growth opportunities in existing suburbs such as those in the Lakes area.

Contributing to this overarching objective, the City of Cockburn has been undertaking revitalisation strategies since 2009 to identify further housing opportunities while at the same time identifying plans to revitalise suburbs. The Lakes follows on from the following revitalisation strategies: Coolbellup (2014), Hamilton Hill (2012), and the Phoenix Revitalisation Strategy (2009).

The Lakes area is considered a well-connected location and is well situated to contribute to the delivery of these infill targets. It is also considered a unique suburb to provide further development opportunities and associated revitalisation work due to the following factors:

- The Lakes area is strategically placed within the heart of the rapidly expanding south west corridor;



- Is a well-connected inner ring suburb and in proximity to the new Fiona Stanley Hospital, Murdoch University Precincts and the emerging Cockburn Central Activity Centre;
- Good levels of infrastructure with direct access to the Kwinana Freeway;
- The physical age of built form within the suburb being such that decisions for redevelopment and/or renewal are expected to be made by landowners over the coming years, providing the opportunity to consider whether redevelopment to other forms of housing (grouped and multiple) should take place;
- A unique age demographic which sees the opportunity to explore more diverse responses in housing variety and form through the suburb.

## Analysis findings

---

### Population, housing and future development

- The age of residents in the Lakes is diverse. The suburbs of Bibra Lake and North Lake have the same median age of 39, which is significantly higher than South Lake and the City of Cockburn average. The suburb of South Lake has a median age of 33.
- The Lakes area has a relatively high number of residents above 65 years – a total of 18.64%. The Cockburn average is 10.3%. However it is important to recognise this high figure is contributed to by the residents in the aged car facility in Bibra Lake. Excluding this facility the number of over 65's in the study area is around 15.47%. Still higher than the Cockburn average.
- Residents in the Lakes area are highly car dependent. Public Transport use to work (5.6%), people who walk to work (1.13%) and people who drive to work (71.9%)
- The number of 1 and 2 person households is expected to rise from 46.5% (2011) to 53.8% (2026), to 54.4% (2036).
- More than 95% of dwellings are separate houses.
- There is a clear need to diversify the types of housing available into the future - providing an alternative to 3 and 4 bedroom homes. Particularly so that the ageing population has opportunities to continue to live in the area.
- Many homes – particularly in the South Lake area are in need of revitalisation.

- The 'appetite for change' varies between suburbs with North Lake and Bibra Lake having a desire for low to medium density changes (less so North Lake). South Lake however, has an appetite for medium to high change with zoning changes to allow for a greater diversity in housing options.
- Strong support for a greater variety of housing including town-houses, villas, apartments, grouped dwellings. Most support for battle-axe type dwellings. There was a high regard for ensuring a maximum of 2-3 storey developments throughout the suburbs.
- Density increases were supported within targeted areas such as along public transport routes, nearby local centres, parks and schools.
- South Lake residents generally supported a density increase in targeted areas and throughout the entire suburb.

### Character of the Lakes

- Residents appreciate and value the proximity to the chain of Lakes, wetlands and the overwhelming sense of the natural environment. As a result retention of trees, greenery and the flora and fauna it attracts and supports is important into the future.
- The suburbs are valued for their location and accessibility.
- A strong sense of community exists amongst residents with a number of residents reporting a feeling of safety and security.
- The walkable nature of the suburb layout and large blocks are also appreciated.
- An opportunity exists to build on

the natural areas of Bibra Lake by improving the connection between residential areas and the Lake. This includes improving the amenity and presentation of the eastern edge of Bibra Lake.

- Public Open Space areas are highly valued and appreciated by residents in all suburbs.
- Any opportunity to apply for future under-grounding of power lines should be completed as soon as possible.
- Planting of additional native and fruit trees within the suburbs is desired by residents.
- South Lake residents demonstrated support for high quality entrance statements into to suburb in the form of Public Art, Signage and/or landscaping.
- Residents in all suburbs showed support for local shopping centres to receive upgrades.



**The natural environment of Bibra Lake is highly valued by residents and contributes to a strong character for the surrounding residential areas.**

## Transport and accessibility

- There is strong support from the community against the Roe Highway extension.
- Despite bus services connecting through to outer areas including Cockburn Central and Murdoch, residents report a need to improve the frequency of services.
- Considered of value into the future, residents see a desire to improve traffic flows, ease congestion, reduce through traffic.
- An opportunity exists to improve signage and awareness of services.
- Further enhancement of streets, including further street tree planting could assist in promoting further walking and cycling.
- It is understood a number of residents access community services in Coolbellup and as a result public transport to Coolbellup should remain a priority.
- While on average 50% of residents use public transport there remain opportunities to promote a greater use of bus facilities.
- Overall, Traffic management and parking is considered safe and efficient within the Lakes area. Bibra Lake respondents 'agree' with this statement the most at 76%, followed by North Lake respondents at 75% and South Lake respondents 67%.



## Services

- As Cockburn central continues to evolve, the level of services available to residents will improve.
- There is a desire for a cafe and a community gathering area on the eastern side of Bibra Lake. This recognises the considerable number of facilities on the western side.
- An enclosed dog park is desired by residents.

## Parks and the natural environment

- Parks and open space are popular within the Lakes area. Between 83% and 89% of respondents of the survey 'agree' that the Parks meet the needs of themselves and their families.
- Residents in Bibra Lake and South Lake see a desire to improve: shelters, BBQs and play equipment.
- 40% of Bibra Lake respondents, 42% of North Lake and 40% of South Lake respondents would be interested in taking part in a tree planting program.
- Bushland and the natural environment should be protected and promoted as much as possible.
- A desire to upgrade the skate facility
- The lakes/wetlands/natural environment; the greenery/trees/flora/fauna are all very important to residents.
- There is a desire for more street trees need to be introduced – preferably native species.



## Part 2 - Recommendations

---

### **Program 1 – Encourage and support appropriate development and diverse housing options.**

- Action 1.1 Residential Density and Zoning Changes.
- Action 1.2 Undertake a drainage review for Bibra Lake and continue to monitor South Lake.
- Action 1.3 Prepare acoustic guidelines for the Lakes suburbs.

### **Program 2 – Promote sustainable transport options and easy ways to move in and around the Lakes area.**

- Action 2.1 Deliver the Recreation Loop – connecting the Lakes area with the emerging Baldivis tramway track and Cockburn Central.
- Action 2.2 Secure a commitment (for example an MOU) from the State Government for an increase in public transport services if increased residential infill is secured as part of the Strategy.
- Action 2.3 Undertake initiatives to promote cycling and walking in and around the Lakes area.
- Action 2.4 Undertake road improvements to improve safety and ease congestion.
- Action 2.5 Undertake an update of the transport assessment every 3-5 years as required.

### **Program 3 - Improve the Lakes Public Spaces and streets.**

- Action 3.1 Continue to revitalise key streets in the Lakes area by continuing street tree planting already commenced throughout the Lakes streets. Also, investigate and recommend street tree species that provide feed opportunities for local birds.
- Action 3.2 Continue upgrades to residential parks and improve the maintenance of the eastern side of Bibra Lake Reserve.
- Action 3.3 Create a multi-functional gathering space on the eastern side of Beeliar Wetland (skate area), encompassing: Facilities for food vans, skating, dog walking, picnic tables, shade areas.
- Action 3.4 Undertake public realm upgrades around the 3 local centres.
- Action 3.5 Facilitate the provision of underground power by applying for the next round of funding through the State Underground Power Program.

## Program 1 – Encourage and support appropriate development and diverse housing options.

### Action 1.1 Residential Density and Zoning Changes.

The residential density and zoning plans are shown on the following pages propose a change to most residential land within the Study Area. The exception being the local centres, the aged care facility and a few residential areas that were recently developed and already provide an increased density beyond R20. These areas remain unchanged.

The Residential Density and Zone Plan is based on the following principles:

- The base density code of R30 will maintain the existing local character of Bibra Lake East and North Lake while allowing flexibility for increased development opportunities for land owners.
- For South Lake an R40 base code has been applied due to the vital need for revitalisation in this area. This decision is supported by feedback obtained within the forums and the surveys - that being South Lake has a higher appetite for change.
- Provision of increased densities to ensure appropriately scaled streetscapes that provide a transition between changing densities.
- Higher density development is focused around:
  - The commercial and retail centres;
  - High frequency transport routes, and;
  - Areas of POS capable of supporting increased densities.

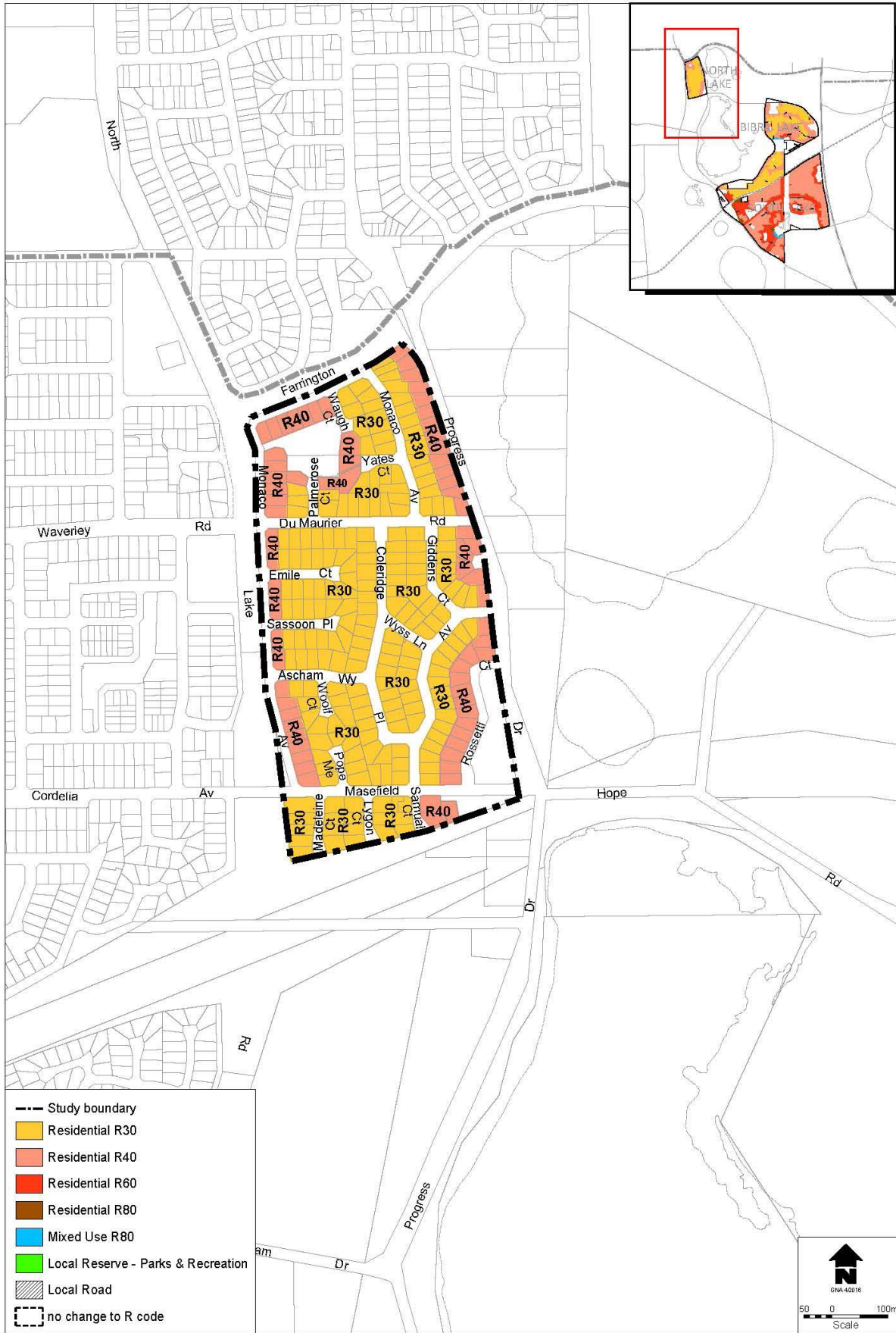
For reference, next to each proposed map (see page 12 onwards) is the existing residential density codings in the Study Area.

#### Explanation of residential density

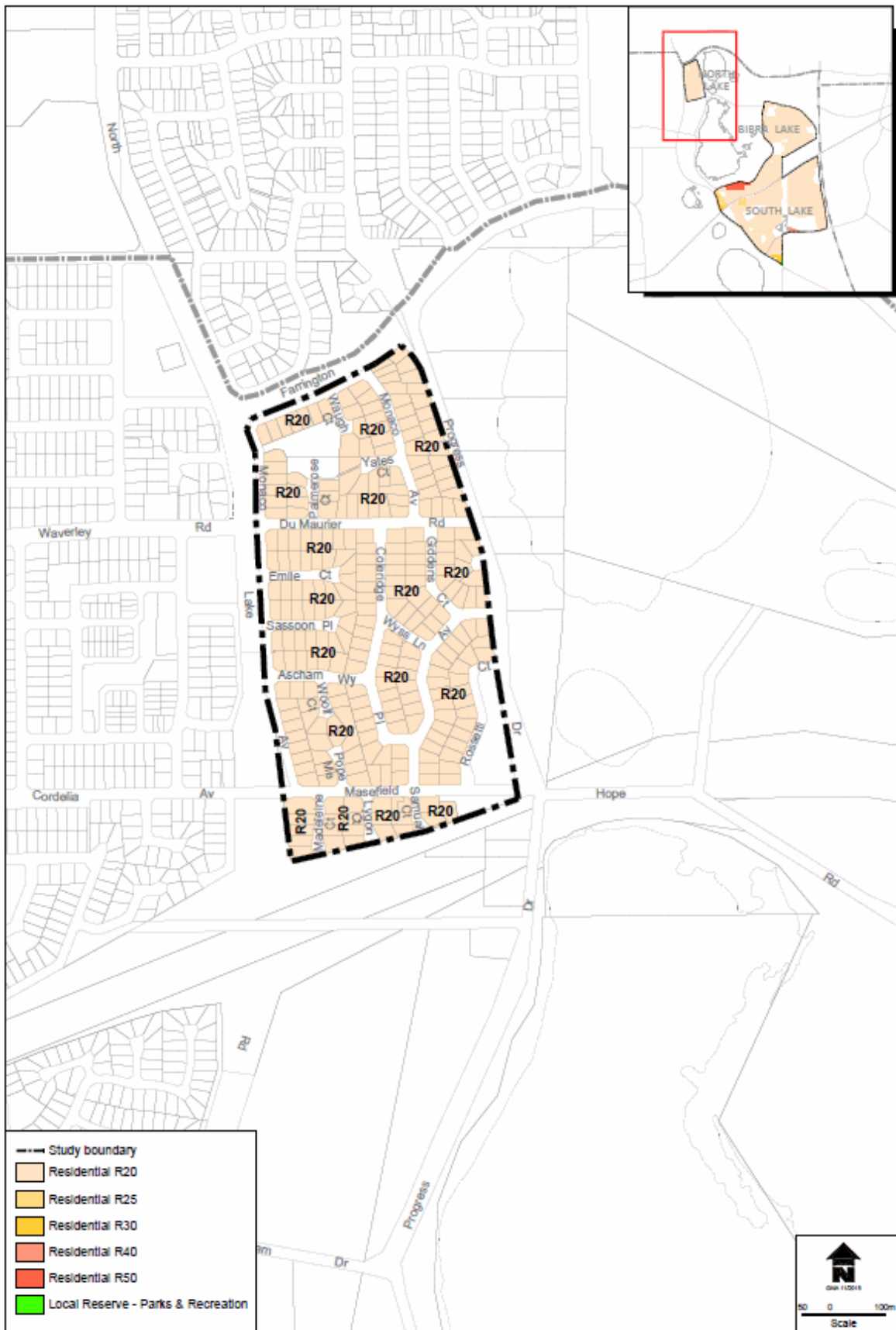
Residential density is the term used to describe the intensity or number of residential units allowed to be developed in a specified land area. The Residential Design Codes of Western Australia (“the R-Codes”) provides the basis for the control of residential density throughout Western Australia. The R-Codes specifies minimum and average lot areas, or plot ratios for each density code (ie R20, R30, R40 etc). Local planning schemes then apply a density coding to residential zoned land which is used to control the subdivision and development of land.

To assist the community understand the impact of the Residential Density and Zone Plan page 23 provides an explanation of development potential under a range of R-Code densities. The table on page 23 provides indicative lot yields under the varying densities. Multiple dwellings yield more lots than single or grouped dwellings on land coded R30 and above as multiple dwellings are controlled via plot ratio, maximum building height and minimum open space rather than minimum and average site area. The potential dwelling yield for multiple dwellings showing on page 23 have been calculated using an assumed average dwelling area of 65m<sup>2</sup>. However, dwellings can be as small as 40m<sup>2</sup>.

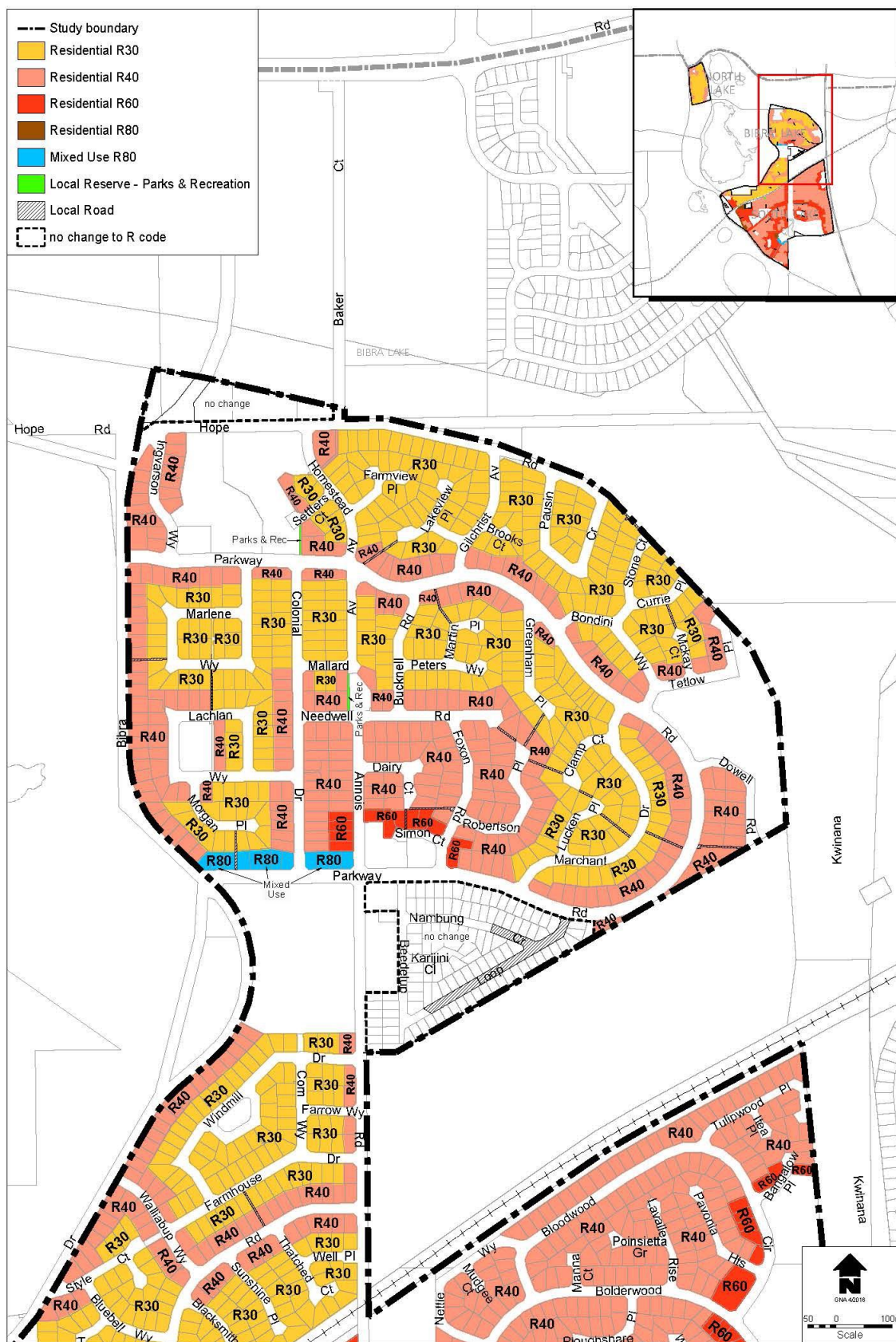
These lot yields are based on a hypothetical development scenario. Ultimate development yields will be influenced by many other factors such as the existing lots configuration, frontage, existing development etc.



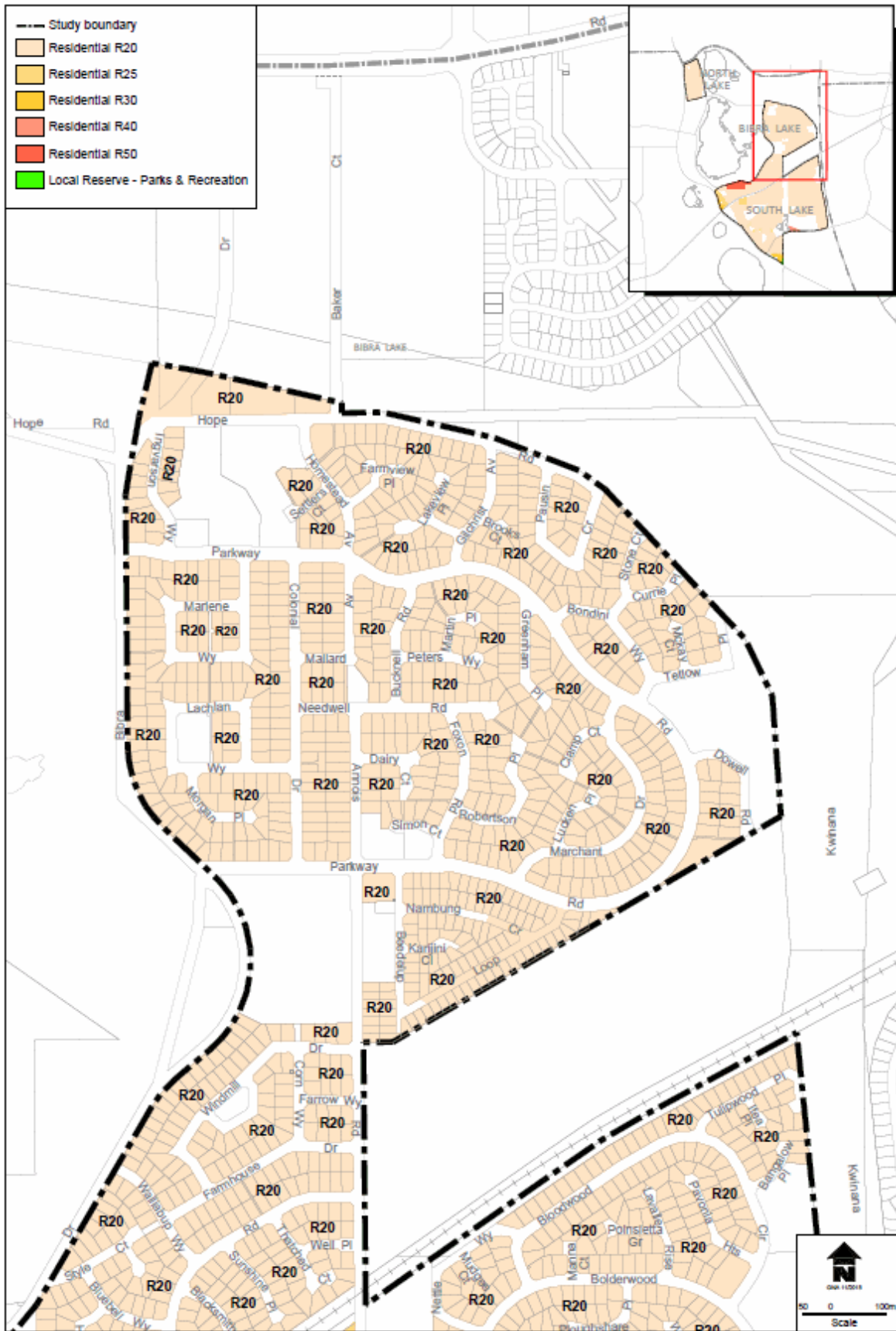
## North Lake Proposed Residential Density and Zone Plan



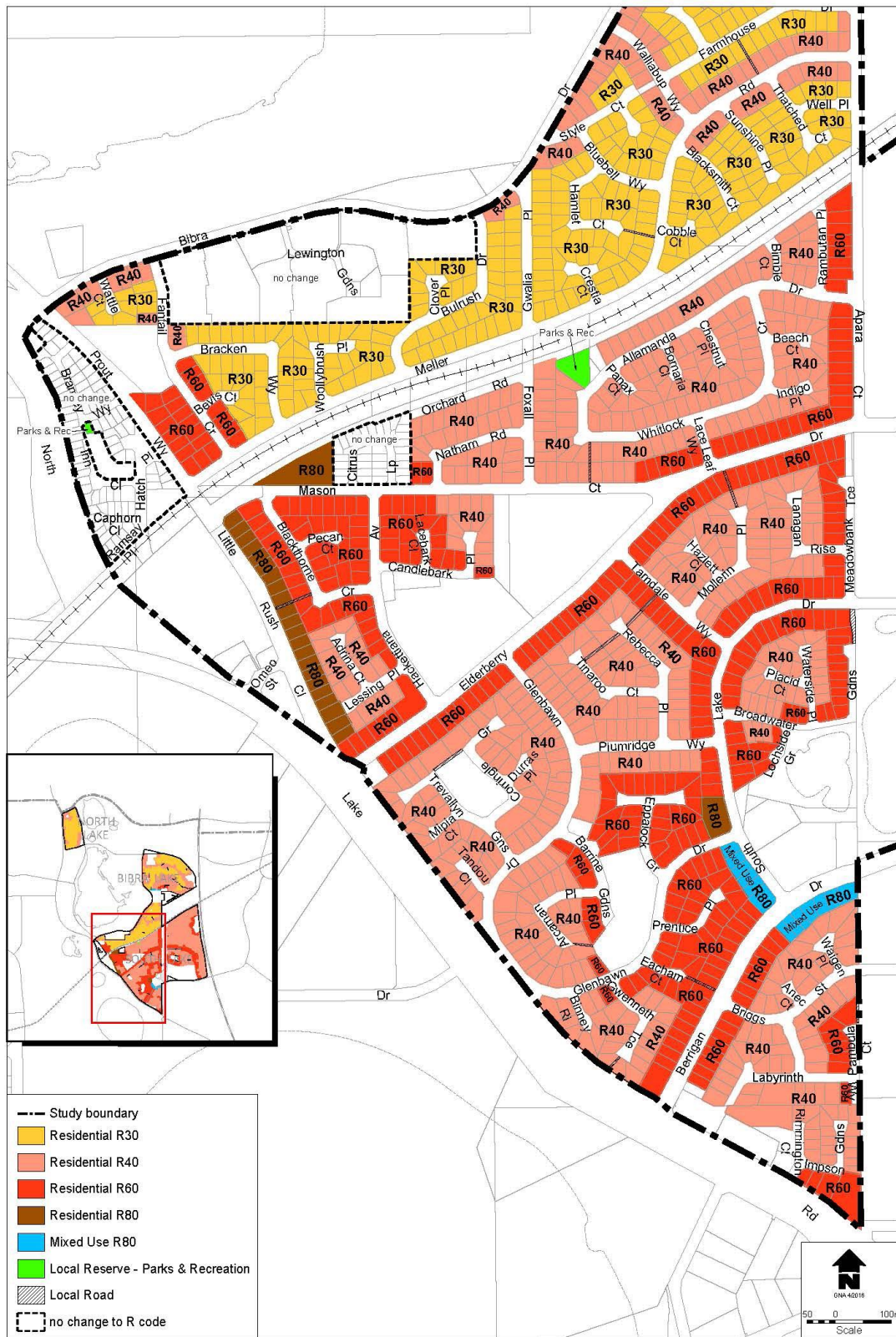
### North Lake Existing Residential Density and Zone Plan



Bibra Lake (North) Proposed Residential Density and Zone Plan

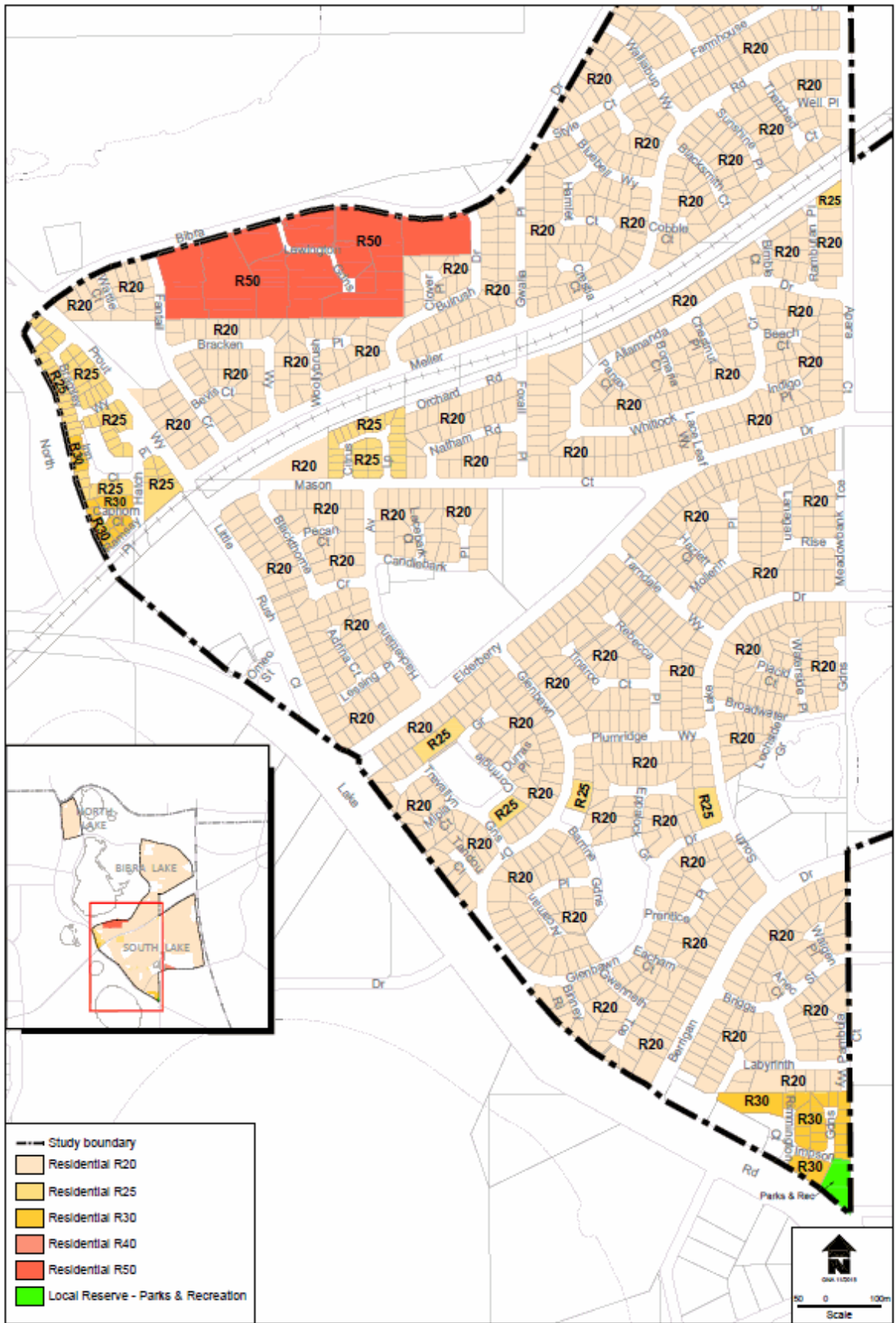


Bibra Lake (North) Existing Residential Density and Zone Plan



## Bibra Lake (North - East) & South Lake (North) Proposed Residential Density and Zone Plan

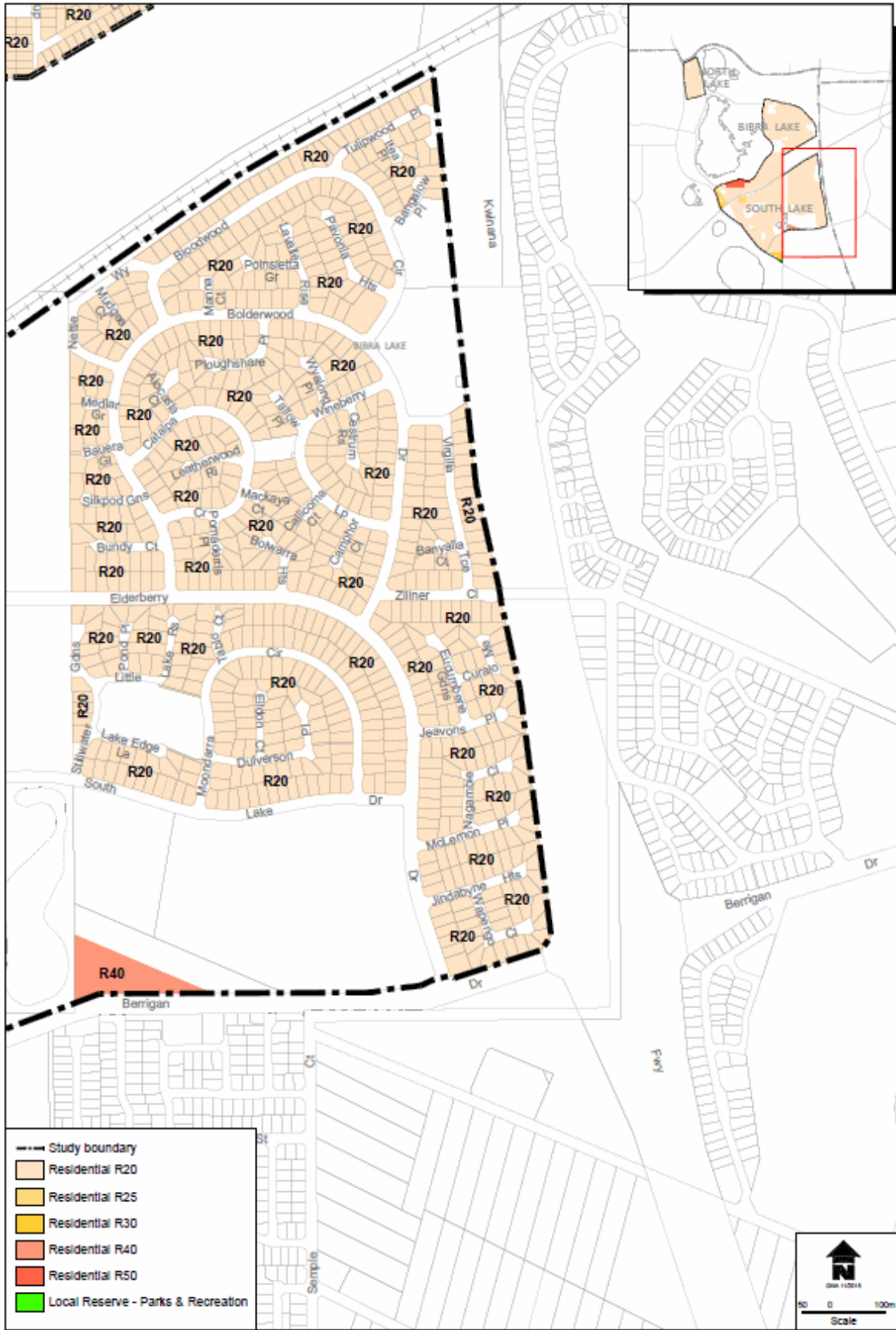




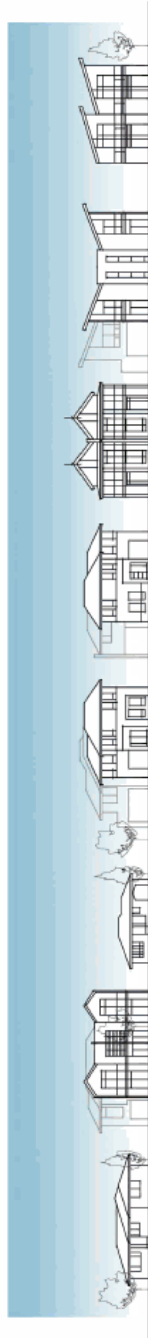
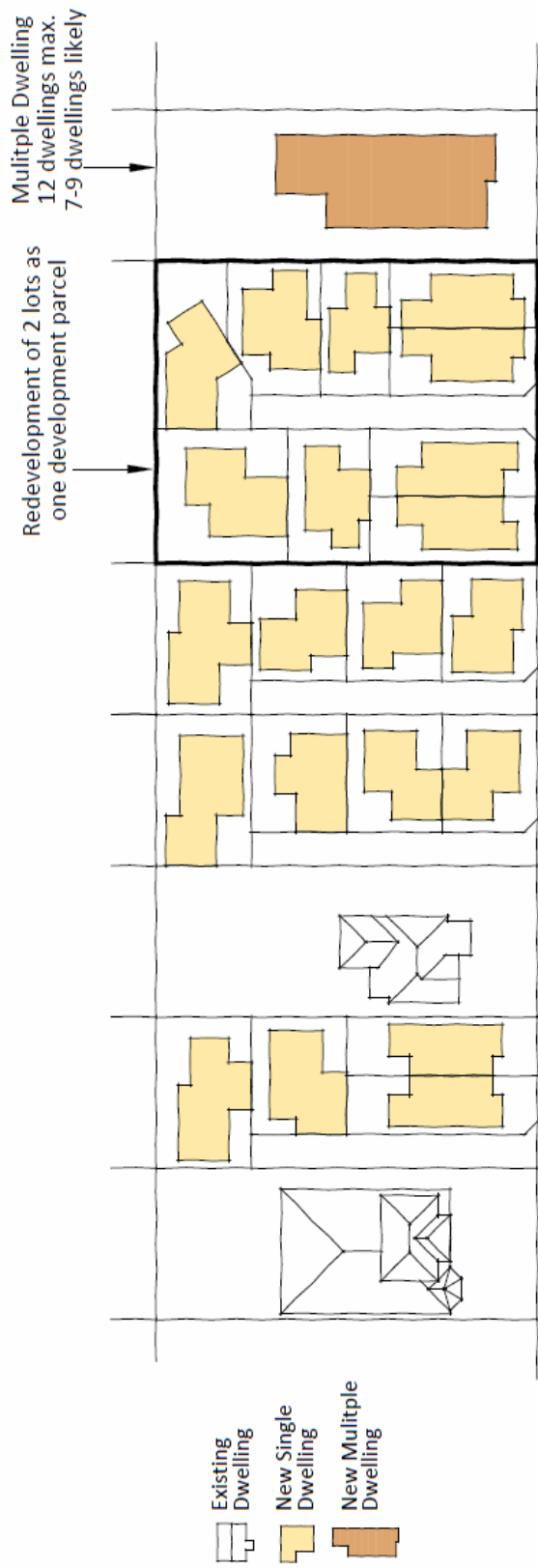
Bibra Lake (North - East) & South Lake (North) Existing Residential Density and Zone Plan



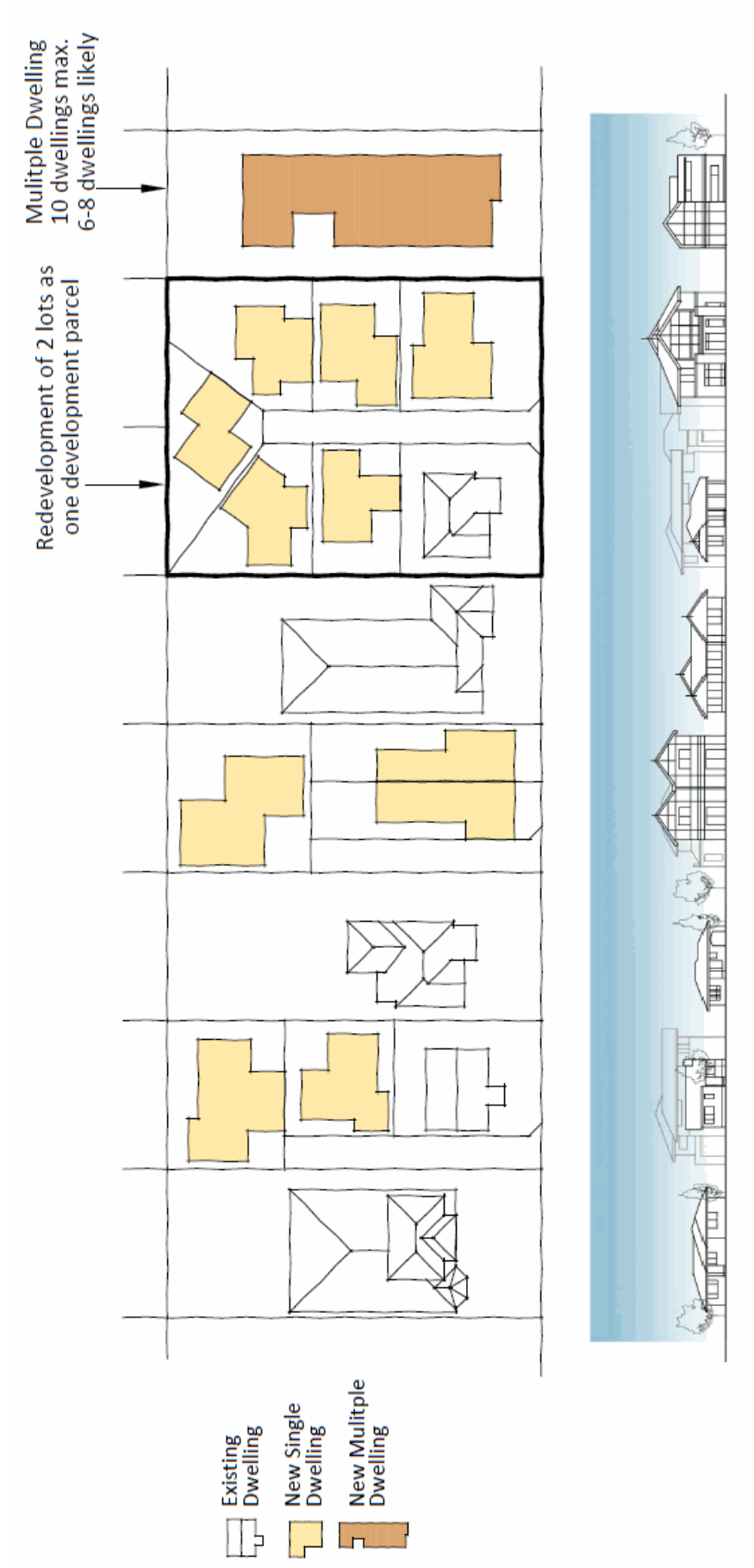
South Lake (South) Proposed Residential Density and Zone Plan



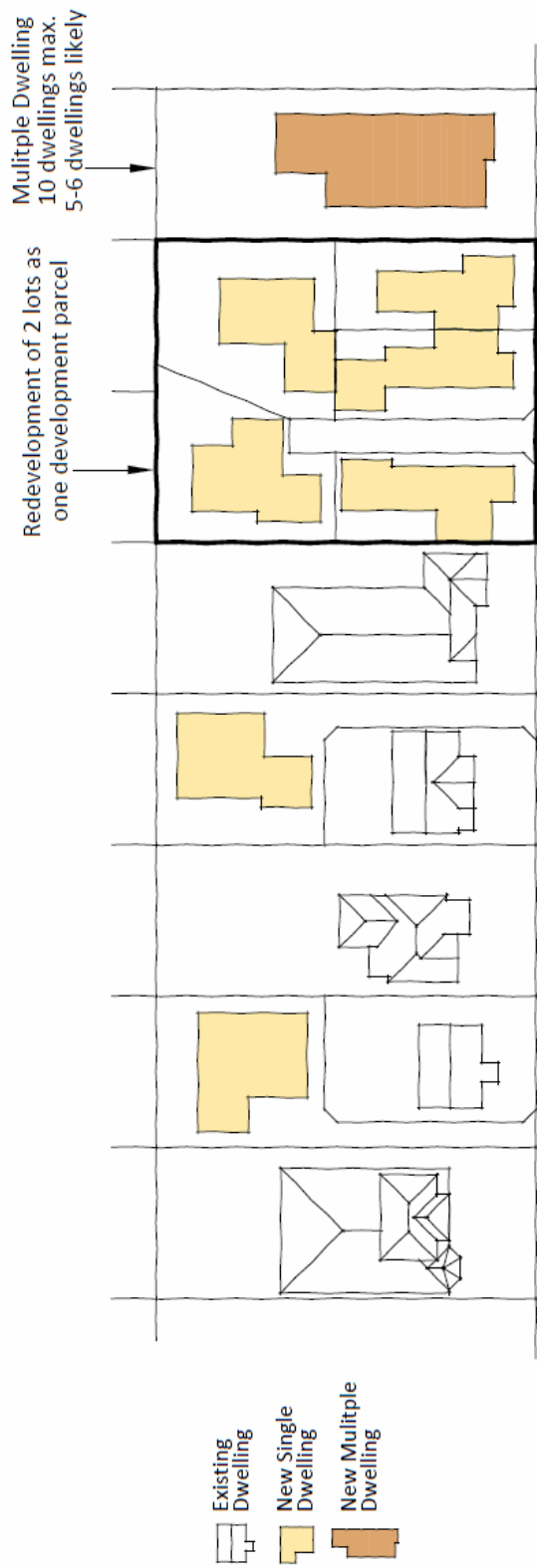
### South Lake (South) Existing Residential Density and Zone Plan



Hypothetical Development Illustration at R30



Hypothetical Development Illustration at R40



Hypothetical Development Illustration at R60

## Explanatory guide to the R-Codes for R20 to R80

An R Code of R20 means that an average of 450 m<sup>2</sup> is required per dwelling.

Existing Lot Size		450-899 m <sup>2</sup>	900-1,349 m <sup>2</sup>	1,350-1,799 m <sup>2</sup>	1,800-2,249 m <sup>2</sup>	2,250 m <sup>2</sup> plus
Potential No. of dwellings <sup>1</sup>	Single and Grouped Dwellings	1	2	3	4	5 or more
	Multiple Dwellings	1	2	3	4	5 or more

## R20

An R Code of R30 means that an average of 300 m<sup>2</sup> is required per dwelling.

Existing Lot Size		300-599 m <sup>2</sup>	600-899 m <sup>2</sup>	900-1,199 m <sup>2</sup>	1200-1499 m <sup>2</sup>	1,500 m <sup>2</sup> plus
Potential No. of dwellings <sup>*</sup>	Single and Grouped Dwellings	1	2	3	4	5 or more
	Multiple Dwellings	1	2	3	4	5 or more

## R30

### Notes:

- The ultimate lot yield will be affected by other factors. Some of these are listed below
  - whether an existing house is retained or not,
  - whether the proposed development is for a "battle-axe" subdivision,
  - the ability to vary the minimum site area requirements under Clause 5.1.1 Site Area of the R-Codes.
- Potential No. of Multiple Dwellings (above R40) have been calculated using an assumed average dwelling area of 65m<sup>2</sup>. However, dwellings can be as small 40m<sup>2</sup>.

An R Code of R40 means that an average of 220 m<sup>2</sup> is required per dwelling.

Existing Lot Size		220-439 m <sup>2</sup>	440-659 m <sup>2</sup>	660-879 m <sup>2</sup>	880-1099 m <sup>2</sup>	1,100 m <sup>2</sup> plus
Potential No. of dwellings <sup>*</sup>	Single and Grouped Dwellings	1	2	3	4	5 or more
	Multiple Dwellings <sup>2</sup>	2-4	4-6	6-8	8-10	10 or more

## R40

An R Code of R60 means that an average of 150 m<sup>2</sup> is required per dwelling

Existing Lot Size		150-299 m <sup>2</sup>	300-599 m <sup>2</sup>	600-749 m <sup>2</sup>	750-899 m <sup>2</sup>	900 -1,049 m <sup>2</sup>	1,050- 1,199 m <sup>2</sup>
Potential No. of dwellings <sup>*</sup>	Single and Grouped Dwellings	2	3	3-4	4-5	6-7	7-8
	Multiple Dwellings <sup>2</sup>	1-2	3-5	5-7	7-9	9-13	14-21

## R60

An R Code of R80 means that an average of 120 m<sup>2</sup> is required per dwelling

Existing Lot Size		180-359 m <sup>2</sup>	360-539 m <sup>2</sup>	540-719 m <sup>2</sup>	720-899 m <sup>2</sup>	900 -1,299 m <sup>2</sup>	1,300- 1,999 m <sup>2</sup>
Potential No. of dwellings <sup>*</sup>	Single and Grouped Dwellings	1-2	2-3	3-4	4-6	7-9	10-15
	Multiple Dwellings <sup>2</sup>	2-5	5-8	8-11	11-13	13-19	19-30

## R80

## North Lake

### Base Code – R30

The lowest proposed density under the Residential Density and Zoning Plan is R30 and this is the base code selected for North Lake. Based on the average lot sizes in these areas most lots would be able to be redeveloped into two single, grouped or multiple dwellings.

Refer to the table on page 23 for estimated lot yields within an R30 zone.

See page 20 for a hypothetical illustration of new residential development at R30 on a standard Lakes area lower scale street.

### R40 adjacent to POS and in proximity to North Lake Road

Given the relatively low appetite for change in North Lake, the only further zone change is for land adjacent to POS and in proximity to North Lake Road, of which is proposed to be rezoned to a density of R40. A range of lot sizes exist in this area (mostly between 700 – 850m<sup>2</sup>). This would allow most single residential lots to be redeveloped into three single or grouped dwellings. Lots in this size range could be redeveloped into 6-8 multiple dwellings. This would allow for some diversity in the suburb while still recognising the desire to retain the current suburban character of North Lake.

Refer to the table on page 30 for estimated lot yields for larger lot sizes under the R40 zoning. See page 21 for a hypothetical illustration of new residential development at R40 on a standard street.

## Bibra Lake

### Base Code – R30

The lowest proposed density under the Residential Density and Zoning Plan is R30 and this is the base code selected



Lots fronting POS, including Bibra Lake are recommended for an R40 coding.

for Bibra Lake. Based on the average lot sizes in these areas most lots would be able to be redeveloped into two single, grouped or multiple dwellings.

Refer to the table on page 23 for estimated lot yields within an R30 zone.

See page 20 for a hypothetical illustration of new residential development at R30 on a standard Lakes area lower scale street.

### R40 adjacent to POS and in proximity to Parkway Drive, Bibra Drive and within the 800m walkable catchment of the Bibra Lake Local Centre

Land adjacent to POS, in proximity to Parkway Drive, Bibra Drive and within the



800m walkable catchment of the Bibra Lake Local Centre is proposed to be rezoned to a density of R40. This would allow most single residential lots (lots which predominantly range from 700m<sup>2</sup> to 800m<sup>2</sup>) to be redeveloped into three single or grouped dwellings. Lots in this size range could be redeveloped into 6-9 multiple dwellings. Refer to the table on page 23 for estimated lot yields for larger lots sizes under the R40 zoning.

It is envisaged that higher densities will assist in creating a more defined street edge particularly along Parkway Drive.

See page 21 for a hypothetical illustration of new residential development at R40 on a standard street.

### **R60 adjacent to the Bibra Lake Local Centre**

Land fronting the Bibra Lake Local Centre is proposed to be rezoned to a density of R60. The intent of this zone is to create a greater intensity of development and activity around the local centre.

It is also considered the walkable catchment of the shops is appropriate for the provision of increased densities given proximity to services. Further, the Centre provides direct access to high frequency buses.

This would allow most single residential lots (lots which are between 700m<sup>2</sup> to 800m<sup>2</sup>) to be redeveloped with, in some cases, up to five single or grouped dwellings. Lots in this size range could be redeveloped with up to eight multiple dwellings depending on lot size.

Refer to the table on page 23 for estimated lot yields for larger lot sizes under the R60 zoning.

See page 22 for a hypothetical illustration of new residential development at R60 on a standard street.

### **Mixed use fronting Parkway Drive**

Lots between the Bibra Lake Local Centre and Parkway Drive are proposed to be mixed-use. The Mixed-use zone proposed over these lots is informed by the following considerations:

- Immediate proximity to the Bibra Lake Local Centre;
- The Mixed-Use zone allows for residential uses to transition over time if required to alternative uses, supporting the growth of the Local Centre into the future;

### **South Lake**

#### **Base Code – R40**

A base code of R40 is selected for South Lake. This is higher than the base code of Bibra and North Lake, recognising the more urgent need for revitalisation of building stock in this area and as a result of the greater appetite for change expressed by South Lake residents.

Based on the average lot sizes in these areas, most lots would be able to be redeveloped into three single, grouped or multiple dwellings.

Refer to the table on page 23 for estimated lot yields within an R40 zone.

See page 21 for a hypothetical illustration of new residential development at R40 on a standard lower scale street.

### **R60 adjacent to POS and in proximity to Elderberry Drive, Berrigan Drive and within the 800m walkable catchment of the Lakes Neighbourhood Centre**

Land adjacent to POS, in proximity to Elderberry Drive, Berrigan Drive and within the 800m walkable catchment of the Lakes Neighbourhood Centre is proposed to be rezoned to a density of R60. This would allow most single residential lots (lots which predominantly range from 700m<sup>2</sup> to 800m<sup>2</sup>) to be redeveloped into three to five single or grouped dwellings. Lots in this size range could be redeveloped into 6-8 multiple dwellings. Refer to the table on page 23 for estimated lot yields for larger lot sizes under the R60 zoning.

See page 22 for a hypothetical illustration of new residential development at R60 on a standard street.

### **R80 fronting the Lakes Neighbourhood Centre (Little Rush Close)**

Lots fronting Little Rush Close and the Lakes Neighbourhood Centre are proposed to be rezoned to a density of R80. The R80 zone proposed over these lots is informed by the following considerations:

- Immediate proximity to the Lakes Neighbourhood Centre;
- An R80 coding is consistent with densities proposed on the neighbourhood centre site;
- Little Rush Close is a very wide street that has the capacity to accommodate increased densities of this scale.

### **Mixed use fronting Berrigan Drive Local Centre**

Lots fronting Berrigan Drive Local Centre are proposed to be mixed-use with a residential coding of R80. The mixed-use zone proposed over these lots is informed by the following considerations:

- Immediate proximity to the Berrigan Drive Local Centre;
- The mixed-Use zone allows for residential uses to transition over time to alternative uses if required. As a result, supporting the growth of the Local Centre into the future;

### **Action 1.2 Undertake a drainage review for Bibra Lake and continue to monitor South Lake.**

The proposed increased densities will have a direct impact on future drainage requirements. While landowners and developers are required to accommodate drainage requirements from developments on site, there is still nonetheless a requirement to continually monitor and upgrade the drainage system within public spaces and roads.

A drainage study was undertaken throughout most Cockburn suburbs in 2009. This included South Lake and North Lake. The current drainage provision in these suburbs is appropriate and therefore monitoring of the infrastructure as development intensifies is required.

Bibra Lake however was not part of the study and there are areas within the suburb that are not connected to a drainage network.

As a result, engineering will be conducting a drainage review of infrastructure in Bibra Lake in 2016. At this time, during

the scheme amendment process, the proposed zones will be considered.

Recommendations will be made to ensure appropriate levels of drainage for an expanding suburb.

### **Action 1.3 Prepare acoustic guidelines for the Lakes suburbs.**

North Lake Road, Farrington Road, Kwinana Freeway and the freight railway line are considered to be 'major transport corridors' within the Lakes Revitalisation Strategy area. As a result, it is important to understand the potential impact of noise and vibration on nearby properties when making decisions regarding increased densities.

The Western Australian Planning Commission's State Planning Policy 5.4 'Road and Rail Transport Noise and Freight Considerations in Land Use Planning ('SPP 5.4') seeks to minimise the adverse impact of transport noise, without placing unreasonable restrictions on noise-sensitive residential development, or adding unduly to the cost of transport infrastructure.

For new residential noise-sensitive developments (such as residential development), SPP 5.4 specifies noise assessments should generally be conducted as early as is practicable in the planning process. On this basis the City engaged the services of an Acoustic Consultancy to assess the Lakes study area to help formulate vehicle noise and vibration analysis. This analysis has, alongside other information, informed the proposed density plans identified within the draft Strategy.

While the analysis and resulting report provides useful guidance for landowners

to develop in proximity to these high traffic environments into the future (including where noise sensitive areas of the house should be located such as bedrooms) it does not remove the need for land owners to undertake an acoustic report in certain locations.

To assist landowners the City's Noise Attenuation Local Planning Policy and associated guidelines provides guidance to applicants as to when an acoustic consultant should be engaged and provide information on the type of assistance an acoustic consultant might provide.

The acoustic report and resulting guidelines, together with the Noise Attenuation Policy will assist landowners near noise sensitive locations wishing to development their land in the future.

While the full Lakes Acoustic Report is still being finalised, it will (prior to land being rezoned), be made available to assist landowners in making informed development decisions for the future.

This information is not intended and in no way precludes residential development. The findings are purely for community and landowner consideration at the onset of any new development consideration.

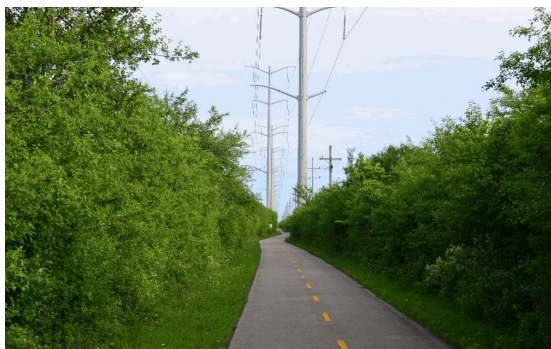
## Program 2 – Promote sustainable transport options and easy ways to move in and around the Lakes area.

### Action 2.1 Deliver the Recreation Loop – connecting the Lakes area with the emerging Baldivis tramway track and Cockburn Central.

Connecting the Lakes suburbs with the natural asset of Bibra Lake, public spaces and public transport are vital in promoting a sense of place for residents and encouraging people to walk, cycle and catch public transport.

In particular a greater connection to the emerging activity centre of Cockburn Central will provide greater access to essential services including medical services, the emerging Regional Recreation Facility, the Success Library, Gateways Shopping Centre and Cockburn Central Train Station.

The Beelihar Wetlands are the most important inland natural asset in the sub-regional catchment, providing a range of recreational facilities of which mostly occur on the western side of the Lake.



Right: Proposed recreation track for Cockburn Central area (shown in green), linking with the emerging regionally significant Tramways Trail Concept Plan and Cockburn Central.

Above: An example of turning a constraint into an asset.

An opportunity exists to better connect with this asset and promote usage on the eastern side of the lake.

Aligning with this objective is the power line easement cutting through residential land in a North - South direction through the middle of the Lakes area, down through and past Cockburn Central to the South.

The easement stretches for approximately 7km from Russell Road in the south and up to the southern boundary of the suburb of Bibra Lake. At which point the alignment continues North, through the partly upgraded easement (adjacent to North Lake Senior High). The easement terminates at the railway line and it is at this point cyclists and pedestrians are required to travel along Annois Road and onto the Bibra Lake Local Centre. A left hand turn at this point, at Parkways Drive, connects through to Bibra Lake.

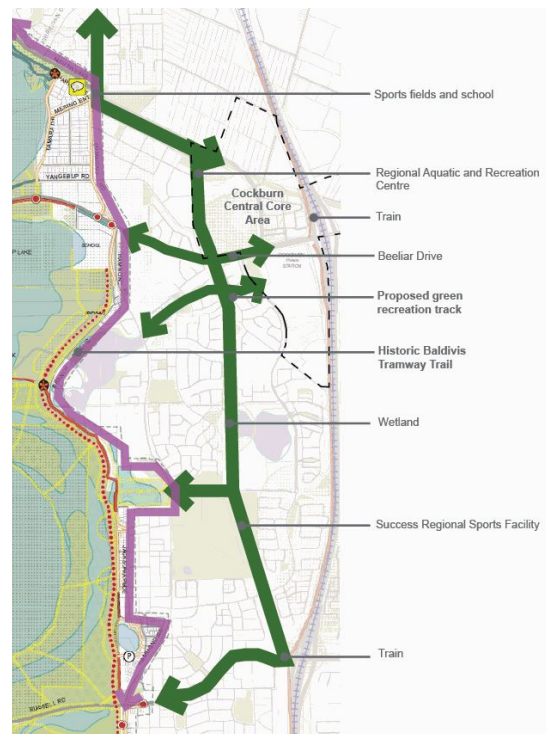


Figure (Right) illustrates how this stretch of land has the potential to connect several residential neighbourhoods and recreation facilities with the Lakes Area.

Importantly the benefits of this project correlate with the objectives of the Cockburn Central Activity Centre Structure Plan which seeks also to provide better connections between the suburbs surrounding Cockburn Central.

Portions of this easement have already been revitalised and now present as high quality areas including large areas of grassland, landscaping and water areas. It is recommended the remaining portions of the easement are upgraded in a similar manner. The concept plans are illustrated on page 30.

The enhancement of this easement should include planting, where opportunities exist, in an attempt to provide a green backdrop for residential areas and the Cockburn Central Activity Centre and in effect reduce the negative visual impact of the transmission lines.

This project will require consultation with Western Power.

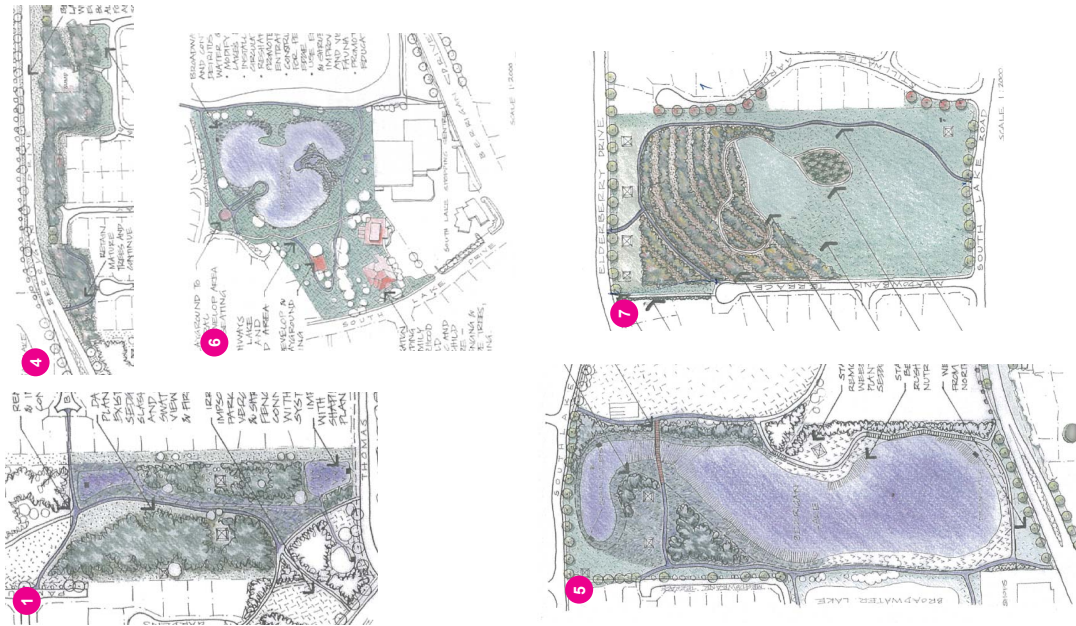
Further to this point, the City's Environmental Services Team are finalising the Tramways Reserve Trail, a historic linear trail approximately 32km in length running in a north south direction traversing the Cities of Cockburn, Kwinana and Rockingham. The trail also runs past a number of natural features including the Beeliar Regional Park with potential lookouts towards a linear chain of lakes including Yangebup, Kogalup and Thomsons Lakes. The trail was formerly a tram network for transporting harvested timber from Karnup to Jandakot. The network was running for a period of about five years in the 1920s until the timber stocks were exhausted; since then the rail lines have been pulled up.



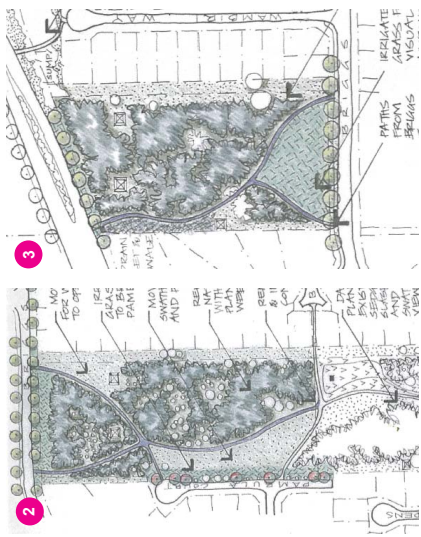
Proposed Recreation Loop (Northern Portion). Linking the Lakes area with Cockburn Central for cyclists and pedestrians.

This initiative has clear benefits in connecting Lakes residents with an important emerging activity centre and surrounding natural assets.

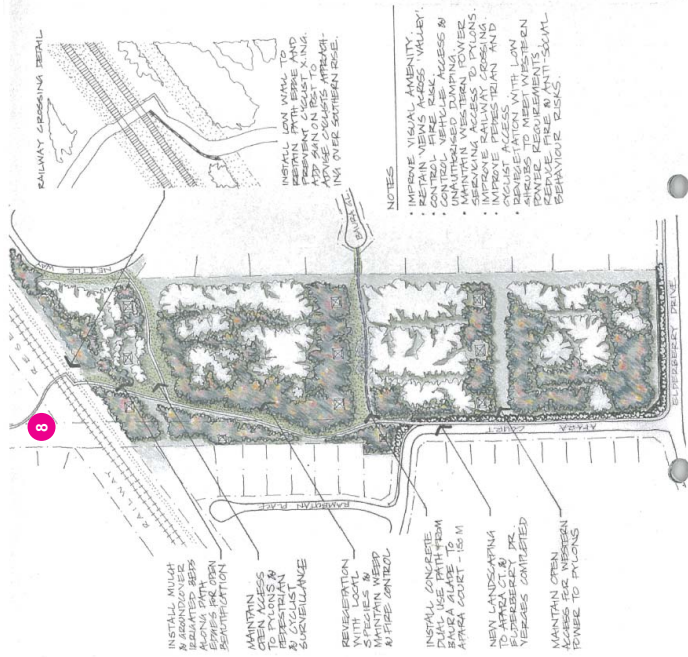
Landscape and park upgrades - Complete



To be undertaken



Further recommendation (Lakes Revitalisation Strategy)



Community consultation was undertaken on these plans in 2003 (Connecting South Lakes, 2003)

South Lake and Bibra Lake power line easement upgrades - 4 final components to be completed.

**Action 2.2 Work with the Public Transport Authority to undertake a review of bus services and infrastructure.**

The Lakes study area is well connected to public transport with the area being serviced by five bus routes of which three services provide access to the Murdoch Station, Cockburn Central Station or the Fremantle Station. The local bus services provide public transport to two train stations (Cockburn Central and Murdoch), providing residents with access to the wider metropolitan area.

Important local community facilities are well serviced by public transport. Bibra Lake Primary School is serviced by the 514 service which runs from Murdoch Station to Spearwood Avenue/ Hamilton Road. This service runs centrally through the Lakes Study area along Bibra Drive, Parkway Road and Northlake Road which is within a 5 minute walking distances to most properties within the Lakes.

The 514 service runs directly past the Lakes Shopping Centre providing residents and students with direct access to the local shops, primary school and Murdoch Station. Along Northlake Road residents have access to the 520 service which connects from the 514 service extending centrally through South Lake past South Lake Primary School, Lakeland Senior High School and the Local Centre site at the corner of Berrigan Drive and South Lake Drive.

However improvements can be made to the provision of buses. Feedback obtained from residents suggests the following can be improved and therefore it is recommended the following point be discussed further with the Public Transport Authority. This recommendation will be undertaken by the City of Cockburn Engineering Team -

1. Improve public transport to the Bibra Lake Employment Area (Bibra Lake West)
2. Address “long travel times” and limited service coverage at evenings and on the weekends.

Several other public transport related initiatives are recommended and these are identified within the Transport Assessment of the Background Report. These relate to bus stop upgrades and promoting public transport initiatives.

**Action 2.3 Undertake initiatives to promote cycling and walking in and around the Lakes area.**

The City of Cockburn Bicycle and Footpath Plan (2010) provides an assessment of the City’s pedestrian and cyclist networks. The plan identifies a range of built and non-built recommendations for improving the network, encouraging its use and monitoring future use. Opportunities exist to encourage walking and cycling through the upgrading of some of the pathway environments and to ensure important paths link with the wider network beyond the Lakes study area boundaries.

In early 2015 City project officers undertook a series of site inspections including bike tours to explore and rate the current bicycle networks within the Lakes study area. The table on pages 34-36, and the corresponding map on page 33, identifies areas where the project officers consider bicycle network improvements are required, and includes the recommendations as outlined in the 2010 plan which have not yet been completed.

See the Background Report for the full Transport assessment.

## Action 2.4 Undertake road improvements to improve safety and ease congestion.

Transport infrastructure should be planned and, if need be, improved to match increased traffic demand. In the case of the Lakes revitalisation study area, the draft changes to existing density codes is predicted to have a negligible impact on the transport network in the short to medium term.

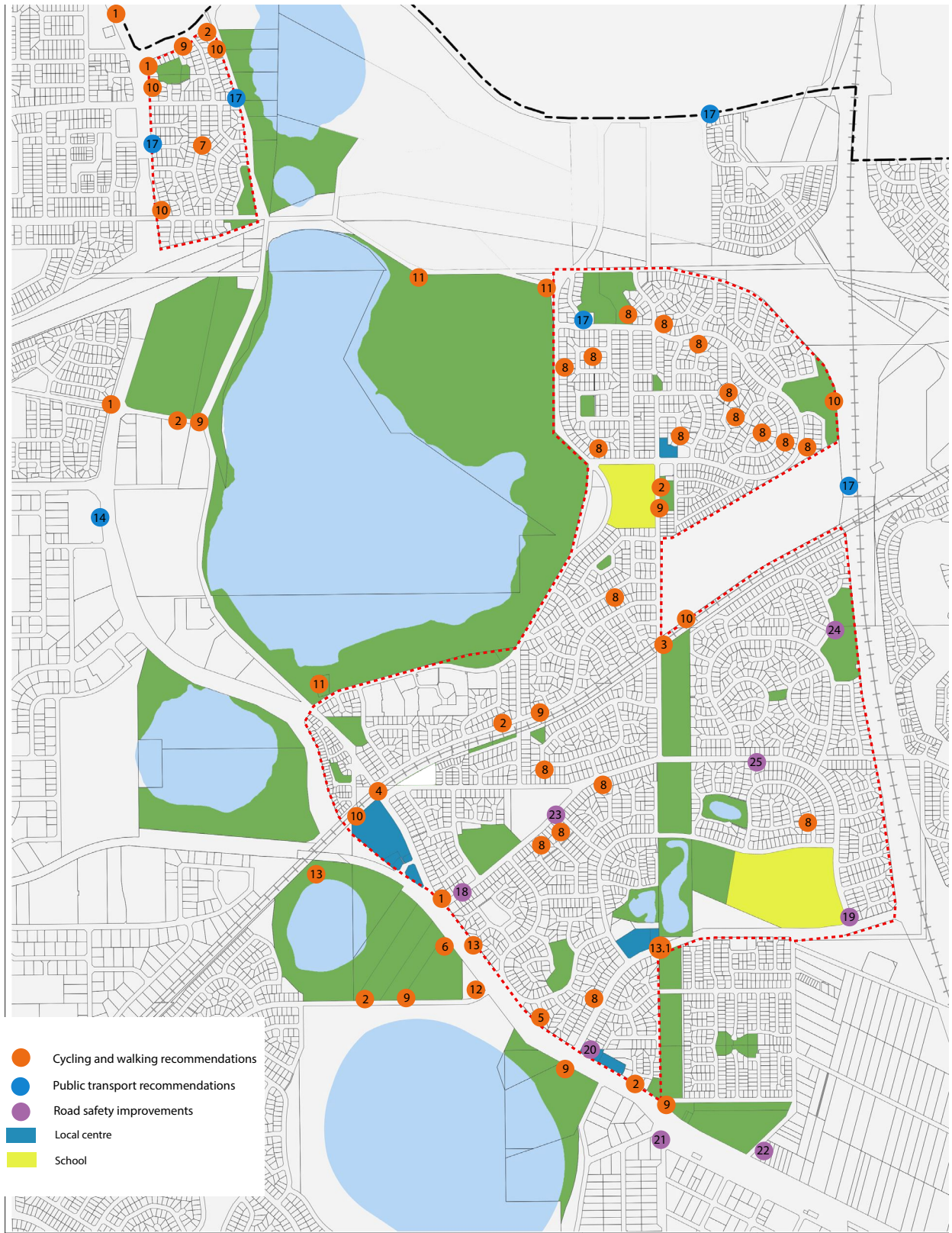
The predicted increased traffic flows can be managed by the existing road network and already planned intersection upgrades as outlined in the Transport Assessment provided within the Background Report.

This recognises that development will occur incrementally as we have seen in Spearwood and Hamilton Hill. Over the long term monitoring and targeted improvements where required will be undertaken.

There are however some improvements that can be undertaken now and these are identified within the table on pages 34,35 and 36. The recommendations correspond with the map on page 33.







## Transport recommendations

Number (on plan)	Action	Target date	Works required	Cost estimate	To be actioned by	Has the recommended action been drawn from an adopted CoC Strategy?
	<b>Cycling and walking related recommendations</b> (*Orange circles – see map)	Low: 5-10 years Med: 1-3 years High: 6 months – 1 years				
1*	Undertake a vehicular safety review and implement safety measures to improve the following road intersections for cyclists and pedestrians: a. Intersection of North Lake Road and Winterfold Road (SW8). b. Intersection of North Lake Road, Gwilliam Drive and Forrest Road (SW10). c. Intersection of North Lake Road and Farrington Road (SW8). This intersection also requires vegetation overgrowth maintenance which currently obstructs pedestrian visibility. d. Intersection of North Lake Road and Elderberry Drive.	Short term	Safety Review	\$60,000	Engineering Services	Yes - Main Roads Western Australia crash statistics data and the City of Cockburn Integrated Transport Plan Strategy Report. (Including community engagement for the month of August 2013).
2*	Improve signage for all major 'SW' bike paths within the Study Area. The objective is to encourage increased cycling activity.	Medium term	Signage & Line Marking	\$50,000	Engineering Services	No – However relevant to the City of Cockburn 2010 Bicycle Network and Footpath Plan
3*	Implement safety measures to improve the pedestrian and cycle crossing at the Annois Road/ Aparra Court railway crossing. The crossing should perpendicularly meet the formal railway crossing rather than bend towards the formal crossing within 1 metre of the railway line.	Medium term	Safety Review & Design	\$30,000	Engineering (lead) with State Government	No – Identified safety issue.
4*	Design and implement street improvements to Little Rush Close & Prout Way in favour of cyclists and pedestrians over cars.	Short Term	Investigation & Design	\$30,000	Engineering Services and Parks and Recreation	No – Identified safety issue.
5*	Line and image mark the existing stretch of path as a shared use path (SUP) on the northern side of North Lake Road from Semple Court to Elderberry Drive / Little Rush Close	Short term	Signage & Line Marking	\$25,000	Engineering Services	Yes - CoC Bicycle and Footpath Plan 2010.
6*	Formalise the PBN route SW34 north along North Lake Road to the Lakes Shopping Centre.	Medium term	Design & Construct	\$150,000	Engineering Services	Yes - CoC Bicycle and Footpath Plan 2010.
7*	Provide a new footpath through the core of North Lake along Coleridge Place.	Medium term	Design & Construct	\$65,000	Engineering Services	Yes - CoC Bicycle and Footpath Plan 2010.
8*	Public access ways (PAWs) within the lakes study area require vegetation maintenance, signage and the provision of bicycle symbol ground markings.	Medium term	Maintenance & Signage	\$50,000	Engineering Services	No – Identified safety issue.
9*	Bicycle symbol ground markings require maintenance /repainting throughout the Lakes study area.	Medium term	Maintenance & Signage	25,000	Engineering Services	N/A – maintenance
10*	Implement the seven 'Proposed Actions' as specified by The Lakes Study area community cycling 'Hot Spots' of concern table.	Medium term	Review, Design, Construct	300,000	Engineering Services	Yes - City of Cockburn Integrated Transport Plan Strategy Report. (Including Community engagement for the month of August 2013).
11*	Implement the upgrades to the 'Bibra Lake Circuit' (Project e) as identified by The City of Cockburn Trails Master Plan 2013 on page 46.	Medium term	Design and install signs and markers	30,000	Engineering Services and Parks and Recreation	The City of Cockburn Trails Master Plan 2013 (Project e)
12*	Implement the upgrades to the 'Little Rush Lake Trail' (Project j) as identified by The City of Cockburn Trails Master Plan 2013 on page 51.	Medium term	Maintenance and signage	\$80,000	Engineering Services and Parks and Recreation	Yes - The City of Cockburn Trails Master Plan 2013 (Project j)
13*	Implement the upgrades to the 'South Lake Trail' (Project q) as identified by The City of Cockburn Trails Master Plan 2013 on page 61.	Medium term	Planning, maintenance, signage and trail construction	\$120,000	Engineering Services and Parks and Recreation	Yes - The City of Cockburn Trails Master Plan 2013 (Project q)
13.1	Investigate the need for a pedestrian crossing in the proximity of the powerline easement across Berrigan Drive.	Short term	Investigation & Design	\$20,000	Engineering Services	No – Identified safety issue.

Number (on plan)	Action	Target date	Works required	Cost estimate	To be actioned by	Has the recommended action been drawn from an adopted CoC Strategy?
	<b>Public transport (*Blue circles – see map)</b>	Low: 5-10 years Med: 1-3 years High: 6 months – 1 years				
14*	Engage with the PTA to: <ul style="list-style-type: none"> <li>Improve public transport to the Bibra Lake Employment Area (Bibra Lake West)</li> <li>Address "long travel times", and limited service coverage at evenings and on the weekends across the suburbs.</li> <li>Discuss with the PTA - bus services that no longer connect directly with Gateways (used to be 514 and 520 from Murdoch via Bibra Lake to Gateways Shopping Centre) but now stops at the train station.</li> </ul>	Medium term	public transport review	\$20,000	Engineering Services	N/A – customer requests
15	Upgrade core bus stop infrastructure	Medium term	Review & Replace	\$50,000	Engineering Services (Liaise with WALGA and the Public Transport Authority)	No - Partnership Agreement between WALGA and the Public Transport Authority paper
16	<ul style="list-style-type: none"> <li>Continue to promote the use of Co-funded "TravelSmart" programs.</li> <li>Continue the implementation of Healthy Spaces and Places initiatives</li> <li>Support programs that encourage active travel to school.</li> </ul>	Ongoing	Education Program	\$20,000	The City's Travel Smart Officer	No - The Department of Transport's 'TravelSmart' programs No - Healthy Spaces and Places – A national guide to designing places for healthy living.
17*	Implement the three identified actions as prescribed by <i>The Lakes Study area community public transport 'Hot Spots' of concern table.</i>	Short term	Traffic Review	\$20,000	Engineering Services to communicate with the Public Transport Authority and the City of Cockburn.	Yes - City of Cockburn integrated Transport Plan Strategy Report. (Including Community engagement for the month of August 2013).

Number (on plan)	Action	Target date	Cost estimate	Funding requirements	To be actioned by	Has the recommended action been drawn from an adopted CoC Strategy?
	<b>Roads safety (*purple circles – see map)</b>	Low: 5-10 years Med: 1-3 years High: 6 months – 1 years				
19	Berigan Drive and Elderberry Drive intersection – As shown in the Murial Court Structure Plan it is planned to realign both the southern end of Elderberry Drive and the northern section of Semple Court to form a 4-leg intersection with Berigan Drive. That new intersection will be constructed as a roundabout or traffic signals (subject to Main Roads WA approval), subject to further investigation.	This project is tentatively scheduled for 2020-22 on the City's Regional and Major works 2013-2030 plan, but timing will be dependent on funding availability and progress of development in the Murial Court Precinct.	\$300,000	To be actioned as a DCA item based on demand, funding and MRWA approval.	MRWA, WAPC, City of Cockburn and community development/DCA funding.	No – however relevant to the Murial Court Local Structure Plan 110/007, 110/094
20	North Lake Road and Berrigan Drive intersection – The City's Engineering Services Officers previously identified the need for some improvement of this intersection and have applied for grant funding from the 2015/2016 State Black Spot Program to extend the left turn lanes on the west (North Lake Road) and north (Berrigan Drive) legs of the intersection and improve street lighting.	Road upgrade project dependent upon funding. Waiting for announcement from the Minister for Transport. To then be actioned accordingly by the City's engineering services.	\$280,000	N/A - That project has been recommended for funding and it is anticipated an announcement will be made soon by the Minister for Transport.	MRWA, Department of Transport and the City of Cockburn.	Yes - State Black Spot Program funding request.
21	North Lake Road and Hammond Road roundabout/leg intersection – This intersection will be improved as part of the current widening of North Lake Road, from Hammond Road to Kentucky Court, to 4-lanes. Separate turn lanes will be provided at Hammond Road for safety and to minimise disruption to continuing traffic.	Current works program	\$180,000	Municipal	Engineering Services	Yes - Current works program
22	North Lake Road and Semple Court intersection – This intersection will be improved as part of the current widening of North Lake Road to 4-lanes. A protected right-turn lane will be provided in the median for motorists turning into Semple Court, and motorists turning right from Semple Court will be able to turn in two stages by temporarily storing in the median on North Lake Road.	Current works program	\$150,000	Current works program	Engineering Services	Yes - Current works program
23	Elderberry Drive and Tardale Way intersection – Local residents have raised the issue that "School parents parking inappropriately cause visibility issues and park too close to the corner". This intersection is located opposite a pedestrian access point. It is expected parents would park here during peak student pick up/drop off times. Investigate possible parking provision options for this intersection or alternatively explore pedestrian entry point relocation away from the intersection.	Short term	\$30,000	Municipal	Engineering Services	Yes - City of Cockburn Integrated Transport Plan Strategy Report. (Including Community engagement for the month of August 2013).
24	Bloodwood Circle and Pavonia Heights intersection – Local residents have raised the issue that "This junction of Bloodwood and Pavonia Heights is dangerous. Cars going south on Bloodwood go too fast down-hill there is also limited sight from Pavonia". City road engineer's to investigate and implement improvement options or nomination for State 'Black Spot' Funding. Subject to their professional review.	Medium Term	\$25,000	Municipal	Engineering Services	Yes - City of Cockburn Integrated Transport Plan Strategy Report. (Including Community engagement for the month of August 2013).
25	Elderberry Drive – Local residents have raised the issue that "School zone is not clearly marked, roads too wide and signs are not seen or are ignored. Better line marking needed and electronic signs." City road engineer's in consultation with City Planners to investigate and implement traffic calming, parking provision, dedicated bicycle path and street tree provisions. Design concepts to be prepared by the Strategic Planning department for Elderberry Drive. Implementation of the works to be undertaken by the City of Cockburn Engineering department.	Short term	\$30,000	Municipal	Engineering Services	Yes - City of Cockburn Integrated Transport Plan Strategy Report. (Including Community engagement for the month of August 2013).
26	Explore 'on-road' car parking opportunities along key roads.	Short term	\$35,000	Municipal	Engineering Services	No – new action as a result of revitalisation strategy
			<b>1,565,000</b>	<b>Recommendations from existing CoC Strategies</b>		
			<b>610,000</b>	<b>New recommendations identified within this Strategy</b>		
			<b>2,166,000</b>	<b>Total</b>		

## Program 3 - Improve the Lakes Public Spaces.

### Action 3.1 Continue to revitalise key streets in the Lakes area by continuing street tree planting.

Attractive streetscapes are an integral part of enhancing the character of the Lakes area and encouraging pedestrian and cycle use both throughout the locality. If streets are well presented and functional, then there is a likelihood for a positive effect on land values and will contribute to a place people wish to live and visit and spend time in.

Feedback received from residents is that streets are generally considered attractive in the Lakes area. However improvements can be made to street tree provision and the current layout of Elderberry drive requires review to identify opportunities for on-street car parking and cycle lane markings. This is discussed further in the transport section recommendations.

See map opposite and actions on page 34 for Streetscape upgrade details.

### Action 3.2 Continue upgrades to residential parks and improve the maintenance of the eastern side of Bibra Lake Reserve.

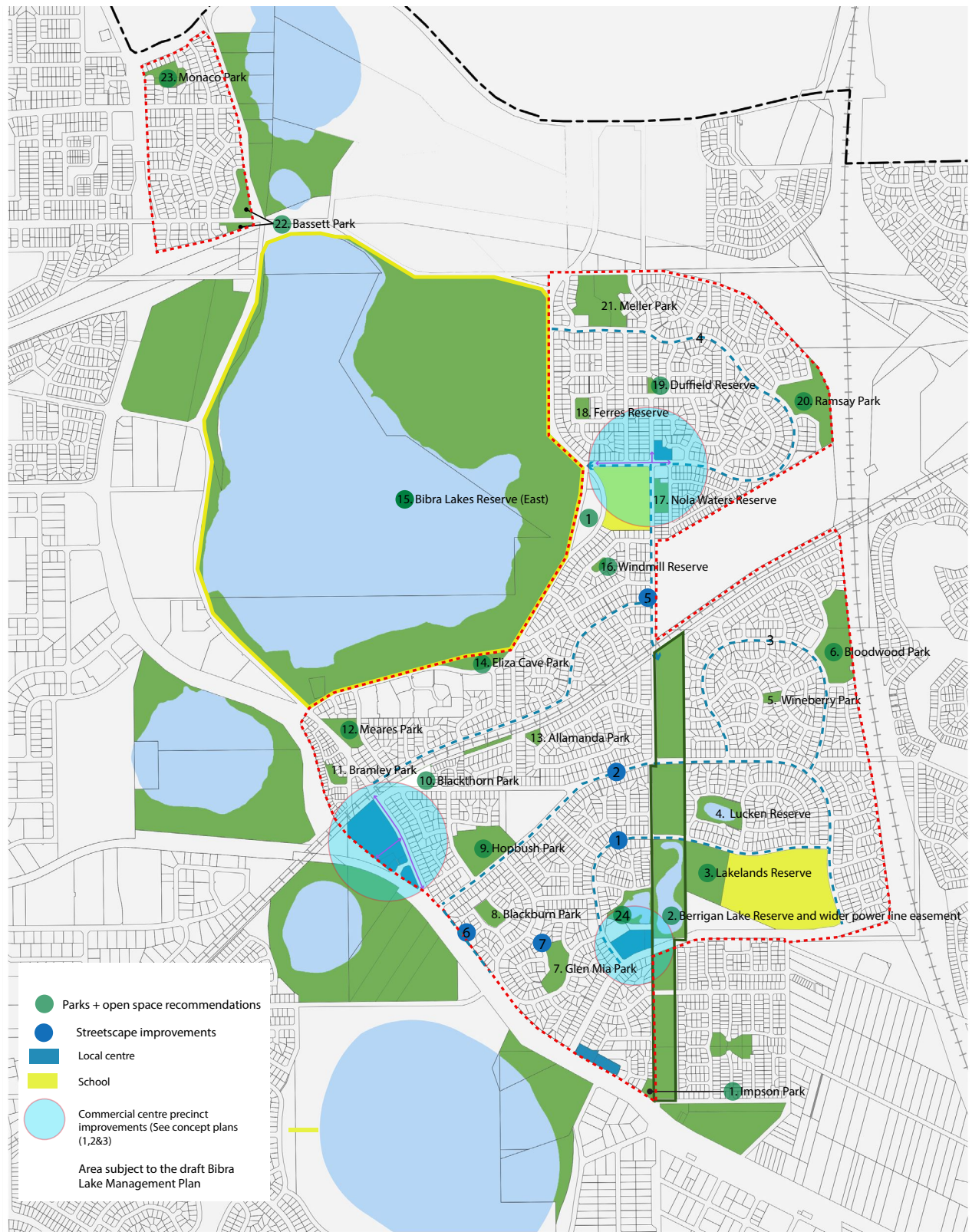
The Lakes area is provided with a wide variety of parks. Some are more natural - such as the areas adjacent to wetland areas, while others are used for more formal activities including sport and play areas for smaller children.

Parks and open space are popular within the Lakes area. Between 83% and 89% of respondents of the survey 'agree' that the Parks meet the needs of themselves and their families.

The map (opposite) identifies parks in the study area. These numbered parks correlate with the recommendations identified within the table on page 34.

With regard to the eastern side edge of Bibra Lake the biggest improvements can come from regular maintenance of this area. The below image illustrates the recommended actions.





Parks, streetscapes upgrades reference map (See page 34 for actions)

Number (on plan)	Park/street/project name	Park primary function	Action	Target date	Funding Requirements	To be actioned by	Has the recommended action been drawn from an adopted CoC Strategy?
1	<b>Impson Park</b>	Underutilised and undeveloped vacant land. Excess to needs.	Rezone to R80: <ul style="list-style-type: none"> <li>Land underutilised</li> <li>Sufficient POS adjoining</li> <li>Ensure a PAW on the northern boundary.</li> </ul>	When the scheme amendment is undertaken to implement the strategy objectives.		Strategic Planning and Land Management Departments	No – first time proposal
2	<b>Berrigan Lake Reserve and wider power line easement</b>	Recreation space	Implement the South Lake Precinct Upgrade and Redevelopment Plan	2016/17 2017/18	Stage 5 (North of Elderberry) - \$350,000 Stage 6 (Lots 12 & 26) - \$350,000	Parks Service Unit	Yes - The concept plan is an adopted concept as part of "Connecting South Lake 2003. The Parks Team are part way through actioning the plans.
3	<b>Lakelands Reserve</b>	Sport space	This park is under review for regional sport needs.	TBA	TBA	Parks Service Unit and Recreation Service Unit	Yes - POS Strategy 2014-2024
4	<b>Lucken Reserve</b>	Recreation – passive, children's play.	No further improvements identified	-	-	-	Yes - POS Strategy 2014-2024
5	<b>Wineberry Park</b>	Recreation – passive, children's play.	No action recommended – A new playground recently added	-	-	-	Yes - POS Strategy 2014-2024
6	<b>Bloodwood Park</b>	Recreation – passive, children's play, BBQ facilities	Neighbourhood Park requiring BBQ, picnic settings, shelters and landscaping. Exercise Equipment to be installed in 2015/16 through the CL Strategy.	Medium term	\$200,000	Parks Service Unit	Yes - POS Strategy 2014-2016
7	<b>Glen Mia Park</b>	Recreation – passive, children's play, dog exercise area	No further improvements identified	-	-	-	Yes - POS Strategy 2014-2024
8	<b>Blackburn Park</b>	Recreation – passive, children's play.	No further improvements identified	-	-	-	Yes - POS Strategy 2014-2024
9	<b>Hopbush Park</b>	Recreation – active and passive, children's play, BBQ facilities.	Exercise Equipment to be installed 2015/16 (CIL Strategy). Shelter and seating required to support existing infrastructure	Medium term	\$100,000	Parks Service Unit	Yes - POS Strategy 2014-2016
10	<b>Blackthorn Park</b>	Recreation – passive, children's play.	Improve landscaping and amalgamate the play areas.	Medium term	\$100,000	Parks Service Unit	Yes - POS Strategy 2014-2024
11	<b>Bramley Park</b>	Recreation – passive, children's play.	No action recommended	-	-	-	Yes - POS Strategy 2014-2024
12	<b>Mearns Park</b>	Recreation – neighbourhood space, children's play	Playground Shade Sail, picnic setting, shelters and landscaping	Medium term	\$150,000	Parks Service Unit	Yes - POS Strategy 2014-2024
13	<b>Allamanda Park</b>	Recreation – passive, children's play.	No action recommended	-	-	-	-
14	<b>Eliza Cave Park</b>	Recreation – passive, children's play, cycling, walking	Proposed to relocate and upgrade 200m north – see the Bibra Lake Reserve (east) concept plan (recommendation 3.4 of the Lakes Revitalisation Strategy)	Medium term	Cost integrated into "Bibra Lake Reserve (east) concept plan"	Parks Service Unit	See recommendation 3.4 for further details.

Number (on plan)	Park/street/project name	Park primary function	Action	Target date	Funding Requirements	To be actioned by	Has the recommended action been drawn from an adopted CoC Strategy?
15	Bibra Lake Reserve (east) concept plan	Currently - Skate Park	See recommendation 3.4 of the Lakes Revitalisation Strategy. Recommend this space consolidate several activities required in the area and address desires identified in the community forum. Including: <ul style="list-style-type: none"> <li>Improved skate facilities over time (\$400,000-500,000)</li> <li>An enclosed dog area (\$55,000)</li> <li>Children's play area (\$100,000)</li> <li>Seating and tables (\$30,000)</li> <li>Car parking, including a hard stand area for a food van (\$300,000)</li> </ul>	Medium term	\$985,000	Parks and Service unit	No - This concept will require an amendment to the Bibra Lake Management Plan in the first instance.
16	Wind mill reserve	Recreation – local space, child play elements	Additional footpath required	Medium term	\$50,000	Parks Service Unit	Yes - POS Strategy 2014-2024
17	Nola Waters Reserve	Undeveloped	No action recommended	-	-	-	Yes - POS Strategy 2014-2024
18	Ferres reserve	Recreation – passive, children's play.	No action recommended	-	-	-	Yes - POS Strategy 2014-2024
19	Duffield Reserve	Recreation – passive, children's play.	Incorporate playground and shade sail, landscaping.	Medium term	\$100,000	Parks Service Unit	Yes - POS Strategy 2014-2024
20	Ramsay Park	Recreation Space – Neighbourhood park – social space and playground facilities	<ul style="list-style-type: none"> <li>Exercise equipment</li> <li>Bbq/s</li> <li>Picnic setting</li> <li>Landscaping</li> <li>Increase playground features</li> </ul>	Medium term	\$250,000	Parks Service Unit	Yes - POS Strategy 2014-2024
21	Meller Park	Recreation – unstructured sports, passive, children's play.	No action recommended	-	-	-	Yes - POS Strategy 2014-2024
22	Bassett Park	Recreation Space – Neighbourhood park – social space and playground facilities	Picnic seating areas, gazebo and sports infrastructure.	Medium term	\$150,000	Parks Service Unit	Yes - POS Strategy 2014-2024
23	Monaco Park	Recreation – passive, children's play, dog exercise area	Landscaping	Medium term	\$20,000	Parks Service Unit	Yes - POS Strategy 2014-2024
24	Broadwater Park	Recreation – passive, children's play.	Investigate an upgrade to include facilities suitable for teenagers.	Medium term	\$20,000	Parks Service Unit	No – first time proposal. (Note: Community Services is seeking a grant to construct a pump track at either Broadwater or Hobbush.)
<b>Total:</b>					<b>2,725,000</b>		



## STREETSCAPES

Streets (Blue circles)	Street	Works recently undertaken/streetscape elements	Further recommendations	To be actioned by	Funding Requirement	Reference document and further comments
1	South Lake Road, South Lake		<ul style="list-style-type: none"> <li>Street tree planting required.</li> </ul>	Parks Service Unit		Yes - POS Strategy 2014-2024
2	Elderberry Drive	Street tree planting done on both sides of the street	<ul style="list-style-type: none"> <li>Street tree planting down centreline</li> </ul>	Parks Service Unit	\$250,000	Yes - POS Strategy 2014-2024
3	Bolderwood Drive	Street tree planting already undertaken	No further recommendation	-	-	-
4	Parkway Drive	Jacaranda's planted both sides of the street	No further recommendation	-	-	-
5	Berrigan Drive	<ul style="list-style-type: none"> <li>Good provision of advanced street trees.</li> </ul>	<ul style="list-style-type: none"> <li>Strengthen the gateway treatment on the corner of Elderberry Drive</li> <li>Strengthen the gateway treatment on the corner of Berrigan Drive.</li> </ul> <p>Both locations - As shown on map. Scale of landscaping/treatment to respond to context.</p>	Parks Service Unit	\$50,000	Yes - POS Strategy 2014-2024
6	North Lake Road (South-East of Elderberry Drive)	<ul style="list-style-type: none"> <li>Cnr of North Lake Road and Osprey Drive intersection recently upgraded by Main Roads.</li> </ul>	<ul style="list-style-type: none"> <li>Verge area where shared path is requires clearing on Eastern side of road.</li> </ul>	Parks Service Unit	NIL – Maintenance (clearing)	
7	Barrine Gardens	-	<ul style="list-style-type: none"> <li>Investigate the ability to provide a garden bed and location for a tree within the redundant area provided by a previous cul-de-sac head.</li> </ul>	Parks Service Unit	\$15,000	-
<b>Total:</b>					<b>\$315,000</b>	

**Action 3.3 Create a multifunctional gathering space on the eastern side of Beeliar Wetland (skate area), encompassing: Facilities for food vans, skating, dog walking, picnic tables, shade areas.**

A clear desire by residents was a key public space and gathering area on the eastern side of the lake. Also desired was an enclosed area for dogs and a cafe.

While the City has very little influence on the provision of a cafe, other than allowing for the appropriate zone to allow a cafe

business to operate, it can provide the area and facilities for a food van to pull up in the area.

As a result the following concept plan provides details for such a space to accommodate these functions.

Given this area falls within the Bibra Lake Management Plan area there is a requirement for the plan to be amended before these works can be undertaken.

This ensures orderly planning and protection of the Lake and its natural assets.



**Bibra Lake Recreation Node**

### Action 3.4 Undertake public realm upgrades around the 3 local centres.

A clear opportunity to improve the amenity and character of the Lakes area is through Streetscape upgrades around the 3 local centres.

The concept plans establish a vision for future Streetscape enhancement in key locations. Key objectives of the regeneration of these streets are to:

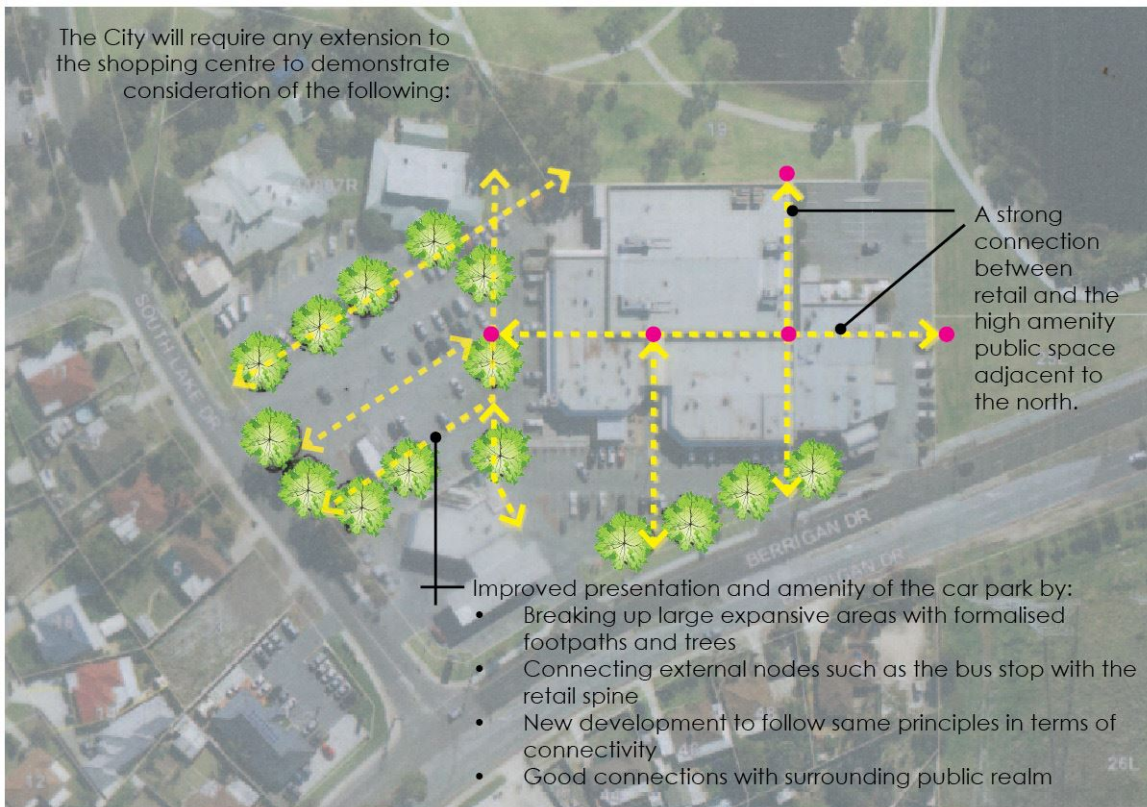
- Reinforce the centres as a strong focal point of the suburbs;
- Improve linkages and relationship between residential areas and the centres;
- Improve pedestrian amenity, safety, and street legibility;
- Encourage pedestrian and cycle

movement;

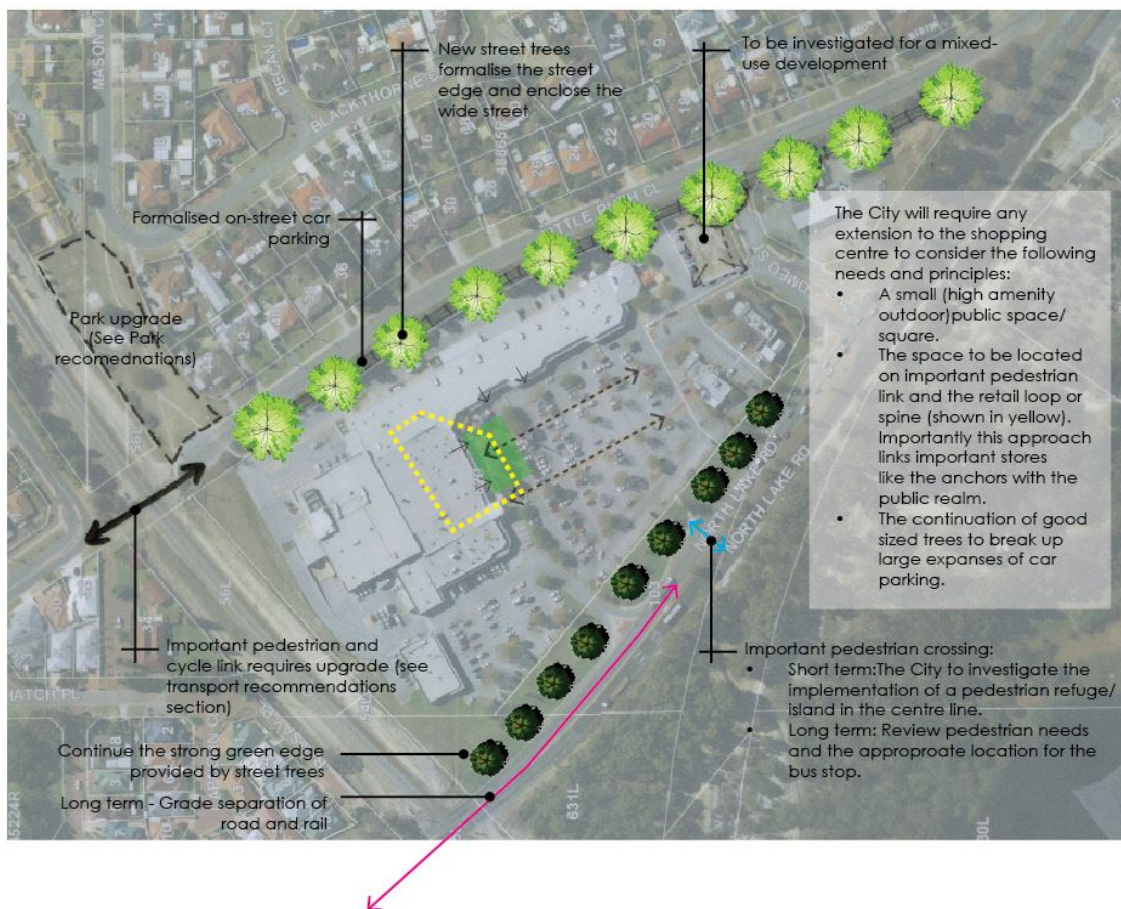
- Accommodate more trees;
- Define the street environment and assist in managing vehicle speeds;
- Provide flexible options for developments to accommodate car parking.



**Bibra Lake Local Centre Concept Plan**



### Berrigan Drive Local Centre Concept Plan



### The Lakes Neighborhood Centre Concept Plan

### **Action 3.4 Facilitate the provision of underground power by applying for the next round of funding through the State Underground Power Program.**

The Coolbellup East Underground Power Project in 2013 saw the undergrounding of power lines in the eastern portion of Coolbellup. This was a result of the State Underground Power Program which was a partnership between the Government of Western Australia (through the Office of Energy), Western Power and the City of Cockburn, to improve residential amenity and security of power supply.

The next round of funding is likely to apply for funding to provide underground power for the remaining, western side of Coolbellup.

It is also considered appropriate that the Lakes suburbs be included within this next application for funding.

It is noted the application is subject to approval and does require community consultation with affected landowners to identify support (80% required) for residents to contribute what is usually 50% of the costs.

Further information will be available to residents at such time as an application is commenced.

## **3.0 Implementation**

---

The revitalisation strategy will be implemented in accordance with the table on page 46.

Certain recommendations, such as the scheme amendment process required to implement the recommended residential density changes, will be implemented as part of the City's normal processes using existing resources and allocations. However there are costs associated with the recommendations relating to park upgrades, streetscape upgrades and transport related initiatives.

The proposed works will need to be funded and planned for within the City's budgeting framework.

Actions to implement the Lakes Revitalisation Strategy		Stakeholders	Priority	Timeframe	Cost estimate	Relevant area of Strategic Plan
1.1	Amend TPS3 in accordance with the Residential Density and Zoning Plan.	Lead Department: Planning Services Department	High	6 months-1 year	Internal	Governance Excellence
1.2	Undertake a drainage review.	Lead Department: Engineering	Medium	1 - 3 years	\$40,000*	Demographic Planning Infrastructure development
1.3	Prepare acoustic guidelines to accompany the City's Noise Attenuation Local Planning Policy	Lead Department: Planning Services Department	High	6 months-1 year	Internal	Infrastructure development
2.1	Prepare an action plan to deliver the recreation loop concept and report to Council for adoption and funding support.	Lead Department: Planning Services Department	Medium	1 - 3 years	\$700,000*	Infrastructure development Lifestyle and aspiration achievement
2.2	Engage with the Public Transport Authority to undertake a review of bus services and routes within the locality.	Lead Department: Engineering	High	6 months-1 year	Internal	Lifestyle and aspiration achievement
2.2-2.4	Undertake the transport related recommendations identified within the table on page 34-36.	Lead Department: Engineering	Medium	1 - 3 years	\$2,420,000 (1,565,000*)	Infrastructure development
3.1	Continue street tree planting along South Lake Dr, Berrigan, Elderberry -Strength planting	Lead Department: Park and Environment Department Support Department: Planning Services External: Landowners	Medium	1 - 3 years	\$300,000*	Lifestyle and aspiration achievement
3.2	Undertake upgrades to residential parks as identified within the table on page 39-40.	Lead Department: Park and Environment Department	Ongoing – see page 39-40 for park specific timeframes	Ongoing	\$1,120,000*	Infrastructure development
3.3	1. Undertake an amendment to the Bibra Lake Management Plan in support of the Bibra Lake East Recreation Area Concept Plan. 2. Undertake more detailed design drawings and deliver the project.	Lead Department: Park and Environment Department Support Department: Strategic Planning	High	6 months-1 year	\$985,000	Infrastructure development
3.4	Undertake public realm upgrades around the 3 local centres.	Lead Department: Park and Environment Department	Medium	1 - 3 years	\$80-100,000	Infrastructure development
3.5	Facilitate the provision of underground power for the Lakes suburbs by applying for the next round of funding through the State Underground Power Program.	Lead Department: Engineering	High	6 months-1 year	To be costed.	Infrastructure development
<b>Recommendations from existing CoC Strategies and plans*:</b>						
<b>Recommendations identified within this Strategy:</b>						
<b>Total:</b>						<b>\$5,365,000</b>

