City of Cockburn

wetlands to waves

CITY OF COCKBURN

COOLBELLUP REVITALISATION STRATEGY

BACKGROUND REPORT

JULY 2014

www.cockburn.wa.gov.au

Contents

Introduction

This Background Report provides the justification for the Strategy recommendations by detailing:

- The relevant planning framework and policies to be considered;
- An explanation of the R-Codes;
- The Regional context;
- The Local context including: History, demographics, town centre and community facilities;
- A streetscape assessment;
- An Integrated Public Open Space Assessment;
- A Transport and Accessibility Assessment,
- Urban infill and medium density development lessons learnt by the City, and;
- Stakeholder consultation outcomes.

At the end of each chapter, key findings are summarised to inform the Strategy recommendations.

The Revitalisation Strategy reflects the comprehensive State Government planning framework embodied in various strategies and policies. The City's local strategic plans is also embedded in the Plan.

Planning policy framework

State Planning Strategy 2012 (draft)

The draft State Planning Strategy (draft SPS) provides the basis for long-term State and regional land use planning within Western Australia. It sets out the key principles, strategies and actions relating to the environment, community, economy, infrastructure and regional development, of which should guide all future planning decisions.

The draft SPS identifies planning considerations and approaches that directly relate to the formulation of the Coolbellup Revitalisation Strategy and set the agenda for urban infill and urban regeneration projects throughout Perth, those being:

- Place based approaches - that plan for the local economy, enhance and protect the identity of places, and provide for diverse, accessible and liveable communities;
- Affordable Living – Identifying opportunities for housing diversity, infill development opportunities in appropriate locations and sustainable developments;
- Health and well-being – Identifying opportunities for the built environment to encourage the well-being of communities such as through the design of environments; and
- Land availability – Providing diverse and affordable housing options.

To view the draft SPS visit: **www.planning.wa.gov.au**

Directions 2031 and beyond: Metropolitan planning beyond the horizon

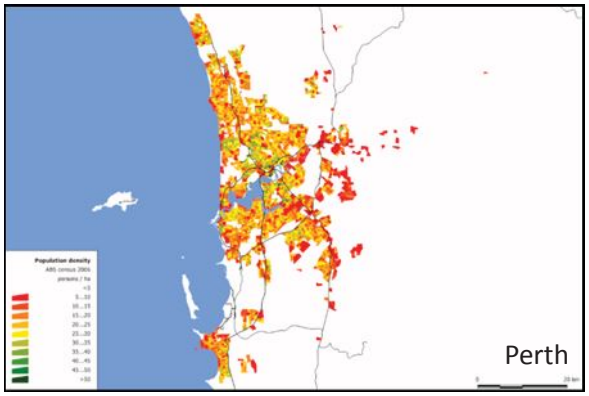
"Directions 2031 and Beyond" is a high level strategic plan that establishes a vision for future growth of the Perth metropolitan and Peel regions, and provides a framework to guide the detailed planning and delivery of housing, infrastructure and services necessary to accommodate growth.

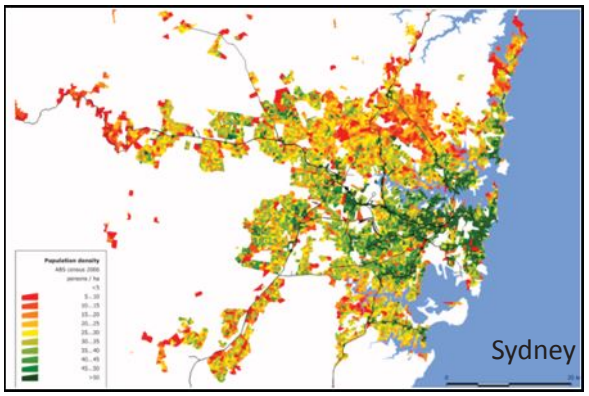
One of the key objectives of Directions 2031 and Beyond is to improve the relationship between where people live and work, to reduce commuting time and cost, and the associated impact on transport systems and the environment.

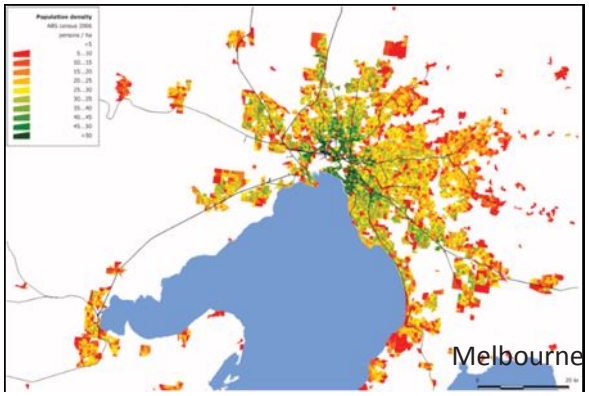
Further, the connected city scenario identifies the need to achieve an urban infill target of 47%, meaning that 154,000 of the 328,000 dwellings required by 2031 will be delivered through urban infill. The 'connected city' model relies upon projects like the Coolbellup Revitalisation Strategy to deliver its objectives for the Perth metropolitan area and sets a target for 10 dwellings per hectare within existing urban areas.

The figures opposite illustrate urban densities across three Australian cities, indicating higher densities in green. The images show higher densities within Sydney and Melbourne respectively, with low densities in Perth metropolitan area, highlighting the significant issue of urban sprawl facing Perth.

Images sourced from: http://chartingtransport.com/2012/10/19/comparing-the-residential-densities-of-australian-cities-2011/)







Perth's population 2011 **1,728,867**

2.2 million Perth's projected population 2031

More than half a million new residents

328,000 new dwellings

Draft Outer Metropolitan Perth and Peel Sub-Regional Strategy

As an implementation mechanism of Directions 2031 and Beyond, draft sub regional strategies have been prepared including the draft Outer Metropolitan Perth and Peel Sub-regional Strategy which focuses on providing an adequate supply of suitable urban land to support the strategic and sustainable growth of the City to 2031 and beyond.

Under the connected city scenario, the City of Cockburn is identified as requiring an estimated dwelling supply (infill developments) of approximately 11,100 dwellings by 2031.

The draft Strategy identifies a declining trend in the average household occupancy in the South-West subregion and an aging population. This suggests it may be timely and appropriate to investigate opportunities to encourage diverse housing types when regenerating residential areas such as Coolbellup. Particularly given the aging housing stock current located within the suburb.

State Planning Policy No. 3 – Urban Growth and Settlement

This Policy sets out the principles and considerations which apply to planning for sustainable urban growth and settlement patterns in Western Australia. The Policy is based on the premise that the spread of urban development intensifies pressures on valuable land and water resources, imposes costs in the provision of infrastructure and services, increases dependence on private cars and creates potential inequities for those living in the outer suburbs where job opportunities and services are not so readily available.

The objectives of the policy demonstrate the need for projects like the Coolbellup Revitalisation Strategy and identifies the objectives to guide such Strategies, including;

- Building on existing communities within established local and regional economies, concentrate investment in the improvement of services and infrastructure and enhance the quality of life in those communities.
- Promotion of the development of a sustainable and liveable neighbourhood form which reduces energy, water and travel demand while ensuring safe and convenient access to employment and services by all modes, provides choice and affordability of housing and creates an identifiable sense of place for each community.

Liveable Neighbourhoods

Liveable Neighbourhoods is an integrated planning and assessment policy for the preparation of structure plans and subdivision layouts to guide further development in Western Australia, including large urban infill sites. Its objectives equally apply to large revitalisation strategies such as this one.

The objectives of Liveable Neighbourhoods generally relate to the Revitalisation Strategy, with the following having a direct correlation:

1. Town centres should be developed to help create a sense of community and with strong local identity and sense of place.
2. Facilitate mixed urban development which provides for a wide range of living, employment and leisure opportunities, capable of adapting

over time as the community changes and which reflects appropriate community standards of health, safety and amenity.

3. Facilitate new development which supports the efficiency of public transport systems where available, and provide safe, direct access to the system for residents.

4. Encourage active street and land use interfaces, with building frontages to streets to improve personal safety through increased surveillance and activity.

5. Provide a variety of lot sizes and housing types to cater for the diverse housing needs of the community at a density that can ultimately support the provision of local services.

6. Ensure cost-effective and resource-efficient development to promote affordable housing.

7. Ensure land potential is maximised wherever possible.

State Planning Policy No. 3.1 – Residential Design Code of Western Australia

The Residential Design Codes of Western Australia ("the R-Codes") provides the basis for the control, through local government, of residential development throughout Western Australia. The R-Codes aims to address emerging design trends, promote sustainability, improve clarity, and highlight assessment pathways to facilitate better residential design outcomes throughout Western Australia

Further, the intention of the R-Codes is to cover all requirements for development control purposes and to minimise the need for local government to introduce separate planning policies concerning residential development. The R-Codes do not address the physical construction requirements or internal arrangements of buildings - these are matters are dealt with by the Building Codes of Australia.

The R-Codes provides minimum and average lot areas for each R code. Local planning schemes then apply an R coding, for example: R20, R30, R40, to residential zoned land which is used to control the subdivision of land.

Table 1 (below) is an excerpt from Table 1 of the R-Codes and sets out the minimum and average site area for R20-R80 single and grouped dwellings and multiple dwellings codes (up to R30).

A copy of the R-Codes can be found on the Department of Planning website.

R-Code	Dwelling type	Minimum site area per dwelling (m^2)
R20	Single house* or grouped dwelling**	Min 350 Ave 450
	Multiple dwelling	450
R25	Single house or grouped dwelling	Min 300 Ave 350
	Multiple dwelling	350
R30	Single house or grouped dwelling	Min 260 Ave 300
R35	Single house or grouped dwelling	Min 220 Ave 260
R40	Single house or grouped dwelling	Min 180 Ave 220
R50	Single house or grouped dwelling	Min 160 Ave 180
R60	Single house or grouped dwelling	Min 120 Ave 150
R80	Single house or grouped dwelling	Min 100 Ave 120

Table 1: Minimum site area requirements (extract from the R-Codes)

Multiple dwellings on land coded R30 and above are controlled in a different manner. Multiple dwellings are controlled via a plot ratio, maximum building height and minimum open space. Plot ratio is the ratio of the gross total of all floors of buildings on a site to the area of land in the site boundaries. Table 2 (right) is an excerpt from Table 4 of the R-Codes which summaries the key control relating to multiple dwellings on land coded R30 and above.

R-Code	Maximum plot ratio	Minimum open space (% of site)	Maximum height (m)		
			Top of external wall	Top of external wall (concealed roof)	Top of pitched roof
R30	0.5	45	6	7	9
R35	0.6	45	6	7	9
R40	0.6	45	6	7	9
R50	0.6	45	9	10	12
R60	0.7	45	9	10	12
R80	1.0	*	12	13	15

Table 2: Multiple and grouped dwelling general site requirements R30-R80 (extract from the R-Codes)

Explanatory guide to the R-Codes for R20 to R80

R20

An R Code of R20 means that an average of 450 m² is required per dwelling.

Existing Lot Size		450-899 m²	900-1,349 m²	1,350-1,799 m²	1,800-2,249 m²	2,250 m² plus
Potential No. of dwellings[1]	Single and Grouped Dwellings	1	2	3	4	5 or more
	Multiple Dwellings	1	2	3	4	5 or more

R25

An R Code of R25 means that an average of 350 m² is required per dwelling.

Existing Lot Size		350-699 m²	700-1,049 m²	1,050-1,399 m²	1,400 -1,749 m²	1,750 m² plus
Potential No. of dwellings*	Single and Grouped Dwellings	1	2	3	4	5 or more
	Multiple Dwellings	1	2	3	4	5 or more

R30

An R Code of R30 means that an average of 300 m² is required per dwelling.

Existing Lot Size		300-599 m²	600-899 m²	900-1,199 m²	1200-1499 m²	1,500 m² plus
Potential No. of dwellings*	Single and Grouped Dwellings	1	2	3	4	5 or more
	Multiple Dwellings[2]	2-4	4-6	6-8	8-10	11 or more

R40

An R Code of R40 means that an average of 220 m² is required per dwelling.

Existing Lot Size		220-439 m²	440-659 m²	660-879 m²	880-1099 m²	1,100 m² plus
Potential No. of dwellings*	Single and Grouped Dwellings	1	2	3	4	5 or more
	Multiple Dwellings[2]	2-4	4-6	6-9	9-11	10 or more

R50

An R Code of R50 means that an average of 180 m² is required per dwelling.

Existing Lot Size		180-359 m²	360-539 m²	540-719 m²	720-899 m²	900 -1,299 m²	1,300- 1,999 m²
Potential No. of dwellings*	Single and Grouped Dwellings	1	2	3	4	5-7	7-11
	Multiple Dwellings[2]	1-3	3-5	5-7	7-9	9-14	14-21

R60

An R Code of R60 means that an average of 150 m² is required per dwelling

Existing Lot Size		180-359 m²	360-539 m²	540-719 m²	720-899 m²	900 -1,299 m²	1,300- 1,999 m²
Potential No. of dwellings*	Single and Grouped Dwellings	2	3	3-4	4-6	6-8	8-13
	Multiple Dwellings[2]	1-3	3-5	5-7	7-9	9-14	14-21

R80

An R Code of R80 means that an average of 120 m² is required per dwelling

Existing Lot Size		180-359 m²	360-539 m²	540-719 m²	720-899 m²	900 -1,299 m²	1,300- 1,999 m²
Potential No. of dwellings*	Single and Grouped Dwellings	1	2	3	4	5-7	7-11
	Multiple Dwellings[2]	1-5	5-8	8-11	11-13	13-19	14-21

Notes:

1. *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,*
   - *approval by the WAPC to vary the minimum site area requirements under P1.2 of the R-Codes (variations up to 5% of site area may be approved by the WAPC).*
2. *Potential No. of Multiple Dwellings have been calculated using an assumed average dwelling area of 65m². However, dwellings can be as small 40m².*

It is important to note that there are additional requirements under the R-Codes when considering the development and subdivision of land. The above description of the R-Codes only covers requirements which relate to dwelling yield. Other requirements of the R-Codes include:

- Streetscape;
- Boundary setbacks;
- Open space;
- Access and parking;
- Site works;
- Building height;
- Privacy; and
- Designing for climate.

City of Cockburn Planning Strategy

The City of Cockburn's Local Planning Strategy (LPS) sets out the long-term planning directions for Cockburn and provides the rationale for the zones and other provisions of the Town Planning Scheme 3. The LPS sets out the City's general aims and intentions for future long-term growth and change.

The following strategies from the LPS directly relate to the formulation of the Coolbellup Revitalisation Strategy:

- Promote development near public transport routes and minimise trip lengths in order to maximise local convenience and minimise the environmental impacts of private car users.
- Encourage cycling by defining and implementing cycle networks and promoting the provision of end-of-trip facilities.
- Provide a range of housing opportunities for a diverse mix of people.
- Promote mixed uses of land in communities, especially through the location of housing in commercial centres.
- Ensure neighbourhoods include appropriate amounts of local open space.
- Enhance local identity and character by preserving buildings and places with historic, architectural, scientific or scenic value.

City of Cockburn Sustainability Action Plan 2013/14

The City of Cockburn's Sustainability Action Plan 2013 – 2014, forms part of the City's integrated reporting platform. The action plan assists in identifying how the City will work towards the City's vision as the most attractive place to live, work, visit and invest in, within the Perth Metropolitan area. The following actions directly relate to the development of the strategy:

- To plan neighbourhoods with a range of residential densities which increase towards the neighbourhood's centre;
- Develop a strategic approach to community engagement, and
- Enhance a sense of community ownership and promote Cockburn as an attractive place to live, work and visit.

Hamilton Hill Revitalisation Strategy and the Phoenix Revitalisation Strategy

The Hamilton Hill Revitalisation Strategy is currently being finalised and the Phoenix Revitalisation Strategy was completed in 2009. Both strategies provide a comprehensive plan to guide future development including guidance as to how future urban infill will be delivered and works required to facilitate improvements in the urban environment.

The Phoenix Revitalisation Strategy was a precursor to the Hamilton Hill Revitalisation Strategy and was finalised in May 2009. The Phoenix Strategy lies immediately to the south of the Hamilton Hill Strategy area. It provides a comprehensive plan to guide future development within the established suburb of Spearwood and a portion of Hamilton Hill. The Strategy developed over 100 recommendations including amendments to TPS3, the development of a built form policy to guide medium residential development, improvement to the Phoenix centre, parks, road and drainage.

The Hamilton Hill Revitalisation Strategy identified strategies to address the ageing building stock and revitalise public areas. These strategies include:

- Changes to residential densities in Hamilton Hill (see figure 2);
- Proposed land consolidation Density Bonus;
- Proposed changes to APD58 – Residential Design Guidelines;
- A POS improvement strategy;
- Recommendations for the Hamilton Hill's centres; and
- Recommendations for the suburb's movement network.

A copy of both the Phoenix and Hamilton Hill Revitalisation strategies are available on the City's website.

Figure 1 Provides the City's staging plan for revitalisation strategies accross Cockburn.

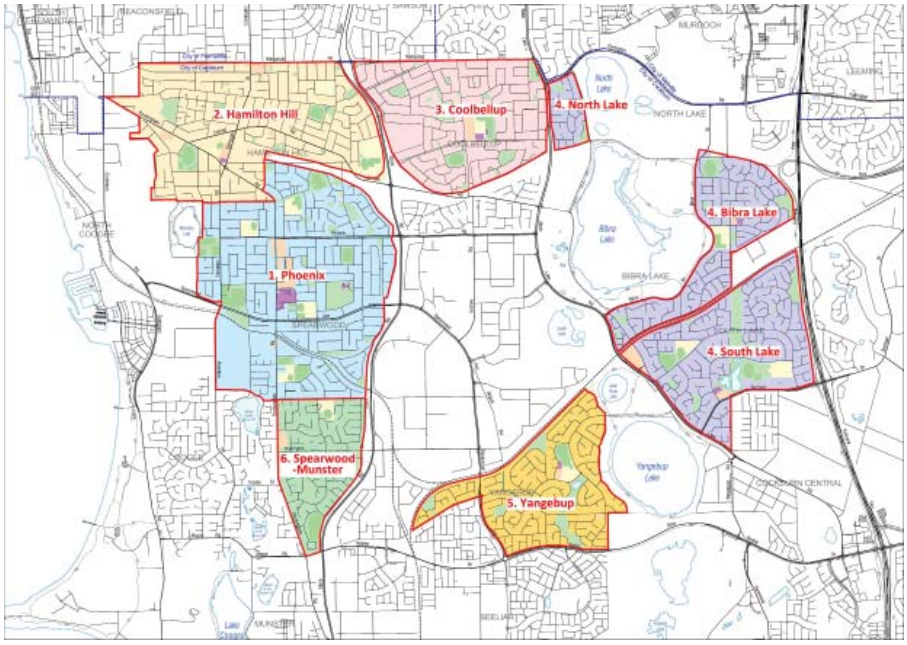


Figure 1: Staging of revitalisation strategies in Cockburn.

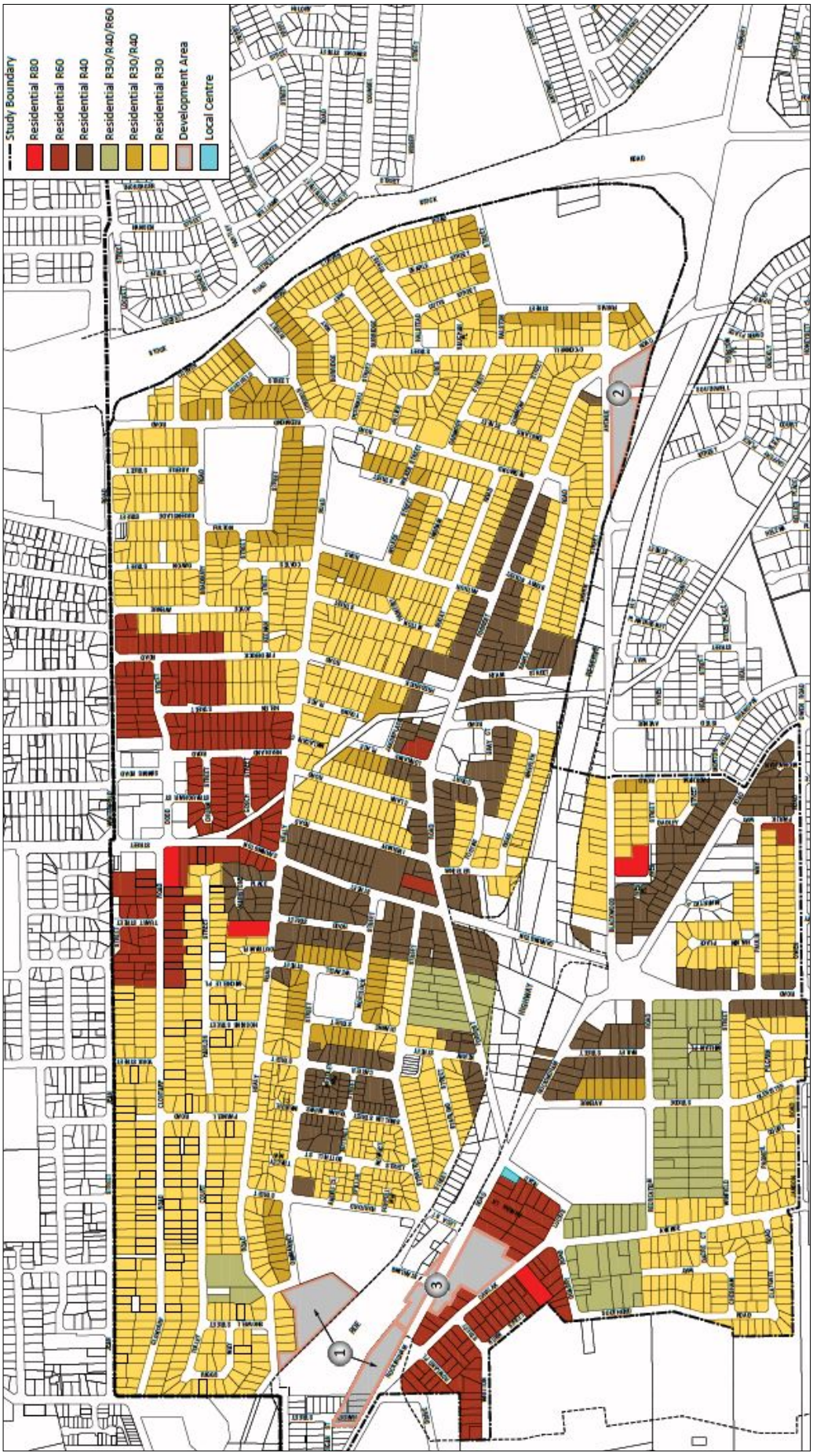


Figure 2: Hamilton Hill Revitalisation Strategy Residential Density Zoning Plan

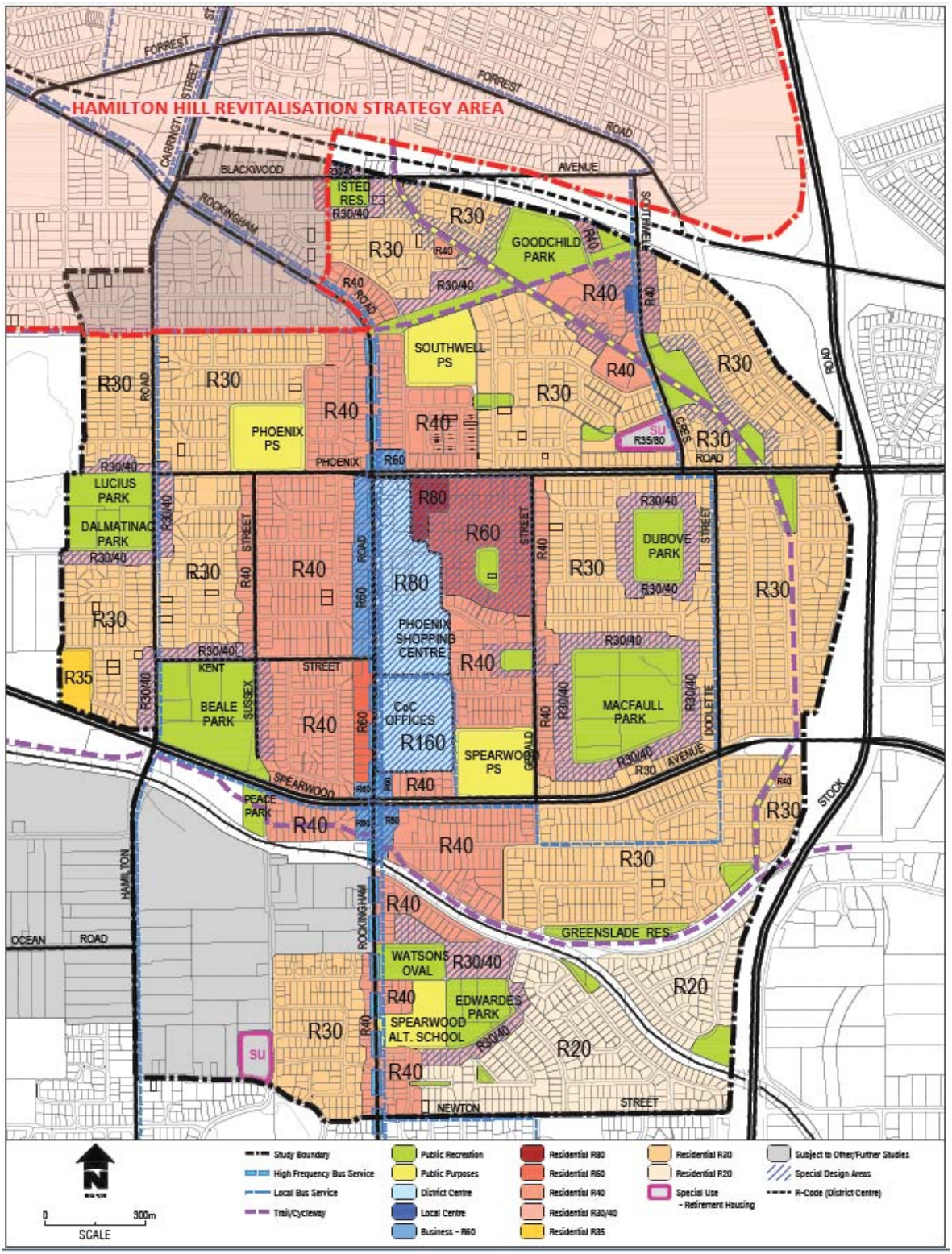


Figure 3: Phoenix Revitalisation Strategy Residential Density Zoning Plan

Regional context

Coolbellup is located within the South West corridor of the Perth metropolitan region approximately 17 kilometres from the Perth CBD. At the regional level, the suburb is a well-connected inner ring suburb and in proximity to the new Fiona Stanley Hospital, Murdoch University Precincts and close to the Fremantle city centre and Phoenix activity centre.

Coolbellup is close to major employment nodes including Fremantle, the Australian Marine Complex, Jandakot Airport and Kwinana heavy industrial area, in addition to growing and future employment nodes such as Latitude 32 industrial area, Cockburn Central and Cockburn Coast.

The suburb is in proximity to a number of neighbourhood and district activity centres including the strategic activity centre of Fremantle.

Hamilton Hill Senior High School is located on the western side of the adjacent Stock Road. North Lake Senior Campus High School is adjacent to the North/North East of Winterfold Road. Private Colleges - Seton Catholic College and Winthrop/Somerville Baptist College are located approximately 2 km North East on Murdoch Drive.

As a result Coolbellup is well located in terms of services, schools, community facilities and retail needs.

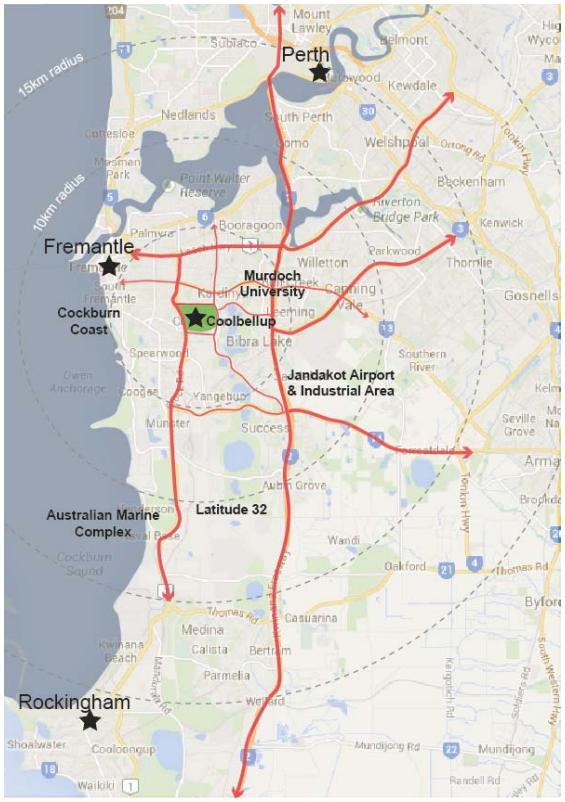


Figure 4: Coolbellup and the surrounding region

Local context

Aboriginal history

The City of Cockburn is known to the Indigenous traditional owners of the area as Beeliar Boodjar. Beeliar are one of the clans of the Whadjuk group of Nyungar and Beeliar Nyungar means ‘river people’. Boodjar means land (City of Cockburn, n.d).

‘The Dreaming’ is a term used to describe Aboriginal creation stories about events within and beyond the living memories of Aboriginal people. The Dreaming shaped the physical, moral and spiritual world and continues to renew and sustain itself today. Nyungar responsibilities, beliefs and values have been based on the same principles. The content of Dreaming stories may change depending on the narrator, audience and location. However, the Rainbow Serpent, the Waakal is always depicted as fundamental to Nyungar Dreaming, creating the shape of the boodjar and giving foundation to the meaning of life. It is easy to look at the Beeliar wetland system and visualise this huge Waakal twisting up and down,

making its way north to Fremantle and south to Mandurah (City of Cockburn, n.d).

Prior to European contact the Nyungar people were hunter gatherers who moved along definite routes determined by seasonal supplies of food and water. They lived in closely knit family groups related by kinship, and over the previous centuries, they had evolved a sound social framework and a finely tuned established order (City of Cockburn, n.d).

The arrival of European explorers and settlers in the Swan River Colony in the late 1820s and the movement of people into the interior of Western Australia in the subsequent decade was to set in motion a period of enormous change for the Aboriginal inhabitants of Western Australia. The arrival of the Europeans, with their different attitudes to land ownership and tenure, was to have a devastating effect upon the traditional way of life of the people.

Investigation of the Cockburn region prior to European settlement in 1829 shows evidence of a large Aboriginal presence. Archaeological findings show camp sites in the vicinity of the freshwater lakes in the Cockburn Sound district, particularly near North and Bibra Lakes. Artefacts and rock engravings found in Cockburn reflect their use of the land. However, their occupation of the land became threatened with the arrival of the Europeans and since 1829 the history of Cockburn has been dominated by the development of the land under European influence.

Ceremonial Tree Site

A registered Aboriginal Heritage site exists in the Coolbellup Community Schools road reserve just off Waverley Road, and adjacent to the North Western corner of Len Packham Reserve. The site is registered as *Site ID 21787 - Coolbellup Wardang (Crow) Tree.* Surveys suggest the Coolbellup Wardang (Crow) Tree to be a modified tree, ceremonial and mythological site. The site comprises the remains of a jarrah tree - *Eucalyptus marginata*. The general area of Coolbellup is recognised as a place belonging to Wardang (crow). The tree was the largest among a cluster of tall jarrah and marri trees that were nesting grounds for the crow. They served as a conduit to channel the wardung spiritual source between humans and birds.

Although severely reduced by lopping to provide clearance to adjacent power lines, the significance of the tree is important. Any disturbance or modification to this tree would require ministerial consent under Section 18 of the Aboriginal Heritage Act (WA 1972).

Figure 5: Coolbellup Wardang (Crow) Tree

European history

Suburb name

“Coolbellup” was an Aboriginal name initially given to North Lake by AC Gregory in 1842. In 1954 when the land west of the Lake was resumed by the State Housing Commission, a meeting in 1957 decided that the place should be

called “Coolbellup”, in preference to North Lake.

Land use

In the early 1900’s most of the wider locality was utilised for dairy farms however a cattle borne disease destroyed the dairy industry in the area. Large portions of native bushland remained, as did native wildlife. In the 1950’s most of the land in Coolbellup was taken up by the State Housing Commission and an intensive post-war housing scheme developed for the area.

During the 1960s the area’s population grew quickly with families moving into modern brick houses on large blocks provided at low cost loans by the state government. A number of flats were also constructed in the area. The Coolbellup Shopping Centre was constructed in the middle of the suburb, as was the Coolbellup Motor Hotel.

By the 1990s Coolbellup’s post war population boom was over and gradually the demographics changed from young families with children to older residents. By this time the suburbs housing and appearance was starting to age and the area which had provided for relatively low income levels was in need of revitalisation. Plans commenced to provide for urban renewal towards the late 1990s.

A major housing revitalisation project commenced in 1998 to reduce the amount of dwellings owned by the then Department of Housing and Works. When the project commenced in August 1998 there was a total of 2,350 dwellings in Coolbellup, 750 of which (32%) belonged to the Department of Housing and Works. The number of dwellings owned by the Department of Housing today has been significantly reduced. The renewal project also sought to refurbish many of the Department’s properties, and additionally carried out major upgrades to Coolbellup’s streetscapes with street trees being planted in Counsel Road, Waverley Road and Coolbellup Avenue.

The suburb’s major entrance points and parks were landscaped and beautified to improve the amenity of the area.

During this period, in June 2002, the Minister for Education announced a review of schools in Coolbellup, resulting in the closure of the three primary school sites and construction of one new school on Len Packham Reserve where the Coolbellup Community School is located today.

Development planning for the former three school sites has been an extensive process over almost 10 years. The sites are at various stages of development.

To read more about the development and extensive community engagement process undertaken for the former school sites please visit the project webpage: www.cockburn.wa.gov.au/Council_Services/City_Development/Projects/Coolbellup/Coolbellup_School_Sites_Redevelopment

Information in this section of the website also sets out guidance for the town centre and tavern site redevelopment (See Coolbellup Town Centre Local Structure Plan project page).

These changes over the last 15 years together with the suburbs location and Perth real estate trends have resulted in a significant increase in property values in the area. The houses in the area are

typified as 1960s 3 bedroom 1 bathroom brick and tile cottages with solid timber floors on 700 sqm blocks.

Heritage sites in Coolbellup

There are 3 sites with heritage interests in Coolbellup, in addition to the Wardang tree (see page 13). These include:

- Hargreaves Park
- Uniting Church
- St Theresa Hall

Hargreaves Park

Hargreaves Park has social significance for members of the local community as a place for active and passive recreation.

Hargreaves Park is a fine example of an area fostering environmental awareness and of natural bushland which has a good cross section of indigenous timber, for example tuart, jarrah, she-oak, banksia and grass tree.

The park was constructed in 1960 and is registered with the National Trust WA.

Uniting Church Coolbellup

Uniting Church, Coolbellup was built as Coolbellup Presbyterian Church in 1970, with the foundation stone being laid by Rev. H. D. McAndrew.

The Presbyterian Church became part of the Uniting Church, together with the Methodist Church and the Congregational Church, in 1977.The Church has social significance for those who have worshipped there since its construction in 1970.

St Theresa Hall

St Teresa has social significance for those members of the Catholic community who have worshipped at the place, or celebrated significant events there.

St Teresa was built in 1960, but when new Catholic churches were built at Hilton and Yangebup, it was decided that a Catholic church in Coolbellup was no longer needed. Saint Teresa ceased services in 1999, and the building remains church property and is used as a community hall.

Figure 6: Hargreaves Park, Coolbellup

Figure 7: Uniting Church, Coolbellup

Figure 8: St Theresa Hall, Coolbellup

Demographics

This section of the report analyses and documents the current demographics of Coolbellup relative to City of Cockburn and Perth averages and trends. This is an important part of the Background Report as it helps define the unique character of the local population as well as predict the future populous of the area.

The Coolbellup population is diverse. The suburbs desirability as a place to live and invest is expected to continue to attract young adults similar to an inner City suburb. While the median age of residents is 36, Coolbellup has a greater aged population profile than Cockburn overall with 16.3% of the population being over 65 years of age, compared with 10.3% respectively.

Coolbellup has a higher proportion of households (31.5%) earning a weekly household income of less than $600 than Cockburn (19.3%). Further, in Coolbellup 5.3% of households had a weekly income of more than $3,000, while 14.3% of households had a weekly income of more than $3,000 in Cockburn.

The largest occupational groupings amongst residents are professionals, technicians and trade workers, together comprising 36.7% of employed residents.

Coolbellup residents are heavily dependent on cars to travel to work. Only 5.3% commute by public transport and 1.5% walk. However on average Coolbellup residents own less cars than in Cockburn overall.

A higher proportion of people live in rented accommodation in Coolbellup (36.5%) relative to in Cockburn (23.8%). A lower proportion of residents own their dwelling and a smaller proportion were owned with a mortgage.

As might be expected with an aged population, a greater proportion of households consist of couples without children or lone persons, than in Cockburn overall. 54.2% of Coolbellup households consist of one or two persons. Forecasts suggest the number of one or two person households will increase to 60.4% in 2021 and 62.7% by 2031.

Housing

There are 2,367 dwellings in Coolbellup. The structure and number of dwellings is shown in Figure 9, illustrating a much higher proportion of households live in separate houses. This is consistent with the wider trend across Cockburn.

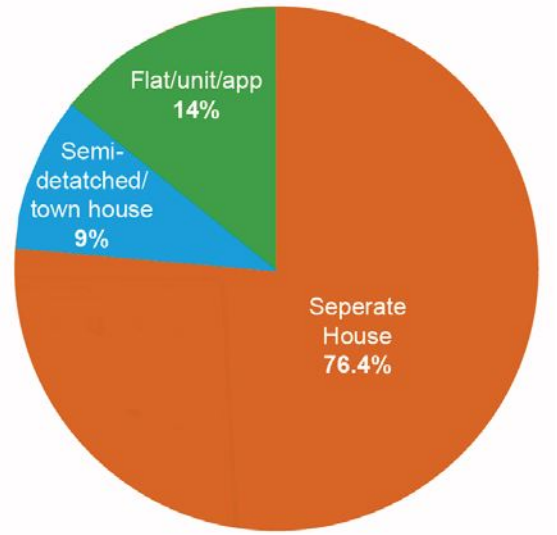


Figure 9: Coolbellup Dwelling Structure

While a high percentage of homes are detached brick houses on large blocks constructed in the 1950's when the suburb was planned and subdivided for Homeswest, also scattered throughout the suburb are flats and units generally 2 to 3 stories in height. These units and apartments commonly face public open spaces or located on corner allotments. Figure 9 maps different dwelling types in Coolbellup.

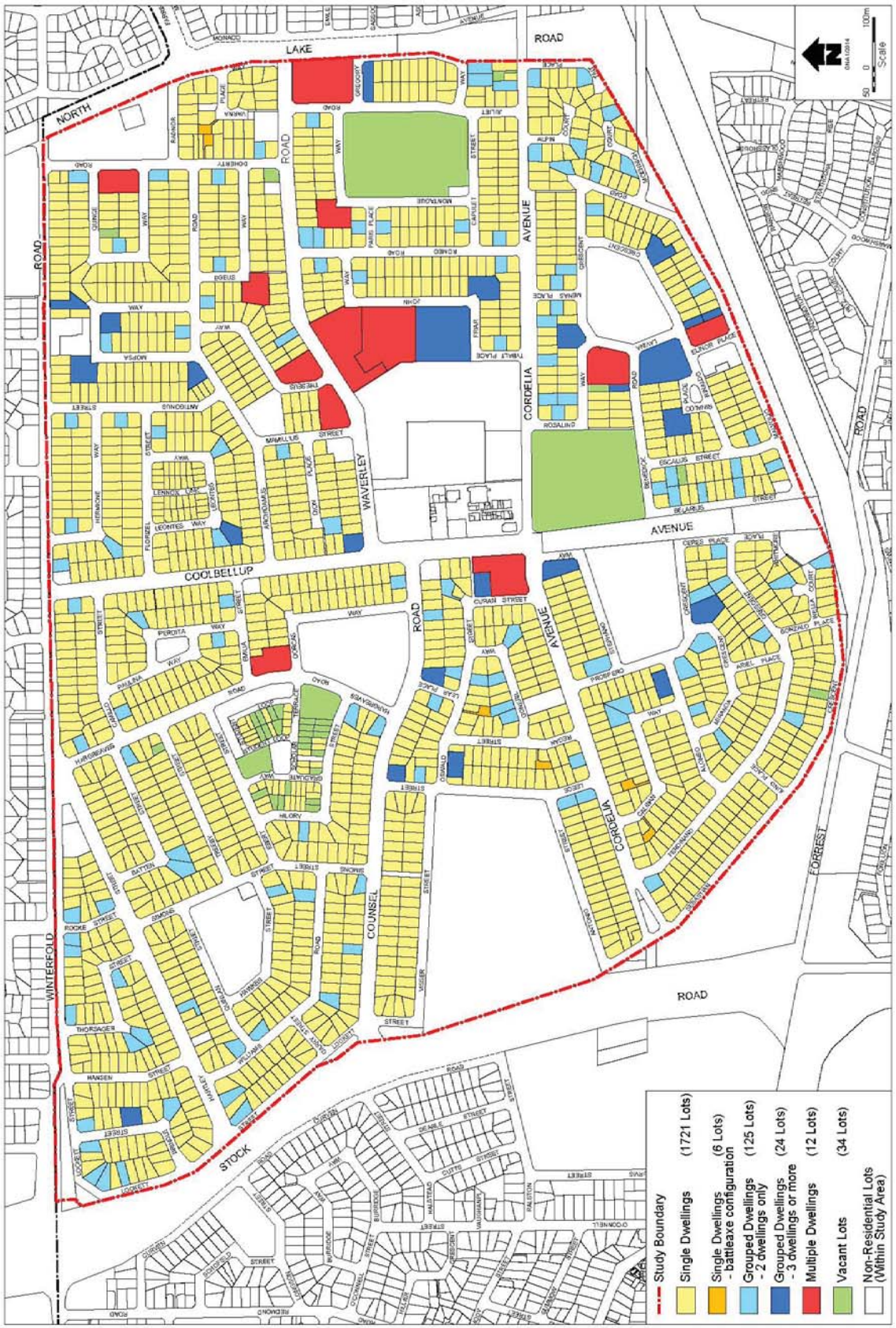


Figure 10: Coolbellup Existing Dwelling Structure Types

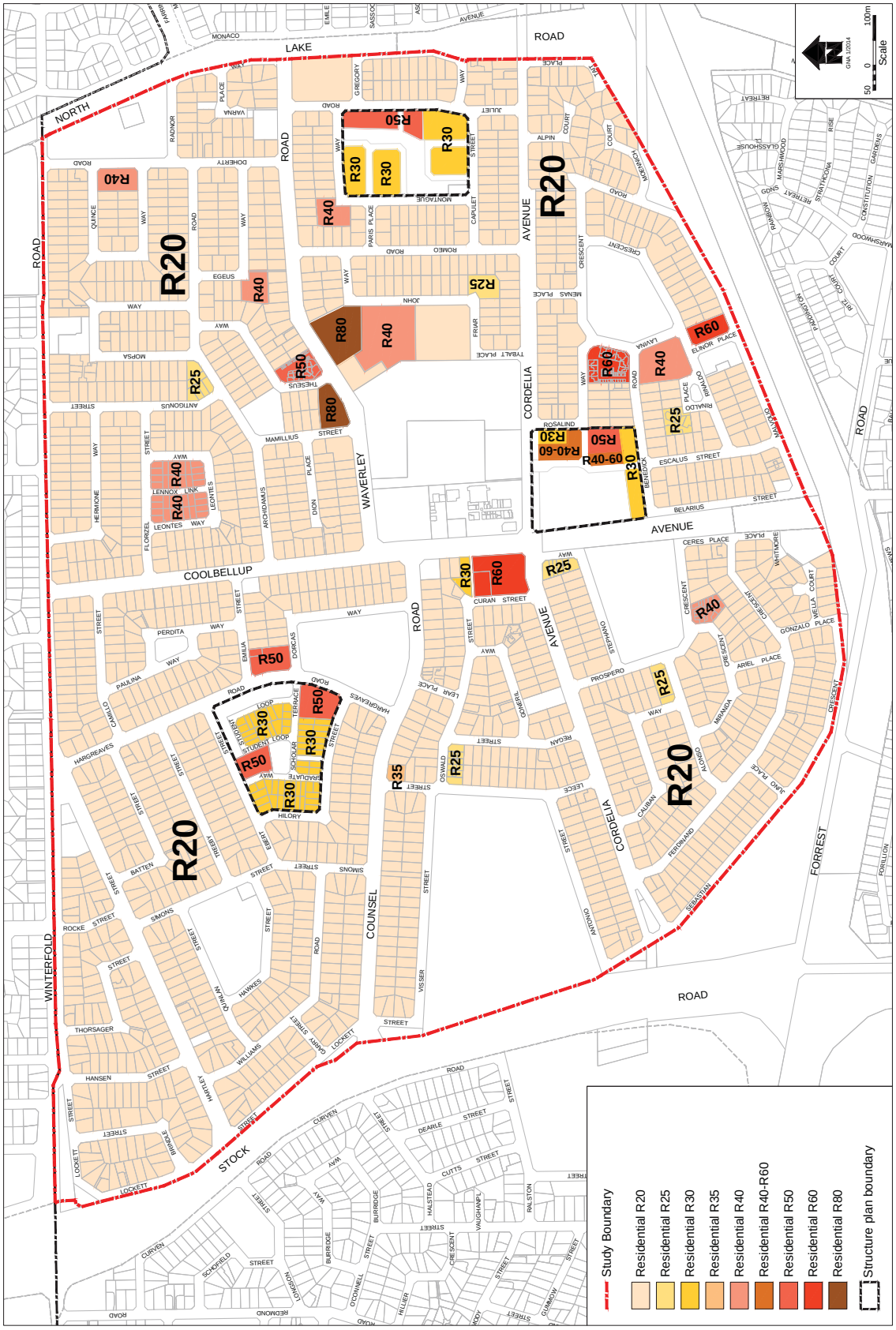


Figure 11: Current density codings.

Figure 10 maps single dwellings, grouped dwellings of various scale and multiple dwellings in Coolbellup. By far the most common are single dwellings (1721 lots).

Figure 11 shows the current density codings, R-Codes, prescribed to residential land within Coolbellup. Page 6 and 7 provides a detailed explanation of the R-Codes and the development potential under various density codes.

The majority of Coolbellup is coded R20.

Figure 12 provides an indication of the size of the single residential lots and undeveloped lots in the study area. Most residential lots in Coolbellup range between 600m² and 800m² however a proportion (409 lots) are just over 800m². The former school sites of which are currently undergoing redevelopment represent the lots over 1,400m².

This analysis provides an understanding of the existing residential development within the area, but also the development implications of the proposed recoding's outlined in Part 2 of the Strategy.

Figure 12: Two storey developments in proximity to the town centre.

Demographic and housing summary and implications

The strategy must ensure that future planning responds and supports the demographic characteristics which have been forecast for the suburb. The key demographic characteristics and trends to be considered for Coolbellup relate to:

- A diverse and aging population;
- Small and declining household sizes;
- Potential increase in young families;
- Lower income households than the wider Cockburn average, and;
- High car dependency.

The purpose of the Strategy accords with these demographic characteristics and trends. Through reviewing the residential densities, the Strategy supports the creation of a greater diversity of housing types and sizes which will provide appropriate housing options for these smaller household sizes. Further the Strategy seeks to encourage alternative transport modes through the revitalisation of Coolbellup's key streets and public places.

Alternative, smaller, dwelling types are likely to contribute to an affordable living option.

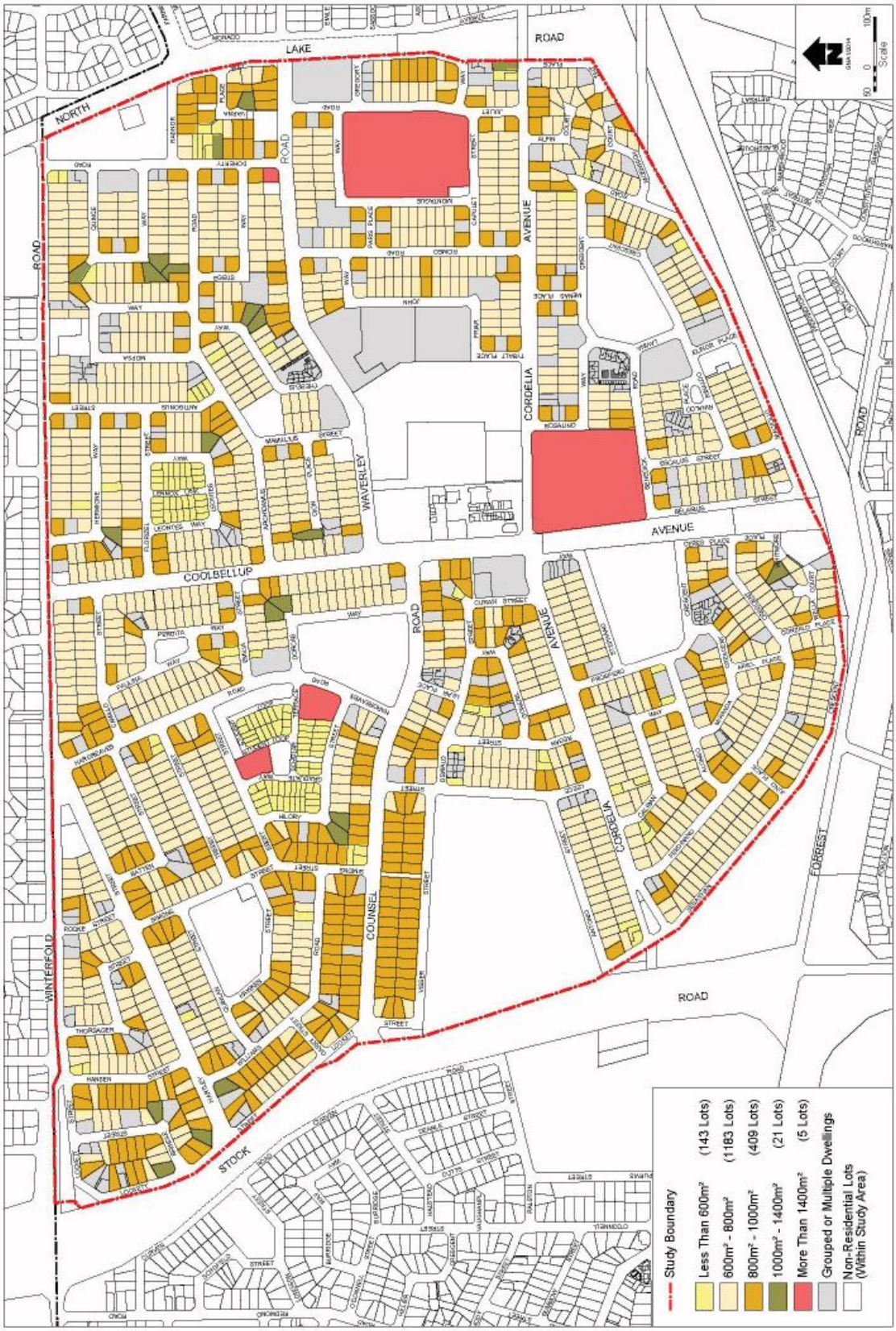


Figure 13: Coolbellup Existing Lot Size Map

Town Centre and community facilities

The Coolbellup town centre is centrally located in the heart of the suburb. Figure 14 shows the location of the Town Centre and the 400m walkable catchment and the location of community services. Coolbellup is well provided for in terms of schools, medical facilities, places of worship and community halls. An advantage of the concentration of services within the one central area is that these services naturally contribute to a central community hub.

While the Town Centre and services are located in an ideal central location, the current condition of the centre requires attention and renewal.

The important role and contribution the Coolbellup Town Centre has on the function, image and perception of the suburb was highlighted in the community engagement forums and surveys conducted as part of the Strategy formulation. The feedback collated in late 2013 resulted in:

- 147 separate comments received within the surveys regarding the need for revitalisation of the town centre;
- Identifying that an attractive town centre and shops is viewed by most residents as the characteristic that has the greatest influence on the suburbs character and peoples perception of the area;
- A desire for increased activities including community events around the town centre.

While the Strategy does not seek to review the Town Centre LSP adopted in 2011, this section seeks to collate the key points discussed in other sections of this Background Report so as to provide a resource of information to complement the adopted Coolbellup Town Centre LSP and to provide a useful reference for any future works to the town centre.

Any future works in and around the town centre should include/consider:

- The adopted Coolbellup Town Centre LSP;
- The Coolbellup Revitalisation Strategy Town Centre Surrounds Concept Plan (page 23 of the Strategy);
- Opportunities to increase community events around the town centre;
- Increased densities, particularly on land within the 400m walkable catchment. It is viewed that increased densities will contribute to the viability of the commercial centre by increasing the number of people in proximity to the Centre;
- Higher densities will assist in delivering larger buildings that will contribute towards reinforcing and enclosing these important areas and increasing activity and surveillance;
- Improve pedestrian amenity, safety, and street legibility;
- Encourage pedestrian and cycling to and from the centre through improved signage;
- Accommodate more trees; and
- Improve the relationship between the town centre and Len Packham reserve by considering the aims of the Len Packham Reserve Concept Plan (See page 31 of the Strategy).

The City remains committed to assisting the Coolbellup Shopping Centre land owners where it can.

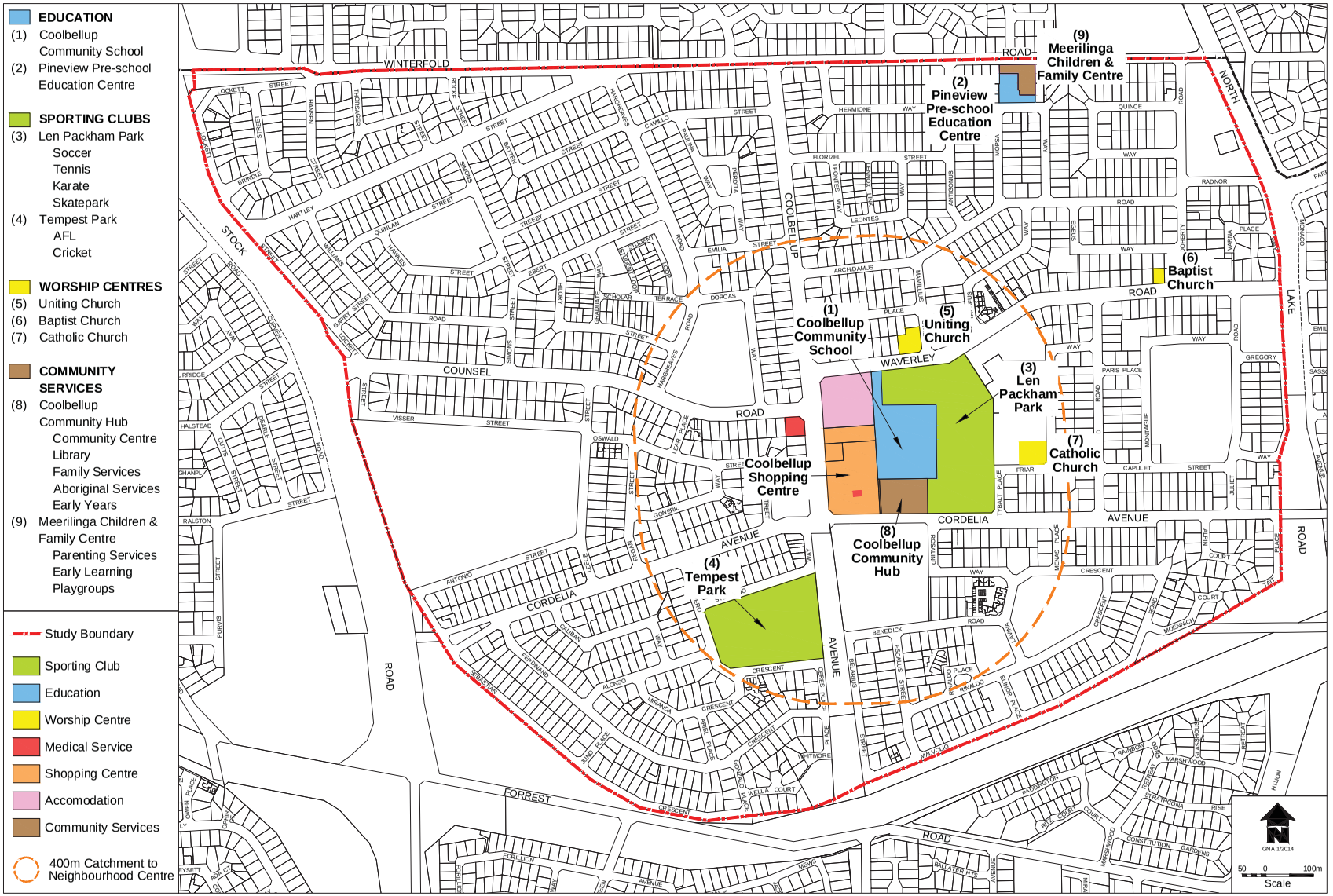


Figure 14: Town Centre and Community Facilities Map

Streetscape assessment

Streets are important shared spaces and their presentation and form impacts on the perception of a place. The interaction between the street and building scales for example is important in defining the spatial characteristic of the street. Wide streets with low buildings and no definition can feel empty and uninviting. Conversely, narrow streets with extremely tall buildings can be overwhelming and produce a sense of over-enclosure.

This section of the background report broadly identifies the key issues impacting on the presentation, function and character of Coolbellup's key streets so as to inform the strategy recommendations with regard to streetscape improvements and assist in identifying appropriate increased densities.

Spatial definition of streets

Within Coolbellup there are three main corridors; Coolbellup Avenue, Counsel and Waverley Roads, and Cordelia Avenue. With the exception of a few locations the spatial definition along these streets is poor. In particular, Coolbellup Avenue north of Waverley Road, has very poor spatial definition as the streets and dwelling setback areas are disproportionately wide when compared to adjacent building heights. The extended length of these streets also contributes to the lack of enclosure and definition in the street.

Dwellings along these streets are predominantly single storey although there are examples of two to three storey developments around the town centre and Len Packham Reserve. The width of these streets (the distance between the property boundaries) is considerably wider than most residential streets commonly found throughout Perth. The lack of street definition is further enforced by the extensive setbacks (the distance between the property boundary and the dwelling).

The remaining lower order residential streets are shorter in length and are naturally more defined due to their smaller scale however opportunities remain to improve the spatial definition of these. Table 3 provides an assessment of the spatial definition of Coolbellup's streets.

Figure 15: Aerial of Coolbellup 1974

Architecture

A significant amount of housing in Coolbellup was constructed when the suburb was first developed by the then Department of Works and Housing in the 1960's. A number of these original dwellings remain across the suburb presenting the following characteristics:

- 3 bed, 1 bath homes commonly 12m X 12m on large lots averaging 732sqm.
- Deep setbacks from the street (up to 10m).
- Plain concrete driveways.
- Commonly redbrick with some blonde brick examples.
- Diverse landscaping however native plantings are dominant.

Table 3: Streetscape assessment

Street	Existing condition	Opportunities
Coolbellup Avenue 	• Considerably wide distance between dwellings - 50m. • Poor spatial definition in the street • Predominantly single storey dwellings • Half the street provided with underground power • Poor provision of advanced street trees however it is noted some plantings have occurred recently.	• Establish consistent setbacks and building heights. • Reduce the setback of dwellings to assist in defining the street. • Plant more street trees and landscaping to resolve spatial problems. • Upgrade verges. • Consider on-street car parking.
Counsel and Waverley Roads 	• Considerably wide distance between dwellings - 50m. • Average spatial definition in the street (compared to Coolbellup Avenue) due to more advanced street trees however both Counsel and Waverley Roads present very long vistas and are wide open stretches of pavement. • Predominantly single storey dwellings • Counsel Road with underground power. Waverley above ground. • Some advanced trees however the plantings lack consistency in the street. • Poor verge maintenance.	• Establish consistent setbacks and building heights. • Reduce the setback of dwellings to assist in defining the street. • Plant more street trees and landscaping to resolve spatial problems. • Upgrade verges.

Street	Existing condition	Opportunities
Cordelia Avenue 	• Considerably wide distance between dwellings - 50m. • Some parts of the road are more defined than other sections due to the presence of more mature street trees however poor spatial definition exists. • Predominantly single storey dwellings • Cordelia Avenue west of Coolbellup Avenue provided with underground power. To the east remains aboveground. • Some advanced trees however the plantings lack consistency in the street. • Poor verge maintenance.	• Establish consistent setbacks and building heights. • Reduce the setback of dwellings to assist in defining the street. • Plant more street trees and landscaping to resolve spatial problems. • Upgrade verges.
Remaining lower order residential streets 	• Considerably wide distance between dwellings – mostly 40m however some examples are up to 50m. • Generally, most streets present a lack of uniform street tree planting. • Predominantly single storey dwellings however units and town houses are scattered around the suburb. • Poor level of verge maintenance impacts greatly on streets.	• Establish consistent setbacks and building heights. • Reduce the setback of dwellings to assist in defining the street. • Plant more street trees and landscaping to resolve spatial problems. • Upgrade verges.

Given the relatively small dwellings on large lots, in addition to their square form, the traditional Coolbellup homes present cottage type structures. These homes are very small in size compared to today's three bedroom dwellings.

The remainder of the suburb presents a range of styles that are intermittently scattered throughout the suburb and as a result no further architectural vocabulary dominates.

Opportunities

- The deep setbacks of lots accommodating these older style cottages may result in some land owners either extending their home towards the street or providing an ancillary dwelling in the front setback. For example a granny flat. This is likely to have an impact on the streetscape as compared to the common alternative in other suburbs of providing further development behind the existing dwelling. An opportunity exists to provide design guidance and good practice examples within the Strategy's proposed "Medium Density Good Design Guideline", not only to ensure quality streetscapes but also to protect the architectural integrity of the cottages of which in several streets is a contributor to the character of Coolbellup.

Landscape elements

Street trees and vegetation within a street contribute greatly to a pedestrian experience and can assist in various other ways such as slowing down traffic and contributing to sustainability aims by reducing the impact of excessive heat in suburbs (Commonly referred to as Heat Island Effect).

The presence of vegetation is a major factor in establishing edges between the road and footpath space. Most importantly, street trees provide habitat for wildlife, such as birds, that add an additional character of liveliness to the complexity of the street

Elements that contribute to a high quality streets condition include:

- Street Trees;
- Median Trees (trees down the centre of the road);
- Shrubs, and;
- Ground covers.

Opportunities

- An opportunity exists right across the suburb to improve Coolbellup's streets through the provision of landscaping.
- Verges can be better maintained.
- There is an opportunity to use different tree types to demarcate edges between neighbourhoods and at major intersections.
- There is an opportunity to use street trees as a vegetative connection between parks and open spaces.
- There is an opportunity for a varied use of different street trees to provide diverse habitats for different types of wildlife.
- There is an opportunity to develop a scheme where tree species relate to a sense of direction.

Safety issues

The community has identified the need to address safety concerns and anti-social behaviour at night in Coolbellup. Reports

suggest illegal motorcycle riding occurs by minors and the City has recorded regular occurrences of vandalism to public facilities including the Len Packham Hall.

While an element of these issues need to be addressed by the Police, there are several ways in which to increase perceptions of security in the area, including:

- Maintaining clear visual areas beneath tree canopy and above shrubs for clearer visibility;
- Appropriate lighting;
- Encouraging more people to utilise streets and stay in them longer by providing uses and activities that bring people to local parks and the town centre;
- Ensuring dwellings front the street thereby increasing surveillance by residents;
- New commercial developments in the town centre addressing public spaces and streets;
- New developments should incorporate safer by design guidelines (see Designing Out Crime Planning Guidelines, June 2006)

Opportunities

- Incorporate surveillance and security considerations within the proposed verge maintenance brochure.
- Continue to upgrade lighting when the next round of underground power occurs.
- The City to ensure a high level of design for future development applications proposed on the town centre site.
- Street tree plantings and upgrades will assist with encouraging greater use of public spaces including streets.

Figure 16: An opportunity exists to improve the presentation of the Coolbellup Town Centre.

Streetscape assessment conclusion and Recommendations

The opportunities identified here have directly informed the Strategy's recommendations, including:

1. Increasing densities. This will directly contribute towards improving the spatial definition of streets, in particular Coolbellup Avenue. In addition to increased bulk and scale, the R-Codes allow for a reduced setback (the area between the front property boundary and the dwelling) and therefore dwelling will be able to be built closer to the street;
2. The preparation of the Street Tree Masterplan. Consistent street trees will help frame the street and will therefore assist in reducing the

impact of streets undergoing change as a result of infill development and differences in dwelling setbacks;

3. The concept plans proposing the upgrading of landscaped areas in key Coolbellup streets;
4. The verge education brochure;
5. Amendments to Local Planning Policy APD58;
6. The development of a Medium density Good Development Design Guide;
7. The City's commitment to applying for the next round of underground power lines for Coolbellup East.

Public open space

In new residential estates 10% of the gross sub divisible area is required to be provided for POS (Liveable Neighbourhoods, October 2007). This standard has a long history in WA, stemming from Perth's first metropolitan plan, the Stephenson Hepburn Plan of 1955. POS provision calculations (Figure 18) show that Coolbellup currently has a provision of 10%. As such there is currently an adequate supply of open space in Coolbellup when considering Western Australian standards.

POS is generally described as either active or passive and generally there should be a balance between the two in an area. Active POS includes facilities such as sports fields, courts and kick about areas, whereas passive open space includes parkland provided for non-specific activities other than the general enjoyment and recreation of residents. Neighbourhoods should generally provide for a range of activities and a good balance of both active and passive areas.

Figure 17 maps the location and walkable catchments of the local, neighbourhood and district parks in Coolbellup. This report provides an integrated assessment of each of the parks in Coolbellup and identifies key considerations to be considered when making recommendations for future upgrades.

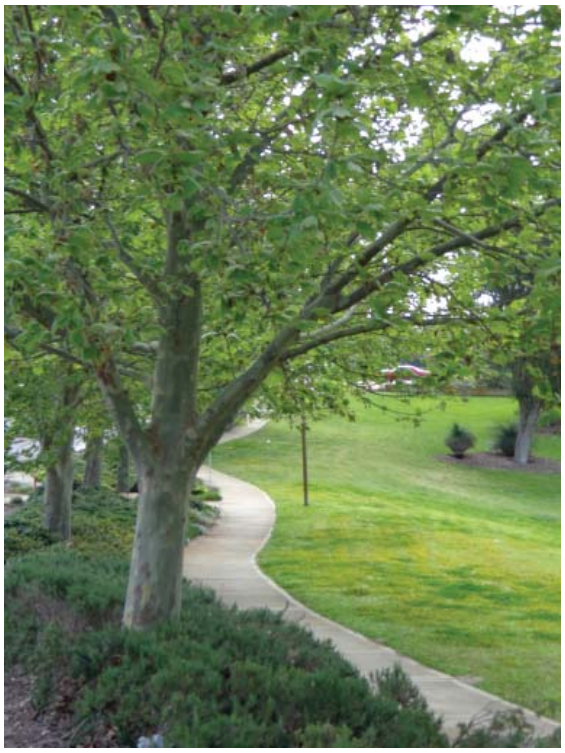


Figure 17: Hargreaves Park, Coolbellup

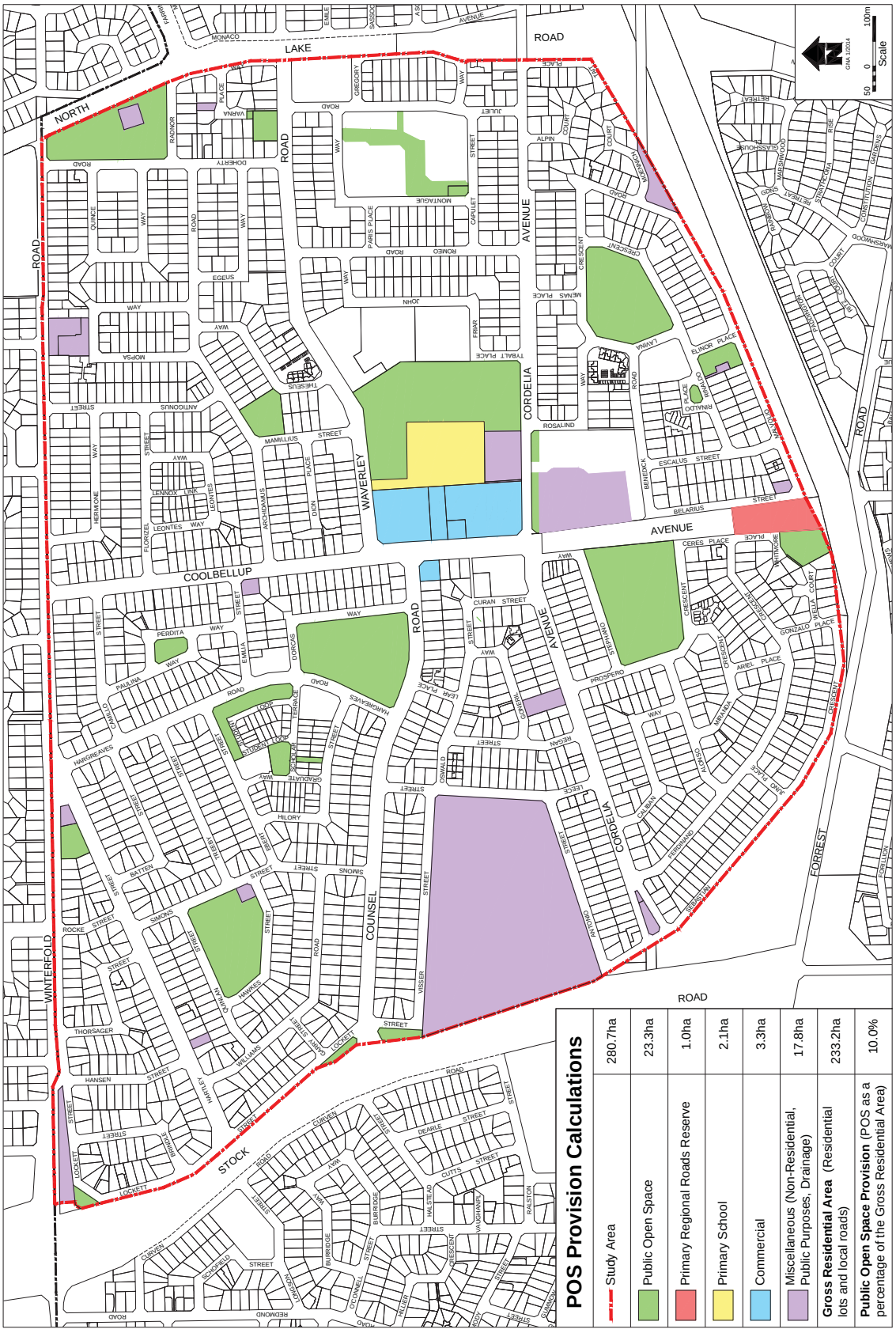


Figure 18: POS Provision Calculations

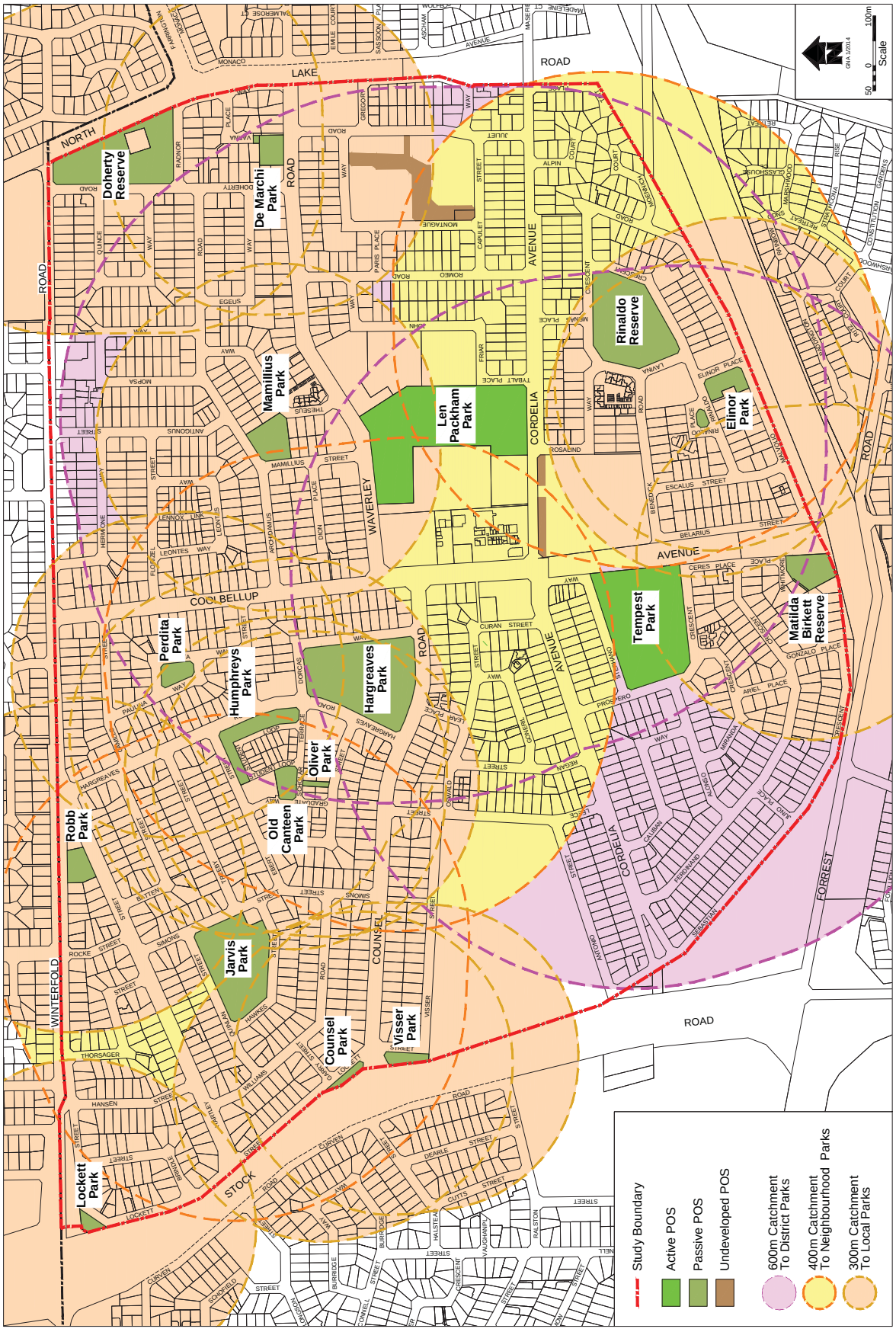


Figure 19: Location and walkable catchment of POS

Len Packham Reserve – 96 Cordelia Avenue. Reserve Category: District

Location

The Len Packham Reserve (red box in photo above) is located within the central core of Coolbellup. The site is bounded by Waverley Road to the North; aged care, strata developments and Tybalt Place to the East; Cordelia Avenue to the South; and the Len Packham Hall and Coolbellup Community School to the West. The Hall is located on the Western boundary within close proximity to the Community Hub and school.

Landform

Len Packham Reserve slopes from West to East and has been re-contoured creating a lower terrace for the existing playing fields. The Len Packham Clubroom is elevated above the playing fields and is generally at the same level as the Town Centre facilities to the west. As a result of this level change an embankment exists separating the fields from the Town Centre on the North West corner. Another embankment, (approximately 2 metres high), separates the playing fields from the back fences of properties to the east.

Landscape Development

The reserve is fully turfed and irrigated. Mature trees flank the perimeter of the reserve along Waverley Road, Tybalt Place and Cordelia Avenue. Historical photographs from the 1950s reveal that the large trees and grass trees along the eastern side of the reserve date from the days before Coolbellup was developed as a residential suburb.

Building Development

Len Packham Reserve is freely accessible from the North and South directly off the adjacent roads. To the West however, pedestrian access is restricted by embankment (described above). A retaining wall exists along the Western boundary towards the North. Stairs are provided up to the adjacent access road and rear of the town centre development however this corner of the reserve is relatively disconnected from the tavern and town centre site.

The Len Packham Clubrooms stand centrally within the reserve. It contains a large meeting room, kitchen and catering facilities, and internal toilet facilities. Adjacent to the hall are 29 car parking spaces provided for the Coolbellup Hub development, and a further 70 spaces provided for use by the school.

The South East corner accommodates a skate park (with eight parking bays) and two flood lit tennis courts.

Current Use

The tennis courts have recently been upgraded and are well used by local tennis groups all year round. The skate facility is also well used. The two soccer pitches are heavily used during the winter months by a junior club (Phoenix Knights) and a senior club (Fremantle and Croatia). Due to the location of the clubrooms, the soccer pitch is constrained in width.

Future development should consider how the playing surface can be widened. The Reserves sports fields have capacity to accommodate more use during the summer months. The Len Packham Clubrooms are a well utilised Council asset and are leased to community groups, sports groups and for community events. Due to it's patronage by the soccer clubs it is well used during winter. A local Karate Club (Tuesdays and Thursdays) and private functions (predominantly weekends) also utilise the hall all year round.

The City's Buildings and Facilities Maintenance team expend a considerable amount of resources repairing the Len Packham Clubrooms. It is regularly subject to vandalism. It is understood poor surveillance in this area is contributing to the problem. One approach suggested is to place a fence around the western perimeter of the building. Should this occur, attention should be given to how the fence and the hall interfaces with the surrounding land and land uses should be considered during the design and planning stage. It should be noted a fence is not preferable however it is understood the ongoing costs are significant. Minimising the impact of the fence should be considered.

The implementation of sports field lighting has been identified, as has the widening of the soccer pitch adjacent to the Clubrooms which currently do not meet sporting code standards.

There are no footpaths provided in the reserve.

Surrounding Development

Len Packham Reserve is bound to the West by the school and Community Hub. Residential and aged care developments address the Northern and Eastern perimeters and are generally coded R-20. One R-40 and two R-80 land parcels are located adjacent to the North East corner. R-20 coding with occasional higher densities, usually facing public open space, is generally characteristic of the wider suburb.

Two heritage items listed in the City of Cockburn Local Heritage Inventory are located in close proximity to the reserve.

The Uniting Church, Coolbellup is located to the North of the site at 9 - 11 Mamillius St Coolbellup. The inventory identifies the building is significant for those who have worshipped there since its construction in 1970.

Figure 20: Underutilised land on the corner of Waverley and Mamillius Street, fronting Len Packham Reserve presents an opportunity for development to better frame the park edge.

Figure 21: Uniting Church Coolbellup - A small, functional brick church with a brick cross located on the wall near the entrance.

Figure 22: St Theresa Church, Friar Avenue, Coolbellup.

St Theresa Hall is located towards the South West of the site on Friar John Way and holds social significance for those members of the Catholic community who have worshiped at the place, or celebrated significant events there. It continues to have social significance for the users of the Hall. The parcel of land also accommodates grouped dwellings managed by the Roman Catholic Church for seniors. The residential buildings on this site is aging and are likely to require upgrading or replacement in the short to medium term. Any new development within this location should consider its frontage to Len Packham Reserve, protection the curtilage of the church and a potential connection with the reserve.

Figure 23: St Theresa Church located in the South East corner of the lot, surrounded by residential grouped dwellings.

Future development

The Coolbellup Town Centre Local Structure Plan was adopted in 2013 and provides guidance for the redevelopment of the existing shopping centre site and the tavern development. The LSP makes provision for a mixed use development with good accessibility with the surrounding residential areas and public and community facilities.

In November 2013 a development application was approved over the existing tavern site for 152 one and two bedroom apartments.

No further development applications have been submitted however the LSP makes provision for an R80 residential density and identifies a projected commercial floor space in the order of 3,427 – 5,712sqm by 2026.

Additionally, an LSP is adopted over the former Korilla School site, located towards the South West of the reserve. The LSP makes provision for a mix of aged care and medium density single and grouped dwelling development of which will complement the Town Centre.

Figure 24: Coolbellup Town Centre (north of Cordelia Avenue) and Former Korilla School site (South of Cordelia Avenue Local Structure Plan.

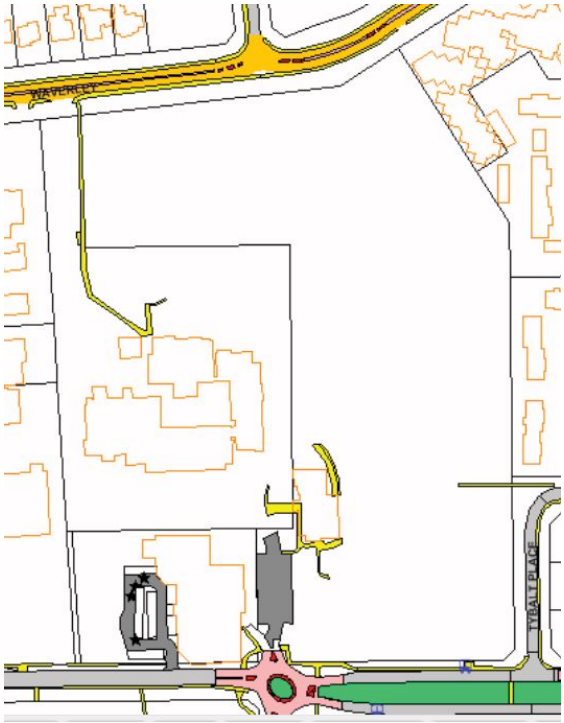


Figure 25: Footpath network in the vicinity of Len Packham Reserve (shown in yellow).

Access to and within Len Packham Reserve

The reserve is easily accessible by car and ample parking is provided, particularly on weekends and after office hours when additional parking is available in and around the Coolbellup neighbourhood centre.

Footpaths connect the reserve to the surrounding streets however the embankment between the reserve and the town centre will be likely to dissuade use of the reserve by elderly people or those with prams trying to traverse the reserve.

Diversity of recreation opportunity

While this reserve is very successful at meeting the needs of active sports users, particularly for soccer, tennis, and skateboarding, there is limited opportunity for informal, unstructured use of the park. This is a result of a lack of facilities such as seating, play opportunity or visual interest and variety in the appearance of the park.

It is recognised this park is accessible and central, and as such it should be developed to encourage its use for informal activities such as dog walking, ball games, picnicking, personal contemplation and rest.

Opportunities to increase value to the community

The value of the Reserve would be increased by providing more effective and formal access through the reserve, in addition to utilising the areas not currently given over to sports fields to accommodate a greater range of users while respecting the predominant active recreation focus of the park.

Considerations

- The Len Packham Reserve is centrally located adjacent to the civic hub and is the most central public open space within the suburb therefore it should be accessible to a wide range of age groups and provide for diverse activities.
- Several existing and proposed aged care facilities are within the immediate locality and therefore passive, functional, spaces should be provided for seniors and visiting family members such as visiting grandchildren.
- The edges of the reserve remain underutilised and lack any function beyond being green scenery.
- The Northern end of the reserve remains underutilised outside of soccer season.

- Several land parcels adjacent to the reserve remain either underutilised with regard to residential development opportunities or the aging building stock requires replacement/upgrading in the short to medium term. Potential exists for increasing the density of development to revitalise this area and for new developments to improve connections with the reserve.
- The soccer field is undersized and any future developments on the reserve should not impact on the ability for the field to be widened when funding becomes available.
- An opportunity exists to improve the visual and perceived connection between the Uniting Church (on the opposite side of Waverley Road) and Len Packham Reserve.
- Access to the park from Tybalt Place should be formalised.
- Vandalism and damage to the Len Packham Hall is a regular occurrence.

Recommendations

1. Any planned changes should consider the wider aspiration of connecting the town centre with the park.
2. A passive seating area, play equipment and picnic sets in the North East corner would provide opportunities for the adjacent aged care facility to engage and utilise the park. This would require consideration of how residents would be able to gain access to the park such as the provision of secure gates into the group housing areas.
3. Introduce sports field lighting. This will require widening of soccer pitch to minimum width required by sporting codes.
4. The length of the Eastern boundary while well maintained is underutilised and lacks a function. There may be potential for this area to accommodate a community garden. The embankment in this location could prove suitable for a terraced garden and as a result be a great opportunity to encourage gardening for seniors given the opportunity to provide for raised garden beds. Further, the primary school is likely to be another group likely to be interested in such a project. This location would also ensure the facility is provided with good surveillance and the interaction of children and seniors is viewed as favourable. Tree planting and seating between this area and the soccer fields could provide for both uses and formalise this boundary as would a formalised path connecting the Northern side of the park, to the South.
5. Any opportunity to provide for additional trees without impacting on the existing facilities including the soccer fields should be explored. An opportunity exists to provide additional seating and trees in the area East of the school - North of the Len Packham Clubroom.
6. Opportunity to facilitate pedestrian access through the site should be explored however this should not compromise the soccer pitches and other sports facilities.
7. Any future actions to address the vandalism to public facilities should consider the wider design and

functional objectives of the reserve and surrounding land use aims. To ensure the reserve remains a popular and attractive resource, retrofitting the Len Packham Clubrooms to make it more resistant to attack should not be permitted to increase the sense of foreboding that security devices such as high fences with bars tend to project.

Tempest Park – 28615R Stephano Way. Reserve Category: District Park

Location

Tempest Park is located to the West of Coolbellup Avenue, West of the former Korilla School site on which an aged care facility is proposed (See former Korilla Site LSP in previous section of this report).

Landform

The park falls from East to West. The site has been leveled to create a central playing field 4m below the level of Coolbellup Avenue.

Landscape Development

The sports field component of the reserve is fully turfed and irrigated. Mature trees enclose the perimeter of the reserve. Two large stormwater drainage swales has been introduced into the park. One swale in the North East corner, the other in the South West corner of the Park. The presence of these drainage facilities will constrain future development of the park.

Stormwater drainage swales (blue speckled areas) and 1m contours (red lines) occupy large areas of Tempest Park (used the snip tool to get this image).

Historical aerial photographs reveal the eastern and southern boundaries of the site were planted with native trees and shrubs in the 1980s. This is generally unmaintained vegetation consisting of mature trees and shrubs largely screens the park from view from adjacent streets.

Built Development

Tempest Park's clubrooms are located in the North West corner of the park, and are leased to community groups. The Clubrooms have a kitchen, bar, and change rooms. Staged installation of floodlights has recently begun, with two of four proposed new light towers installed. The Clubhouse is serviced by

56 on site car parking bays.
A children's playground with sand soft fall is located adjacent to the club house.

Current Use

Tempest Park provides for Aussie Rules football. A senior team utilises the field during winter for both training and home games. Teams participating in the competition come from the Cockburn and Bibra Lake areas. The nearest junior football club is at Meller Park in Bibra Lake and at Davilak Oval in Spearwood.

A cricket pitch is also located in the park and is used in summer by 5 teams. The cricket club have expressed to the City a desire to relocate to an area with a greater catchment of children.
The City's Recreation Services team report the club rooms are well utilised.
Surrounding Development

Predominantly single storey residential development surrounds the North, South, and Western side of the Park. These houses are generally coded R-20 with the exception of one R-40 and two R-25 land parcels (see plan below).

The building stock within this area is approaching 50 years of age. It is likely to need significant upgrades or replacement within the short to medium term.

The perimeter of the park facing theses residential areas presents opportunities for accommodating embayment style on street car parking.

Figure 26: Tempest Park - City of Cockburn TPS3 Zone Map.

The former Korilla School site is located to the East of Tempest Park, on the eastern side of Coolbellup Avenue.
The Local Structure Plan for the former Korilla School site identifies a future residential density of R27 for the aged care component and ranges up to an R60 density across the former school site.

Figure 27 Former Korilla School site LSP.

Access to and within the reserve

The use of bollards around much of Tempest park limits vehicle access to the Clubrooms car park. This is entered from Prospero Crescent at the eastern end of the Park.

Figure 28: Tempest Park Footpath and car park network (shown in yellow).

Pedestrian access into Tempest Park is possible from around it's entire perimeter, except for the south eastern corner of the park, which presents a thicket of vegetation that is impenetrable to pedestrians, The southern boundary of the park is bounded with a 1.5m high chain mesh fence with two open gateways, one at the very western end and one halfway along the park boundary fence.

Diversity of recreation opportunity

The reserve provides for a range of active and passive uses including formal sport, meeting space within the club rooms, a playground and extensive irrigated lawns with mature shade trees .

Opportunities to increase value of park for community use

A key issue with Tempest Park is the perception that the park is disconnected from the town centre.

The park is largely screened from view by motorists using Coolbellup Avenue due a low hill or mound. This is a remnant of the original landform of the area. The park and Coolbellup Avenue have been established in cuttings either side of this mound, Pedestrian access into the park is also hampered in its south eastern corner by a thicket of vegetation planted on the mound in the 1980s.

Opportunities exist to better integrate Tempest Park into the visual catchment of both the aged care facility on the former Korilla School site, and that of motorists approaching the town centre precinct.

Selective clearing of ground storey vegetation to establish vistas through to the park's irrigated lawns beyond, and the establishment of a rural style footpath along this side of the road would increase the park's visual prominence and local interest and awareness of this park as a town centre recreational resource.

Considerations

- Tempest Park is one of two parks in close proximity to Coolbellup's town centre. Potential exists for visually integrating the park with the aged care facility proposed for the former Korilla School site. The Park should therefore be accessible to a wide range of age groups, including seniors and their visiting relatives.
- The eastern edge of the reserve remains underutilised and presents poorly to the main thoroughfare, Coolbellup Avenue.

The sporting provision should be preserved. Parks Services have produced a strategy for establishing the most effective layout of flood lights for the football and cricket ovals.

Recommendations

1. Modify the eastern boundary of the park facing Coolbellup Avenue to increase ease of pedestrian access across Coolbellup Avenue to the park from both the former Korilla School site and the Town Centre precinct;
2. Identify and establish vistas into the park from Coolbellup Avenue to increase the visual prominence and recognition of the park as a town centre resource. Retain the park's mature trees and consider further tree planting to perpetuate the sheltered shady nature of the park.
3. Any future works is not to impact on the football field/facilities. Development of the park should consider football and cricket oval layout and orientation and the provision of floodlighting columns when funding by Council becomes available. These features will have implications for locating pedestrian access points, tree planting and other ancillary facilities within the park.
4. As further car parking is required in this area, opportunities exist to formalise and enhance on-street parking on the streets forming the perimeter of the park. Future works should consider enhancing pedestrian access between the former Korilla School site, the Town Centre and the park.

1. **Rinaldo Reserve –** Rinaldo and Lavinia Crescent
2. **Rinaldo Place Reserve –** Rinaldo Place and Rinaldo Crescent
3. **Elinor Reserve –** Rinaldo Crescent, Elinor Place and Malvolio Road
4. **Moennich Reserve –** Malvolio Road and Moennich Court

Location

These four reserves are located towards the South East corner of Coolbellup. The largest reserve, Rinaldo Reserve, is located approximately 180m East of the former Korilla School site.

Landform

1. The landform within Rinaldo Reserve slopes from the North-West and North-East. The central lawn areas forms a terrace 4m below the embankment in the north-east corner and 2m above the stormwater drainage swale in the south west corner of the reserve.
2. The landform of Rinaldo Place Reserves can be characterised as a relatively steep (1:6) East West slope.
3. Elinor Reserve is established down hill of and south-west of Rinaldo. Elinor Reserves landform can be characterised as bowled with a 3m deep drainage swale occupying its central area. The landform of Moennich Reserve can also be characterised as bowl shaped. The 1:5 slopes also contains a stormwater drainage swale at the reserves central lowest point, some four metres below its highest northern boundary.

Landscape Development

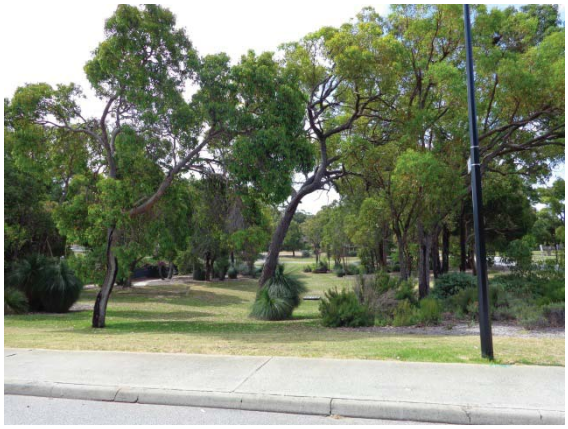
Figure 29 (above): 1. Rinaldo Reserve, 2. Rinaldo Place Reserve, 3. Elinor Reserve, 4. Moennich Reserve and figure 27 (below) footpath network.

1. Mature trees line the perimeter of Rinaldo Reserve and a concentration of trees are located within the South-West corner.
2. Mature native trees fill the tiny Rinaldo Place Reserve.
3. Elinor Reserve is a well maintained irrigated park planted with native species.
4. Moennich Reserve is not irrigated, it is slashed four times a year and contains remnants of bushland shrubs and trees in a very degraded state.

Built development

1. Rinaldo Reserve provides a generously sized central irrigated lawn open to surveillance from surrounding streets, a children's playground, half-court basketball ring and a BBQ. A footpath winds around the park providing good internal access.

Figure 30 - 32: Rinaldo Reserve



2. Rinaldo Place Reserve is a small pocket park containing a children's playground with sand soft fall. Mature native trees shade the park, which is provided with a strip of irrigated lawn 2 or 3 metres wide along its southern boundary.

Figure 33: Rinaldo Place Reserve

3. Elinor Reserve is developed with extensive irrigated lawns, 70% of the site remains shaded by mature native trees and shrub planting. A number of low curving retaining walls have been installed to exaggerate the depth of the lawn thereby increasing the capacity of the stormwater swale that occupies the centre of the park. The walls have enabled the retention of the mature bushland vegetation over a large part of the park.

Figure 34 - 36: Elinor Reserve

5. Moennich Reserve is unimproved POS. Its principle role is to provide stormwater drainage capacity for the adjacent streets. The site is slashed four times a year by the City. The reserves southern boundary abuts the Department of Transport's Roe Highway reserve. This currently forms an attractive bushland backdrop to the reserve. A few remnants of the sites former bushland vegetation remain.

Figure 37 - 39: Drainage Reserve

Current use

Observations carried out in late 2013 show very little activity took place within these parks on weekdays.

Surrounding Development

Residential development surrounds the North, South, and Western side of Rinaldo Park and an R-20 code has

been applied, with the exception of four sites fronting two of the reserves, they range from R-25 to R-60 and are illustrated in figure 37.

Most of the building stock within this area dates from the late 1960s and is likely to need significant upgrades or replacement within the short term. Several of the larger sites accommodating grouped or multiple dwellings are owned by HomesWest.

Future development

With the exception of the former Korilla School site of which is discussed above, there are no other proposals known to the City at this point in time.

Figure 40: Rinaldo Reserve and surrounds zoning - CoC TPS3

Access to and within the reserve

Rinaldo Reserve, Rinaldo Place and Elinor Reserve provide excellent access around the perimeter of the sites.

Moennich Reserve presents as a steep sided non irrigated drainage reserve. It's role beyond stormwater disposal is currently ill defined. There are no paths worn across the site, whereas the Roe Highway road reserve immediately south of it is criss crossed with sand fire trails and maintenance tracks.

Diversity of Recreation Opportunity

The parks provide opportunities for walking, children's play, basketball, dog walking, BBQ's and quiet reflection and rest. The central lawn in Rinaldo Reserve is large enough to support organised/ formalised outdoor activities such as fitness training, group gathering and informal ball games.

With the exception of maintenance and some native planting to assist with reducing weed infestation it is unlikely the introduction of any further works or additional infrastructure will be appropriate in Moennich Reserve until the Roe Highway has been developed.

Opportunities to increase value of park for community use

The community should be further consulted on opportunities to diversify these parks in the future review of parks suggested to be conducted in 4 to 5 years' time. The constraints imposed by the use of the reserves as drainage facilities is likely to constrain any future development within the reserves.

Considerations

The reserves provide for a good mix of park functions for the South-East corner of Coolbellup:

- The three parks provide for a range scaled spaces and provide a range of activities
- Opportunities exist to increase densities for lots fronting these public open spaces.

- Several land parcels remain either underutilised with regard to residential development opportunities or the aging building stock requires replacement/upgrading in the short to medium term. Therefore potential exists for increased densities to revitalise this area and for new developments to improve connections with the reserve

Recommendations

- Increase densities surrounding the larger reserves, particularly Rinaldo Reserve. This will assist in framing this beautiful park.
- Improve general maintenance for Moennich Reserve. It may be appropriate to provide dense planting in this location. For example native shrubs and ground covers. It is unlikely this site will attract any further infrastructure until the Roe Highway has been developed.
- The Parks contain a good level of mature trees of which should be maintained.
- Rinaldo Reserve, due to its larger size may present opportunities in the future to offer more diverse functions than already catered for.
- The community should be further consulted on opportunities to diversify the park in the future review of parks suggested to be conducted in 4 to 5 years' time.

Hargreaves Park – Counsel Road

Hargreaves Park is identified as having local heritage significance within the City's Local Government Inventory and is a listed park with the National Trust WA. This is a result of Hargreaves Park having social significance for members of the local community as a place for active and passive recreation and is a fine example of an area fostering environmental awareness and of natural bushland. The park was constructed in 1960.

Landform

The park contains a central shallow valley along its north south axis. The low point is located towards the southern edge of the park, which is seven to nine metres below the surrounding estate roads.

Built Development

A Water Corporation sewer easement passes south-west to north east through the south east corner of the park.

The reserve is fully turfed with a good variety of indigenous tree species including, jarrah, casuarinas, banksia and grass trees.

All other native vegetation has been cleared. This clearance, combined with the extensive use of irrigated turf across the park is likely to degrade the health of the park's remaining vegetation over time.

Banksia, Dryandra, Hakea, Eucaypts, She-Oaks, Hibbertia and Grass trees are prone to infection from the Phytophthora cinnamomi fungal disease (Dieback).

The phosphates commonly present in irrigation bore water, and the increase soil moisture content exacerbates their vulnerability to this fatal disease.

Figure 41 and 42: Hargreaves Park play facilities

Hargreaves Park is in the middle of a residential area. The Park is well kept and there is modest provision of play equipment for younger children in the park.

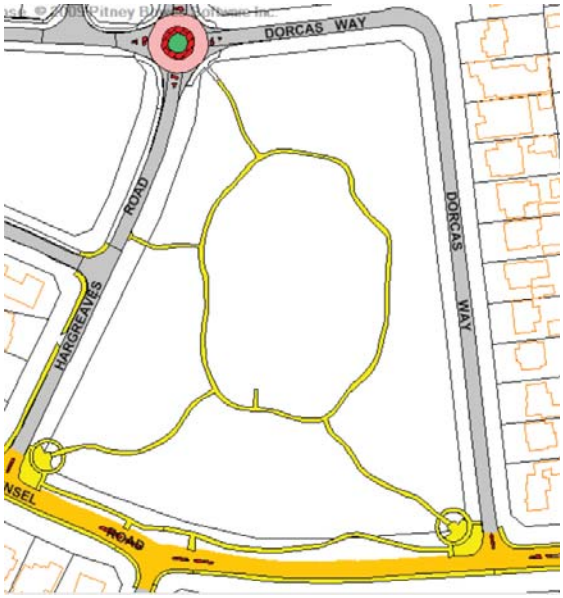


Figure 43: Hargreaves Park footpath network (shown in yellow).

A concrete footpath circuit has been established in the central portion of the park. This is connected by radially aligned concrete paths that lead to the North-West, South-West and South-East corners of the park, and to the western edge of the park approximately halfway along its length.

The road verge at the South-East and South-West corners of the park has been developed with paved areas, steps and lighting. A gazebo is located with seating towards the centre of the site.

Bollard lights describe an east west route along the concrete footpaths across the southern end of the park.

The Park is bound on all sides by local roads and as a result is highly accessible. Vehicular incursion into the park is not common, as a consequence perimeter bollards are not a feature of this park, indicating it is well respected.

Figure 44: Hargreaves Park gazebo and seating area.

Current Use

Observations carried out in late 2013 show some activity took place within the park on weekdays and weekends.

Surrounding Development

Predominantly single storey residential development surrounds the Park and are generally coded R-20 with the exception of the North-West corner where the former Coolbellup Primary School site is currently under development. At this corner the redevelopment provides a R50 code for future development. Adjacent is an existing R50 three storey development.

Figure 45: Hargreaves Park and surrounds zoning - CoC TPS3

The building stock within this area dates from the late 1960s and is likely to need significant upgrades or replacement within the short to medium term.

Opportunities exist to improve the proportion of scale between the single storey dwellings and the large size of the park. This will assist in framing the park and contribute to a sense of enclosure in the street.

The surrounding residential developments provide a high level of accessibility and surveillance.

Future development

Emerging residential development on the former Coolbellup Primary School site is located opposite the North-West corner of Hargreaves Park. The former Primary School sites LSP identifies a range of residential densities including an R50 group housing site currently being developed on the corner of the school site adjacent to Hargreaves Park.

Access to and within the reserve

Pedestrian access is good. The park can be characterised as open irrigated lawn with well spaced mature trees and limited shrub planting. The path network described above however, does not connect to Dorcas Way which runs the length of the eastern side of the park. Dorcas Way is not provided with a foot path in its verge either.

Diversity of recreation opportunity

While not being used for formal sport, this space is well turfed and potentially could be used for a range of informal recreation opportunities: training, exercise, kick about area etc. Other areas of the park provide shade opportunities for more solitary or spontaneous pursuits, such as dog

walking, and play. The path provides a good link, and a useful circuit in and around the park for pedestrians and cyclists.

Opportunities to increase value for the community

Given the proximity to the Town Centre it may be appropriate to accommodate activities or uses that are wanted by the wider community that may not be a as suitable for locating in the central open space area of Len Packham Reserve.

The community should be further consulted about what would constitute an appropriate development of the parks facilities in the future review of parks suggested to be conducted in 4 to 5 years' time.

Considerations

As a local space this reserve goes a significant way to meeting the diverse needs of the surrounding residents. The large size of the park is in contrast and well complemented by the emerging POS in the former Coolbellup Primary School site.

Recommendations

1. Any new proposals for the park should recognise the heritage significance of the park.
2. The community should be further consulted on opportunities to diversify the park in the future review of parks suggested to be conducted in 4 to 5 years' time.
3. Provision of play equipment for such a large park as Hargreaves is very modest, consideration for upgrading the standard and size of play facilities within the park should be given.
4. Grass trees in areas designated for irrigated turf may be transplanted to dry bushland zones.
5. Irrigated lawn areas should be established only in areas that do not subject native trees to irrigation water.

Doherty Reserve – Doherty Road and Randor Place

Location

Doherty Reserve is located on the Eastern perimeter of Coolbellup between residential developments on Doherty Road and Radnor Way and North Lake Road.

Landform

The northern portion of the park falls 10m from north to south presenting a noticeable 1:16 gradient. Relative to

Figure 43: Doherty Reserve

the reserve the adjacent North Lake Road rises four or five metres above the reserve on a dry grass highway embankment. The southern portion of the park gently slopes to the east at an imperceptible 1:60 gradient.

Built Development

The Reserve contains extensive stands or mature, remnant bushland that screens vehicles using North Lake Road from the residents of streets bordering the reserve.

The north, west and southern edges of the reserve are furnished with irrigated lawn approximately 20m wide. This provides good visual access into the park from adjacent housing and provides for safe use of the paths and play equipment.

The reserve contains a network of concrete footpaths.

The central portion contains a circuit route. The circuit is bisected by an East West route connecting a bus stop on Doherty Road (the western boundary of the reserve) with a bus stop on North Lake Road (which forms the eastern boundary of the reserve.
The eastern, northern and the northern half of the western perimeter verge is also furnished with a concrete footpath.

Figure 46: Doherty Reserve footpath network (shown in yellow).

Building Development

A large square shaped drainage sump is located centrally within the reserve (blue speckeld area above). This sump is fenced off from public access due to its steep sides and the drowing risk this feature presents to the public during storms. The sump receives water from

Figure 47: Doherty Reserve and surrounding drainage network

A large square shaped drainage sump is located centrally within the reserve (blue speckeld area above). This sump is fenced off from public access due to its steep sides and the drowing risk this feature presents to the public during storms. The sump receives water from North Lake Road and Doherty Road.

Figure 48: A playground and two benches are located within the centre of Doherty Reserve towards the western boundary primarily for younger children.

Figure 49: A half basketball court is provided in the northern portion of the reserve.

Current Use

There was little observable use on the reserve.

Surrounding Development

The immediate surrounding development is dominated by residential development, mostly single storey with the exception of a two storey development fronting the western side of the reserve.

Future development

It is unlikely any major changes will take place within the immediate proximity of the reserve.

Access to and within the reserve

The edges of the reserve are easily accessible and a paved footpath provides access to the intersection of North Lake Road and Winterfold Road.

Diversity of recreation opportunity

There is only a limited range of facilities provided on this reserve and these would predominantly be used by children.

Given the good supply of other larger reserves within the suburb in addition to the benefit of having dense planting to provide a natural separator from the busy North Lake Road, it is unlikely any further development would occur on this site.

Opportunities to increase value for the community

The native plantings and the location of this site limits the opportunity for further development or facility provision. Maintaining the native vegetation is likely to be the priority.

Recommendations

Encourage native plantings and maintenance of the bushland in addition to the current facilities on site.

Jarvis Park

Location

Jarvis Park is located towards the North-West corner of Coolbellup. The Park is bound by Quinlan, Hawkes and Simons Streets.

Landform

The park contains a central shallow valley sloping from the North-West corner down towards the South-East corner towards the lowest point.

Built Development

Jarvis Park is in the middle of a residential area. The Park is well kept and there is modest provision of play equipment for younger children in the park.

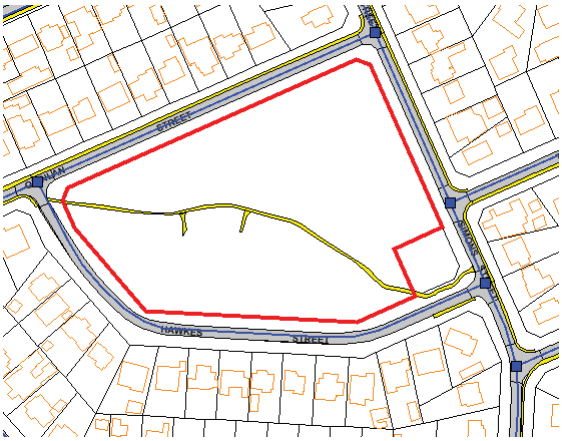


Figure 50: Jarvis Park footpath network (shown in yellow).

The reserve is similar in character to nearby Hargreaves park. The park contains the remnants of an open woodland canopy of local tree species (Jarrah, Casuarina, Grass trees and Marri trees).

Late 1960s – bushland understorey cleared and rough mown lawn established.

Mid 1980s path, picnic shelter and three modest playgrounds installed.
1998 Irrigated turf established across the entire park, two stormwater drainage swales introduced, these appear as wide

open turfed depressions in the parks land form located at the south east and the north west corners of the park. The water is fed into these swales from surrounding streets. In 2003 the existing playgrounds refurbished. In May 2013 additional spur path added to east west path to provide access to southern edge of park opposite 25 Hawkes Street

A concrete footpath runs diagonally through the park connecting the North-West and South-East corners.

Figure 51: Jarvis Park and surrounds zoning - CoC TPS3

Current Use

Observations carried out in late 2013 show some activity took place within the Park on weekdays and weekends.
Surrounding Development

R20 development surrounds the park. Opportunities exist to improve the proportion of scale between the single storey dwellings and the large size of the park. This will assist in framing the park and contribute to a sense of enclosure in the street.

Figures 53 55: Jarvis Park play equipment and seating area.

activities undertaken in this park.
Access to and within the reserve
No development planned within the immediate vicinity to the City's knowledge.

Diversity of recreation opportunity

While not being used for formal sport, this space is well turfed and potentially could be used for a range of informal recreation opportunities: training, exercise, kick about area etc. Other areas of the park provide shade opportunities for more solitary or spontaneous pursuits, such as dog walking, and play.

The existing path provides a link between the West and Eastern side of the Park. Recent footpath extensions requested by residents suggest a review of the suitability of the existing path, and the preferred path network plan is required.

Opportunities to increase value for the community

The community should be further consulted about what would constitute an appropriate development of the parks facilities in the future review of parks suggested to be conducted in 4 to 5 years' time.

Considerations

The remnant bushland tree cover across the park has been subjected to bore water irrigation and the presence of kikuyu turf since 1998. While the vegetation appears to have withstood this dramatic change in growing conditions, it does make species such as Jarrah trees vulnerable to attack by die back fungus.

In addition, the need to regularly mow a park peppered with trees of unpredictable shape and size located in random spacing indicates that maintenance of the park is likely to lead to a further denuding of the park's shade cover, aesthetic and wildlife value.

Recommendations

Review the current layout of the park and produce a costed, funded Management Plan.

Management plan to include the following;

- Consultation phase to identify any demand for a wider variety/additional facilities within the park.
- Amalgamating grass trees into distinct, fenced bushland blocks, with indigenous understorey species, irrigation during establishment period only.
- Additional indigenous tree species to take over from senescent stock within the park.
- Amalgamation and augmentation of three playgrounds into one.
- Replacement of picnic shelter with larger 'Cockburn' shelter close to new playground.

Surrounding Development

R20 development surrounds the park. Opportunities exist to improve the proportion of scale between the single storey dwellings and the large size of the park. This will assist in framing the park and contribute to a sense of enclosure in the street.

Small local reserves

The remaining reserves in Coolbellup are generally small spaces compared to other sized parks and primarily used for playground and native planting purposes. These reserves have been assessed collectively, rather than individually, with recommendations made for their future development and management as follows.

These reserves include:

Figure 56: Park

Figure 57: Perdita Park

Figure 58: De Marchi Reserve

Figure 59: Locket Park - Locket Street

Figure 60: Counsel Park – Locket Street

Figure 61: Visser Park – Locket and Viser Street

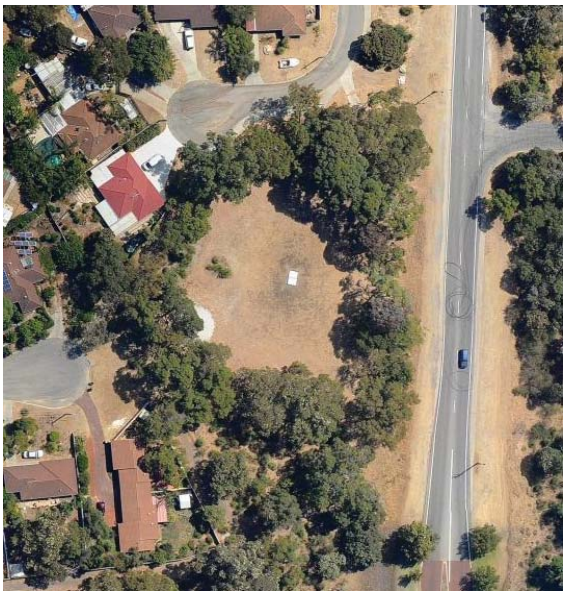


Figure 62: Matilda Birkett Reserve

Location

These spaces are dispersed across Coolbellup. They are sometimes fragments of land adjacent to major highways, often the result of past subdivision practices that have left small areas of unusable/unsellable land in the public domain.

Landform

1. Robb Park, Perdita Park, De Marchi Reserve and Matilda Birkett Reserve are relatively flat spaces and retain some vegetation.
2. Locket, Counsel and Visser parks have a change in gradient due to these spaces accommodating drainage infrastructure.

Landscape development

These spaces generally fall into two categories. Firstly those spaces developed for playground purposes, generally with central sitting playground equipment and surrounding turf and native trees. Secondly, those that are on the edge of the suburb and provide drainage infrastructure and/or are locations for gateway planting into the suburb.

Current use

The observation survey recorded no use of these reserves.

Surrounding Development

Generally single storey residential developments.

Future development

It is unlikely any major changes will take place within the immediate proximity of the reserve.

Recommendations

Continue to maintain these spaces and where appropriate provide further tree

plantings.

Report summary and implementation

This assessment has been prepared to inform the Coolbellup Revitalisation Strategy by identifying key upgrades.

These are identified as:

1. Prepare a concept plan to guide the recommendations identified for Len Packham Reserve,
2. As funding becomes available consider the recommendations for the remaining parks, in particular Hargreaves Park and Tempest Reserve.
3. Use this information to support a future assessment in 5 years' time or as further development demands become apparent.
4. In conclusion Coolbellup has a very good provision of Public Open Spaces.

Drainage infrastructure

The proposed increased densities will have a direct impact on the current drainage infrastructure. As a result a Drainage Review will need to be undertaken to understand the current capacity and any upgrade requirements of the system. This review will be required to be undertaken internally and through the engagement of a specialist consultant. The Drainage Review should be undertaken as a high priority and should be included within the City's budgeting framework for approximately $200,000.

It is noted a drainage review and associated works was conducted for Coolbellup approximately 12 years ago when Homeswest and the City undertook earlier revitalisation work. While this review was beneficial at the time it did not consider the proposed increased densities and therefore a further drainage review is now required.

Transport and accessibility

Streets have a significant role within urban environments and undertake a role encompassing more than providing space for vehicles. Streets can promote interaction of residents, provide public safety, and an attractive environment for people to move within, including vehicles, pedestrians and cyclists. Opportunities exist to improve Coolbellup's streets and as a result this section provides a review of their current performance and provides recommendations to support future growth.

Pedestrians and cyclists

A good network of pedestrian pathways exist through the suburb, however opportunities exist to encourage walking through the upgrading of some of the pathway environments and to ensure important paths link with the wider network beyond Coolbellup's boundaries.

The City of Cockburn Bicycle and Footpath Plan 2010 provides an assessment of the City's pedestrian and cyclist networks, including how Coolbellup connects with the wider district. Generally, Coolbellup is well connected to the wider district cycle network given connections West to East provided by SW8 and SW10 (see figure 60). SW10 in particular assists cyclists connect through Bibra Lake and onto the Kwinana Freeway shared path, this route can take approximately 20min.

The SW2 route (see figure 63) provides a North South connection along the length of Coolbellup Avenue. This route provides access from Bibra Lake in the South, to the Swan River in Attadale in the North. Within the City the route is primarily on-road with short sections of shared use path in the vicinity of the Coolbellup Neighbourhood Centre including:-

- The eastern side of Coolbellup Avenue between Archidamus Road and Cordelia Avenue; and
- The eastern side of Coolbellup Avenue between Forrest Road and Phoenix Road.

Kerbside lanes are marked on the southern section of Coolbellup Avenue south of Tempest Park. This route intersects with PBN routes SW8 and SW10.

Figure 63: City of Cockburn Bicycle and Footpath Plan 2010 - District Cycle Paths

The Bicycle and Footpath Plan 2010 highlights the important connection the SW2 route provides and is therefore important to include the enhancement of this shared path in any future street upgrade. While SW8 and SW10 are outside the study area, there is an opportunity to signpost and promote these paths.

Pedestrian and cycle improvements:

- Provide for the enhancement of the SW2 cycle route in any future road upgrade of Coolbellup Avenue;
- Provide sign posts to inform and encourage cyclists to utilise these paths, including the important networks (SW8 and SW10) surrounding Coolbellup. An ideal location is in the proximity to the town centre and on either end of Coolbellup Avenue;
- Provide a formal pathway connection between the town centre and the shared path and bus stop on Forrest Road;
- Consider bicycle end of path facilities adjacent to the shared path at Coolbellup town centre to encourage through traffic to stop and to provide facilities for Coolbellup residents visiting the centre.

Local road and traffic performance

Coolbellup Avenue and Waverley Road are both classified as Local Distributor Roads under the Main Roads Functional Roads Hierarchy. Both roads are designed to provide for servicing the local area, discourage through traffic, and link with the surrounding higher category road network, those being; Winterfold Road to the north (District Distributor B), North Lake Road to the east (District distributor A), Forrest Road to the south (District Distributor B) and Stock Road running along the western boundary of Coolbellup (Primary Distributor).

Figure 64 illustrates the road hierarchy in and around Coolbellup.

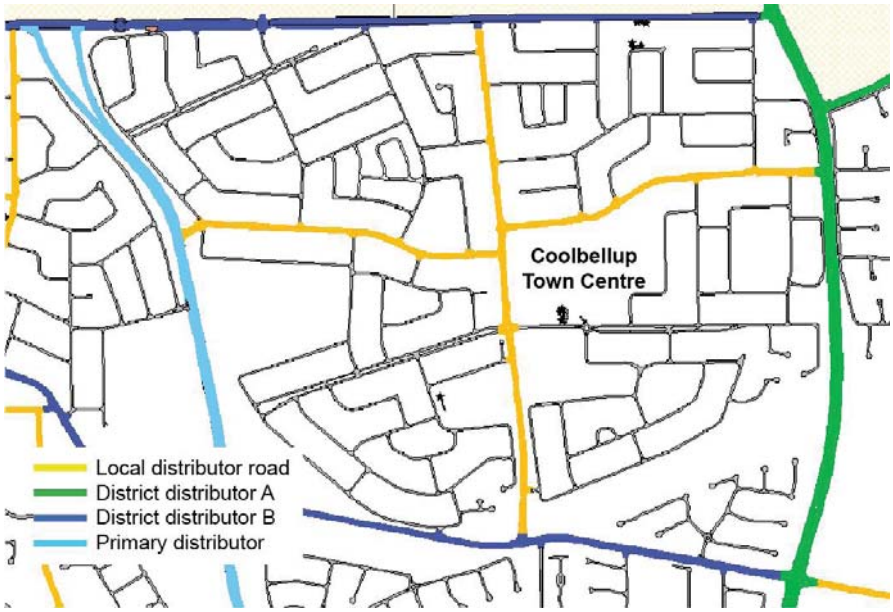


Figure 64: Local road hierarchy

Local traffic count results

The City of Cockburn conducted local traffic counts in Coolbellup throughout January and February 2014 to identify the capability of the current road network in accommodating future growth. Table 4 combines the results of the 2014 traffic counts, the forecasts as identified in the City of Cockburn District Traffic Study, and the relevant road classification to identify the standard capacity of these roads. Table 4 should be read in conjunction with the corresponding figure 62.

Note that Western Australia has two policies guiding the planning and design of street networks and roads:

1. Functional Roads Hierarchy produced by Main Roads which focuses on function and performance of roads and the wider networks.
2. Liveable Neighbourhoods (WAPC) provides guiding principles for designing integrated networks and street design and construction and differs from the MRWA's Functional Road Hierarchy in that route design considers character and land use integration as well as function.

As a result both policies are referred to within the movement section of this report.

5 year reported crash history

A review of the 5-year reported crash history (figure 65) indicates a very low number of reported incidents in comparison to the number of vehicles travelling through these intersections over a 5 year period.

The findings suggest there is capacity within the current road network to accommodate further growth to 2031, in addition to the densities proposed as part of the Coolbellup Revitalisation strategy.

Road	Road Section	Average Weekday Traffic 2014 (vehicles)	District Traffic Study forecasts				Road Classification MRWA and Maximum desirable number of vehicles	Liveable neighbourhoods and Maximum desirable number of vehicles
			Without Roe Hwy Stage 8		With Roe Hwy Stage 8			
			2020	2031	2020	2031		
Coolbellup Avenue	70m south of Winterfold Road	4,356	4,000	6,900	5,600	6,400	Local Distributor	Neighbourhood connector A
	100m north of Waverly Road	4,781						
	50m south of Counsel Road (#67)	5,885					7,000vpd	7,000vpd
	80m north of Forrest Road	5,186	3,800	7,500	5,100	6,200		
Cordelia Avenue	100m east of Coolbellup Avenue	1,968					Access road	Access street
	70m west of Coolbellup Ave (#50) westbound	537					3,000vpd	3,000vpd
	70m west of Coolbellup Ave (#50) eastbound	633						
Counsel Road	50m east of Stock Rd (westbound)	1,547					Local distributor	Neighbourhood connector B
	50m east of Stock Rd (eastbound)	1,810					3,000vpd	3,000vpd
	90m west of Hargreaves Rd (#48-50)	2,436						
Waverley Road	90m west of North Lake Road	3,854	9,900	10,000	10,200	10,500	Local distributor	Neighbourhood connector B
	200m east of Coolbellup Ave (#18)	2,945	7,800	8,300	8,100	8,400	3,000vpd	3,000vpd
External roads								
Winterfold Road	Between Stock Road and Coolbellup Ave		16,000	21,700	12,300	11,900		
Winterfold Road	Between Coolbellup Ave and North Lake Rd		13,400	18,200	8,500	7,900		
Forrest Road	Between Stock Rd and Coolbellup Ave		4,500	14,600	NA[1]	NA[1]		
Forrest Road	Between Coolbellup Ave and North Lake Rd		6,700	17,800	4,300	4,900		
North Lake Road	Between Farrington Road and Forrest Road		38,400	53,600	34,900	34,000		
Stock Road	Between Winterfold Road and Forrest Road		32,100	45,000	40,900	53,600		

Table 4: Coolbellup traffic count results and forecasting

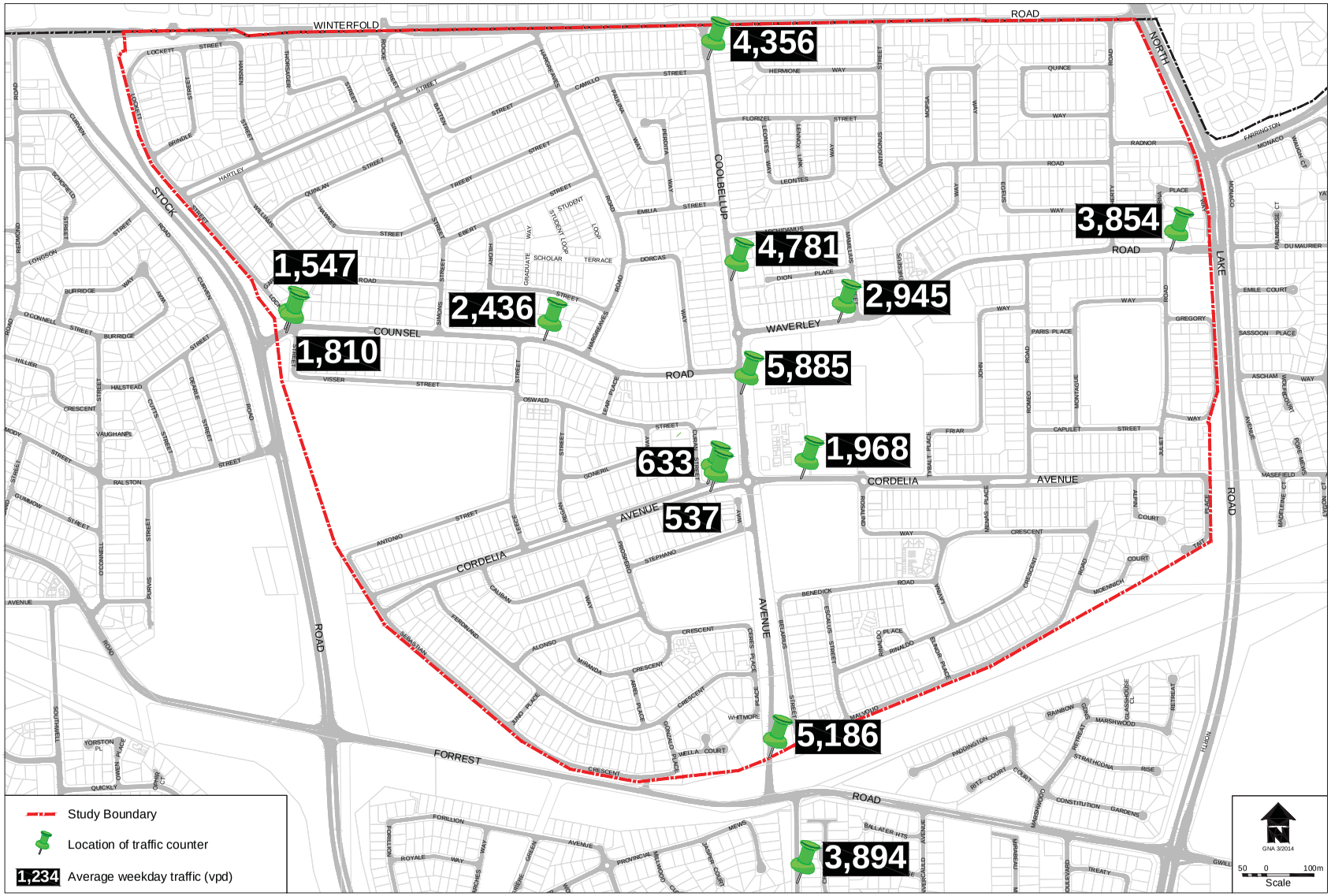


Figure 65: Average weekday traffic volumes February 2014

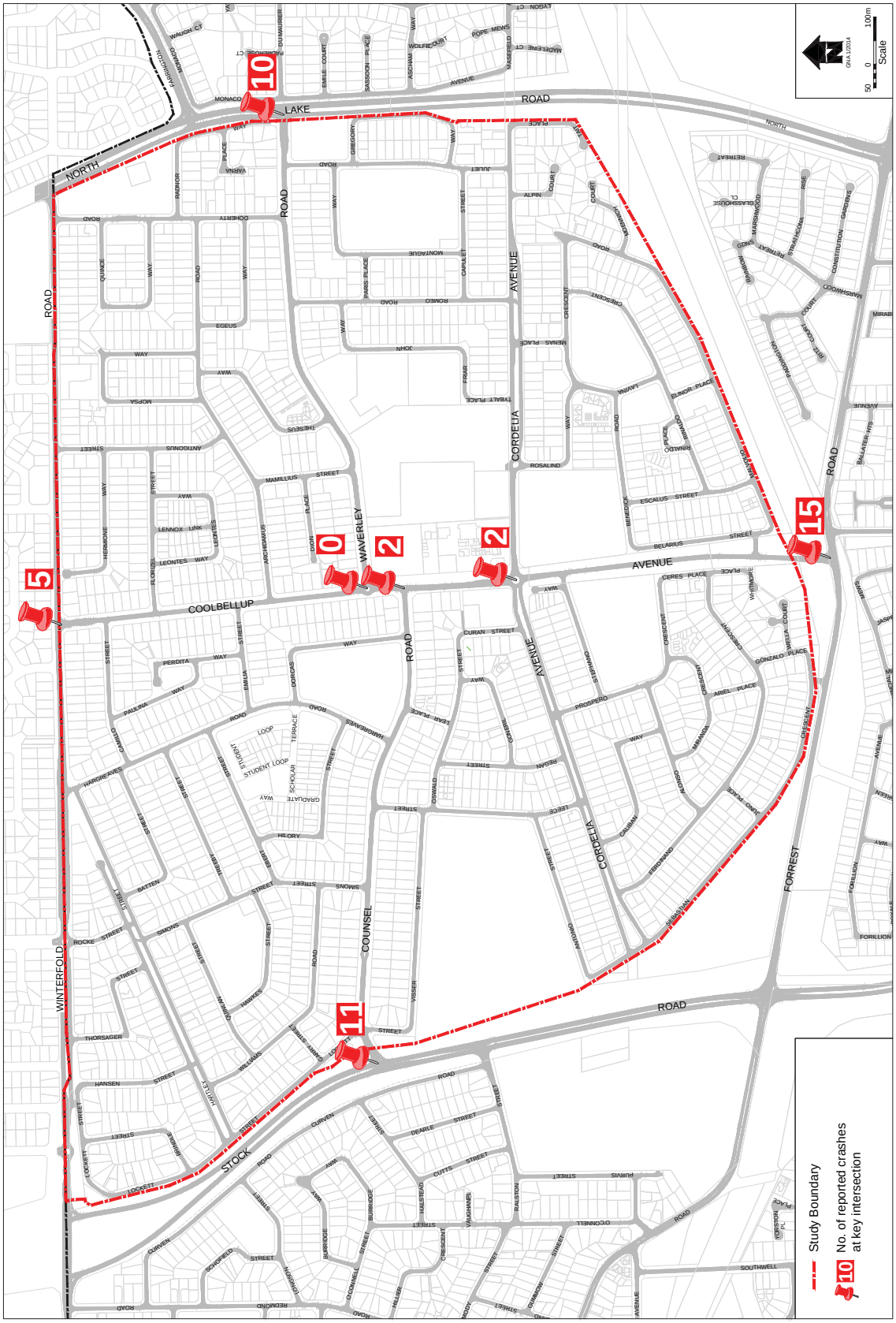


Figure 66: Reported crashes at key intersections.

Key street functions

This section presents the current layout and character of Coolbellup's key streets and identifies the recommendations set out within Liveable Neighbourhoods so as to identify potential improvements to current street layouts.

Coolbellup Avenue

Coolbellup Avenue is considered a 'Neighbourhood Connector A' in Liveable Neighbourhood standards and as such should link the surrounding neighbourhood with the town centre of which it does in a North South direction. Figure 73 illustrates the current condition of Coolbellup Avenue while figure 74 illustrates the Liveable Neighbourhoods standard and one option to consider for a future road upgrade.

Recommendations for a future road upgrade include:

- Increase the number of street trees including trees down the centre line of the road, this will assist

Figure 67: Current street cross section of Coolbellup Avenue

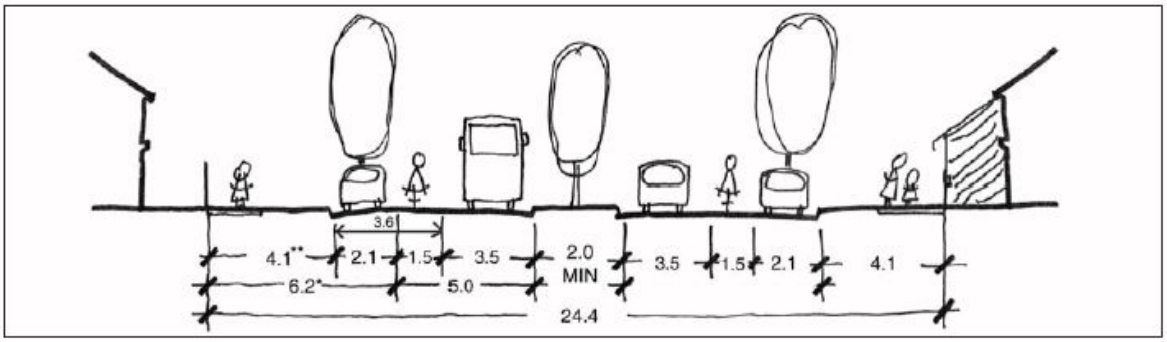


Figure 68: Neighbourhood connector A (Liveable Neighbourhoods, WAPC).

with enclosing the street, slowing down traffic, improving the streets character and walkability and provide consistency down the street through regular planting;

- Coolbellup Avenue is wide enough to accommodate on street car parking, further the deep verges have the potential to accommodate some car parking;
- Extend and enhance the shared cycle and pedestrian path along the length of Coolbellup Avenue; and
- Provide for pedestrian crossovers

Counsel Road and Waverley Road

Counsel Road and Waverley Road fall in the category of 'Neighbourhood Connector B' under the Liveable Neighbourhoods planning guidelines.

Waverley Road provides the main access point in and out of Coolbellup onto North Lake Road from the East.

Counsel Road provides access to the suburb from Stock Road to the West.

Recommendations for future road upgrades include:

- Increase the number of street trees;
- Coolbellup Avenue is wide enough to accommodate on street car parking, or given Coolbellup's extremely deep verges there is capacity to accommodate car parking within these significant setbacks;
- Provide for a shared cycle and pedestrian path along the length of these streets, providing a connection between Stock Road and North Lake Road. It is noted alternative east west connections exist in the wider network for dedicated cycle paths through the provision of routes SW10 and SW8.
- Provide for pedestrian crossovers.

Figure 69: Current street cross section of Counsel Road

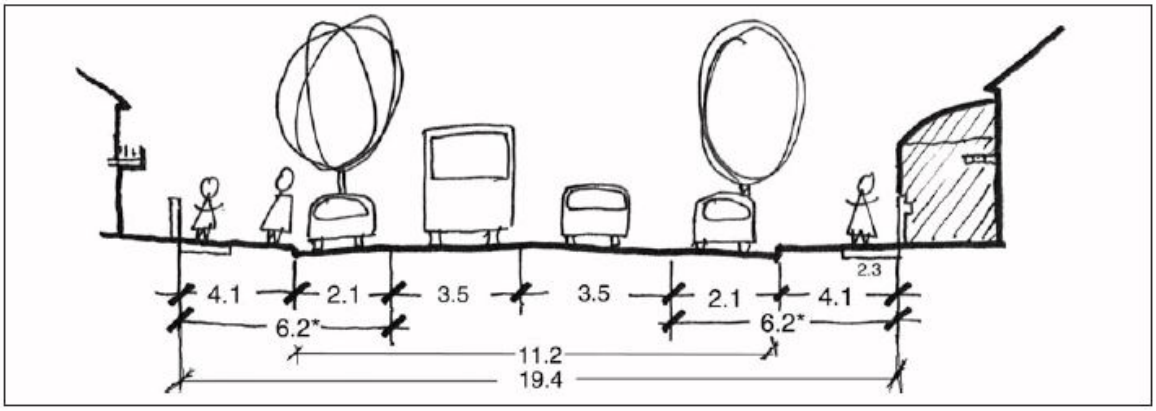


Figure 70: Neighbourhood connector B (Liveable Neighbourhoods, WAPC).

Figure 71: Current street cross section of Waverley Road

Cordelia Avenue

Cordelia Avenue falls in the category of an 'Access Street'.

Figure 72: Current street cross section of Cordelia Avenue.

Recommendations:

Increase the number of street trees;

- Cordelia Avenue is wide enough to accommodate on street car parking;
- Highlight pedestrian crossovers, and;
- An opportunity exists to improve the presentation of the vegetation underneath the power lines.

Roe Highway extension impacts and considerations

The Roe Highway Primary Regional Road Reserve under the Metropolitan Region Scheme (MRS) runs along the southern boundary of the Study Area.

Under the MRS, responsibility for the planning for land in a Regional Reserve falls to the Western Australian Planning Commission (WAPC). While support for the Reserve has been finalised by the State Government, timing for construction is dependent on funding. Last updates suggest the project funding would not be provided until at least 2016.

While Roe 8 highway forecasts suggest minimal impact on the internal function of Coolbellup streets (see table 4), it is nonetheless recognised many Coolbellup residents do not support the project and the City continues to advocate the same message to the State Government.

Public transport

Coolbellup is well serviced by high and a low frequency bus routes, including:

- Bus 511 and 513 – Fremantle to Murdoch (see figure 71)
- Bus 520 – Cockburn Central Station to Fremantle Station (see figure 75)

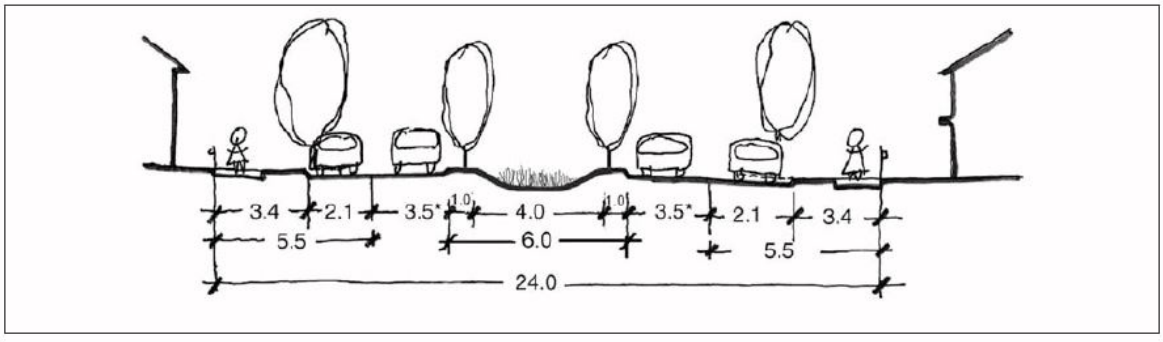


Figure 73: Access Street A - Avenue (Liveable Neighbourhoods, WAPC).

- Bus 940 - Hamilton Hill to Perth via Booragoon Bus Station (see figure 73)

These routes generally run every 20 minutes during peak hour and regularly (generally between 30 min and 1 hour) for the remainder of service times. Generally these services run until 11pm and also run regularly on weekends. Bus 940 is a high frequency bus route, running through the centre of the suburb along Counsel and Waverley Roads. Bus stops are general well located throughout the suburb however the bus stop facilities and signage require upgrades.

Proposed new route

At the time this report was prepared, Transperth is inviting public comment on the proposed introduction of new Route 512 operating between Murdoch Station and Spearwood via North Lake and Coolbellup and the rerouting of Route 513 in Coolbellup. The new route will improve the frequency of services between Spearwood and Murdoch.

A copy of the proposed new routes is illustrated in Figure 74. Further information can be found on Transperths website.

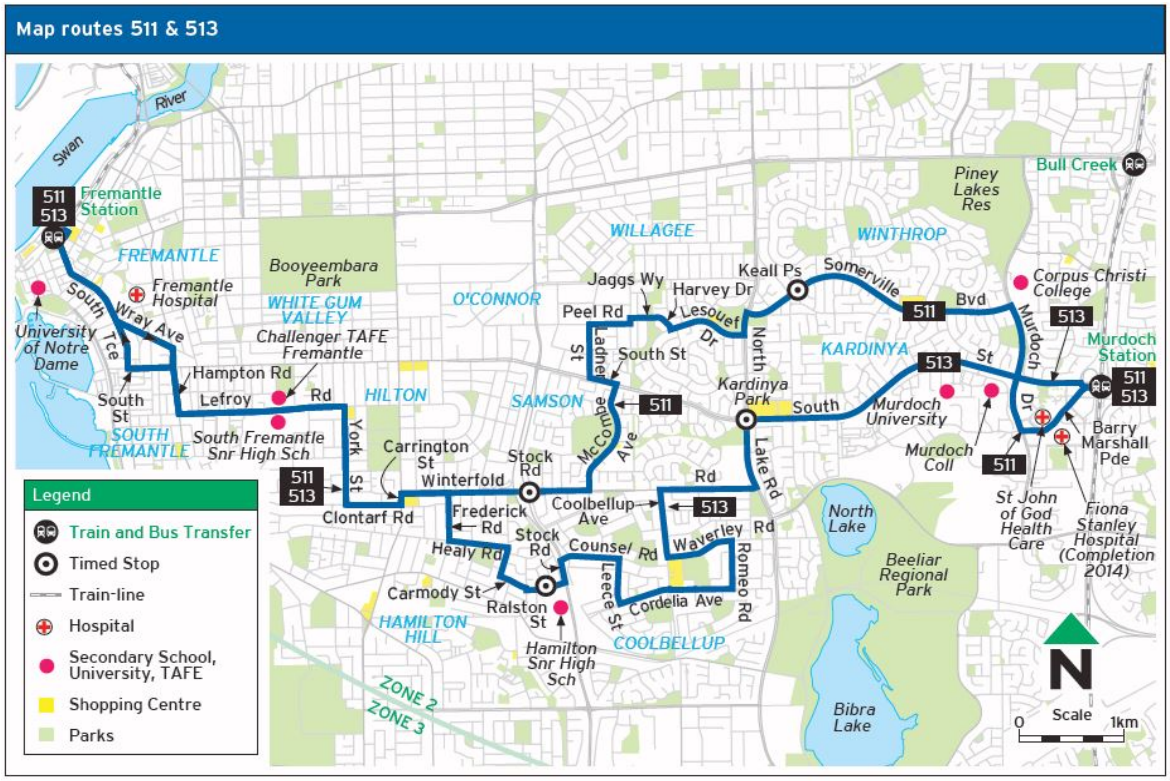


Figure 74: Bus 513 and 511. Source: Transperth.

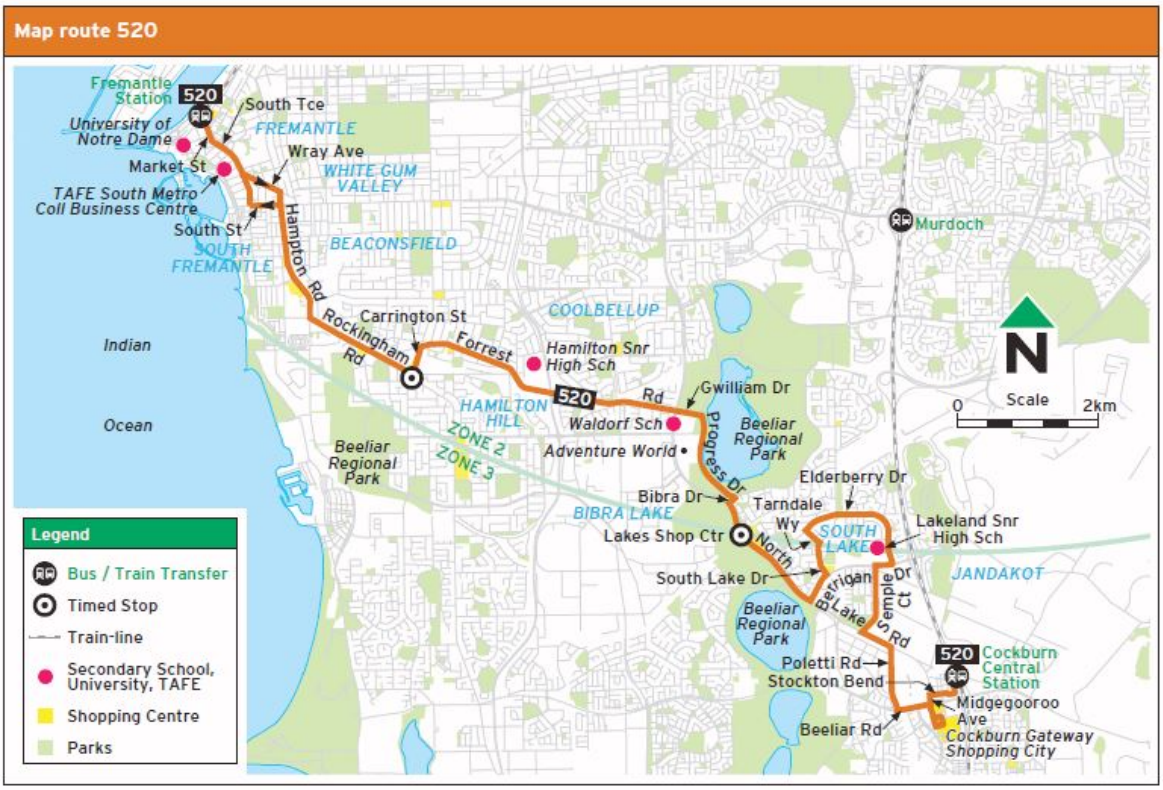


Figure 75: Bus 520 – Cockburn Central Station to Fremantle Station. Source: Transperth.

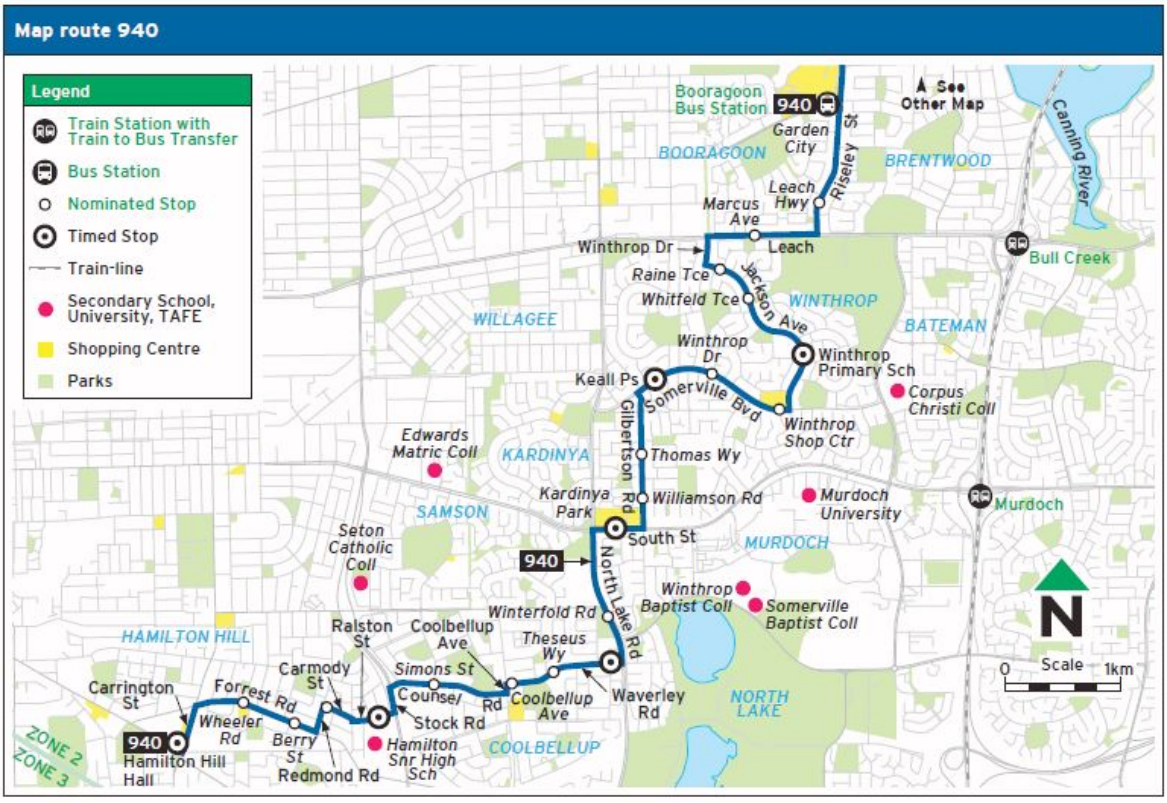


Figure 76: Bus 940 Hamilton Hill to Perth via Booragoon Bus Stn. Source: Transperth.

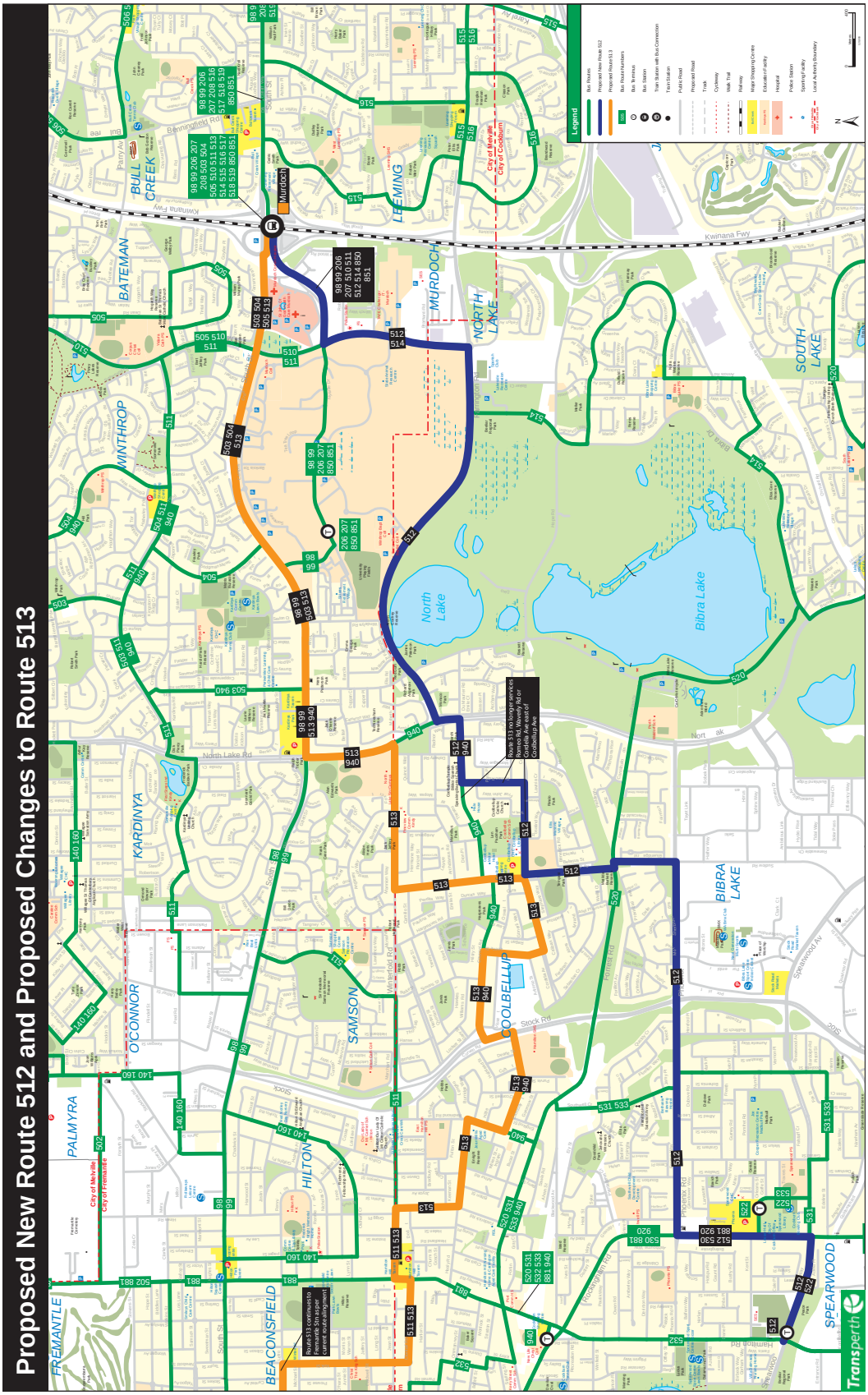


Figure 77: Proposed New Route 512 and Proposed Changes to Route 513. Source: Transperth.

Figure 78: Bus stop locations in Coolbellup

Community views

Feedback collated from the Coolbellup community engagement work identified that while current levels of public transport are appreciated and supported by some, many more believe the frequency of services should be increased, especially early in the morning and in the evenings and at night. Connections to important facilities and services in surrounding areas also need to be upgraded, especially connections to Murdoch and Spearwood.

The new 521 route should assist in addressing residents concerns regarding bus service frequency to and from major centres.

Several comments received expressed a need for more bus stops to be provided with shelters.

Figure 79: Example of wayfinding signage for the town centre.

Recommendations

- Undertake an audit and prepare a plan to upgrade bus infrastructure, including the shelter, seating, lighting and signage. The first stage of upgrades should focus on the town centre stops and the stops located along the 940 high frequency route;
- Monitor the new 521 bus route and advocate for improved bus routes with the Perth Transit Authority;
- Upgrade signage and signpost bus information at bus stops and within the town centre.

Urban infill and medium density development: lessons learnt by the City

The City has experienced increasing amounts of medium density development over the last 10 years. Medium density under the R-Codes includes R30-R60.

In general the City is pleased with the outcomes of this medium density development which is occurring in places of high amenity, convenience and accessibility. However, the City has observed a number of negative design outcomes common to the medium density development applications it receives.

Most of the time the City through the development application process is able to negotiate design changes which remove or reduce the impact of these design issues. Sometimes though, the City is limited in its ability to require modifications due to 'gaps' in the existing development controls for medium density residential development. The common negative design outcomes occurring in the City's medium density development are discussed in the following sections, alongside strategies to address these issues.

Figure 80: Good provision of landscaped frontages.

Driveways

Residents within medium density developments commonly share driveways, commonly referred to as Private Access Ways.

The R-Codes provides very basic controls for the design of driveways and the City has observed development which complies with the R-Code's requirements that do not meet its expectations and aspirations for the City. The City has observed the following poor development outcomes which are being created under the existing R-Code requirements for driveways:

- Poorly landscaped and maintained spaces;
- Harsh environments in summer with limited
- Shade and heat build up from pavement;
- Inconvenient visitor parking resulting in people parking over footpaths;
- Extensive systems of driveways with one connection to the public road network which reduces safe and convenient vehicle movement through the site.

Figure 81: Poorly landscaped access way with no trees.

The design controls placed on driveways under the R-Codes for development are essentially limited to dimension specifications for developments less than R30. There are limited requirements for R30 and over however, developments do still need to meet the dimension requirements of Australian Standards.

The City's previous revitalisation strategies introduced additional development requirements to address the negative impact of driveways on streetscapes and internal amenity within APD58. This round of proposed amendments to APD58 are a further refinement of this work of which includes additional landscape requirements and an attempt to encourage the use of less hardscape materials.

This issue is further addressed by way of the newly introduced requirement of a Design Quality Statement. Appendix 1 sets out the proposed amendments to APD58 .

Stakeholder consultation

Stakeholder consultation took place through a resident and property owners survey and two community visioning forums. The purpose of the consultation was to ensure the Coolbellup communities views informed the preparation of the Strategy. The surveys and the forums were undertaken in October-November 2013.

Coolbellup residents and property owners survey.

All Coolbellup residents and property owners were sent a survey to gauge their opinions on a number of topics relating the future of the suburb and satisfaction with the areas parks, street environment, pedestrian and cycle paths and traffic. Over 400 completed surveys were returned to the City.

Outcomes

Key outcomes of the residents and property owners survey identified:

- 63% of the respondents believe Coolbellup is changing for the better. Respondents identified the following as key influences:
    - Recent development including the 3 school sites;
    - Changing demographics within the suburb;
    - Underground power.
    - Parks
    - Street improvements
    - Sense of community.
- 72% of the respondents supported some increase in housing in the suburb;
- 18% of the respondents did not support an increase in the amount of housing in the suburb;
- 51% of respondents would definitely or probably consider subdividing their property upon any rezoning;
- 38% of the respondents would definitely not or probably not consider subdividing their property upon any rezoning;
- 66% of respondents expressed their interest in taking part in a tree planting program;
- 147 separate comments were received within the surveys regarding the need for revitalisation of the town centre. These comments have been passed onto the business owners and strata manager of the shopping centre.

A detailed account of the outcomes of the residents and property owners survey is provided in Appendix 2.

Community visioning forums

Two community forums were held by the City in October aimed at drawing out and articulating Coolbellup residents' "vision" for the future development of their suburb.

The two Forums were held on:

- Thursday 17 October 5pm – 7.45pm, and
- Sunday 20th October 10.30am - 1.15pm

The first Forum was attended by approximately 85 community members, and the second by approx. 43 (total of 128).

Workshop structure

Attendees were separated into tables and were asked to discuss the following questions:

1. What aspects of Coolbellup do you value and are important for the future?

2. What is your appetite for change in terms of new residential development and redevelopment within Coolbellup? Low, med, high?

3. Would you support a greater variety of housing and therefore residential densities throughout Coolbellup? If yes, where would you like to see medium to high residential densities provided?

4. What public domain improvements should take place for Coolbellup? (E.g., street trees, parks, public art, plantings and car parking under power line easements, improved public transit and facilities)

The table facilitators were asked to stimulate debate amongst those at their table, and to record both individual comments and collectively-held views.

The Forum attendees were asked to complete the same questions on the questionnaire, and to return them to the facilitator at the end of each Forum.

Attendees were also encouraged by the table facilitators to discuss each of the four questions in turn, and the facilitators had the responsibility of formulating a consensus "table view" for each question.

At the end of the workshop phase, a spokesperson from each table was asked to present, in turn, their table's responses to the four questions. Both individual comments and collectively-held views were articulated.

Consultation outcomes

Common responses emerged from these table presentations. These responses were briefly summarised and articulated by the facilitator after the individual table presentations were completed, and general agreement was voiced by the audiences. These consensus themes were generally consistent across both Forums, although the feedback from the second Forum was a little more diverse than from the first.

The following community positions and themes were supported by a clear majority:

1. Coolbellup residents greatly value and appreciate their parks, the trees, greenery and streetscapes, and the remnant bushland. The suburb's location and accessibility are seen as major advantages, and the sense of community is pronounced. Existing public transport is regarded as quite good.
2. There is a medium to high appetite for change. Very few residents want to resist change.

3. There is strong support for more medium density housing types, and good support for more medium to high density housing types.

4. A greater range of dwelling types (town houses, units, flats, ancillary dwellings in back yards) should be developed and made available, so that residents can ”age in place”, and not have to leave Coolbellup to find alternative, more appropriate housing types as their accommodation needs change over time. However, these higher density-type dwellings should preferably be provided in targeted areas, such as around the shopping centre, community hub and parks, and along the main public transport routes.

5. There is some support for the view that subdivision of all single lots presently accommodating a single dwelling should generally be permitted, so that in future two dwellings can be accommodated on each lot.

6. New housing should be of a high quality, and development/design guidelines should be introduced alongside new R-Codes to ensure this occurs.

7. Affordability of housing needs to be protected, and property values retained or improved.

8. There is strong support for the centrally-located community hub and shopping centre, however, the shopping centre is most appreciated for its central location and accessibility, rather than its appearance and form. There is a very strong feeling amongst the Coolbellup community that improvements to the shopping centre (i.e., relating to its appearance, functionality, the breadth of uses available, its lack of vibrancy, poorly-maintained parking areas and unclear/unsafe circulation patterns) are urgently required.

9. While the community hub is well used and greatly appreciated, it could be expanded and the range of facilities increased. More community events should be planned, public artworks created, and a community garden developed to build upon the strong sense of community pride that is already established.

10. The generally quiet and peaceful environment of Coolbellup is highly valued, however safety and security issues were a concern voiced by a number of workshop attendees. Youths on motor bikes and trail bikes behaving in an anti-social manner are another common concern.

11. Existing public open space reserves are highly valued, however there is scope for improvements to the standard and scope of the facilities within them. The opportunity exists to upgrade and improve the parks to encourage greater usage, particularly by the youth in the community. The value of the POS reserves will increase over time as population and demand increases.

12. The City should continue to improve streetscapes. More street trees and better presented street verges are required. The issue of upgrading street verges to the community’s satisfaction amid competing views on responsibility will be a challenge for the City.

13. Existing mature trees need to be protected, and existing bush land

should be protected and better managed.

14. While current levels of public transport are appreciated and supported by some, many more believe the frequency of services should be increased, especially early in the morning and in the evenings and at night. Connections to important facilities and services in surrounding areas also need to be upgraded, especially connections to Murdoch and Spearwood. More bus stops should be provided with shelters.
15. The programme of under-grounding the power lines within the suburb should be completed as soon as possible.
16. The footpath and cycle path system needs to be upgraded and extended to improve accessibility within the local area.
17. There is very strong support for Roe Highway to be removed from the MRS.

Community consultation summary

The key outcomes of the community consultation undertaken to inform the draft Strategy were:

Support for urban infill

- Residents generally support further housing in Coolbellup. Strong support is provided for more medium density housing types, and good support for more medium to high density housing types.
- There is a portion of the community (18% of respondents to the residents and property owners survey) that do not support further housing in Coolbellup.

Figure 82: Coolbellup community consultation forum at the Len Packham Hall, October 2013.

Streetscapes and Parks

- Residents want to see Coolbellup streets continue to be upgraded to improve their presentation and function. More street trees are wanted and the second phase of under-grounding power lines is supported;
- Many trees in the suburb are important to the community.
- Coolbellup residents are proud of their beautiful parks and every should be undertaken to maintain them. Residents wish to see the facilities and services in these parks diversified.

Coolbellup shopping centre

There is a very strong feeling amongst the Coolbellup community that improvements to the shopping centre (i.e., relating to its appearance, functionality, the breadth of uses available, its lack of vibrancy, poorly-maintained parking areas and unclear/ unsafe circulation patterns) are urgently required.

Transport and accessibility

The community is not satisfied with cycle paths and bus services in and around Coolbellup. They wish to see more bike lanes, cycle paths and bus services outside business hours connecting to areas such as Fremantle and Cockburn Central.

Character

The community identified the following top 10 contributors to Coolbellup's character:

1. Attractive town centre and local shops.

2. Parks with adequate shade trees.

3. Accessible public transport.

4. The large spaces between houses.

5. Safe, well maintained and efficient roads.

6. Attractive streets.

7. Good access to playgrounds.

8. Community facilities.

9. A safe, connected system of well maintained cycle paths.

10. Adequate seating, picnic facilities and lighting.

References

City of Cockburn, n.d, Beeliar Boodjar. An introduction to the Aboriginal History of the City of Cockburn based on existing literature, retrieved on 17 March 2014 from http://www.cockburn.wa.gov.au/Community_Services/Abori ginal_Services/

Australian Bureau of Statistics, 2011, Coolbellup Census Quick Stats, retrieved on January 16 2014 from http://www.censusdata.abs.gov.au/census_services/getproduct/census/2011/quickstat/

Appendices

Appendix 1 - Proposed amendment to Local Planning Policy APD58.

Appendix 2 - Outcomes Report - Resident and Landowner Survey.

Appendix 3 - Outcomes Report - Community Visioning Forum.

www.cockburn.wa.gov.au