

# BURONGA GOL GOL STRUCTURE PLAN 2020







**Document Control & Authorisation**

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# Acknowledgements

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## Buronga Gol Gol Community

A thank you is extended to the community members who have provided input into the preparation of the structure plan. Their valuable feedback and ideas have informed and shaped the development of the structure plan.

## Acknowledgement of Country

Wentworth Shire Council acknowledges the Traditional Owners of the land and pay respect to Elders past, present and emerging. Wentworth Shire Council recognises and considers the wishes and desires of the indigenous community of Buronga Gol Gol within this Structure Plan.

## Disclaimer

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## ***Executive Summary***

The Buronga Gol Gol Structure Plan provides a strategic land use framework to facilitate quality and sustainable urban development in the Buronga Gol Gol area by setting out what, when, where and how land and infrastructure development should occur.

The Buronga Gol Gol area is currently experiencing rapid housing development prompting the need for a strategic land use plan to guide, manage and monitor future growth and development in the area.

The Structure Plan draws on the community's agreed vision for the Buronga Gol Gol area with respect to housing, population services, infrastructure, community facilities and environmental management. The plan sets out strategic short, medium and long-term land use directions for achieving sustainable urban growth and optimising land development in the area.

The Structure Plan envisions Buronga Gol Gol becoming sustainable, self-sufficient and vibrant with well-balanced urban and rural characteristics that have strong relationships to the surrounding rural landscape to adequately support the social, economic, cultural and environmental needs and aspirations of current and future residents.

A range of guiding principles have been adopted within this plan. These principles reflect the future growth and development outcomes for the various aspects of the study area.

The recommendations in this Structure Plan aim to consolidate future urban development, facilitate development of a commercial precinct, rezone to support future and emerging land use needs and expand and/or upgrade infrastructure and services in Buronga Gol Gol.

The Structure Plan provides approximately 544 hectares of residential land, 49 hectares of industrial land and 15 hectares of commercial land. The plan also includes an urban land release staging plan for ensuring coordinated land development and infrastructure delivery.

Successful implementation of this plan includes commitment of resources to ensure that future development can be sustained and is supported by the level of services necessary.







# Chapter 1: Introduction



# Chapter 1: Introduction

## 1.1 Purpose of the Structure Plan

The purpose of the Buronga Gol Gol Structure Plan (BGGSP) is to facilitate quality and sustainable urban development in the localities of Buronga and Gol Gol. With the two localities currently experiencing fast growth, it is imperative to plan and guide land use changes, infrastructure development and public and recreational spaces to support this growth.

The plan sets strategic short and long-term directions for optimising land use and development, including identifying what, when, where and how development should occur in the area. Given the current high spate of development in the two townships, this plan provides certainty about the type and quality of future urban development in the area.

## 1.2 Land to which this Structure Plan Applies

This Structure Plan applies to Buronga and Gol Gol townships and the immediate surrounding area. This Structure Plan focuses on both the existing and newly developing areas of the townships to ensure holistic sustainability of the two localities.

Throughout the plan, the entire study area will be referred to as Buronga Gol Gol.

## 1.3 Structure Plan Preparation Process

Preparation of the BGGSP comprised the following main steps:

- a) Desktop research and analysis of relevant studies, strategies and policies relevant to planning in the area.
- b) Consultation with broad ranging stakeholders including local communities and state agencies.
- c) Preparation of the structure plan report and the draft structure plan

## 1.4 Strategic Planning Context

Buronga Gol Gol is affected by a range of state, regional and local strategic policies and studies. Many of these strategic documents have been reviewed and analysed to inform fundamental elements of the BGGSP such as the vision, development principles, land use zones and infrastructure sequencing plan.

Important strategic documents that were used for direction and guidance in the structure planning process are outlined in Figure 1.1.



Figure 1.1 - Strategic Planning Documents





## 1.5 Planning Horizon

A planning horizon is a timeframe that is selected, usually in years, to a plan-related project. The adopted planning horizon for this structure plan is 20 years (i.e. 2040). This planning horizon is considered appropriate for this structure plan as it is an achievable and sustainable benchmark for the Buronga Gol Gol community. The 20-year planning horizon allows the structure plan to explore the short, medium- and long-term goals and needs of the Buronga Gol Gol community.

The adopted planning horizon for this structure plan relatively falls in line with applicable overarching New South Wales state planning policies, such as the Far West Regional Plan 2036.

This timeframe also works well alongside Wentworth Shire Council's other strategic documents, including the 2017-2027 Community Strategic Plan, the Local Strategic Planning Statement and the draft Rural Land Use and Rural Residential Strategy 2015.

Consultation with the community and relevant stakeholders enabled collection and consideration of aspirations, values and concerns of different individuals, agencies and groups in developing the Structure Plan.

The purpose of the consultation was to:

- a) Communicate and inform the community and stakeholders of the process and key messages of the Structure Plan;
- b) Obtain feedback and input throughout the structure planning process;
- c) Ascertain and understand community and stakeholder views and opinions to inform the Structure Plan;
- d) Identify issues and obtain community input on ways to resolve them;
- e) Assist in developing a 'vision' for the town; and
- f) Encourage public ownership of the final Structure Plan.

## 1.6 Public Consultation

Extensive public consultation was undertaken to help shape this Plan and promote development that benefits the community of Buronga Gol Gol. Following consideration and resolution by Council, the draft Buronga Gol Gol Structure Plan was publicly exhibited for 32 days from 09 May to 09 June 2020. The draft structure plan was notified and made available for viewing on Council website, as well as advertised in Sunraysia Daily and Mildura Weekly newspapers and posted Council's Facebook page for public comments and feedback. Letter mail-outs were sent directly to affected landowners whose properties have been proposed for rezoning or other developments. The draft structure plan was also referred to relevant state agencies and community groups for comment and inputs.

Council received eighteen (18) submissions at the end of the exhibition period. The submissions were generally in support of the draft structure plan. The issues raised in the submissions were reviewed and considered by Council to inform the final structure plan. A summary of the points made in the submissions and Council's responses (including adjustments made to the draft structure plan) is provided in Attachment 2 of the Buronga Gol Gol Structure Plan Report.







## **Chapter 2: Existing Conditions and Locality Context**



# Chapter 2: Existing Conditions and Locality Context

## 2.1 Location and Context

Buronga Gol Gol is located in the south-eastern part of the Wentworth Shire Local Government Area in far South-West NSW. Buronga Gol Gol is situated on the Murray River approximately 5 km from Mildura Rural City (in Victoria), which provides convenient access to higher order services for residents in Buronga Gol Gol. Buronga Gol Gol operates as a ‘defacto’ northern suburb of Mildura due to its strong physical and socio-economic connection to the regional centre.

Buronga Gol Gol is strategically located on the Sturt Highway and Silver City Highway, two of Australia’s significant transport corridors and freight routes. These national highways traverse the Sunraysia region and extend to Broken Hill, Adelaide, Melbourne, Sydney and Brisbane, providing the region with direct access to national and global markets.

Buronga Gol Gol is surrounded by a variety of well-established horticultural enterprises, which are typical of towns within the Sunraysia region.

Maps showing the location of Buronga Gol Gol within regional and national contexts are presented in Figures 2.1 and 2.2.

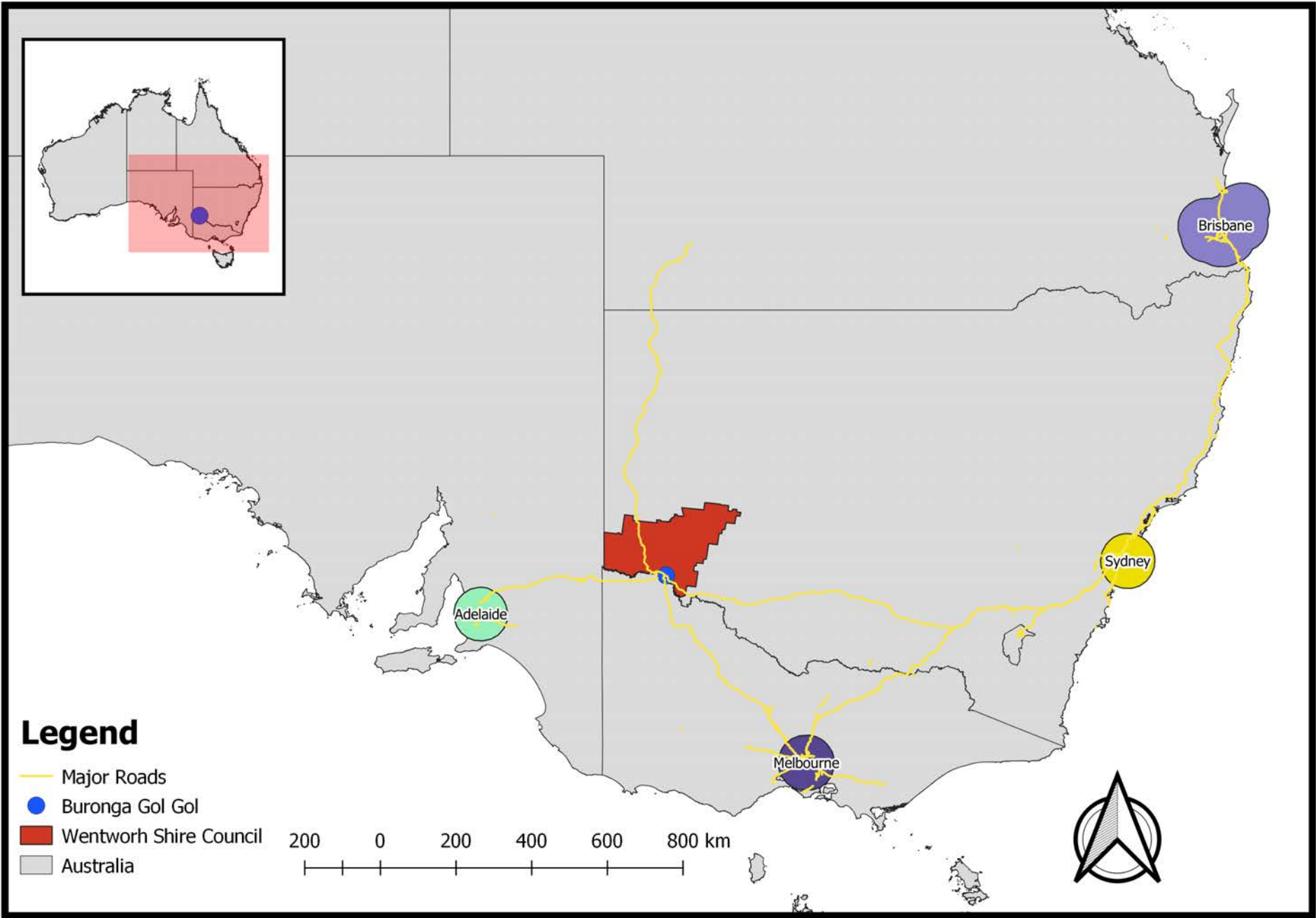


Figure 2.1 – Buronga Gol Gol in National Context

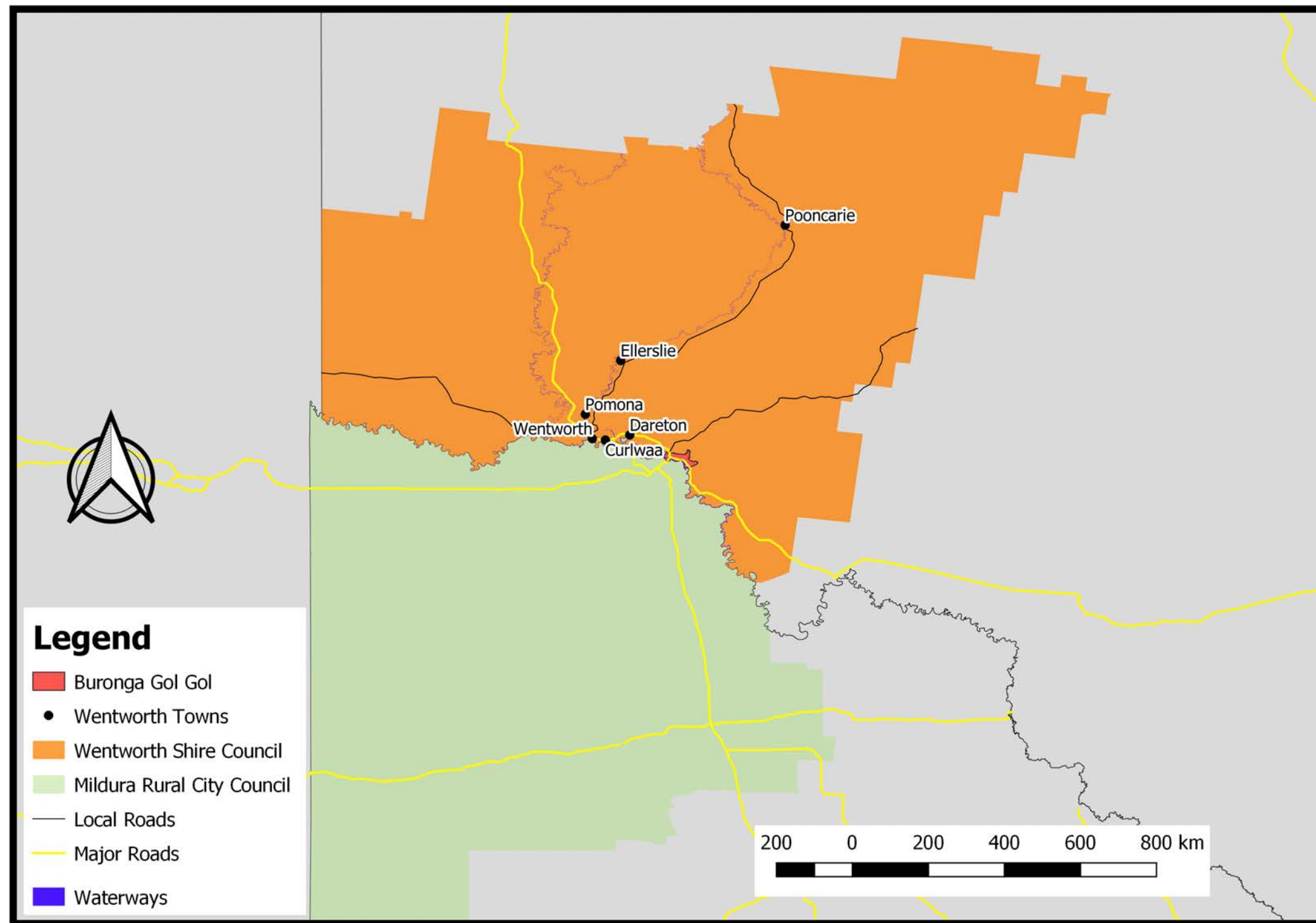


Figure 2.2 – Buronga Gol Gol in Regional Context



2.2 Land Area of Structure Plan

The Buronga Gol Gol Study Area covers approximately 3071 ha (31 km<sup>2</sup>). As shown in Figure 2.3, the study area for the Buronga Gol Gol Structure Plan has expanded by 6.93km<sup>2</sup> to include a large parcel of land to the east of the BGGSP 2005 boundary. This additional parcel of land is subject to a large-scale planning proposal referred to as ‘Northbank on Murray’ to develop the land for a range of accommodation options of a resort nature, cafes and restaurants, gymnasium, shopping outlets and indoor & outdoor attractions and activities.

The southern, northern and western boundaries of the BGGSP study area have remained unchanged since the preparation of the BGGSP 2005.



Intersection of Sturt and Silver City Highways



Gol Gol Town Centre

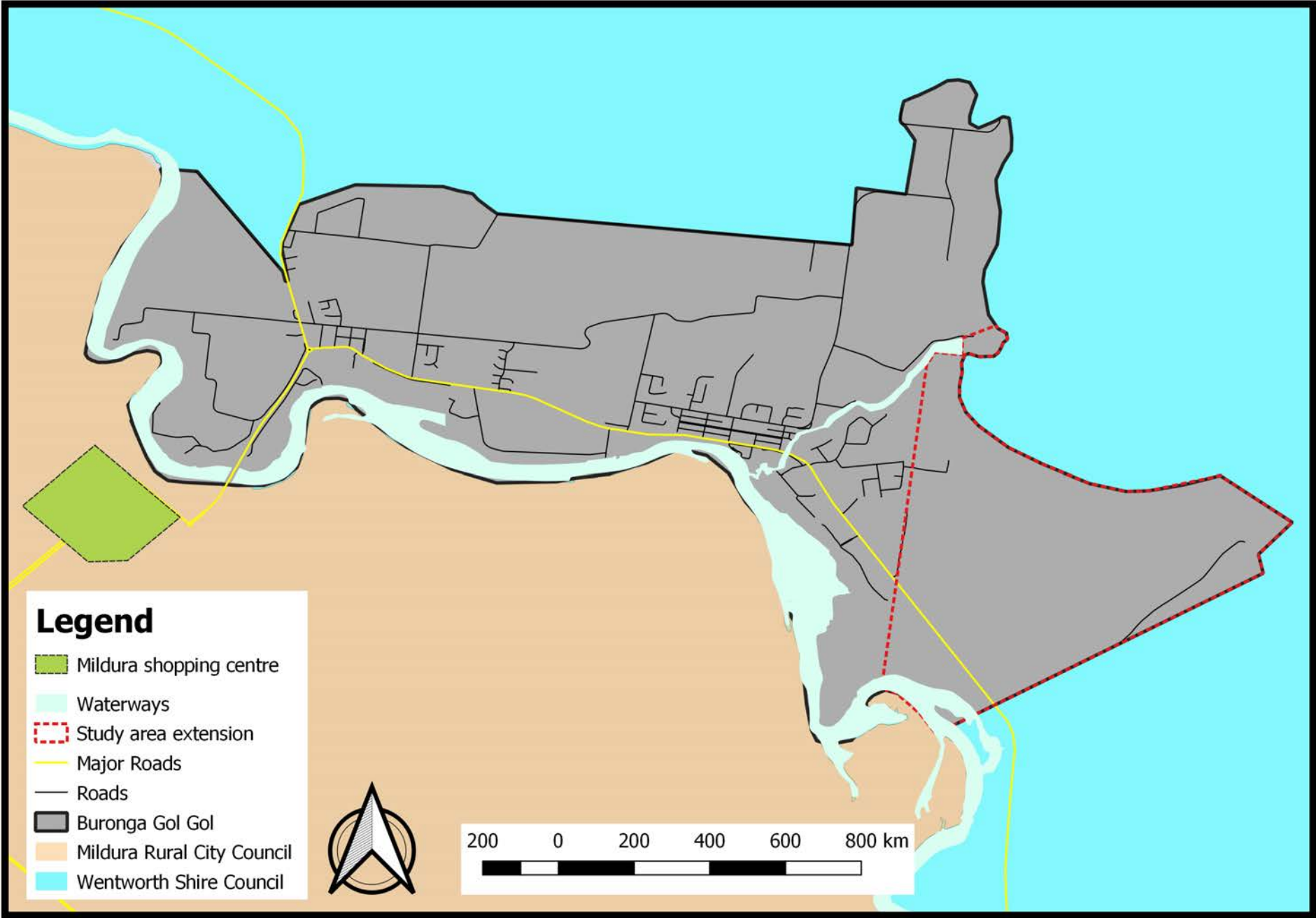


Figure 2.3 – Buronga Gol Gol Study Area



### 2.3 Population and Demographics

Buronga Gol Gol was home to 2,735 people in 2016, which was an increase of 204 persons (8.1%) from the area's resident population of 2,531 people in 2011 (refer Figure 2.4). This indicates an annual population growth rate of 1.6% between 2011 and 2016, which is nearly three times the Wentworth Shire's growth rate of 0.6% over the same period. The 2016 population of Buronga Gol Gol represented 40% of the total 6,794 residential population of the Wentworth Shire.

ABS 2018 Population Estimate indicated Wentworth Shire had a residential population of 7042 which was an increase of 248 persons (3.7%) between 2016 and 2018. This means that the Shire recorded an annual population growth rate of 1.8% between 2016 and 2018, which is a significant increase from the 2011-2016 rate of 0.6%.

Since Buronga Gol Gol is the main growth area in the Wentworth Shire, it can be argued that most of the Shire's population growth between 2016 and 2018 occurred in this area. This is supported by the fact that 61% (66) of the total 109 development approvals granted for new dwellings in the Shire over the same period were in Buronga Gol Gol.

Given the trend of residential development, it has been assumed that 61% of the population increase the Shire experienced between 2016 and 2018 occurred in Buronga Gol Gol. Based on this assumption, it has been determined that Buronga Gol Gol had a resident population of 2,859 in 2018, which indicates an increase of 124 persons (4.5%) and an annual population growth rate of 2.2% over the two-year period.

As presented in Figure 2.4, the population of Buronga Gol Gol is expected to reach approximately 4,742 people in 2040 at an annual growth rate of 2.8%. This population growth will be driven by the ongoing rapid residential development which is largely in response to housing demand overflow from Mildura. It should be noted that the regional centre is currently experiencing strong population growth and its resident population is projected to increase from 51,760 in 2018 to nearly 60,000 (59,440) in 2036 at an average annual growth rate of 0.8%.

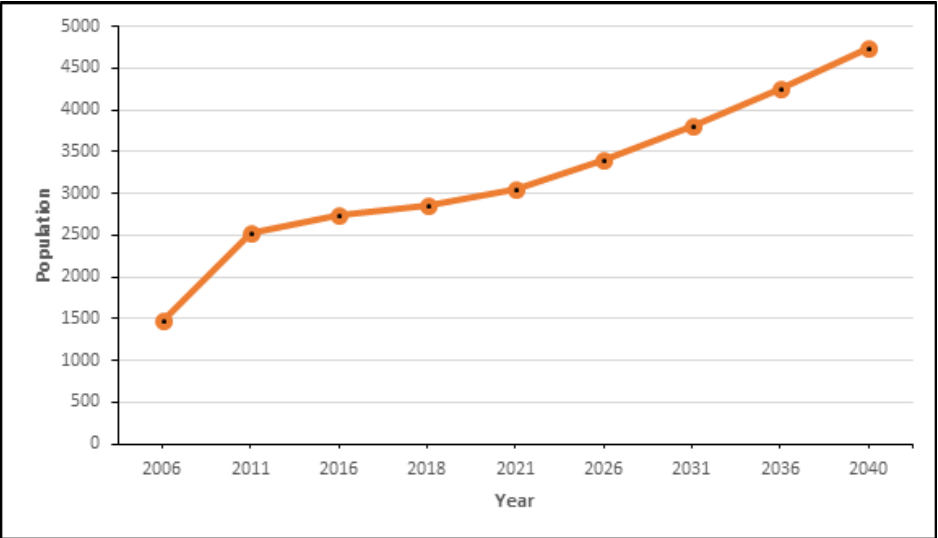


Figure 2.4 –Population Growth Trend

The median age of Buronga Gol Gol residents increased from 37 in 2011 to 38 in 2016, which was on par with that of NSW and Australia, illustrating the nation-wide trend towards an ageing population. Consistent with the general trend in regional areas, nearly 50% of Buronga Gol Gol residents were in the 40 years and over cohort. Residents aged 45 years and over increased by more than 10% from 1,011 in 2011 to 1,116 in 2016, substantiating Buronga Gol Gol's ageing population as presented in Figure 2.5.

Children aged 0-19 years made up 29.9% of the 2016 population with the proportion of families with children increasing from 46% in 2011 to 49% in 2016. In addition, an estimated 171 children were within the secondary school cohort of 15-19 years.

In 2016, Buronga Gol Gol had a total of 947 households with an average household size of 2.6, which is a decrease from the 2011 average of 2.7. Of the total households, 75% are classified as 'family households', while 23% are single person households, which has implications for housing and service provision. In particular, Buronga Gol Gol's ageing population is expected to change household structure to fewer persons per household which can generate substantial demand for new dwellings. Therefore, future housing needs should be determined using a lower average household size of 2.4 given the changing age structure.

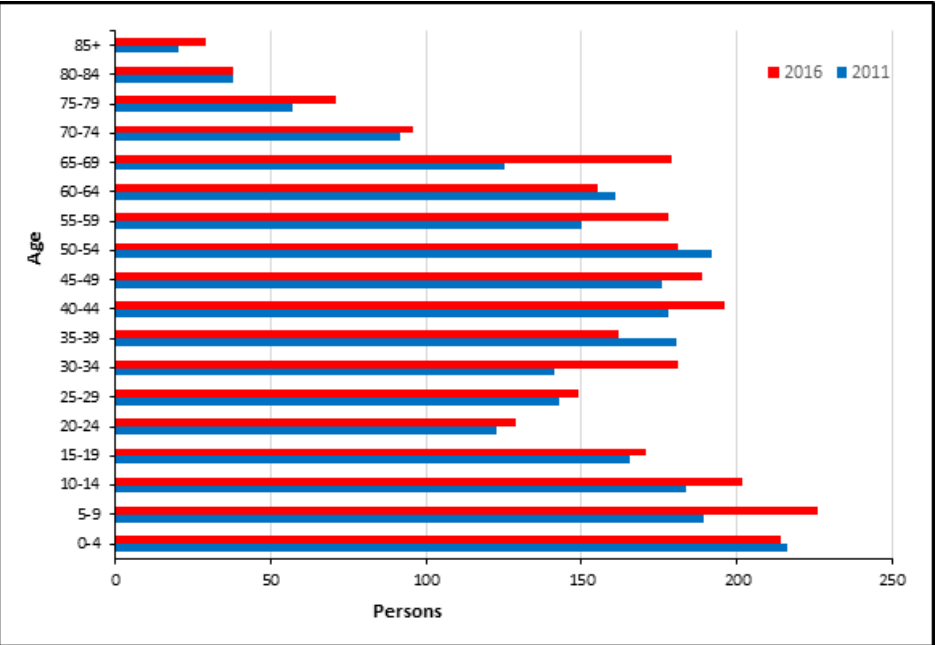


Figure 2.5 – Age Structure of the Buronga Gol Gol Residents

In 2016, 4.7% of the resident population of Buronga Gol Gol identified as Aboriginal and/or Torres Strait Islander, which was significantly higher than the NSW state average of 2.9%. This suggests the need for strong consideration of indigenous perspectives and interests in making land use planning decisions that affect the area.



## 2.4 Built Environment

### 2.4.1 Land Use Zones

Buronga Gol Gol has predominantly rural and rural residential land use zones. The existing land uses are a mix of residential, rural residential, agriculture (horticultural farming), industrial and community related land uses. Figures 2.6 and 2.7 show land use zonings and existing land uses respectively, while Tables 2.1 and 2.2 provide summaries of the corresponding land areas.

Table 2.1 indicates that 52% of the Buronga Gol Gol study area is zoned RU1 Primary Production, reflecting the area's extensive agricultural activities, particularly horticulture, which occupies an estimated land area of 851 ha (8.5 km<sup>2</sup>).

However, approximately 139 ha of RU1 Primary Production land in Buronga West and on Mitchell Lane in north-east Gol Gol has progressively transitioned into rural residential development. This situation demonstrates the demand for large lot, rural and environmental lifestyle living in Buronga Gol Gol and in fact the Shire as a whole. Alternative zones should be considered for these areas to reflect the on-ground land use situation to meet demand for future rural residential development.

RU5 Village and R5 Large Lot Residential zoned lands cover about 14% and 7%, respectively, of the total area of Buronga Gol Gol. Development has occurred on 216 ha of RU5 Village and 133 ha of R5 Large Lot Residential zoned land. Approximately 75-80% of Buronga Gol Gol's existing residential housing is located within these zones, where residential and large lot residential land uses occupy a combined land area of 281 ha.

The IN1 General Industrial zone covers 72 ha and is confined to the industrial precinct located in the northwest corner of Buronga with direct access to the Silver City Highway. Approximately 54 ha of the industrial zoned land has been released and/or subdivided for a range of industrial activities, which currently occupy an estimated land area of 33 ha.

The overall average lot size for the developed or subdivided land in the IN1 General Industrial zone is 7500 m<sup>2</sup> although the lot size for recent re-subdivisions is smaller with the average lot around 3500 m<sup>2</sup>. The trend towards smaller lot size is expected to continue into the future as it has resulted in an increase of the take up rate of industrial lots, which is currently estimated as 4 lots per year.

Table 2.1 – Summary of Existing Land Use Zones

Land use zone	Zoned		Developed		Undeveloped	
	Area (ha)	%	Area (ha)	%	Area (ha)	%
RU5 Village	443	14.43	216	48.76	227	51.24
R5 Large Lot Residential	226	7.36	133	58.85	93	41.15
1IN General Industrial	72	2.34	39	54.17	33.1	45.83
B6 Enterprise Corridor	4	0.13	4	100	0	0
SP2 Infrastructure	72	2.34	N/A	N/A	N/A	N/A
SP1 Special Activities	15	0.49	N/A	N/A	N/A	N/A
RE1 Public Recreation	80	2.61	N/A	N/A	N/A	N/A
RE2 Private Recreation	9	0.29	N/A	N/A	N/A	N/A
W1 Natural Waterways	122	3.97	N/A	N/A	N/A	N/A
W2 Recreational Waterways	162	5.28	N/A	N/A	N/A	N/A
E2 Environmental Conservation	180	5.86	N/A	N/A	N/A	N/A
E3 Environmental Management	94	3.06	N/A	N/A	N/A	N/A
RU1 Primary Production	1592	51.84	N/A	N/A	N/A	N/A
Total	3071	100	N/A	N/A	N/A	N/A

Source: Wentworth Local Environmental Plan (WLEP) 2011



Industrial warehouses



E2 Environmental Conservation and E3 Environmental Management zones cover a sizeable amount of land in Buronga Gol Gol. These zones mainly include areas that have ecological significance and/or are susceptible to flooding. The areas included in these zones should be managed to preserve their ecological values or utilised sustainably without damaging their environmental attributes.

From land zoning and use analysis, it appears that some zones are unsuitable for current and emerging land uses or are considered too restrictive for certain land parcels within the zone. Examples of these parcels of land include:

- the Midway Area currently zoned RU5 Village,
- West Buronga currently zoned RU1 Primary Production, and
- land to the immediate east of Carramar Drive Sporting Complex currently zoned E3 Environmental Management.

This inappropriate application of land use zones can erode the potential for these parcels of land to support development of emerging and future land use needs of Buronga Gol Gol.

Table 2.2 – Summary of Existing Land Uses

Land Use	Area (ha)	%
Residential	167	6.0
Large Lot Residential	120	4.3
Commercial	36	1.3
Community Facility	8	0.3
Industrial	33	1.2
Public Recreation	24	0.9
Rural Residential	139	5.0
Agriculture	1436	51.5
Woodland	440	15.8
Reserve/Park	116	4.2
Special Activity	12	0.4
Vacant	88	3.2
Roads & Access	168	6.0
<b>Total</b>	<b>2787</b>	<b>100</b>

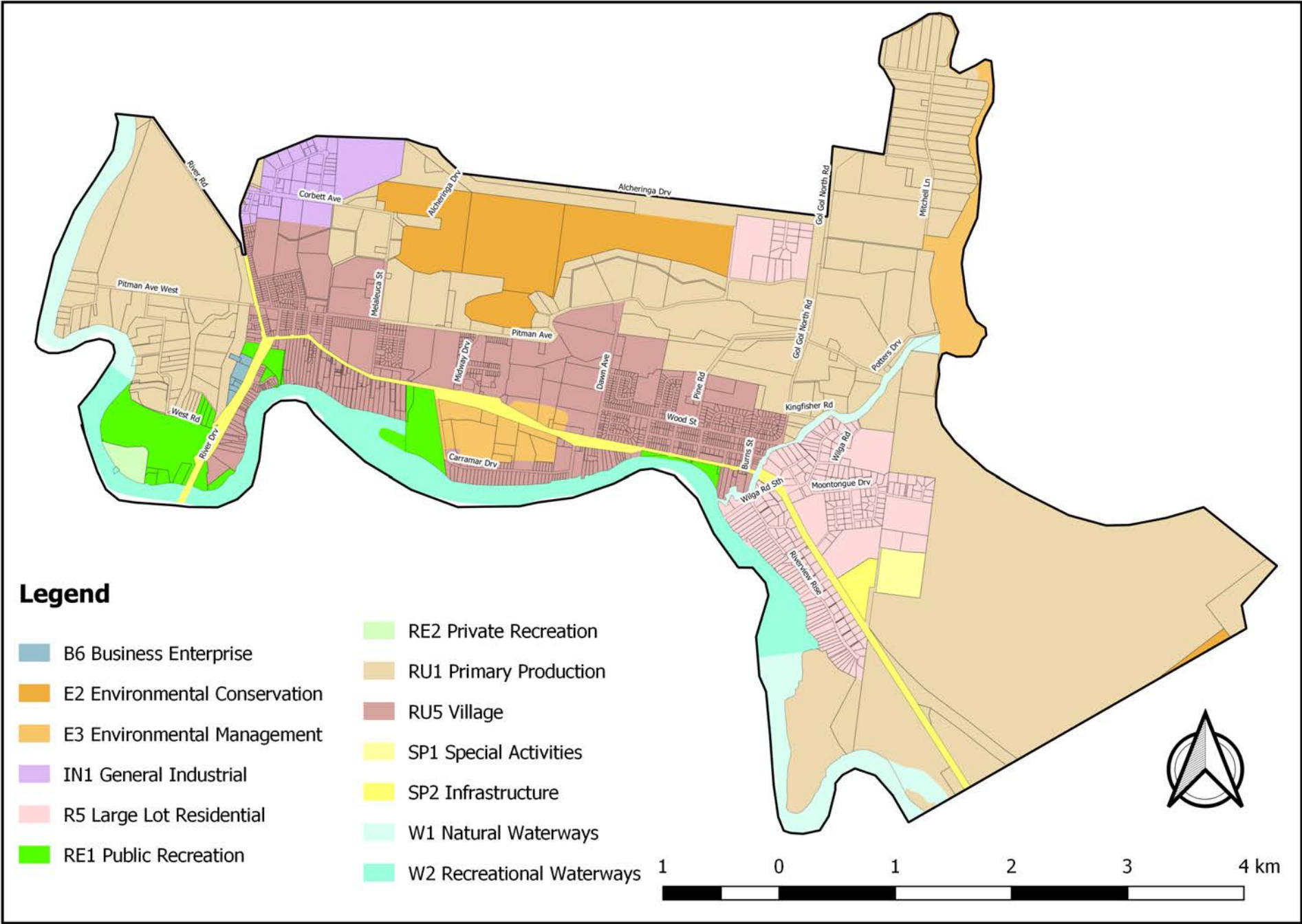


Figure 2.6 – Existing Land Use Zoning

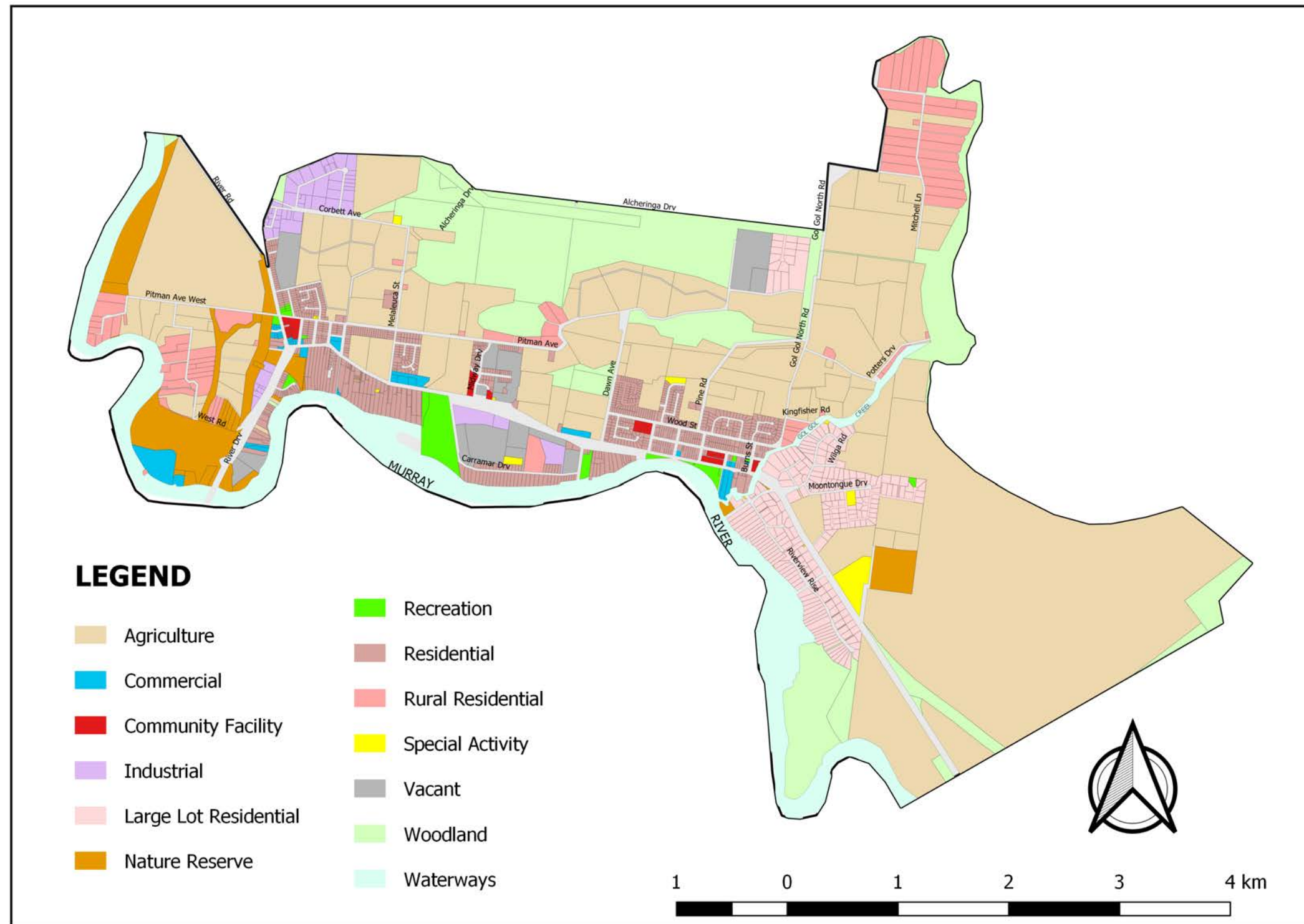


Figure 2.7 – Existing Land Uses



### 2.4.2 Lot Sizes and Density

There is no minimum lot size prescribed in the WLEP 2011 for the zone RU5 Village, which contains much of the residential area of Buronga Gol Gol. However, a clear distinction is noticeable in the lot sizes in the residential area located to the north and south of the Sturt Highways in Buronga Gol Gol (see Figure 2.8).

Land that is north of the Sturt Highway in the existing residential area is subdivided into lots ranging from less than 500 m<sup>2</sup> to around 2,500 m<sup>2</sup>. The lots in the residential area to the south of the highway are larger with many ranging from 2,500 m<sup>2</sup> upwards. The difference in the lot sizes is attributable to the land in the south being riverfront, flood prone and as such largely suitable for large lot residential lifestyle.

The overall average lot size of the developed RU5 Village zone of Buronga Gol Gol has been determined as 1603 m<sup>2</sup>. This provides an average gross density of 6.2 lots per hectare for Buronga Gol Gol, which is significantly below the average of 11 to 12 lots per hectare in other residential areas within NSW. However, lot sizes of recent subdivisions in RU5 Village zone have been averaging around 850 m<sup>2</sup>, which is more consistent with current trends in residential development.

In relation to R5 Large Lot Residential, the WLEP prescribes a minimum lot size of 3000 m<sup>2</sup> and 5000 m<sup>2</sup> for the zone in different parts of Buronga Gol Gol. The overall average lot size of existing developed areas of the R5 Large Lot Residential zone is estimated as 6542 m<sup>2</sup>. However, the average lot size in recent large lot residential subdivisions is around 3500 m<sup>2</sup>, consistent with the minimum lot size for the zone.

Based on recent residential subdivision developments, it is expected that the trend toward smaller lot sizes will continue into the future in both RU5 Village and R5 Large Lot Residential zones. However, the minimum lot size applied to the R5 Large Lot Residential zone should not be reduced to less than 3000 m<sup>2</sup> to ensure residents have adequate land to undertake the type of activities commensurate with rural lifestyle living in a semi-rural setting. Also, a minimum lot size that is consistent with the current village style residential development in Bronga Gol Gol should be determined for the RU5 Village zone.

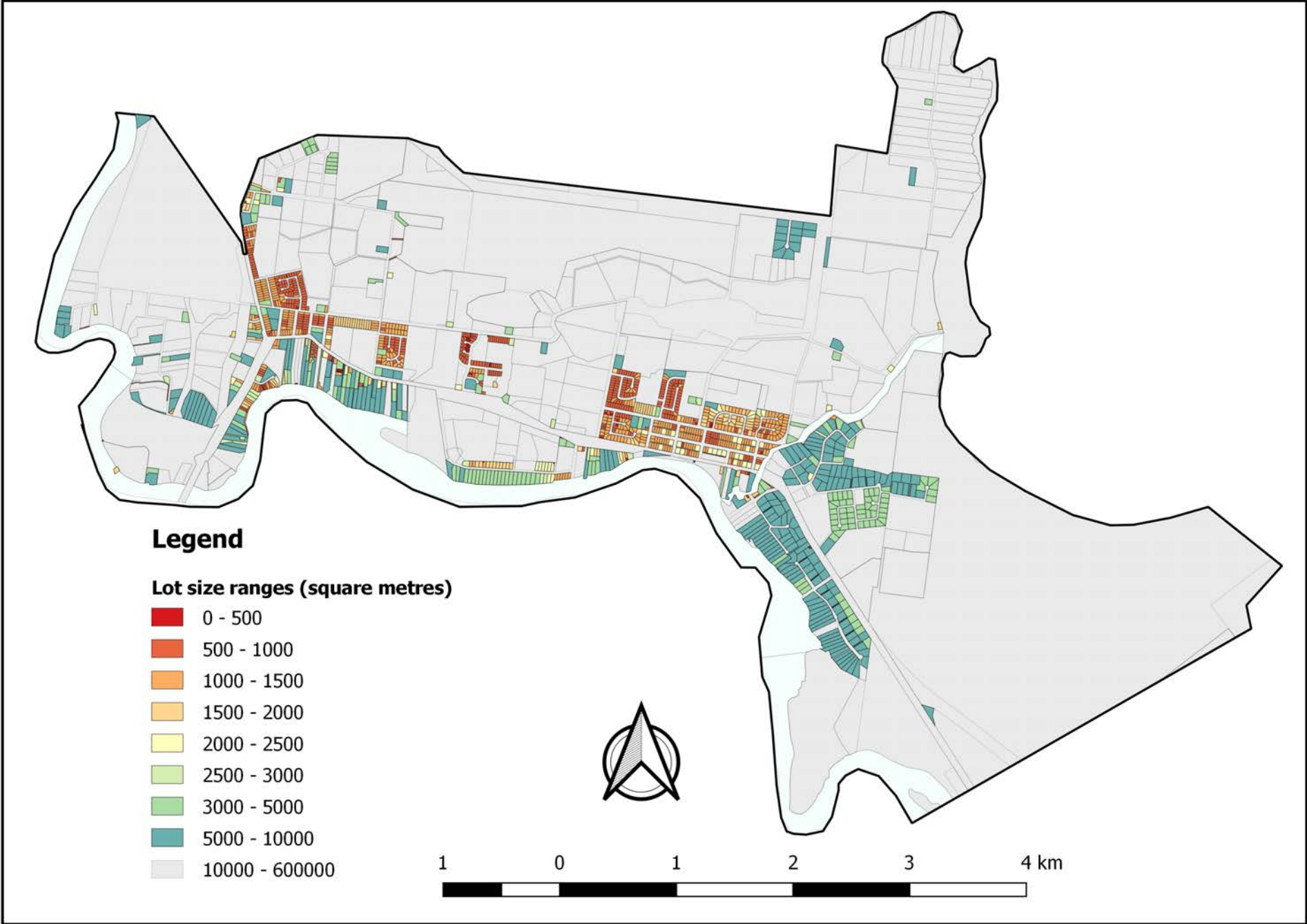


Figure 2.8 – Lot Size Ranges



2.4.3 Residential Land Supply and Demand

Residential land in Buronga Gol Gol falls in the RU5 Village and R5 Large Lot Residential zones.

The average demand for RU5 Village and R5 Large Lot Residential zoned land is estimated as 74 and 19 lots per annum respectively, which equates to an annual average residential take-up rate of 93 lots in Buronga Gol Gol.

In terms of land supply, it has been determined that the total existing undeveloped residential land in Buronga Gol Gol is 320 ha comprising 227 ha of RU5 Village and 93 ha for R5 Large Lot Residential. With allowance of 30% of the land for access, open space and other non-residential uses, the net developable land for RU5 Village and R5 Large Lot Residential is 159 ha and 65 ha respectively.

Based on the average lot size of recent subdivisions and current annual take-up rate for RU5 Village and R5 Large Lot Residential zoned land, a summary of existing developable residential land supply is provided in Table 2.3.

Table 2.3 indicates that Buronga Gol Gol has 25 years supply of RU5 Village land and 10 years of R5 Large Lot Residential land. This suggests that under current circumstances Buronga Gol Gol has adequate long-term RU5 Village zoned land supply, and short to medium term supply of R5 Large Lot Residential zoned land.

However, an increase in the current growth rate of Buronga Gol Gol is anticipated due to factors such as recent improvements in infrastructure services, ongoing development of population services such as supermarket and commercial shops/premises, attractive rural residential lifestyle and amenity, the relatively lower price of land and housing (median=\$310,000) compared to Mildura (median=\$385,000), as well as residential housing demand overflows from Mildura due to urban expansion constraints in the Victorian regional city. These factors can potentially cause a significant residential land shortage, especially in the very popular R5 Large Lot Residential zone.

Therefore, additional residential land needs to be identified to cater for any future increase in current demand rates. This will prevent a potential land supply shortage and housing affordability issues, such as currently being experienced in Mildura.

Table 2.3 – Existing Residential Land Supply under current demand rate and average lot size

Zone	Undeveloped land (ha)	Developable land (ha)	Net Developable land (ha)	Average lot size (m²)	Lot Yield (Additional Lots)	Average Annual Demand	Years Supply
RU5 Village	227	159	111	850	1306	74	25
R5 Large Lot Residential	93	65	40	3500	114	19	10
Total	320	224	151	N/A	1420	N/A	N/A

2.4.4 Housing Development

As of 2016, the housing stock of Buronga Gol Gol was estimated at 1,210 dwellings with the greater majority (93.6%) of the residents occupying a detached residential dwelling type structure. This reveals a homogenous housing typology which suggests the need for increased housing diversity to improve affordability to meet the needs of the ageing population.

Analysis of Council’s approvals records reveals an increasing trend in housing development in Buronga Gol Gol with a total of 170 development approvals granted for new dwellings between 2015 and 2019. This indicates a new dwelling approval rate of 34 per year with the total yearly approvals increasing steadily over the period as presented in Figure 2.9.

The increasing trend of housing development can be attributed to a range of factors, particularly Mildura’s strong population growth, which averages around 580 persons per annum and an associated housing demand overflow. Other ex-

plaining factors include the availability of relatively affordable residential and rural residential land on the NSW side of the Murray River, encouraging people to choose Buronga Gol Gol over the regional city of Mildura, which is located less than 5 km away.

Most of the recent residential housing developments occur within the new subdivision area north and east of Gol Gol. The housing boom in Buronga Gol Gol is expected to continue into the future and will be driven and supported by currently proposed residential subdivision and commercial development in the area as presented in Figure 2.10.





It must, however, be noted that housing development in Buronga Gol Gol is strongly linked to availability of suitable residential land. As depicted in Figure 2.8, the area experienced a sharp decline in housing development in 2016 due to a limited supply of residential land as no residential subdivisions were completed in that year. However, this trend was reversed in 2017 when major residential subdivisions were completed and more suitable residential land became available. Therefore, it is vital to ensure there is an ongoing supply of readily available residential land to satisfy the current and anticipated future demand.

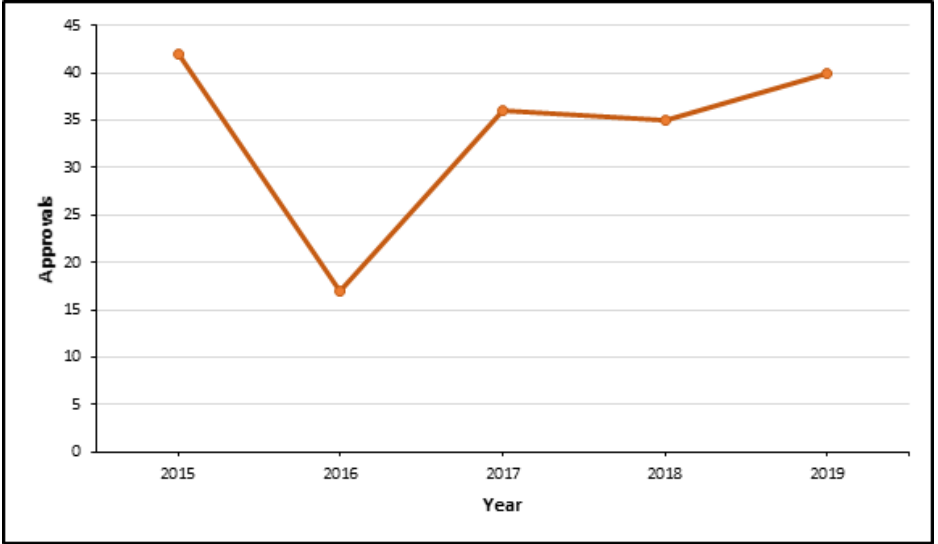


Figure 2.9 – Housing Development Approvals in Buronga Gol Gol

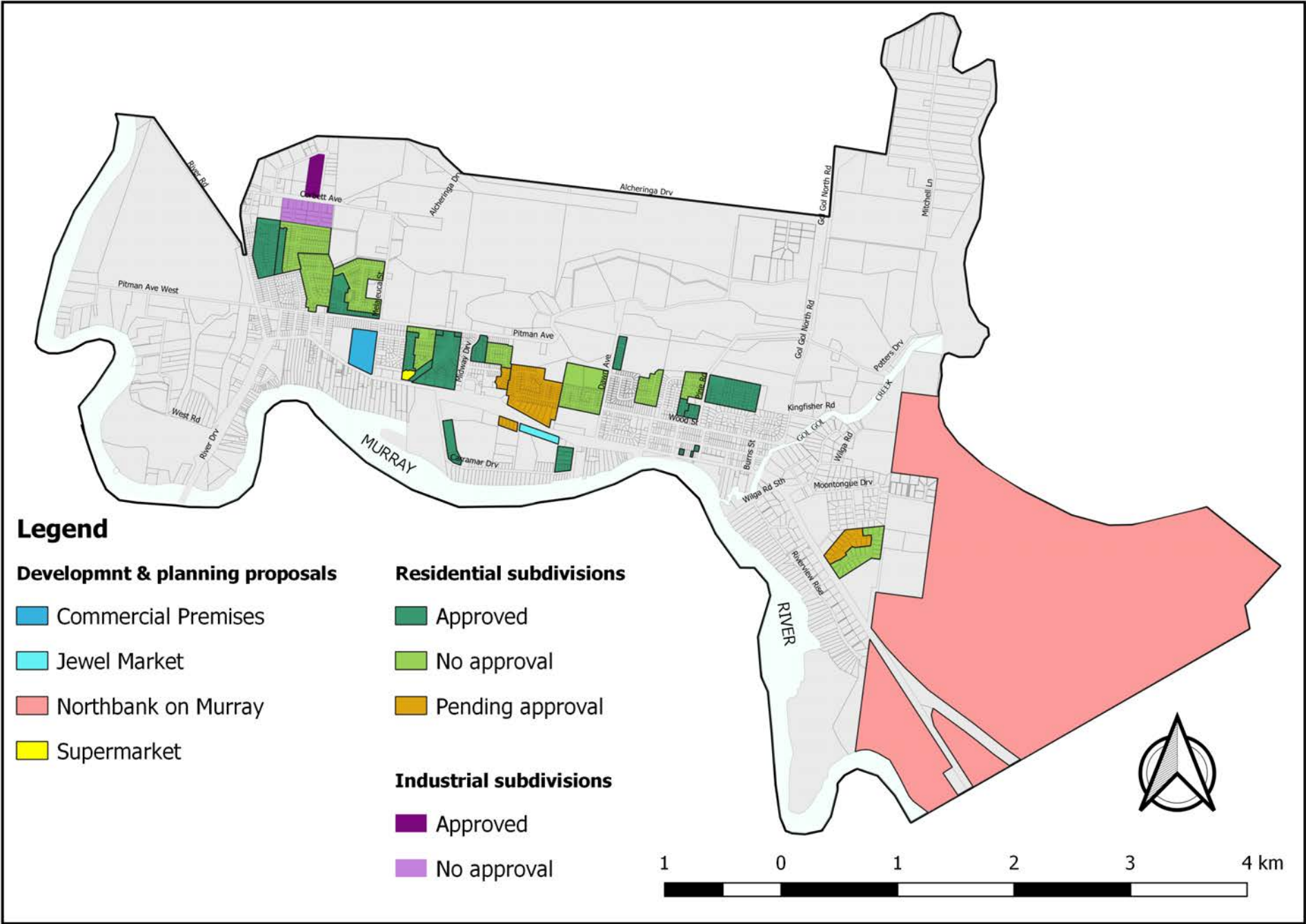


Figure 2.10 Proposed developments, concepts and planning proposals



## 2.5 Local Economy

### 2.5.1 Employment and income

In 2016, approximately 95% of the labour force in Buronga Gol Gol was employed, resulting in an unemployment rate of 4.7% compared to the NSW unemployment rate of 8.5% and 6% for Mildura. The main sectors of employment include agriculture, retail, education, transport, tourism, and government services.

Although there is no local data on the place of work for Buronga Gol Gol, the latest journey to work data for the Wentworth Shire from the 2016 ABS Census indicates that 44% of the working population work within the Shire while 41% work in Mildura. It is evident from this that most of the residents of Buronga Gol Gol work within the Sunraysia region.

In Buronga Gol Gol, the majority 74% of the workers travel to work by car as a driver while only 3% walk to work with none travelling to work by bicycle, bus or taxi. The significantly small proportion of the working population having active transport as the main commute to work is largely attributable to the limited active transport infrastructure in the area.

The median household weekly income in Buronga Gol Gol is \$1,338, this is below the NSW and Australian median income of \$1,486 and \$1,438 respectively. It is also noted that approximately 20% of households are on a low weekly income of less than \$650, which is on par with NSW and Australian averages.

The average weekly household goods and services expenditure in Buronga Gol Gol is approximately \$1,283. The convenient proximity of the neighbouring regional city of Mildura offers the vast majority of retail, commercial and professional services to residents of Buronga Gol Gol. However, the establishment of new services including health, supermarket and retail options is expected to see more of the weekly expenditure spent within the Buronga Gol Gol community.

### 2.5.2 Private Business

There are approximately 295 businesses operating in the Buronga Gol Gol area. These businesses include a mix of tourism accommodation, retail trade, wineries, service stations and plant nurseries.

The retail and commercial businesses are located sporadically within the study area and shopping strips as shown in Figure 2.11. Development of a new supermarket and associated specialty shops has commenced west of the Midway area, which is expected to become the main commercial precinct of Buronga Gol Gol.

### 2.5.3 Agriculture

Agricultural production is fundamental to the local economy of Buronga Gol Gol. The majority of agricultural activity is horticultural farming. The area has an extensive amount of horticultural land farming table and wine grapes, citrus, vegetables and nuts (refer to Figure 2.6).

### 2.5.4 Tourism

Buronga Gol Gol enjoys over 130 km of river frontage to the mighty Murray River. This provides tourism opportunities to eat, sleep and play on the water or river bank. Accommodation includes a vast range of options including Bed and Breakfast cottages, apartments, homesteads, caravan parks, motels and houseboats. Whilst activities include skiing, fishing, camping and bushwalking. Tourists and locals can appreciate the river in both its natural riverine environment, such as from Bottle Bend Reserve or as a recreation hub such as at James King Park where water-skiing and house-boating share the bank with parklands a café and hotel bistro. Land based attractions include the Australian Inland Botanic Gardens, Varapodio Estate Olive Grove, Orange World, Holden Museum and Trentham Estate Winery. These destinations attract many tourists to Buronga Gol Gol and the Sunraysia region.

Events including ski races, car rallies, attract tourism regularly whilst the Midway Centre boasts a 700-seat venue for conferences, exhibitions and a variety of business events.

### 2.5.5 Industrial

Buronga Gol Gol has a number of industries, warehouses and field service centres which are predominantly situated in the industrial precinct located to the northwest of Buronga on the Silver City Highway (see Figure 2.6). Development of the industrial/manufacturing sector in Buronga Gol Gol has been historically slow as existing lots in the industrial precinct were too large for localised industrial developments. However, recent re-subdivision activity has marginally improved land take up and development in the industrial precinct.



Buronga Town Centre





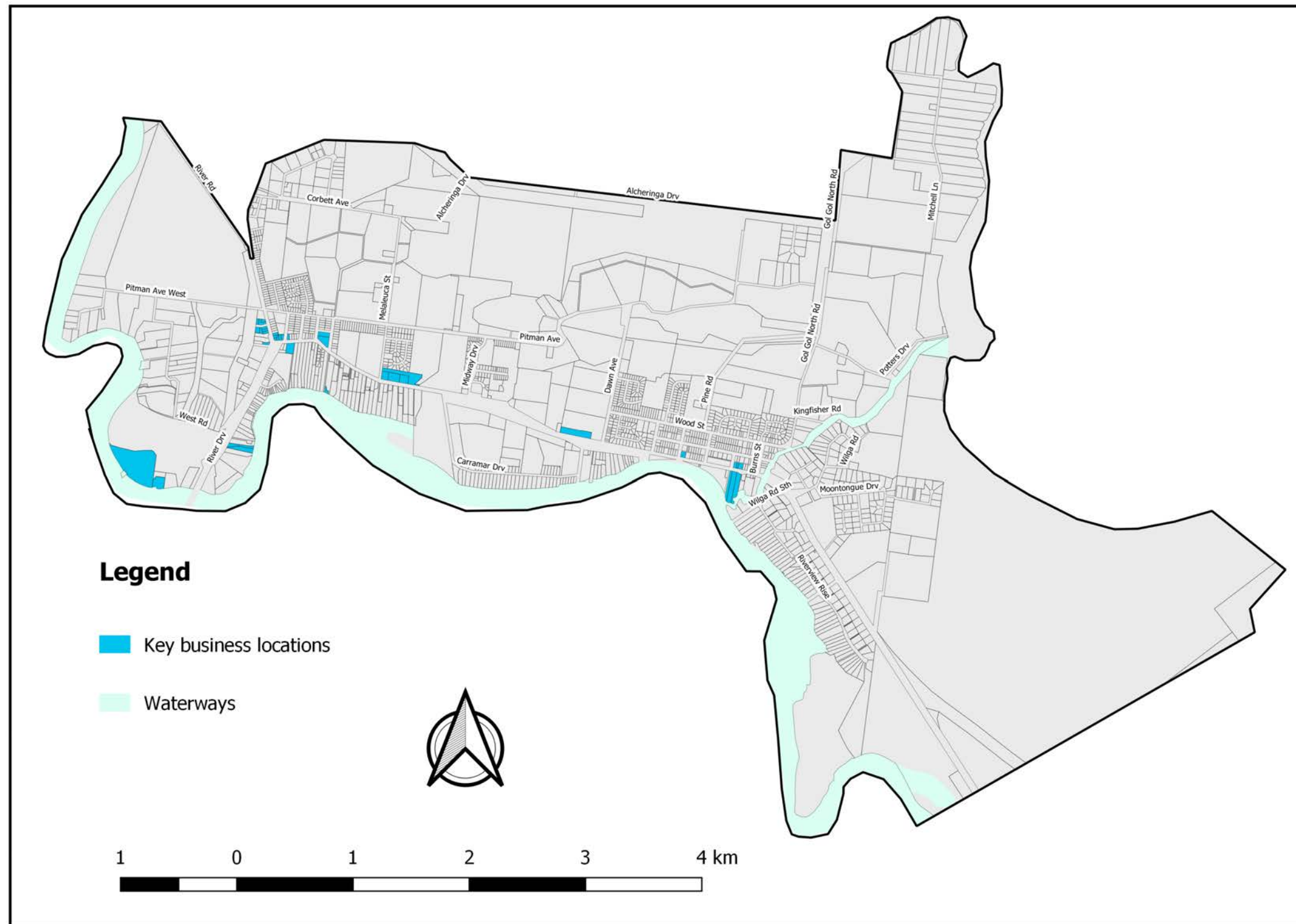


Figure 2.11 – Distribution of Commercial Activities in Buronga Gol Gol

## 2.6 Infrastructure

### 2.6.1 Roads and Transport

Buronga Gol Gol is situated on the Sturt and Silver City Highways which serve as the main entry routes into the study area. The east-west alignment of the Sturt Highway passes directly through the central area of Buronga Gol Gol and meets with the Silver City Highway at the western end of Buronga. These highways clearly define the arterial road system within the area (see Figure 2.12). Sunraysia is becoming known as a 'freight hub' due to the tristate boundaries and intersecting highways within the region.

Upgrades to road infrastructure are continually being undertaken to meet the needs of increasing volumes of heavy and light vehicle traffic on these highways, which both opportunities and challenges to Buronga Gol Gol (see Figure 2.13). The Structure Plan aims to address pedestrian safety and amenity of the local community including the consideration of a future bypass route and/or second Murray River Crossing as long-term objective.

As shown in Figure 2.11, Buronga Gol Gol is also serviced by a number of existing collector and distributor roads that facilitate local traffic distribution to the various parts of the area. Primary collector roads include Pitman Avenue, River Road, Link Road, Melaleuca Street, Corbett Avenue, Dawn Avenue, Gol Gol North Road and Moontongue Drive, among others. These roads are all sealed and routinely maintained by Council but have been experiencing increasing traffic with nominal vehicular queueing observed at the intersections with the highways during peak hours (see Figure 2.13).

There are also unsealed roads in and around Buronga Gol Gol. Most of these unsealed roads pass through road reserves and into state-owned tracts of land and reserves, boundary easements and/or onto private properties.

Although most of the unsealed roads service rural lands, there are roads close to the existing urban area of Buronga Gol Gol which remain unsealed, including properties that lack formal access to the road or street frontage. Examples include Bridge Road in Buronga and the properties behind Buronga's B6 Enterprise Corridor. There is a need to prioritise and provide sealed roads/streets and formal accesses to properties in close proximity to town centres.

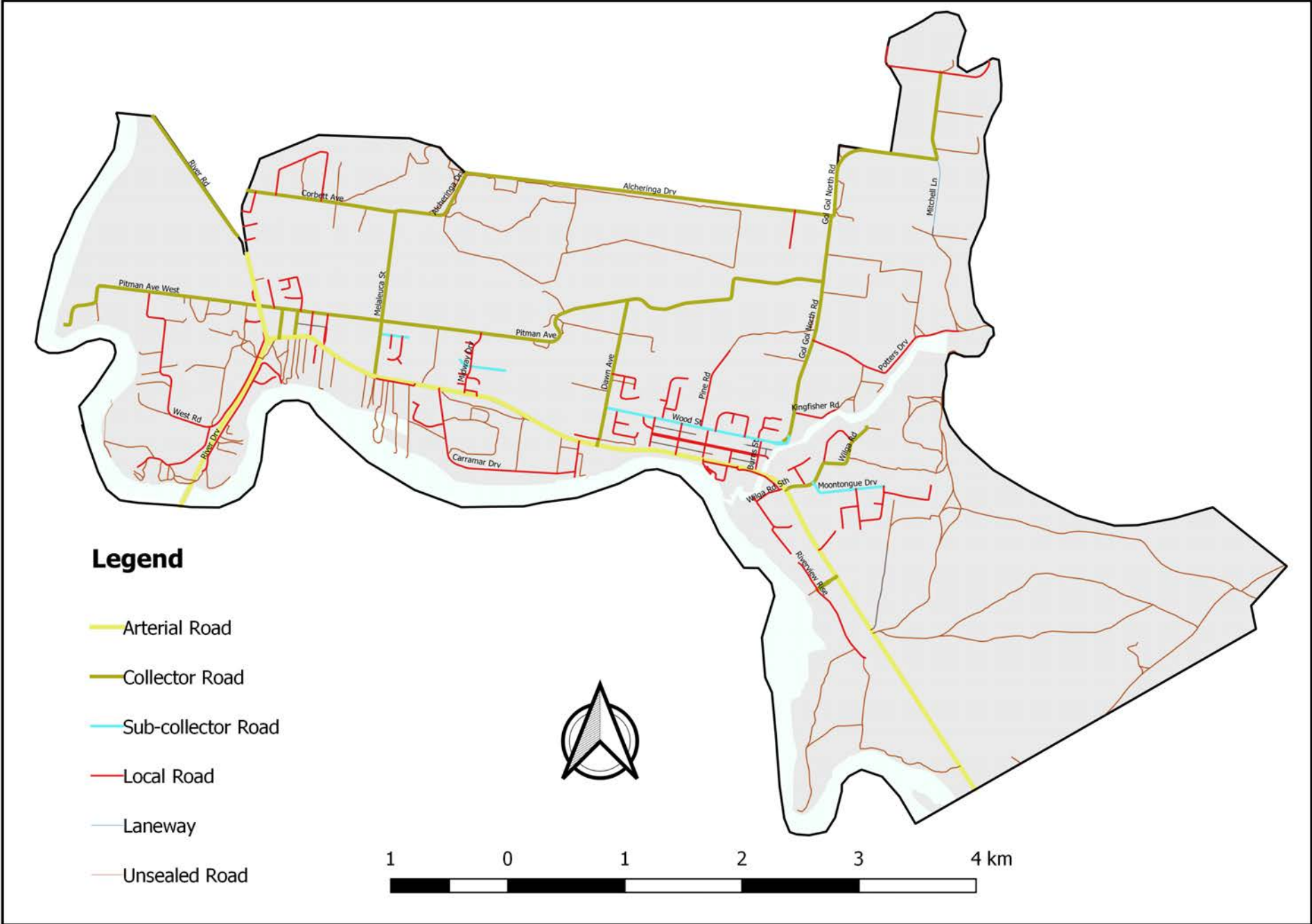


Figure 2.12 – Buronga Gol Gol Road Network



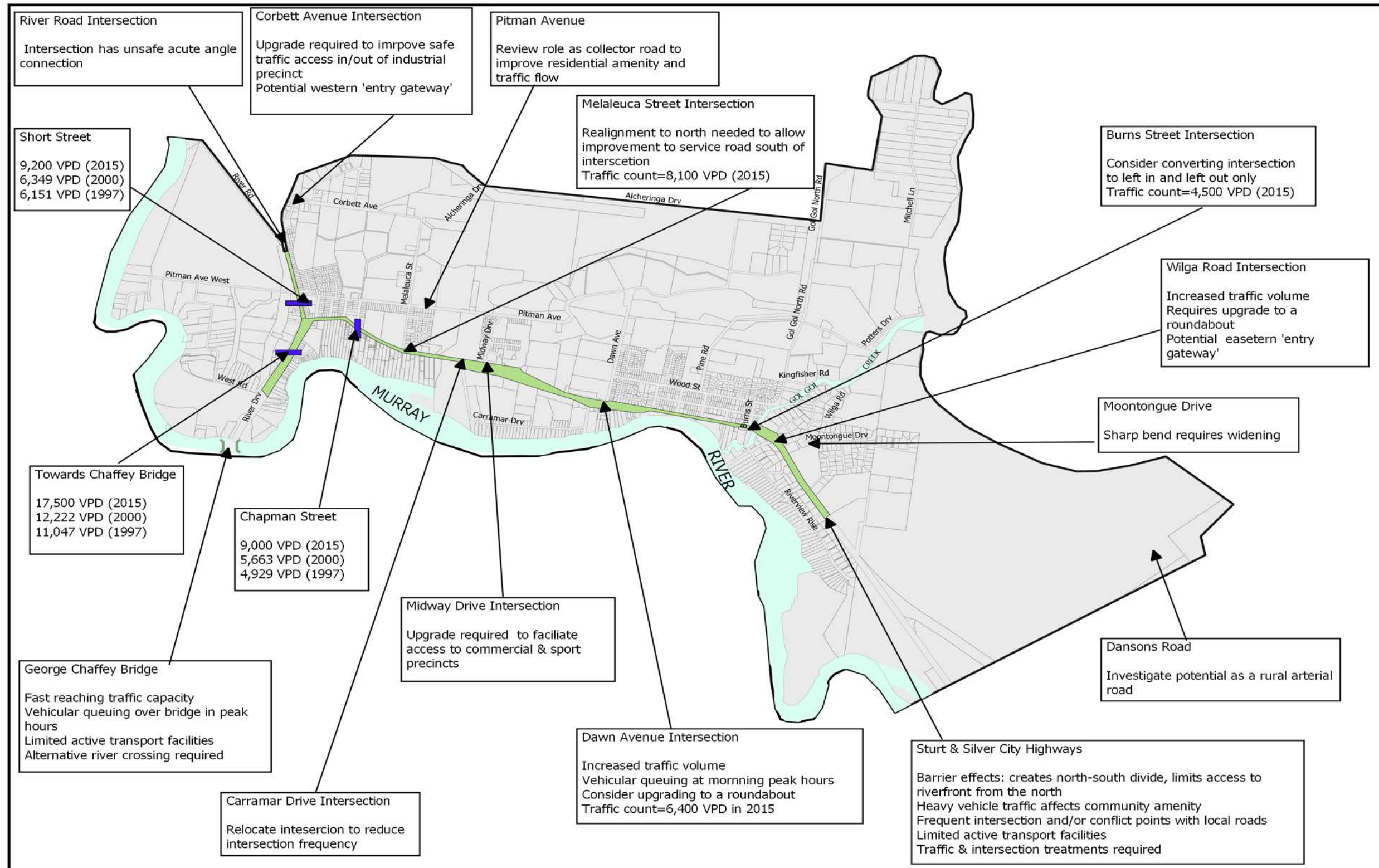


Figure 2.13 Road & Traffic Analysis



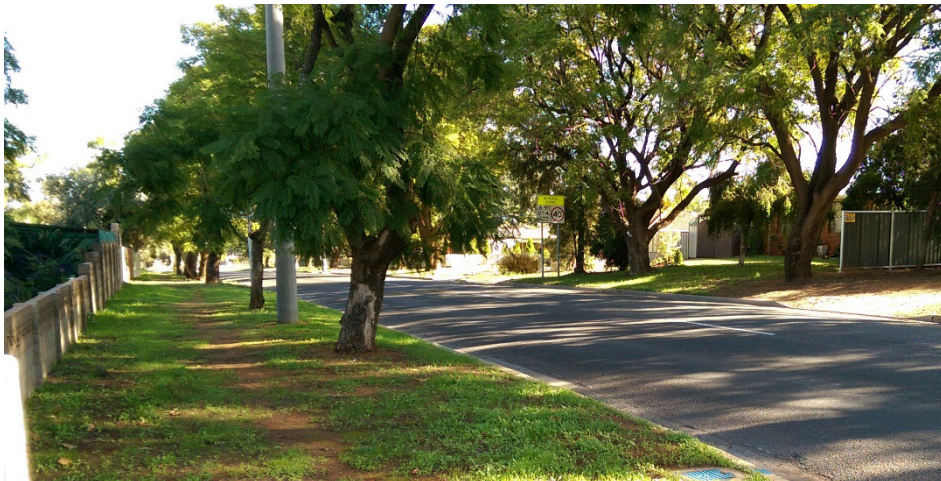
2.6.2 Footpaths and Sharedways

Footpaths and pedestrian safety infrastructure are developed and maintained in Buronga Gol Gol by Council. Continual improvement of the connectivity of footpaths and sharedways is funded annually by the State and prioritised in stages by neighbourhood activity with highest priority to schools, shopping, medical and community activities. Newly developed estates include pedestrian access as part of their development. Connecting these subdivisions to the town centre networks is essential to increasing active transport in the area.

As shown in Figure 2.14, approximately 70% of the Buronga Gol Gol established residential area is without footpaths which creates a disconnect from the pockets of well networked areas. Promoting the benefits of walking and cycling in the area, is not feasible without well networked footpaths, sharedways and pedestrian safety infrastructure. This suggests a pressing need to retrofit, upgrade and connect footpaths and pedestrian safety infrastructure to improve liveability, health and wellbeing of residents in Buronga Gol Gol.



Sharedways in Gol Gol Town Centre



Road reserve without footpath

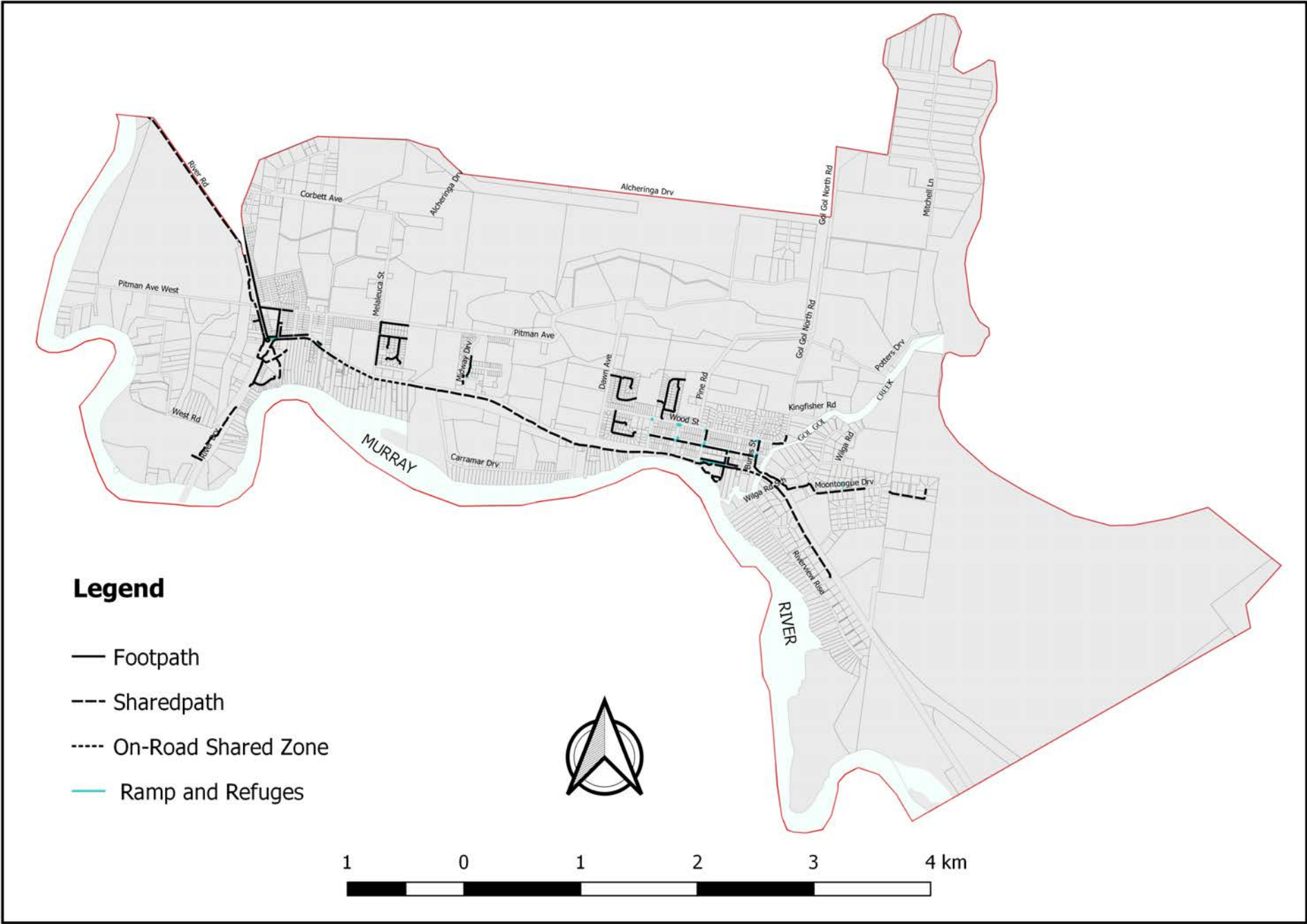


Figure 2.14 Active Transport Infrastructure



### 2.6.3 Water Supply

Most of Buronga Gol Gol is serviced by a dual water system providing reticulat-ed filtered water for use as potable water and reticulated raw water for other domestic uses not requiring the same level of treatment (see Figure 2.15).

The Buronga Gol Gol water treatment plant supplies filtered water to Gol Gol, Buronga, Mourquong, Namitjira and Dareton. The filtration plant has a produc-tion capacity of 3.7 megalitres per day, which is estimated to be able to supply water to 3,000 connections (7,500 people).

The filtered water supply delivery system of pump stations, reticulation pipe-work and a 3 megalitre storage reservoir are adequate for existing demands in the Buronga Gol Gol area. The filtration plant currently services 1,442 con-nections (3,556 people), indicating excess capacity of 1,449 connections in the existing headworks.

Raw water supply in Buronga Gol Gol is extracted from the Murray River and disinfected with chlorine near the pump stations. The reticulated raw water sys-tem currently has 1,421 connections (3,556 people). It is noted that the raw water system capacity is above the current number of connections. However, the reticulation system comprising pumps, pipework and storage reservoirs is ageing and major replacement and/or upgrade to the system would be required in the near future.

The average daily household water usage in Buronga Gol Gol in 2018/2019 was 2,310 litres (i.e. 678 litres of filtered water and 1,632 litres of raw water) which is about 2.5 times the Australian average daily water consumption 900 litres per household. This indicates extreme water consumption by water users and should be addressed through a holistic water supply and demand management program that promote water saving practices and technologies among the res-idents.

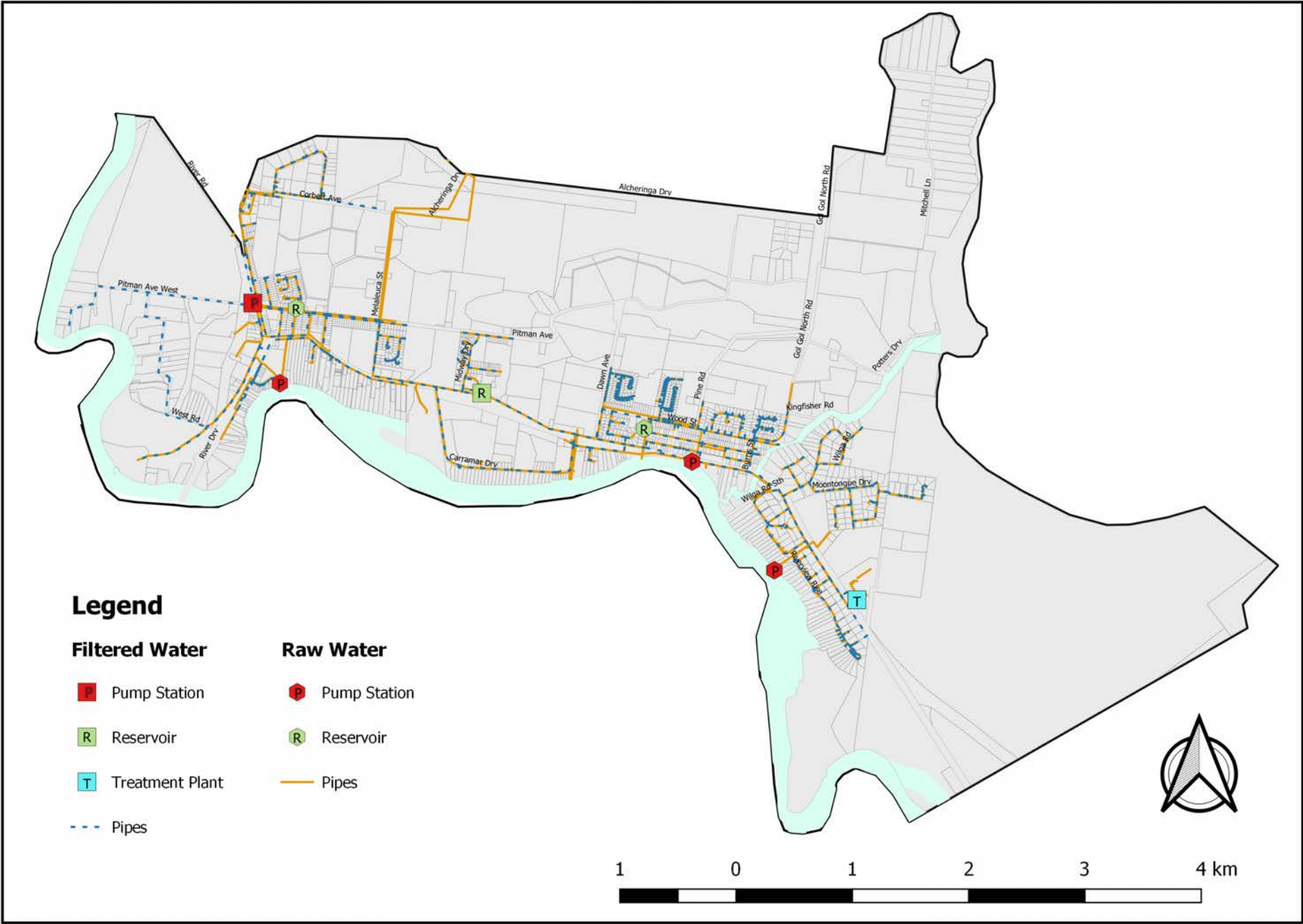


Figure 2.15 – Water Supply Infrastructure



### 2.6.4 Sewerage

Most of the Buronga Gol Gol area in the RU5 Village zone is serviced with reticulated sewerage infrastructure for collection, transportation and treatment of effluent (see Figure 2.16). The Buronga Gol Gol sewerage treatment plant currently services an estimated 2,410 people far below its designed capacity of 10,000 people. This suggests the headworks capability and sewage pump station network of the sewerage infrastructure has ample capacity to treat current and future loads to meet environmental requirements.

It should be noted that properties in the R5 Large Lot Residential zone in Gol Gol are not connected to any town sewerage system due to historical subdivision design and approval regimes and are required to install on-site wastewater management systems. Some of these on-site septic systems are situated in riparian areas and as such installation and mitigation measures are mandatory to ensure that any aquatic pollution risks are negated, especially in flood events. However, given the proximity of the R5 Large Lot Residential zone to the Murray River and Gol Gol Creek and the spare capacity of the existing sewerage infrastructure, serious consideration should be given to connecting this part to the town's reticulated sewerage.



Sewerage Treatment Plant

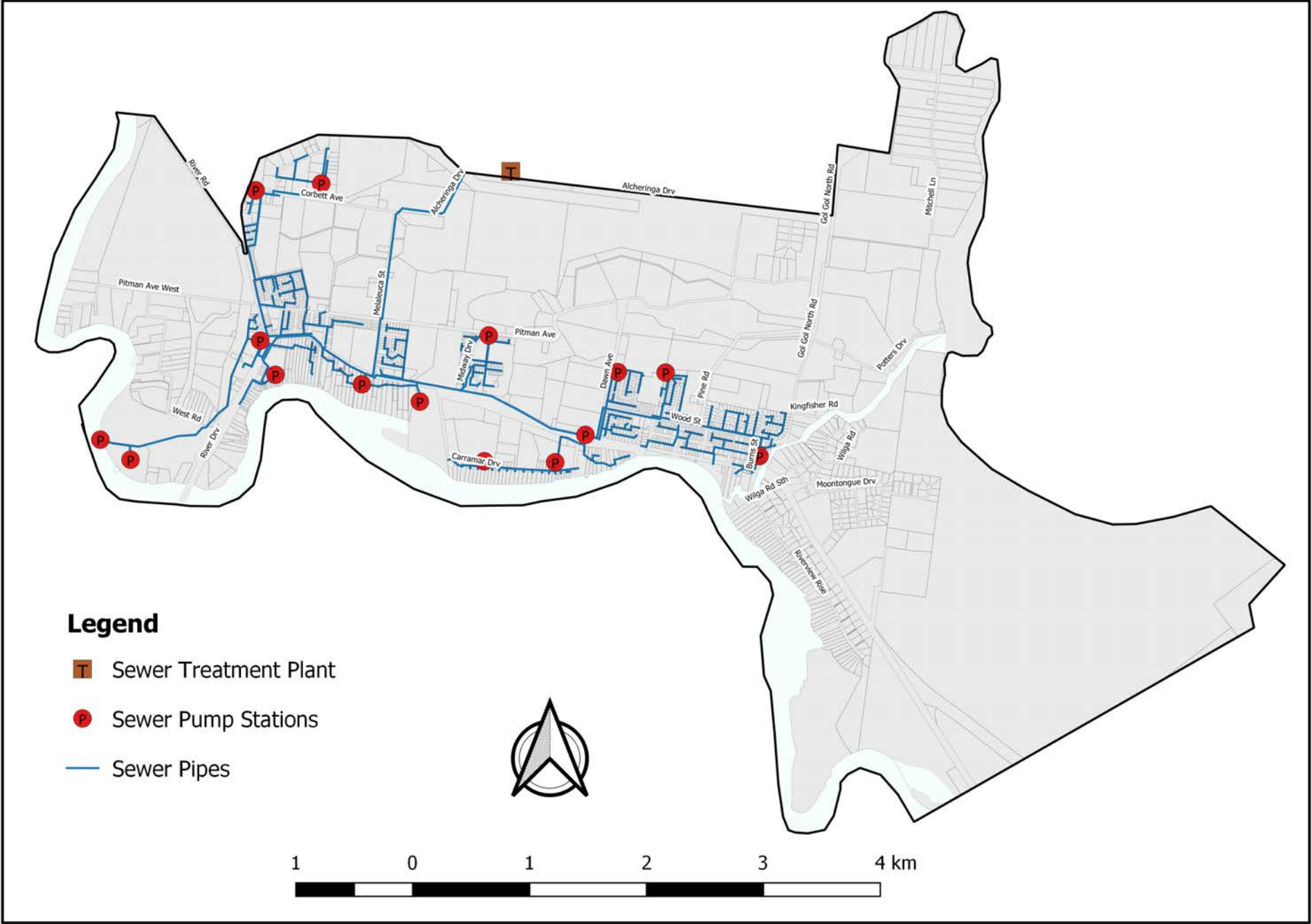


Figure 2.16 – Sewerage Infrastructure



### 2.6.5 Drainage/Stormwater Infrastructure

Stormwater services are available in most parts of Buronga Gol Gol including the new subdivision estates, the industrial precinct and the town centre (see Figure 2.17). The drainage systems are made up of both natural and man-made retention basins that collect excess run-off generated in storm or high rainfall events.

Although the drainage system has generally worked well to prevent large scale flood incidences in Buronga Gol Gol, more recent rainfall events have revealed inefficiency to cope with stormwater runoff in a minor to medium rainfall event. For example, minor inundation affected developments in the Moontongue Drive area due to overflow of the associated retention basin.

There is a need to upgrade and extend the drainage infrastructure to effectively service both existing and newly developed areas of Buronga Gol Gol. Options being considered by Council include an area known as Pink Lake and a review of Moontongue Drive.



Retention Basin at Livingstone Drive

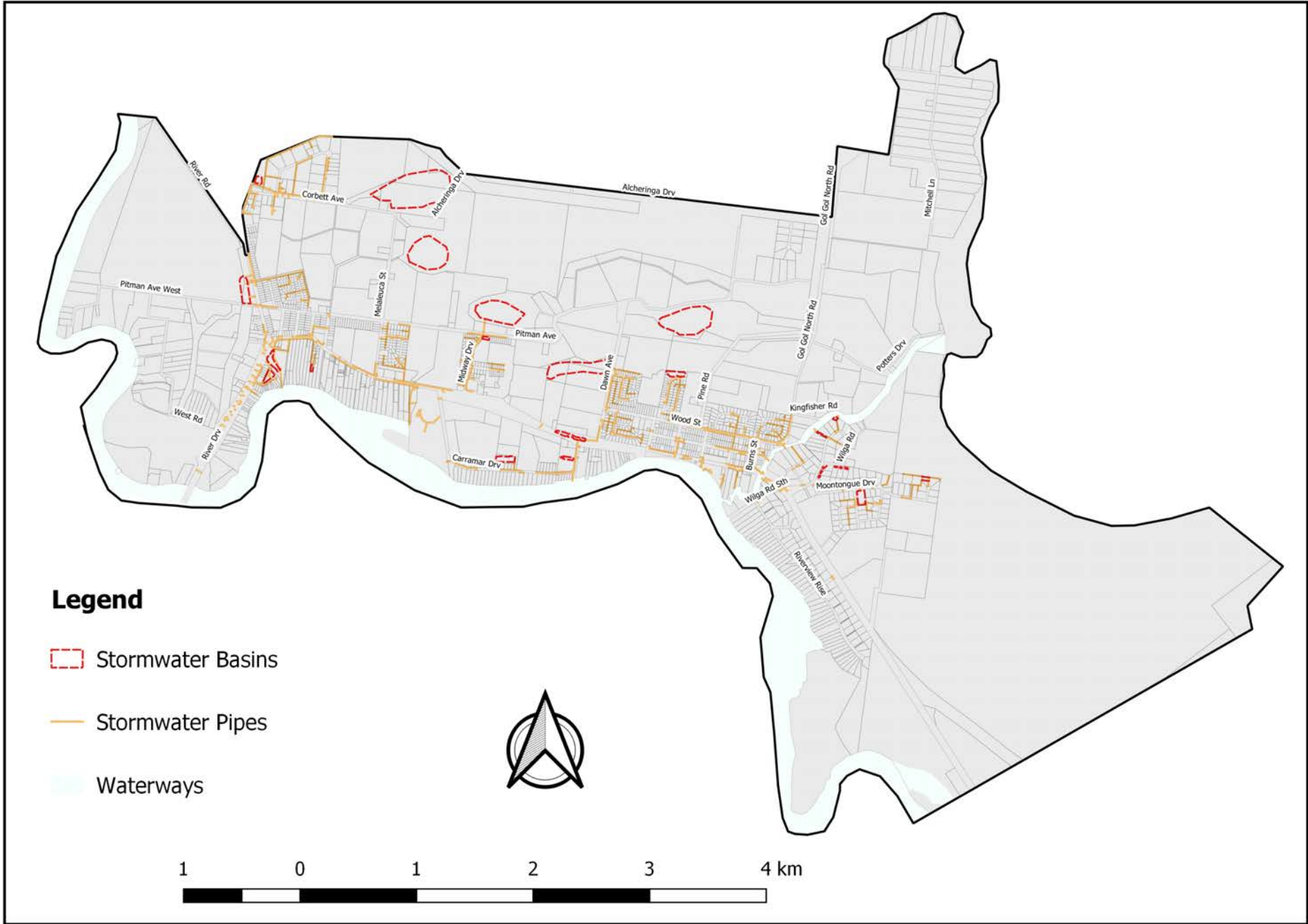


Figure 2.17 – Stormwater Infrastructure



### 2.5.6 Power and Telecommunication

Existing power infrastructure in Buronga Gol Gol includes a Substation at Corbett Avenue and a Switching Station on Arumpo Road in Buronga (refer Figure 2.18). The current power infrastructure has adequate capacity to meet existing and future demand in the Buronga Gol Gol area. However, the predominance of overhead powerlines along the highways in the main township areas undermine the aesthetic appeal of important precincts such as the James King Park.

The existing telecommunications infrastructure consists of a legacy copper network, however the recent addition of fibre to the kerb NBN, high quality voice and data broadband can be achieved. This consists of two Telstra Exchanges located at Wood Street in Gol Gol and Melaleuca Street in Buronga, and an Optus Telecommunication Tower on the Sturt Highway in Buronga. It is noted that the actual quality of telecommunication services provided to the end user depends on the service provider and the plans selected by the individual user.

## 2.7 Community Services and Recreation

### 2.7.1 Community Facilities and Services

Buronga Gol Gol provides a range of different community facilities and services (see Figure 2.18). These include:

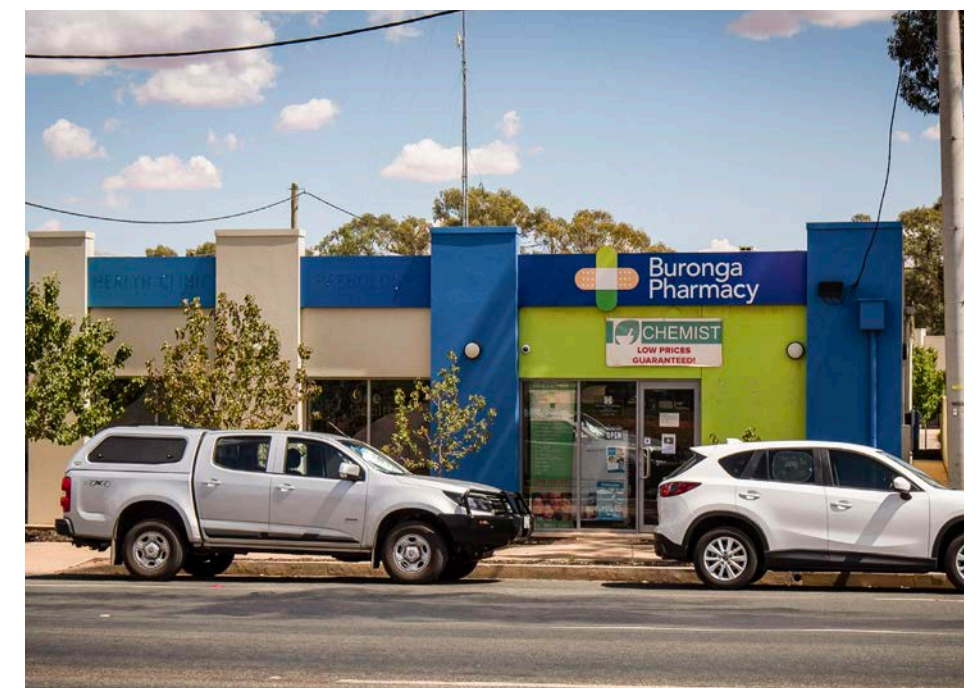
- Early childhood education centres
  - Two Rivers Early Learning
  - Jack & Jill Midway Child Care Centre)
- Pre-school (Gol Gol pre-school)
- Primary schools
  - Buronga Public School
  - Gol Gol Public School
- Emergency services
  - Buronga Police Station
  - Buronga Rural Fire Service
  - Gol Gol Fire Brigade
- Midway Service Centre which includes
  - community centre
  - meeting rooms
  - conference venue
  - Council library and service centre
  - basketball court
- Community Venues
  - Scout Hall
  - Vintage Car Club
  - Carramar Drive Sporting Complex
  - St Michael the Archangel Church
- Health facilities
  - clinic
  - pathology collection centre
  - chemist

- Local amenities
  - Public toilets are throughout the area in 6 locations, 4 of which have unisex facilities, 2 have disability access and some have received recent upgrades.
  - Gol Gol Cemetery is located within the Gol Gol township servicing both towns
  - Drink fountains or filtered water taps are in both of the main parklands where BBQs and Playgrounds occur

In addition, both Buronga and Gol Gol have small village-style retail/business centres that feature key facilities and services such as post offices, bakeries, general stores, service stations and bus stops among others. The retail/business centres are situated in highly visible locations on the main Buronga Gol Gol thoroughfare, however, pedestrian safety infrastructure is limited on the highways.

It should be noted that Buronga Gol Gol does not have a secondary school facility. Secondary school-age children access educational services in Dareton (Coomealla High School) or Mildura (both private and public options). School buses transport students to both NSW and Victorian education facilities from Buronga Gol Gol. Ambulance services are provided by the Ambulance Victoria branch based in Mildura.

Given Buronga Gol Gol's changing demographics, such as the increase in the number of families with children and the ageing population, it is considered necessary that a secondary school and ambulance services are made available locally in the future.





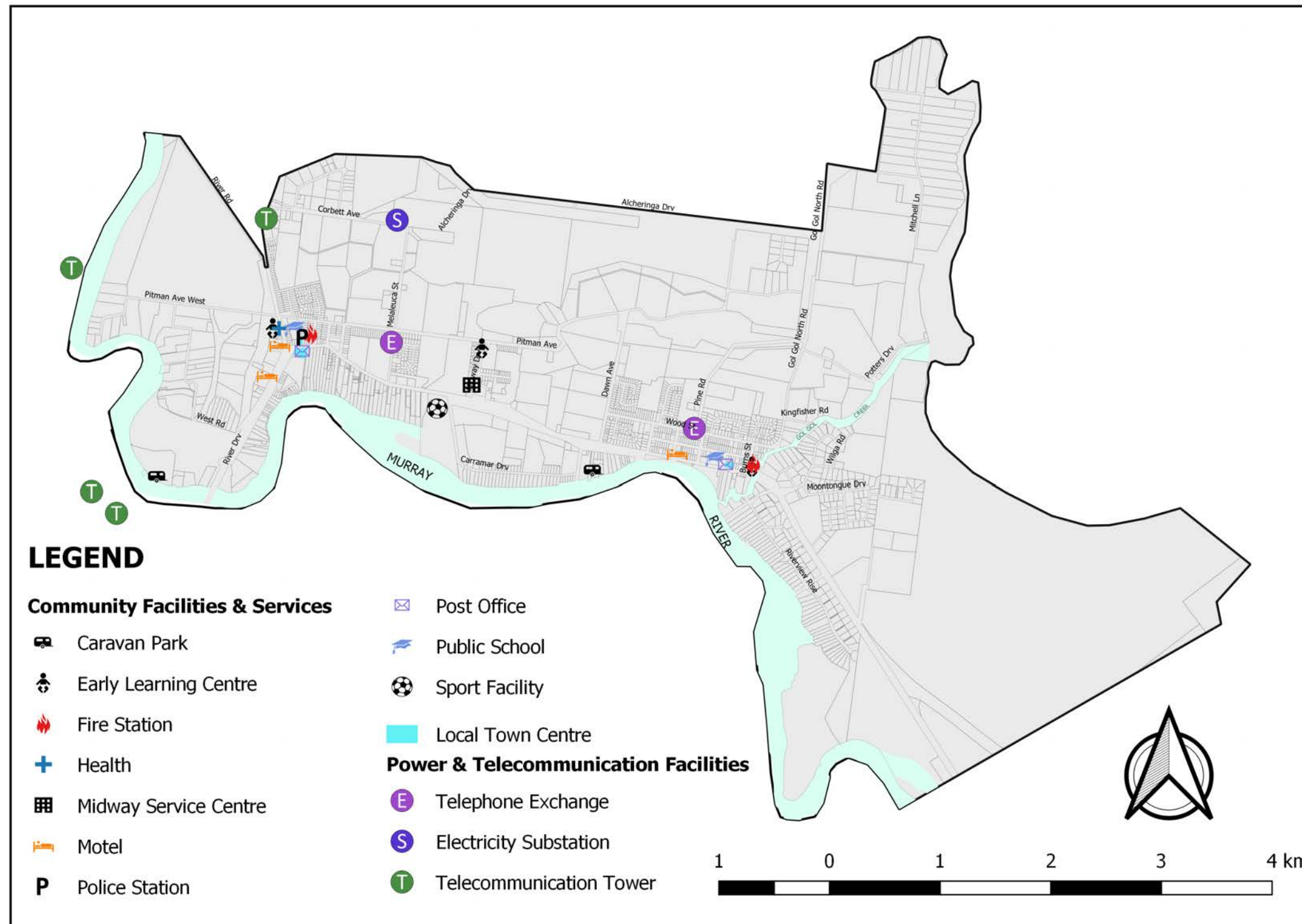


Figure 2.18 – Community Facilities and Services

2.7.2 Public Transport

CDC Mildura provides the only public transportation in Buronga Gol Gol. One mid-morning and one mid-afternoon service per day are provided in each direction on week days only.

There are approximately 22 bus stops operating in Buronga Gol Gol comprising 15 bus shelters and 7 signposted without shelters or seating (see Figure 2.19). Increased service frequency including weekend service will be required to improve patronage of public transport, to subsequently reduce car dependence. This may result in upgrade to and provision of additional bus stops.

Regional and interstate bus services by VLine and Transport for NSW, and passenger air services from the Mildura airport serve as transportation options from Buronga Gol Gol to the major cities and surrounding regional centres.

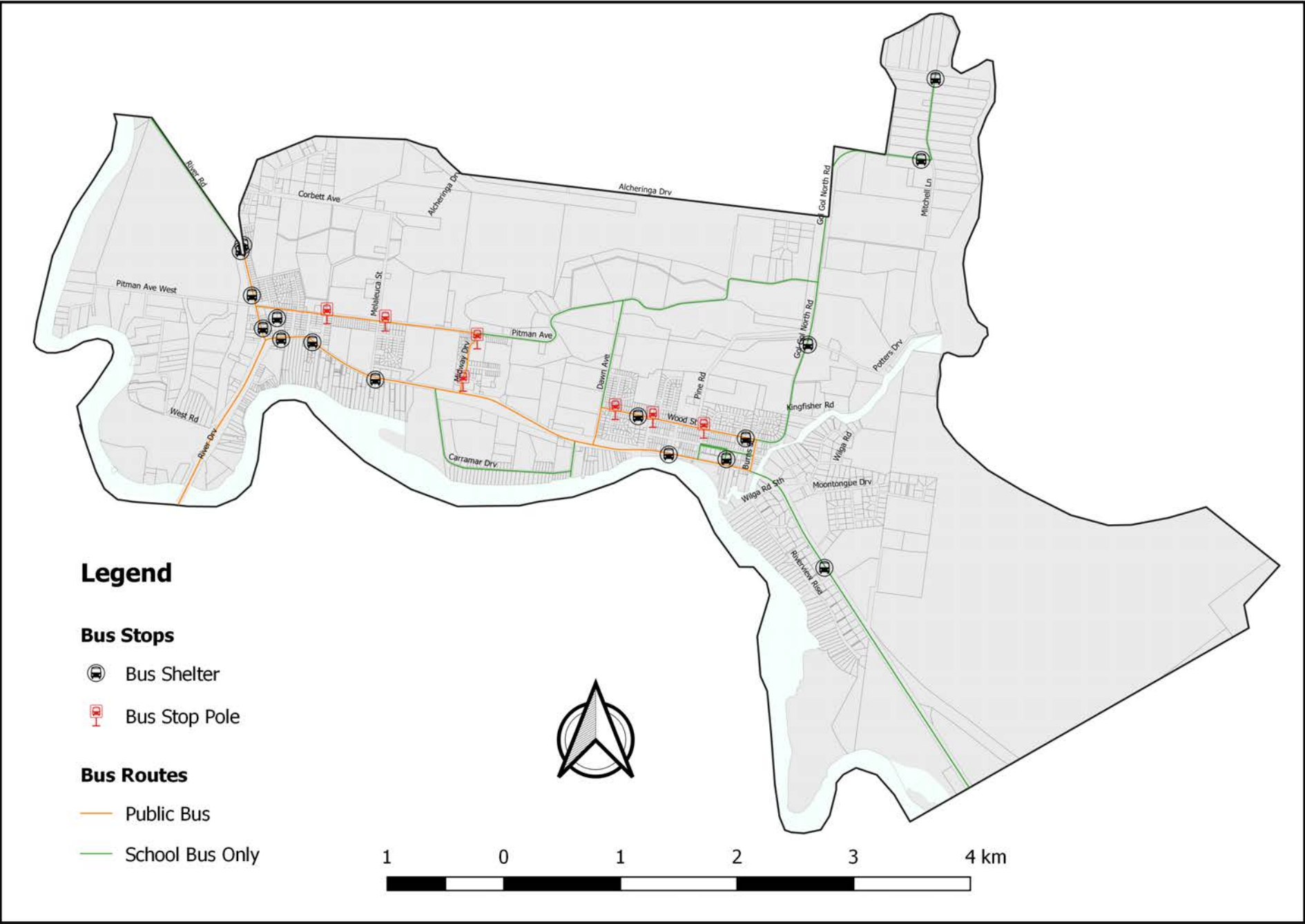


Figure 2.19 – Transport Services



2.7.3 Public Parks and Recreation Facilities

Buronga Gol Gol has numerous parks and recreational areas as shown in Table 2.4 and Figure 2.20. Whilst much of the public open space is made up of natural bushland areas (largely in floodplains) 7 established and maintained parks are peppered throughout the area. The public open spaces occupy approximately 151 ha.

James King Park has had a recent upgrade of infrastructure and facilities including playground, picnic tables and benches, house boat mooring, boat ramp and sandbar to enhance its serviceability to residents and visitors.

The natural reserve adjacent to the Buronga Caravan Park has been enhanced through rationalisation works including formalising walking and cycling trails and consolidating vehicle access to increase safety for all users. These improvements will also support rehabilitation of vegetation and preservation of this natural floodplain area.

It is noted however that the parks and recreation reserves are not well connected and exist in quite a dispersed pattern. This needs to be addressed through measures geared towards creating an accessible, integrated and adaptable network of passive and active open spaces and recreational facilities.

Table 2.4 – Summary of Recreational facilities

Recreational Facility	Playground	Exercise Equipment	Toilets	Disability Toilet	Unisex Toilet	Baby Change	BBQ	Drinking water	Picnic Table
James King Park	✓		✓	✓	✓	✓	✓	✓	✓
Carramar Drive Sporting Complex	✓		✓						
Midway Park			✓		✓				✓
Pitman Park /Rest Stop			✓						✓
Wilkinson Park	✓							✓	✓
Buronga Wetlands	✓	✓	✓		✓		✓	✓	✓
Buronga Children's Playground	✓							✓	✓



Carramar Drive Sporting Complex



James King Park



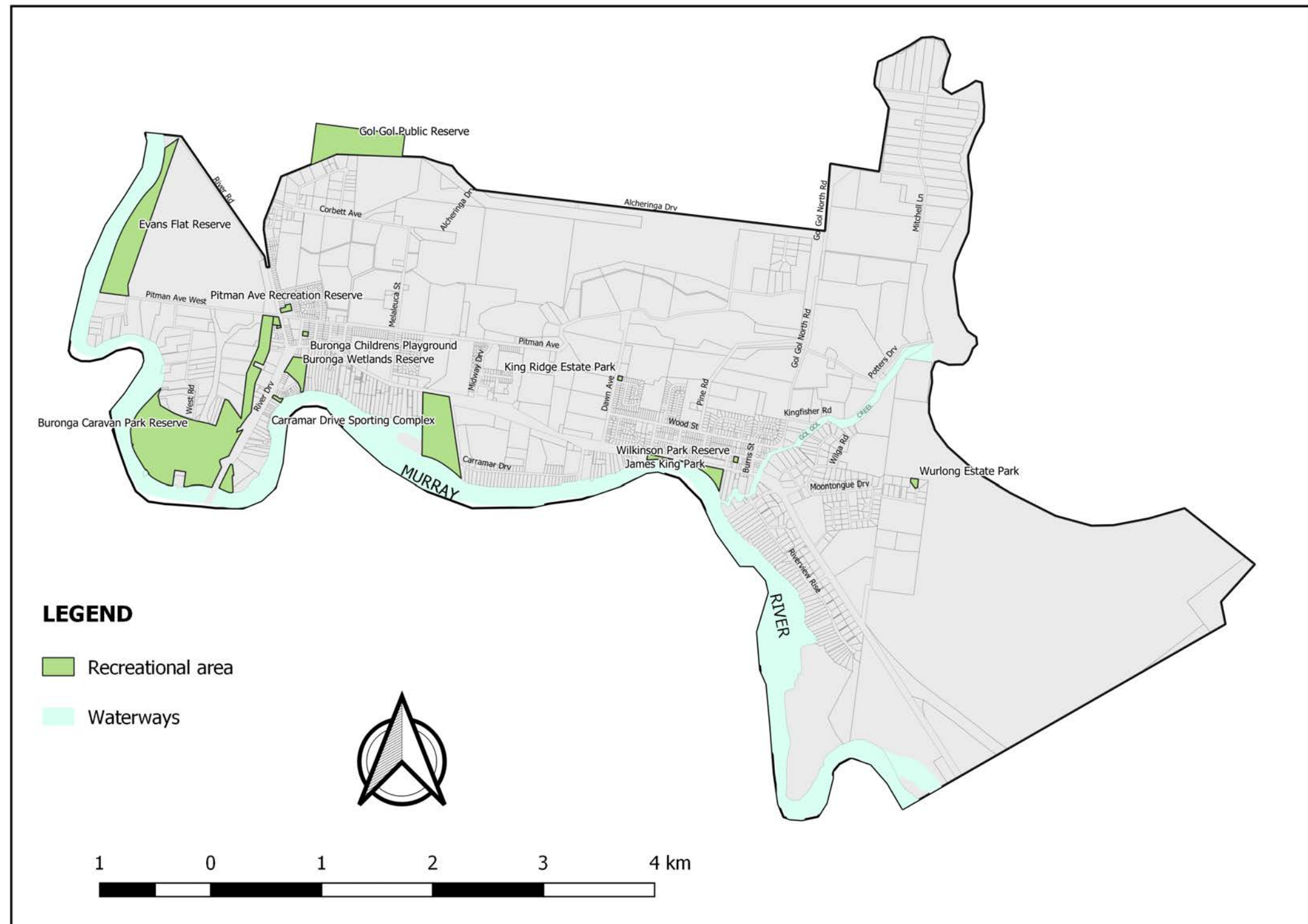


Figure 2.20 – Recreational Areas in Buronga Gol Gol



## 2.8 Natural Environment

### 2.8.1 Topography and Landscape

The Buronga Gol Gol region is renowned for its unique picturesque topography and landscape. The landscape is marked by beautiful red cliffs which span along the Murray River.

Despite the general flat terrain of the region, the majority of Buronga Gol Gol (e.g. Midway Area) is elevated high above the Murray River's natural flow level (refer Figure 2.21). The elevations of the built-up and urban growth areas range between 34-56 m AHD. This topography makes Buronga Gol Gol reasonably safe and protected from flooding, albeit some parts of the township (e.g. West Buronga) are subject to inundation.

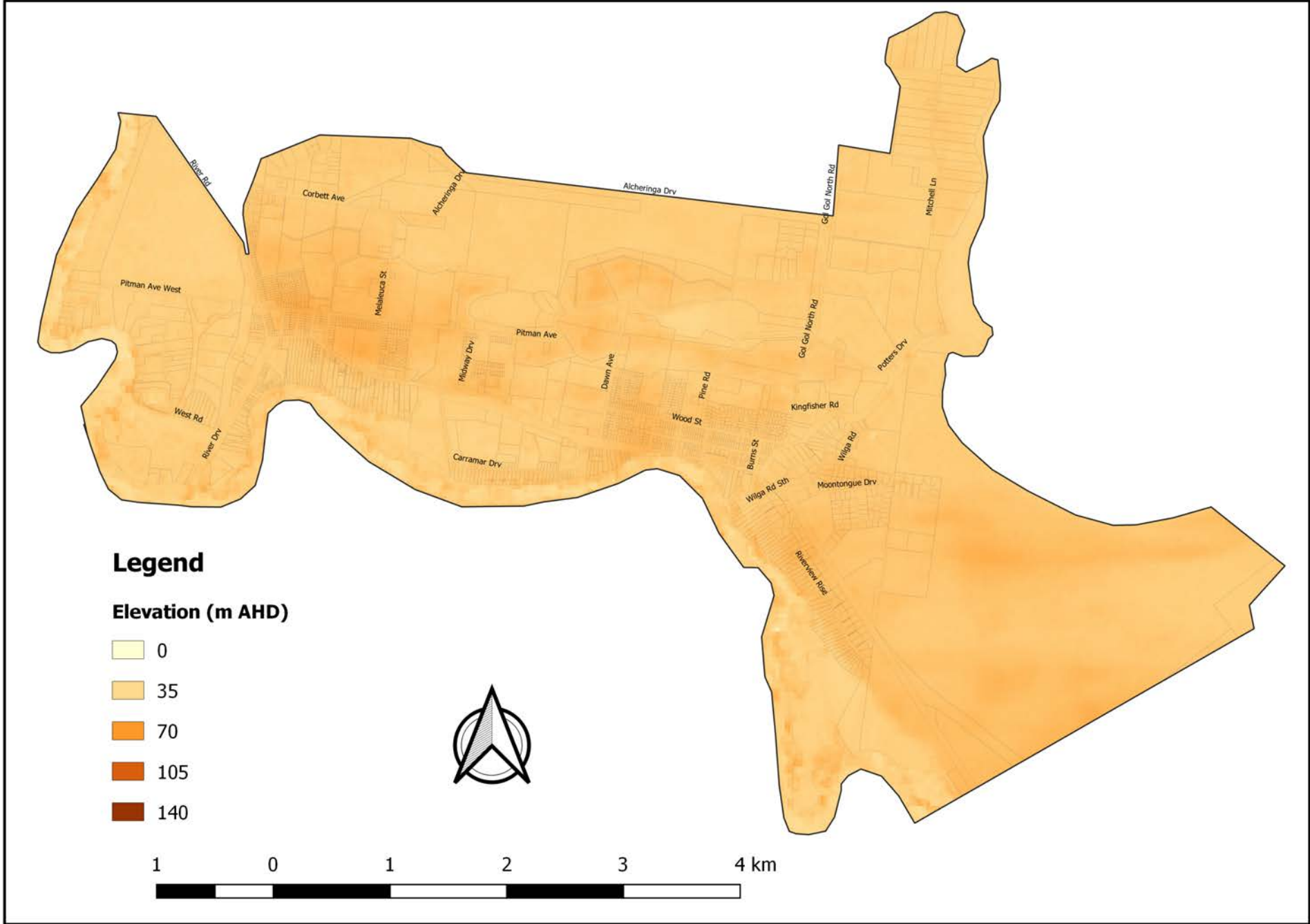


Figure 2.21 – Buronga Gol Gol Topography

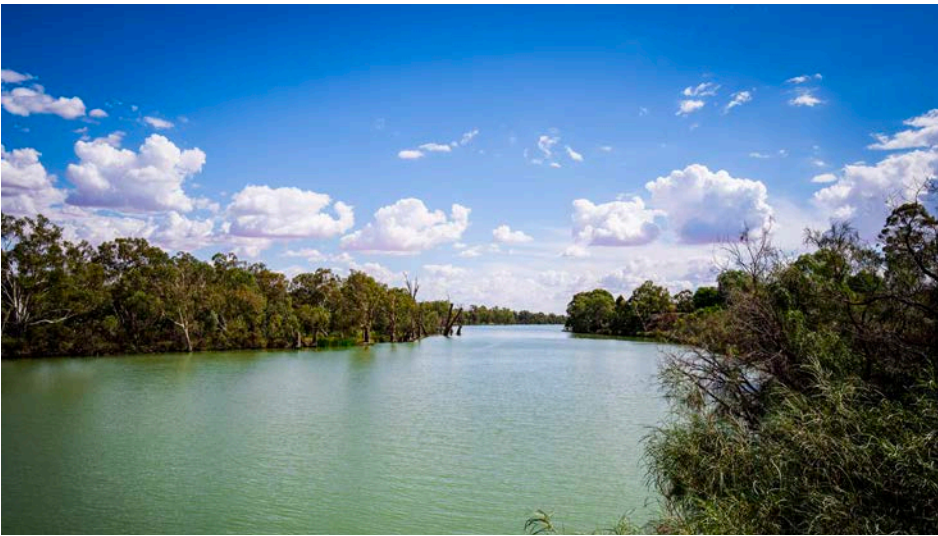
2.8.2 Waterways and Flooding

Figure 2.22 shows the main rivers and waterways in Buronga Gol Gol, namely the Murray River and Gol Gol Creek, as well as the network of wetlands (e.g., Gol Gol Lake, Buronga Constructed Wetland) within and immediately outside the study area. These rivers and waterways are valued community assets and add great amenity and appeal to the township of Buronga Gol Gol.

It can be noted from Figure 2.22 the greater part of Buronga Gol Gol, especially the area north of the highways which are protected by three (3) flood regulators (radial arm gate) installed along the course of the Gol Gol Creek that control flow access from the Murray River to the Gol Gol Creek, are safe from riverine flooding. However, much of the floodplain associated with the Murray River is liable to flooding and properties will already be at risk during a 20-year ARI flood (refer Figure 2.23). These floodplain areas are generally unsuitable for intensive urban development without some form of a levee embankment or other preventative measures.

Nonetheless, the river frontages are highly sought after by home buyers and developers. Historical and ongoing encroachment of these areas has already resulted in issues such as limited native vegetation on the floodplains, river bank instability and dwellings and other structures disrupting drainage corridor continuity among others.

To address these problems, remnants of the floodplain areas should be considered for rezoning to E4 Environmental Living zone with minimum lot sizes ranging from 1 to 3 hectares to allow for low density development while protecting the waterways through appropriate planning controls.



Murray River

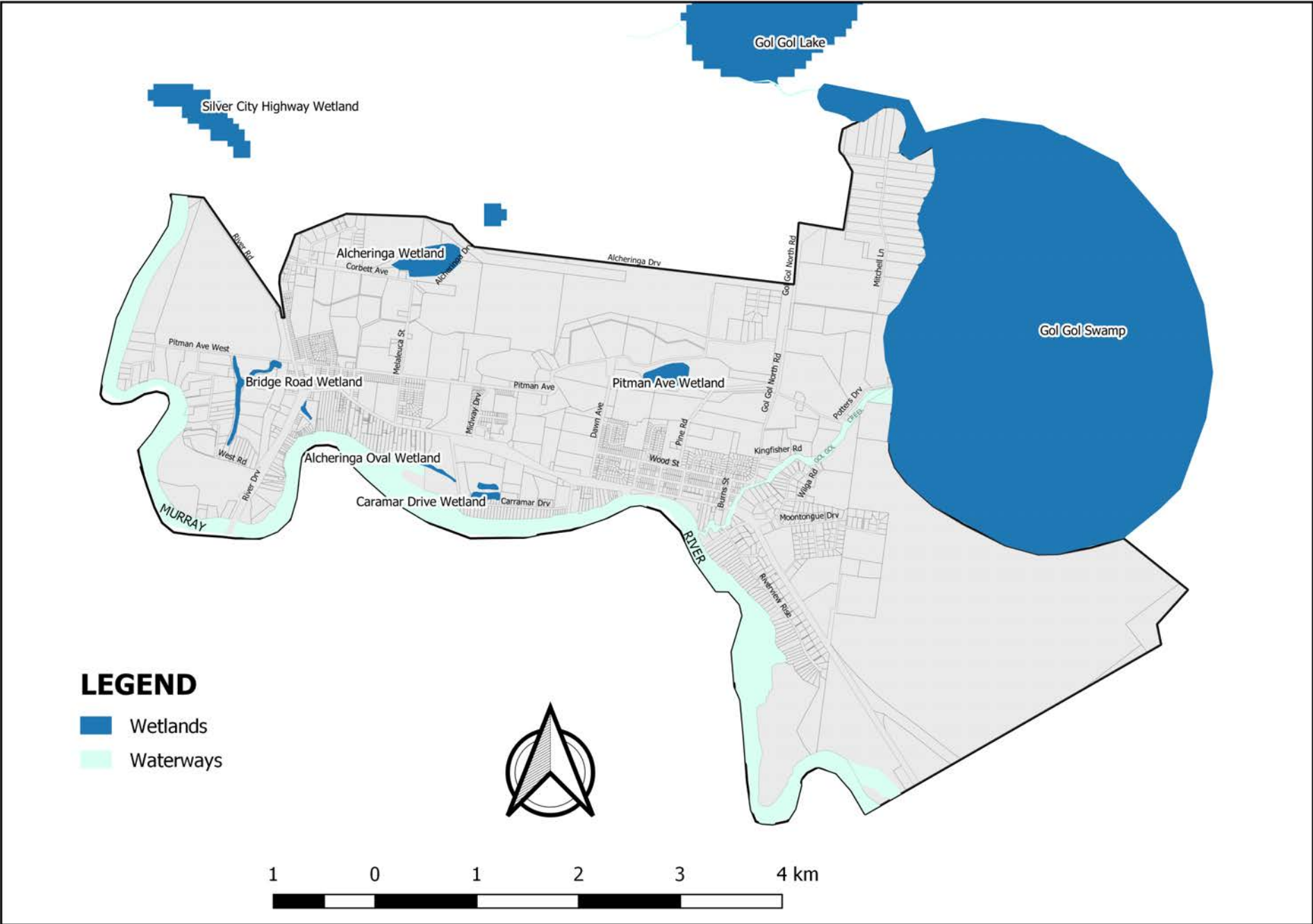


Figure 2.22: Waterways and wetlands



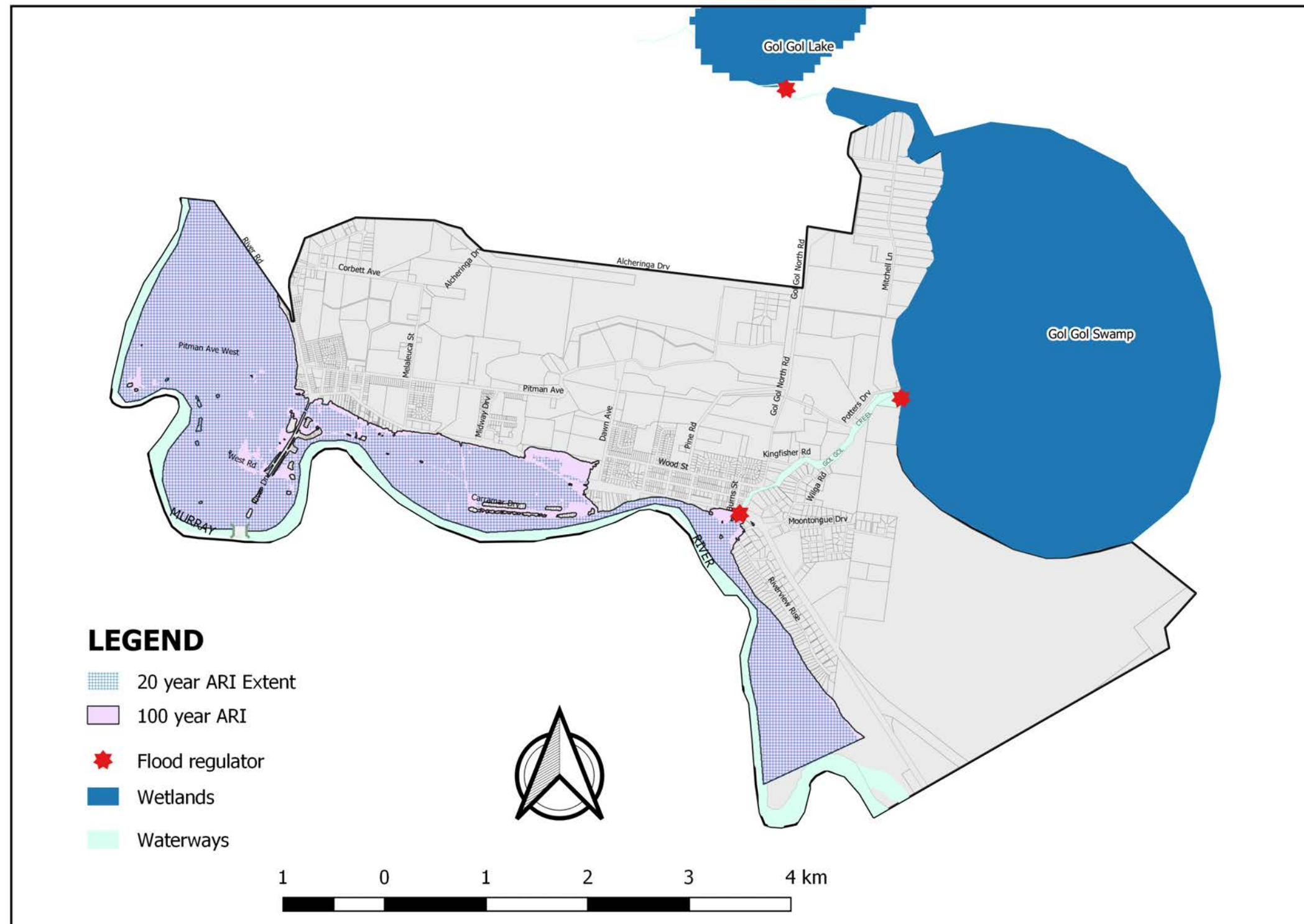


Figure 2.23 – Flood affected land

2.8.3 Biodiversity

Buronga Gol Gol is home to a diverse range of flora and fauna, some of which are classified as ecologically endangered and vulnerable communities. The unique riverine and arid vegetation of Buronga Gol Gol has numerous species of eucalyptus and acacia trees which are well suited to the Murray River wetlands as well as the surrounding semi-arid, Mediterranean climate of the region.

The most notable native vegetation in the area include Red Gum/Black Box Riparian Forests (*Eucalyptus camaldulensis*), Black Box Woodlands (*Eucalyptus largiflorens*), Chenopod Mallee, Chenopod Shrubland, *Acacia montana* (shrub wattle species) and *Acacia notabilis*. The semi-arid and riverine vegetation collectively serves as habitats for a wide range of species including a number of threatened fauna species such as birds, reptiles, frogs and mammals. Some known species include Little Pied Bat, Southern Bell Frog, Freckled Duck, Grey Falcon, Regent Parrot, Black-tailed Godwit *Casuarina obesa*, Santa/um murrayanum, Major Mitchell’s Cockatoo and Brown Treecreeper.

Expanding urban development and extensive agricultural uses have significantly modified the extent and quality of flora and fauna habitat, particularly riparian zones and connectivity to crown lands in the northern part of Buronga Gol Gol (refer Figure 2.24). The long-term protection and conservation of this rich biodiversity is crucial to the ecological and environmental values of Buronga Gol Gol and its surroundings.

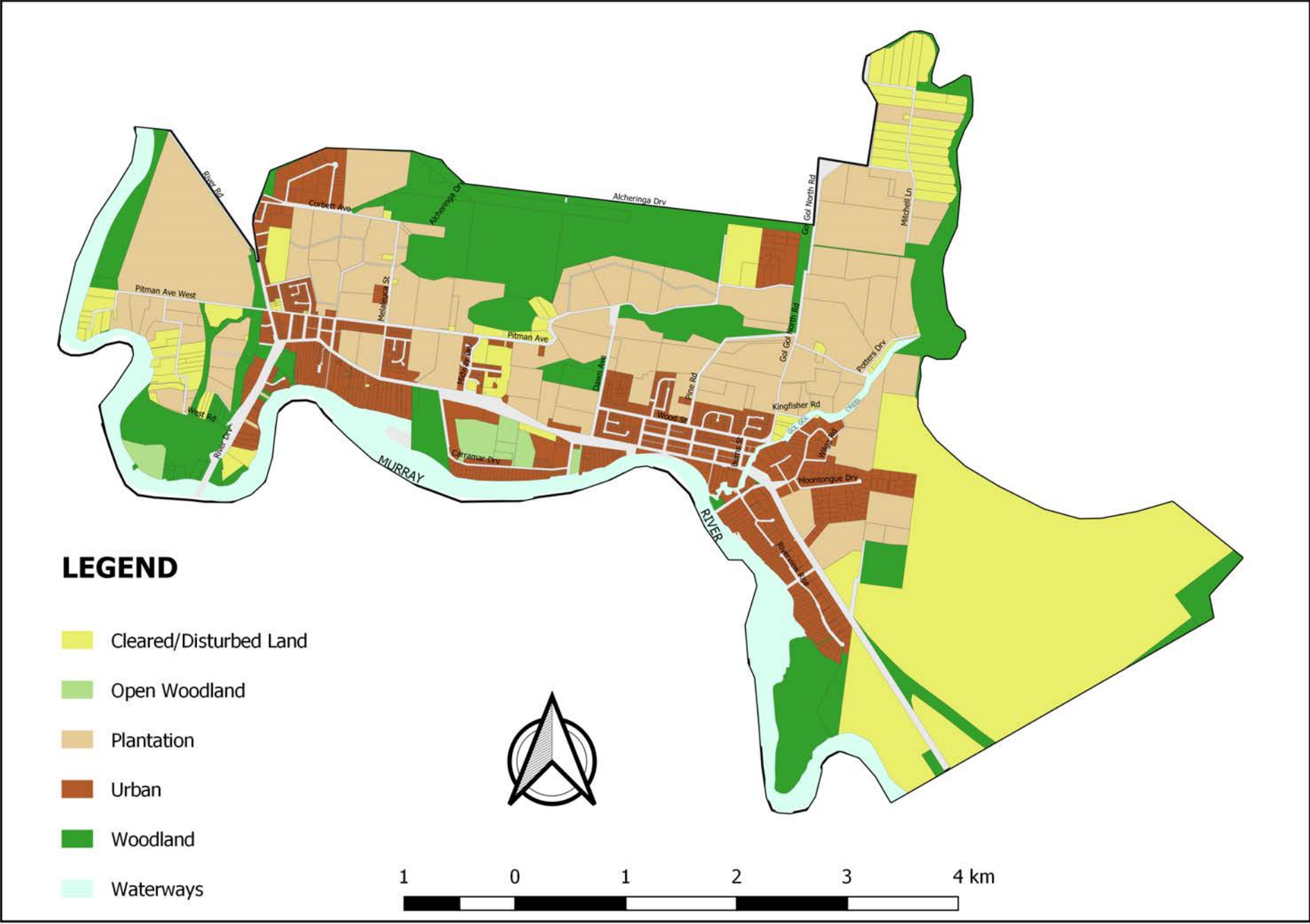


Figure 2.24 – Habitat/Land Cover Types



2.8.4 Cultural and Indigenous Heritage

The Buronga Gol Gol area is endowed with significant Aboriginal and European heritage and cultural values (refer Figure 2.25). The area has three levels of Aboriginal archaeological sensitivity, namely: low, low to moderate and moderate to high. Aboriginal and historical sites of significance generally occur on the less disturbed or developed margins of the creeks, rivers and swamps, as well as the remnant Black Box Woodlands. These include middens such as shells and camp site artefacts and scar trees where tree bark has been harvested to make canoes and coolamons (food and water containers or shields).

Barkindji Elders and people live on country and many work in cultural heritage roles in the community in and around Buronga Gol Gol in organisations such as Barkindji Maraura Elders Environment Team (BMEET) and Barkindji Native Title Group Aboriginal Corporation (BNTGAC).

Barkandji Nation land rights co-exist on multiple areas of land including Council reserves and crown land, as well as some private properties in the area.

In terms of European heritage, Buronga Gol Gol has three locally significant heritage listed places and items. These include the Old Mildura Bridge, the Gol Gol Cemetery and the Former Paddlewheel Hotel.

The heritage mix in Buronga Gol Gol provides opportunity for promoting both Aboriginal and non-Aboriginal cultural values and history as expressed via the heritage sites and assets of the area. Appropriate protection, preservation, management and mitigation measures need to be pursued to ensure long-term protection of these cultural heritage resources.



Gol Gol Hotel

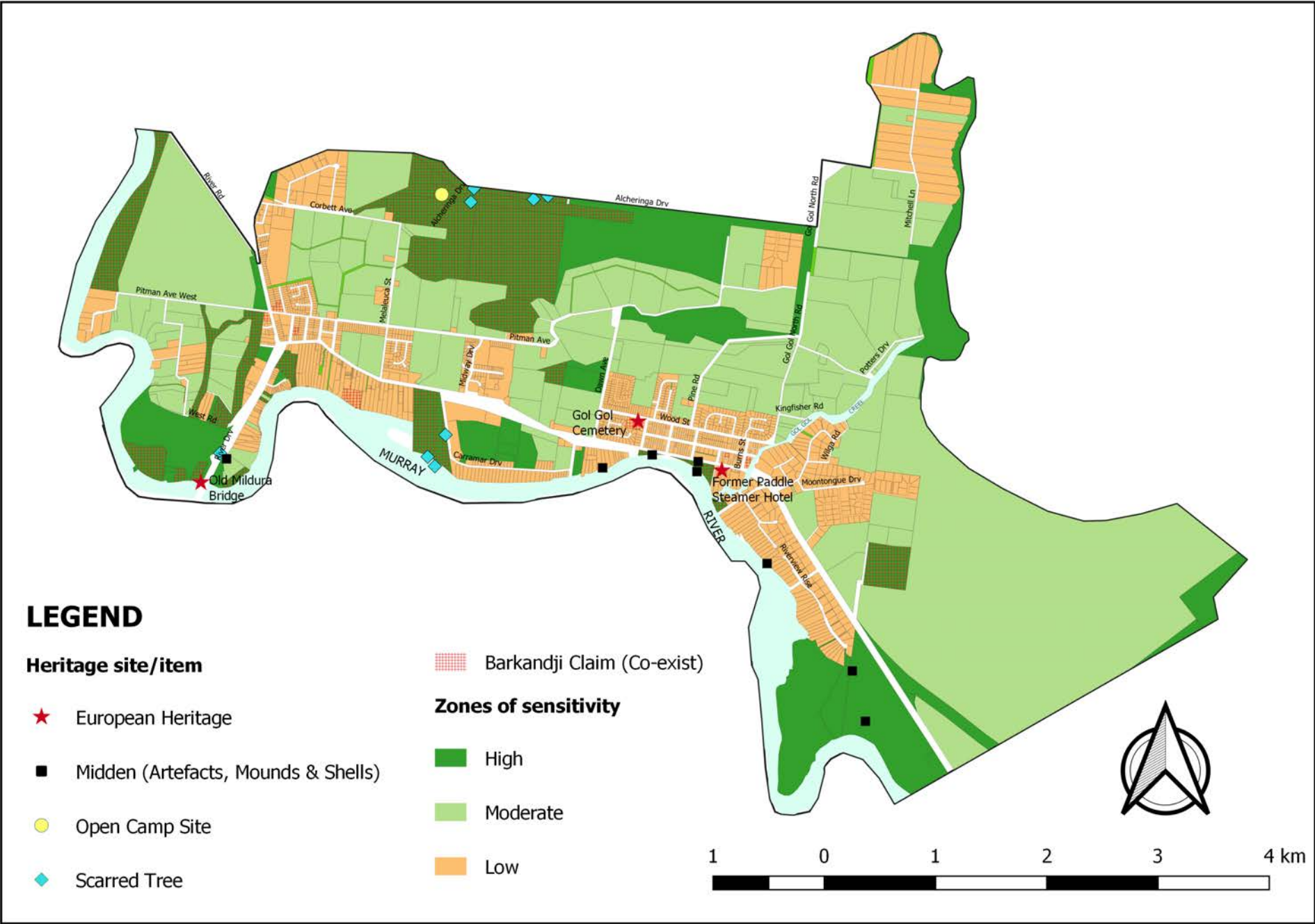


Figure 2.25 – Heritage Areas and Items







## Chapter 3: Outcomes



Chapter 3: Outcomes

3.1 Vision

Buronga Gol Gol will be sustainable, self-sufficient and vibrant townships with well-balanced urban and rural characteristics that have strong relationships to the surrounding rural landscape and adequately support the social, economic, cultural and environmental needs and aspirations of the community.

Buronga Gol Gol will achieve this through an urban development structure/ pattern that provides for housing and lifestyle choices, local businesses and employment, serviceable infrastructure and community facilities, walkable and cycle able street network, safe local and passing traffic, attractive and functional open spaces/recreational areas and protection of natural environments.

In the short term, Buronga Gol Gol is envisaged to be complementary to the growth of Mildura adding to the future growth potential, yet providing opportunities for strengthening local urban amenity and community safety. The long-term plan is for Buronga Gol Gol to further develop its unique ‘sense of place and community’ to compete with the likes of urban Mildura including housing affordability, environmentally sensitive development and efficient urban design and infrastructure provision.

3.2 Development Themes and Principles

In order to achieve the vision for Buronga Gol Gol, a range of development themes and principles have been derived to guide the structure plan. These core themes and principles encompass the opportunities and actions to sustainably improve amenity, liveability and economy of Buronga Gol Gol.

The core themes are:

- a) Infrastructure Servicing
- b) Land Use
- c) Environment
- d) Site Development and Design

The development principles for each of the above core themes are outlined in the subsequent pages.

INFRASTRUCTURE SERVICING PRINCIPLES

Roads and Pathways	Water, Sewerage and Drainage	Community Facilities
<div><div>i. Ensure Buronga Gol Gol is well-connected and highly accessible internally and externally</div><div>ii. Establish an integrated and hierarchical road network to encourage walking and cycling, reduce car dependency and maximise safety and connectivity</div><div>iii. Retain the role of the National Highways (Sturt Highway and Silver City Highway) to ensure Buronga Gol Gol has strong and reliable external connection to the region and nation</div><div>iv. Limit intersections along the Sturt Highway to collector roads wherever possible, provide traffic signal control, incorporating pedestrian crossing facilities where appropriate</div><div>v. Reduce traffic speeds through Buronga Gol Gol by the implementation of traffic management measures designed to be self-enforcing, rather than by reliance solely on speed zonings</div><div>vi. Promote landscaping wherever possible within the road reserve to minimize visual clutter and enhance the streetscape.</div><div>vii. Assess opportunities to retrofit and/or widen footpaths within road reserves in established areas</div><div>viii. Undertake systematic safe system assessments or (if necessary) road safety audits on local roads and highways to identify road safety issues, hazardous locations and recommend remedial action.</div></div>	<div><div>i. Urban development shall focus on areas with current access to reticulated water, sewerage, drainage, power and communications services or where these services can be readily provided</div><div>ii. New subdivisions will be required to provide all necessary infrastructure to service the development</div><div>iii. Continuation of a dual water supply system throughout the servicing district. Active enhancement of development and building standards that accommodate and encourage the use of dual water supply systems, including the installation of water efficient devices in all new and existing development</div><div>iv. Assess opportunities to progressively extend reticulated water and sewerage services to existing non-serviced residential areas</div></div>	<div><div>i. Reinforce the centralised location for existing community facilities in Midway</div><div>ii. Provide additional opportunities to expand those existing facilities north-west of the Midway Centre to create a local civic precinct that is focused away from the Highway</div><div>iii. Encourage and facilitate the establishment of an emergency services precinct</div><div>iv. Support existing educational facilities to service future needs of the community</div><div>v. Provide recreational and sporting facilities to service and include community</div></div>



## LAND USE PRINCIPLES

Agricultural Land	Rural Land Areas	Residential Areas	Commercial Areas / Commercial Precinct	Industrial Areas	Environmental Protection Areas
<p>i. Protect agricultural and horticultural land located to the north of the proposed residential and industrial areas</p> <p>ii. Agricultural and rural areas identified as flood liable land will remain as rural land subject to the outcome of the flood study and flood risk management study and plan unless otherwise indicated in this plan</p> <p>iii. Minimise conflicts between agricultural land uses and other non-rural land uses</p>	<p>i. Existing rural living areas are to be unchanged</p> <p>ii. Rural living areas that contain a level of horticultural and agricultural activity are to be retained as predominantly rural lands unless otherwise indicated in this plan</p> <p>iii. Encourage connection to Council services where achievable and appropriate</p>	<p>i. Develop an urban structure that consolidates the location of residential land and provides connection between the villages of Buronga and Gol Gol</p> <p>ii. Cluster residential areas to ensure walkable neighbourhoods in order to reduce, where possible, car dependence for access to existing and future community services and facilities</p> <p>iii. Promote a mixture of urban development that allows for flexibility to respond to changes in the community over time and cater for a diversity of land sizes and housing types</p> <p>iv. Develop a strategic approach to the design and location of key environmental and open space areas and urban water management</p> <p>v. Encourage built form that demonstrates environmentally sustainable design principles</p> <p>vi. Determine a Staged Development Plan to co-ordinate the roll out of development to assist with planning of road connectivity, infrastructure and services</p>	<p>i. Retain existing structure of Buronga, Gol Gol and Midway Centre commercial areas</p> <p>ii. Reinforce the role of the Midway Centre as a community services hub</p> <p>iii. Provide well-designed and attractive Buronga Gol Gol Town Centre that showcase community character and heritage</p> <p>iv. Attract a range of business and retail activities that can adequately support the provision of local services</p> <p>v. While development along the Sturt Highway will continue to occur with a traditional 'strip' commercial frontage, consideration shall be given to progressive implementation of local commercial precincts that occur with focus away from the Highway</p>	<p>i. Encourage a mix of industrial development</p> <p>ii. Promote the design of industrial areas to provide an entry focus for Buronga along the Silver City Highway</p> <p>iii. Establish guidelines for and encourage landscaping of new industrial development</p>	<p>i. Protect existing uses in environmental areas including dwellings</p> <p>ii. Cautionary use and development of floodplain and flood prone lands</p> <p>iii. Effectively respond to ecological and environmental constraints</p>

## ENVIRONMENT PRINCIPLES

Waterways and Riparian Management	Environmental Repair and Enhancement	Buffer Zones	Cultural Heritage Values	Flood and Bushfire Prone Land
<p>i. Protect multiple functions of both the Murray River and Gol Gol Creek</p> <p>ii. Access to the Murray River and Gol Gol Creek are to be managed to minimise adverse impacts on stability of the bank and vegetation</p> <p>iii. Control development within or adjacent to riparian areas to minimise pollution and nutrients entering the river and creek systems to protect water quality</p> <p>iv. Disturbance to the bank and riparian vegetation of the River Murray shall not be encouraged</p> <p>v. Enhancement of riparian corridor areas is encouraged to offset land degradation processes</p> <p>vi. Protection of riverine landscape by retaining and replacing native vegetation is critical to maintain community value of riparian areas</p> <p>vii. Wetlands are to be protected and enhanced to retain and improve their ecological, recreational, economic, flood storage and nutrient and pollutant filtering values</p> <p>viii. Protect the visual amenity associated with the Murray River and the riparian zone from physical and visual decline</p>	<p>i. Sustainable development should seek to ensure persistence of viable and connected native vegetation remnants</p> <p>ii. All vegetation or habitats with high conservation values should be protected to avoid further decline</p> <p>iii. Remnant vegetation with lower values should be targeted for environmental repair and enhancement based on the principle of working out from areas of higher value towards areas of least value</p> <p>iv. Existing remnant vegetation should be categorised in terms of its conservation value based on at least; size, location, extent of disturbance, species vulnerability, regeneration potential, species diversity and habitat diversity</p> <p>v. Revegetation should include use of a diversity of locally occurring species and plant forms, eg. grasses, shrubs, trees, etc</p> <p>vi. Maintain and enhance visual corridors with unobstructed views from major roads to key features of the study area, such as the Murray River and local native and rural landscapes, with appropriate planting and management of roadsides and other public land</p> <p>vii. Effectively manage urban, industrial and agricultural waste and treat salt affected lands</p> <p>viii. Progressively remove undesirable species and feral animals</p> <p>ix. Stabilise unstable stream banks and control human access to areas of high sensitivity</p>	<p>i. Establish and manage suitable buffer zones at interfaces between agricultural and industrial areas and residential areas</p> <p>ii. Buffer zones should be designed in accordance with guidelines and standards prepared and/or endorsed by the relevant state government agency to enhance visual corridors and create filtered views into adjoining land uses</p> <p>iii. For existing sensitive land uses within 500 metres of existing industrial areas, all new industrial development or modifications to existing industrial development is to demonstrate that unacceptable environmental impacts can be avoided through design, siting and modification of proposals to reduce emissions, noise, dust and odour.</p> <p>iv. In conjunction with minimising any likely emissions and off-site impacts of sewerage treatment facilities, a 500-metre buffer zone is required for the following sensitive land uses including residential areas, schools, nursing homes, childcare facilities, shopping centres, playgrounds and public facilities.</p>	<p>i. Recognise and promote places and values of cultural importance to enrich the identity of the future community and contribute to cultural diversity.</p> <p>ii. Protect heritage places and landscapes and incorporate these areas into the urban environment in a manner that celebrates and interprets their significance.</p> <p>iii. Consider the long-term conservation of a representative sample of the Aboriginal cultural heritage resource and any significant non-Aboriginal heritage items or archaeological deposits.</p> <p>iv. Undertake detailed assessment of both Aboriginal and non-Aboriginal cultural heritage prior to any development occurring in the area to identify the location, nature and significance of any heritage or archaeologically sensitive sites and items which may be present and develop appropriate management and mitigation measures.</p> <p>v. Consult with the local Aboriginal community in undertaking all assessments made in relation to Aboriginal cultural heritage. Such assessments should aim to develop appropriate management and mitigation measures in respect of the cultural heritage resource and proposed impacts.</p> <p>vi. The following landforms are to be exempt from any development impacts: source-bordering dunes (highly likely to contain Aboriginal burials); margins of all hydrological features; and intersections of major rivers or creeks with runners.</p> <p>vii. There is the potential for promoting both Aboriginal and non-Aboriginal cultural values and history as expressed via heritage sites of the area. However, such a program should only be developed after consultation with both Aboriginal community and professional heritage practitioners.</p> <p>viii. Incorporate Aboriginal language reflecting Aboriginal cultural heritage values in place and street names of new developments and precincts in consultation with the Aboriginal community.</p>	<p>i. Complete a strategic flood risk management plan in accordance with the NSW Government Floodplain Management Policy prior to any land use zoning changes on all land identified as being flood liable.</p> <p>ii. Avoid high density development on the flood liable land in Buronga Gol Gol.</p> <p>iii. Review the bushfire prone mapping to effectively capture and plan for bushfire risk areas.</p> <p>iv. Ensure bushfire protection measures are considered in the layout, staging and design of development and local road network.</p>



SITE DEVELOPMENT AND DESIGN PRINCIPLES

Subdivision and Housing Design

- i. Ensure subdivision design incorporates a legible road hierarchy reducing dependence on cars and promoting residential safety and amenity while allowing required service and emergency vehicle access.
- ii. Prioritise the provision of footpaths and shared ways.
- iii. Prevent long lengths of local roads which encourage speeding while reducing residential amenity and safety.
- iv. Minimise the use of dead-end roads (cul-de-sacs) in future subdivision design to ensure connectivity and permeability in the area.
- v. Ensure the width of road pavements are minimised to reflect expected traffic flows.
- vi. Ensure subdivision design incorporates traffic calming principles without the need for retrofitting measures at a later date.
- vii. Ensure road verge widths are sufficiently wide to incorporate necessary services, pedestrian paths as well as planting of trees in accordance with a landscape master plan that, at maturity, will ensure protection from harsh summer sun.
- viii. Encourage on-road visitor parking where appropriate in indented spaces to the requirements generated by the subdivision and housing development.
- ix. Provide for building orientation to maximise good solar access for all housing while not compromising natural features of the site.
- x. Create strong visual connections to open space and surrounding development while maximising privacy between houses.
- xi. Ensure the provision of adequate private open space on lots in a location that maximises solar access.
- xii. Utilise good housing design including the use of eaves, pergolas and deciduous landscaping etc. to minimise energy use.
- xiii. Promote benefits of individual solar systems

Water Sensitive Urban Design

- i. Ensure all new development complies with water sensitive urban design principles to minimise drainage infrastructure costs and protect of water quality in receiving waterways.
- ii. Use stormwater within multiple use corridors so that it contributes to the visual and landscape amenity.
- iii. Protect the environmental health of waterways within new and existing development by implementing best practice sediment and water quality management measures.
- iv. Use of porous pavements within designated staff and customer car parking areas in industrial and commercial areas is required.
- v. Landscaping should enhance amenity, utilise site water and improve water quality.
- vi. Promote the benefits of on-site stormwater detention.
- vii. Encourage reuse of grey water
- viii. Promote the harvesting and use of rainwater.

Local Open Space

- i. Local open space should, where practical, be provided in conjunction with the water management concepts of water sensitive urban design.
- ii. Demand for local open space is to be catered for within multi-use corridors as an alternative to establishing new local open space areas.
- iii. Connection with open space and recreation areas adjoining the Murray River is to be incorporated within proposed and existing road intersection networks.
- iv. Support development of a local park network to provide local amenity to each part of Buronga Gol Gol to complement the unique open space opportunities presented by greenbelts/multi use corridors.







# Chapter 4: Structure Plan



# Chapter 4: Structure Plan

## 4.1 Introduction

This township structure plan has been developed based on the issues, constraints, opportunities and principles discussed in the foregoing chapters. This structure plan chapter specifically identifies actions for addressing issues and improving liveability of Buronga Gol Gol including, where appropriate, the identification of further works or investigations that should be undertaken.

The key elements of the township structure plan are:

- a) Consolidation of future development to control urban expansion and ensure a sustainable and efficient built environment.
- b) Facilitating development of a commercial precinct to promote self-sufficiency and connectivity in Buronga Gol Gol.
- c) Rezoning of lands to support future and emerging land use needs.
- d) Expanding and upgrading infrastructure and facilities to meet demands of future growth.

## 4.2 Land Use Zones and Development

Figure 4.1 presents the future land use zoning map of Buronga Gol Gol with the land area break-up of the land use zones summarised in Table 4.1. The proposed land use zoning for Buronga Gol Gol has been developed to reflect contemporary land use trends and make available parcels of land conducive to future land use needs.

While the proposed land use zones are primarily intended to facilitate future growth and development of Buronga Gol Gol, a few are geared toward addressing anomalies in the Wentworth LEP 2011 land use zoning maps. As a result, rezoning of some specific parcels of land that were not well assessed and now appear quite outdated, is required.

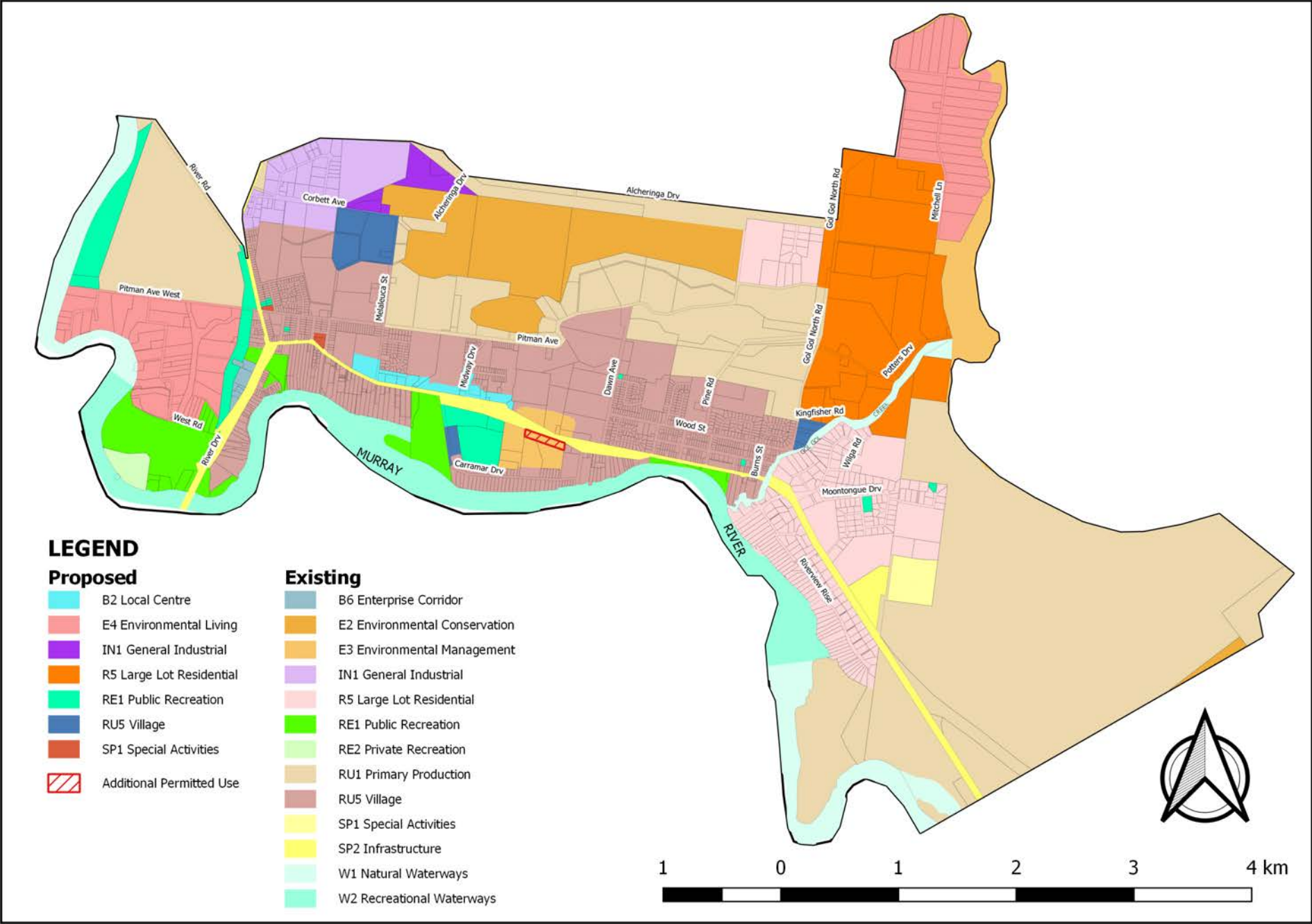


Figure 4.1 Future Land Use Zones



**Table 4.1 – Summary of Future Land Use Zones**

Land use zone	Existing		Proposed		Total Existing & Proposed		Developed		Undeveloped	
	Area (ha)	%	Area (ha)	%	Area (ha)	%	Area (ha)	%	Area (ha)	%
RU5 Village	410	93.4	29	6.6	439	14.3	211	48.1	228	51.9
R5 Large Lot Residential	226	50.3	223	49.7	449	14.6	133	29.6	316	70.4
IN1 General Industrial	72	81.8	16	18.2	88	2.9	39	44.3	49	55.7
B2 Local Centre		0.0	15	100	15	0.5	5	13.3	10	66.7
E4 Environmental Living		0.0	222	100	222	7.2	-	-	-	-
SP1 Special Activities	15	88.2	2	11.8	17	0.6	-	-	-	-
RE1 Public Recreation	80	60.6	52	39.4	132	4.3	-	-	-	-
B6 Enterprise Corridor	4	100	0	0	4	0.1	4	100	0	0
RE2 Private Recreation	9	100	0	0	9	0.3	-	-	-	-
SP2 Infrastructure	72	100	0		72	2.3	-	-	-	-
W1 Natural Waterways	122	100	0	0	122	4.0	-	-	-	-
W2 Recreational Waterways	162	100	0	0	162	5.3	-	-	-	-
E2 Environmental Conservation	180	100	0	0	180	5.9	-	-	-	-
E3 Environmental Management	72	100	0	0	72	2.3	-	-	-	-
RU1 Primary Production	1088	100	0	0	1088	35.4	-	-	-	-
Total of columns	2512	81.8	559	18.2	3071	100	-	-	-	-

#### 4.2.1 Residential

##### 4.2.1.1 Future Residential Development Pattern

Residential growth and development are to be consolidated within existing RU5 Village and R5 Large Lot Residential zones. This consolidation is envisaged to result in an urban form/structure that is economically, socially and environmentally efficient, in addition to promoting healthy active, lifestyles.

The existing RU5 Village zoned land to the north east and east of Buronga and to the north and west of Gol Gol is expected to contain the majority of future development with growth focused around the Midway Centre area, which will form a vital centralised town centre for Buronga Gol Gol. Directing growth and development towards the Midway Centre area will enable amalgamation of the Buronga and Gol Gol townships into a contiguous sustainable built environment, while maintaining village-style growth and improving access to facilities and services in the area.

The existing RU5 Village zoned land is already serviced with an appreciable level of infrastructure which means infill development will occur at no additional cost to Council, while maximising available services and facilities. In addition, consolidating development within existing RU5 Village zone land will ensure creation of a safe built environment as land within this zone is generally flood-free and elevated much higher than most parts of Buronga Gol Gol.

Higher lot density should be encouraged in the RU5 Village zone to achieve more sustainable, logical and an efficient built environment in Buronga Gol Gol (see Figure 4.2). Average gross density for residential development should be around 7 to 11 lots per ha to provide ample opportunity for a range of lot sizes and promote land and housing variety and affordability in the area. In general, the average residential lot size should be in the order of 600 to 1000 m<sup>2</sup>, which is deemed a more contemporary and practical lot size for residential development in small towns like Buronga Gol Gol. However, 600 m<sup>2</sup> lots should be mainly encouraged and located around facilities such as shops or community centres to cater for a range of market segments such as aged care accommodation and 1 or 2-person households.

The R5 Large Lot Residential zone should be confined to the east of Gol Gol North Road and guided to expand north east between the road and Gol Gol Lake. This is to keep large lot residential development away from the urban growth path but in close proximity to the urban area to ensure access to reticulated sewerage and water systems, while minimising impacts on ecological sensitivity and scenic quality of the area.

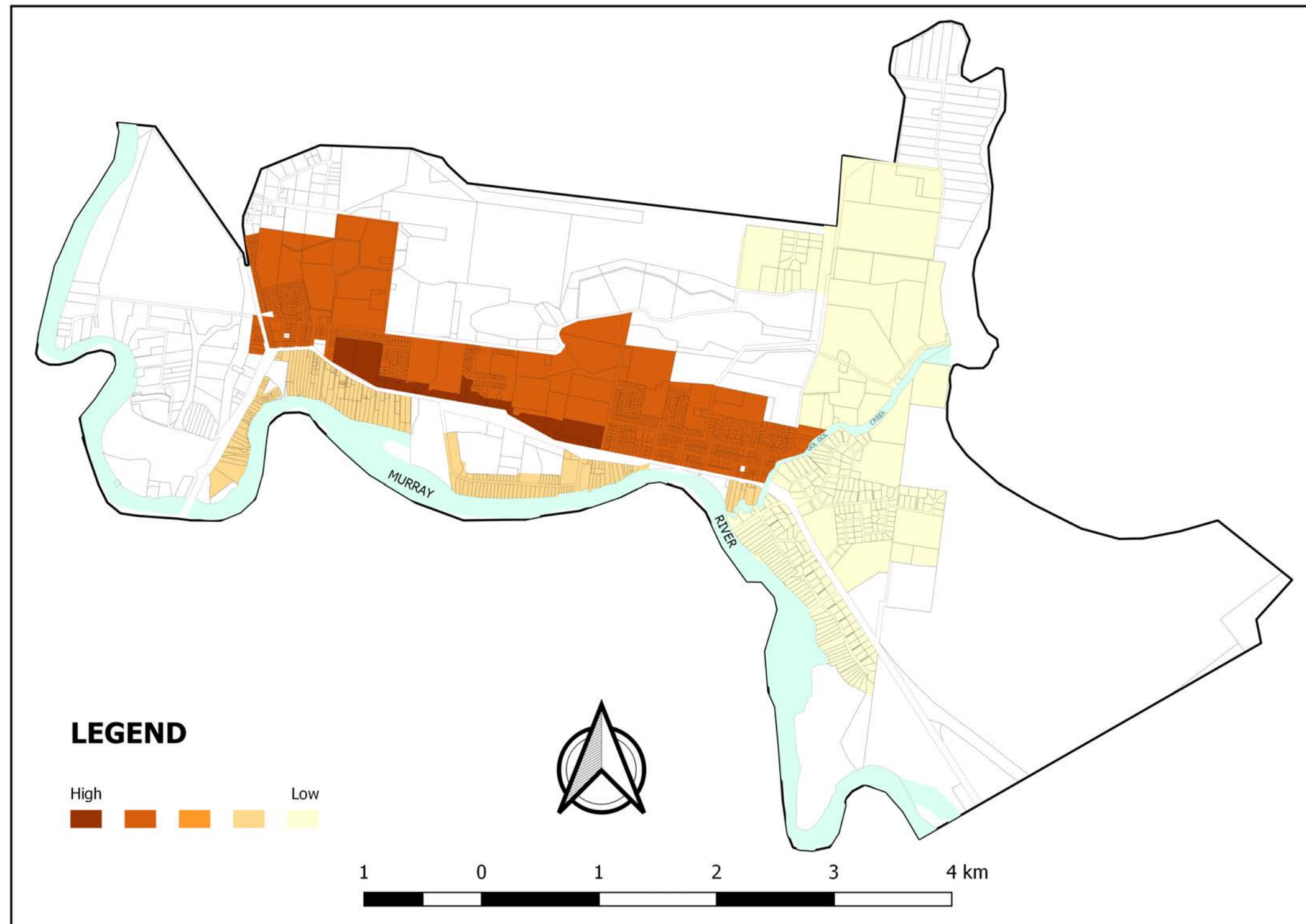


Figure 4.2 – Future Density Plan



4.2.1.2 Future Housing Need and Residential Land Supply

Buronga Gol Gol’s population is expected to reach 4,742 by 2040 at an annual growth rate of 2.8%. This means residential housing has to be provided for additional 1883 people over the next 20 years.

However, given Buronga Gol Gol’s ageing population, the future population will have a large old and retirement age population cohort (i.e. 45 years and over) which will change the household structure to fewer persons household with consequential increase in demand for more dwellings. Therefore, an average household size of 2.4 persons which is more likely in Buronga Gol Gol in the future has been utilised to determine future residential land and housing needs in the area.

Based on the expected additional population and household size, it has been determined that an estimated 785 new dwelling houses will be required in Buronga Gol Gol by 2040. These dwellings would have to comprise of diverse housing types including flats, villas, units, townhouses and detached houses to adequately meet the housing needs of the changing population and maintain housing affordability in the area.

In terms of future residential land supply, there are parcels of land, totalling approximately 29 ha, recommended to be rezoned from RU1 Primary Production to RU5 Village. These include blocks of land (Lots A & B DP 402812 and Lots 216 & 217 DP 756946) located south of Gol Gol North Road between Wood Street and Kingfisher Road in Gol Gol, blocks of land (Lot 100 DP 756946 & Lot 2 DP 114910) located off the Melaleuca Drive in Buronga and a part of parcel of land (Lot 4 DP 1093795) on Carramar Drive in Buronga.

This rezoning is intended to establish a continuous settlement pattern and improve connectivity between existing residential zones of RU5 Village and R5 Large Lot Residential in the area. Thus, the rezoning will augment with the available RU5 Village zone, as well as address the apparent leapfrogging of residential development and clearly define the built-up area of Buronga Gol Gol.

In addition, it is anticipated the resultant residential lots from the proposed RU5 Village south of North Gol Gol Road will be taken up and developed quickly given the high demand for lots located adjacent to or near Gol Gol Creek or a natural waterway. This will help in sustaining housing availability and affordability in the area.

In addition, given limited availability of large lot residential zoned land and the fact that some landowners of R5 Large Lot Residential zone land do not intend to redevelop for residential purposes in the short to medium term, the parcels of land to the immediate north of the existing R5 zone land up to the northern end of Gol Gol North Road are recommended to be rezoned to R5 Large Lot Residential. The total area of land proposed for rezoning is 223 ha.

This rezoning is intended to forestall any future shortage in the supply of large lot residential land during the timeframe of this Structure Plan. In the short

term, Lots 56 and 73 DP 756946 at the end of Wilga Road should be rezoned immediately from RU1 Rural Production to R5 Large Lot Residential. Future subdivisions in this zone should be required to adhere to the minimum lot size to ensure residents have access to adequate land to undertake activities that commensurate with rural lifestyle/life in rural setting.

Allowing 30% for access, open space and other non-residential uses, the net existing and proposed developable land for RU5 Village is 160 ha and R5 Large Lot Residential is 221 ha. Based on the existing average lot size of 850 m<sup>2</sup> for RU5 Village and 3500 m<sup>2</sup> for R5 Large Lot Residential, the existing and proposed developable land for these zones will yield about 1882 RU5 Village lots and 631 R5 Large Lot Residential lots. This suggests that under current average take up rates, there will be approximately 21 years and 26 years supply of RU5 Village and R5 Large Lot Residential zoned land respectively.

As the fast pace of development experienced in Buronga Gol Gol in recent times is expected to continue, it would be premature to conclude that this residential land supply will be sufficient for future residential land demand in the study area. It is therefore necessary that future developable residential land supply is assessed using a growth rate higher than the current rate to pre-empt a future residential land shortage. As a result, higher residential land demand rates of 91 lots per year for RU5 Village and 37 lots per year for R5 Large Lot Residential, which are the highest annual land take up rate recorded for each of these zones in the last five years, have been assumed as the future land take up rates and are used to determine future residential land supply and availability in Buronga Gol Gol as shown in Table 4.2.

These higher future growth rates are deemed more realistic and highly likely considering improving, attractive local living conditions in Buronga Gol Gol, and the fact that the area has been identified by Mildura Rural City Council to take up some of the demand for housing in Mildura into the future, due to environmental and infrastructure constraints in the regional centre. In addition, the available historical residential land demand data reveals that land take up rates are generally high when subdivided land is available. Thus, high future residential land demand is not unreasonable to expect given that many of the owners of existing residential zoned land have either lodged development applications to subdivide/redevelop their land or have indicated their intention to do so in the short to medium term for residential purposes.

As presented in Table 4.2, under the anticipated higher growth rate, Buronga Gol Gol will have 21 years and 17 years supply RU5 Village and R5 Large Lot Residential land respectively. This indicates that while a higher growth rate is highly likely in Buronga Gol Gol, existing and proposed residential land should be sufficient to satisfy long-term residential land and housing needs in the area. In housing terms, the residential land could yield 2,513 dwellings, which is far above the 753 new dwellings that would be required to accommodate the approximate 1883 new residents expected in Buronga Gol Gol by 2040.

Table 4.2 – Future Residential Land Supply under Anticipated Demand Rates

Zone	Existing Undeveloped Land (ha)	Proposed Undeveloped Land (ha)	Total Undeveloped Land (ha)	Net Developable Land (ha)	Average lot size (m <sup>2</sup> )	Lots Yield (Additional Lots)	Average Annual Demand	Years Supply
RU5 Village	199	29	228	160	850	1882	91	21
R5 Large Lot Residential	93	223	316	221	3500	631	37	17
Total	292	252	544	381	N/A	2513		N/A





#### 4.2.2 Commercial

A 'village style' commercial precinct on Hendy Road around the Midway Centre is evolving which will address the absence of a well-defined business centre in Buronga Gol Gol. This is a win-win location for the commercial precinct as it is centrally located in between Buronga and Gol Gol on the Sturt Highway and will be easily accessed by walking, cycling or driving from both townships.

The commercial precinct will be Buronga Gol Gol's first formal local business centre and will provide a range of commercial, civic, cultural and residential uses. The commercial precinct should provide space for local start-up businesses and deliver essential services to local community. The commercial precinct will feature a new large-scale supermarket, a service station, Wentworth Shire Council's upgraded Midway Centre (Council Customer Services, Library, Conference Facility, Meeting Rooms and Basketball Stadium), a well-defined shopping strip, 20 new shop frontages and the NSW State Government office building (existing) as shown in Figure 4.3.

The shop frontages will boost the local economy by providing opportunity for start-up businesses such cafes, restaurants, boutique shops and miscellaneous stores. These shops would be very beneficial to the local community who will be able to walk or cycle to access daily essentials such as food and other supplies, without needing to travel by car to Mildura. It is anticipated a wide mix of uses will make more activities and services available in one location accessible by walking, cycling and public transport, and consequently promote self-reliance and an active lifestyle in Buronga Gol Gol.

Accordingly, the strip of land located to the north of Hendy Road between Melaleuca Street and Dawn Avenue should be rezoned from RU5 Village to B2 Local Centre. The area of the land proposed for B2 Local Centre is approximately 15 hectares, which represents just 0.5% of the study area. The RU5 Village zone currently applied to the land allows for business activities, however rezoning it to B2 Local Centre will ensure it is protected and reserved for commercial development and thereby centralise and consolidate commercial activities required to provide essential services to residents and boost the local economy in Buronga Gol Gol. In other words, a B2 Local Centre will better facilitate development of the proposed Hendy Road Commercial Precinct in the area.

Land use interface management should be considered in the planning, design and development of the commercial precinct to ensure that appropriate interface is developed and to avoid land use conflict such as noise from traffic and loading docks. Commercial land uses should transition to minor impact uses adjacent to residential areas to protect the amenity of these areas. In addition, Crime Prevention through Environmental Design (CPTED) principles should be applied to any development, especially if shop top housing is included.

It is noted that a land parcel (Lot 2 DP 733735) located on the southern side of the Sturt Highway nearly opposite the proposed commercial precinct is subject to a planning proposal to allow development for a market as an 'Additional Permitted Use' (see Figure 4.1). This additional permitted use is supported by this structure plan as the proposed open market will provide additional space for retail and commercial activities to complement the proposed commercial precinct.





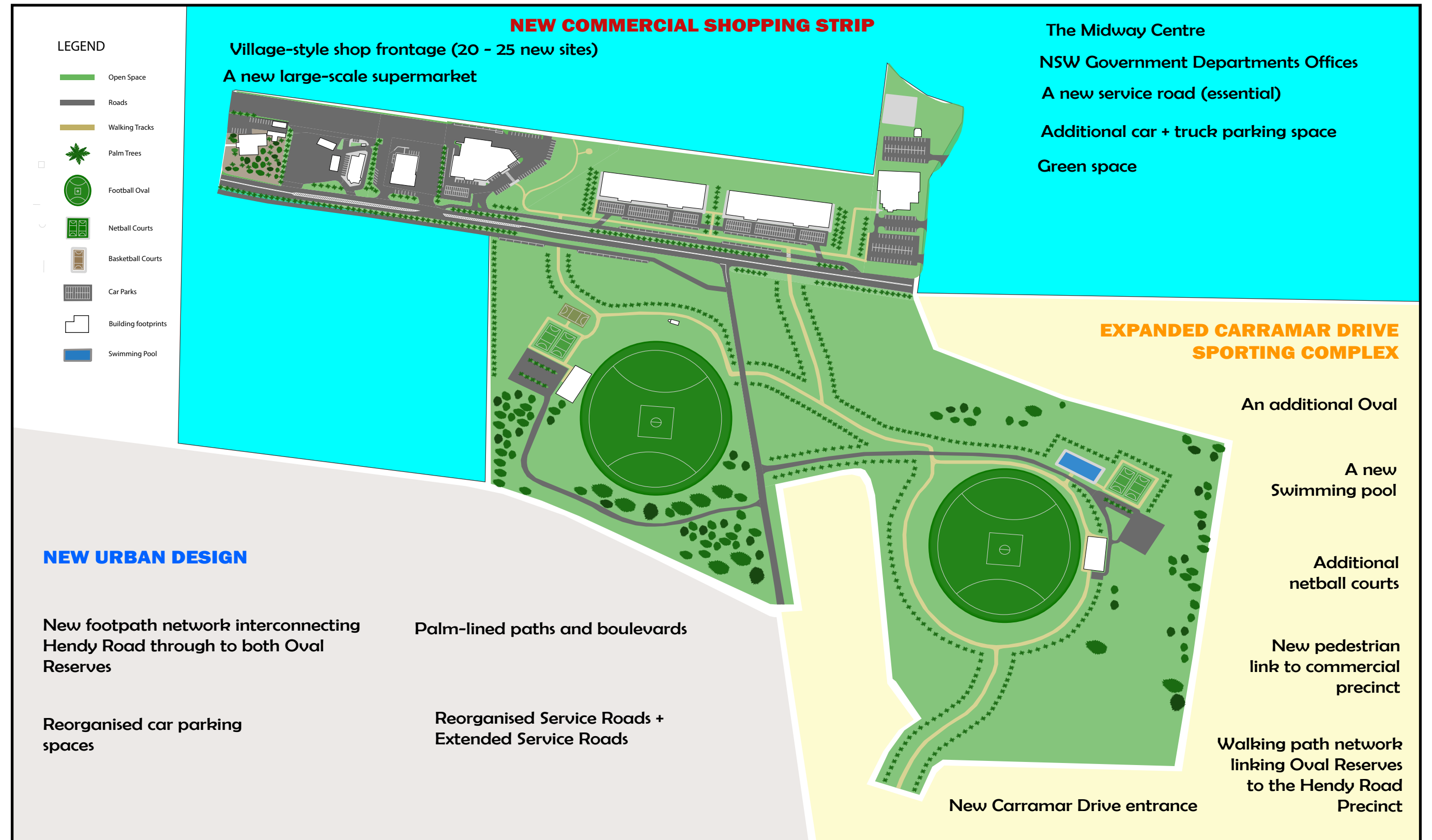


Figure 4.3 – Hendy Road Precinct Plan

### 4.2.3 Industrial

Industrial land use should be concentrated to the northern end of Buronga with extension possibilities to the north of the existing IN1 General Industrial zone. This keeps the industrial area at the edge of Buronga, easily accessed by major transport routes and unlikely to impact on residential areas.

Given that 25 ha of the 33 ha available undeveloped IN1 General Industrial zoned land has only recently been planted to citrus with the landowner not intending to redevelop in the short to medium term, an additional 16 ha parcel of land immediately adjoining the existing IN1 General Industrial land to the east is recommended to be rezoned to 1IN General Industrial. This is intended to forestall any potential shortage of industrial land in the near future, which could adversely affect industrial development in the Buronga Gol Gol area.

With an allowance of 15% for access and services, Buronga Gol Gol has 42 ha of developable industrial land that could yield approximately 120 industrial lots the emerging average lot size of 3500 m<sup>2</sup> in the zone. This total lot yield is equivalent to 30 years of industrial land supply based on the current take up rate of 4 lots per year. This means that even under a higher industrial development rate of say 6 lots per year, which is not unreasonable to expect given the recent fast take up of industrial lots following re-subdivision, the available developable industrial zoned land could provide sufficient long-term industrial land supply. Nonetheless, any excess future demand for industrial land beyond the projected supply should be accommodated by extending the IN1 General Industrial zone northward.

### 4.2.4 Rural Environmental Living

It is recommended that E4 Environmental Living zone be applied to an area of land located in Buronga West and the Mitchell Lane Precinct in north east Gol Gol, which are currently zoned RU1 Primary Production (see Figure 4.1). The total area of the parcels of land to be rezoned is approximately 260 ha.

It is envisaged that E4 Environmental Living will help cater for the existing mix of residential and horticultural uses in these areas, while minimising flood risks and preserving environmental values associated with the areas. This is intended to rationalise developed residential-like streetscapes and small-scale agriculture or hobby farm style uses that currently characterise these areas. Rezoning is also envisaged to reduce large minimum lot sizes that were applied to parcels of land in these areas without any formal comprehensive investigation or assessment, to more contemporary and practical lifestyle minimum lot sizes in the ranges of 1 to 3 hectares.

### 4.2.5 Rural Land

Retain the RU1 Primary Production land adjoining the RU5 Village land to the north in Buronga Gol Gol. This land is not required for immediate urban development and also not serviced which would place a considerable burden on Council's financial resources to provide and maintain services to the area.

It is however suggested that a smaller and consistent minimum lot size should be considered and applied to the RU1 Primary Production land within this area after consultation with the Department of Planning, Industry and Environment. In addition, this area should be treated as a future urban growth area and any urban expansion beyond the identified development areas in this structure plan should be directed here. It is suggested that the parcels of land north of Pitman Avenue (i.e. Lot 108 & 109 DP 756946, Lot 1 & 2 823886), which are all currently used predominantly for rural residential purposes should be investigated for rezoning to RU5 Village in the first review of this structure plan.

### 4.2.6 Urban Land Release Staging

Figure 4.4 shows the staging plan for guiding urban land release to ensure development occurs in an orderly and well-coordinated manner. The staging plan has been developed to:

- ensure transparency in land use decision making;
- enable Council and developers/landowners to identify and plan resource commitment; and
- ensure progressive delivery and availability of necessary infrastructure and services to support development

Sequencing of the urban land release was informed by a combination of factors including:

- proximity to existing development;
- ease of servicing the development area with adequate infrastructure; and
- preparedness of owners to develop





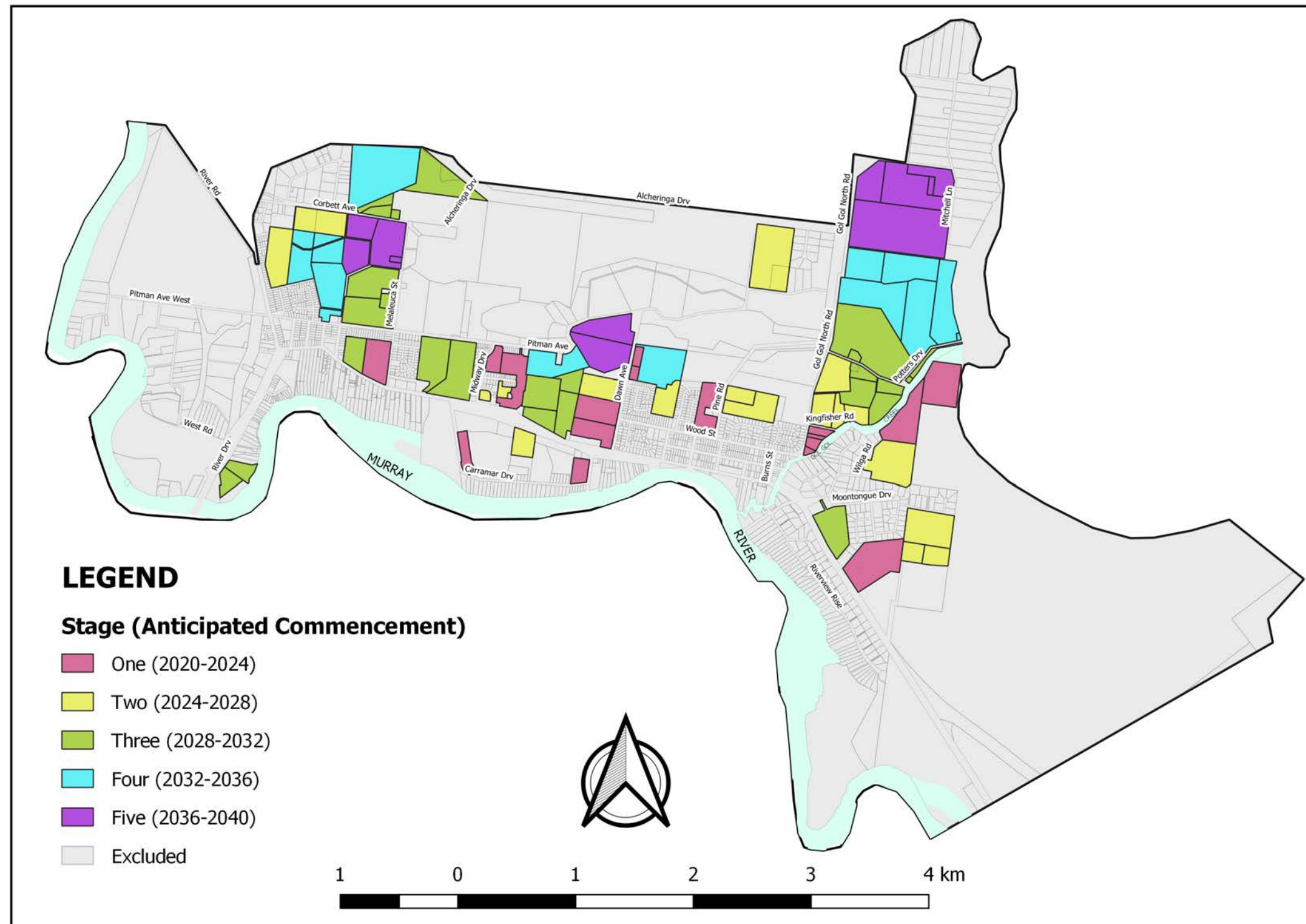


Figure 4.4 – Urban Land Release Staging Plan

### 4.3 Infrastructure

#### 4.3.1 Water Supply

It has been determined that existing reticulated filtered and raw water systems have adequate capacity to supply future developments in the area. However, augmentation of the water reticulation networks with additional reservoir storage capacity and extension of mains will be required as development proceeds. It is expected that the additional reservoir would not only enhance reliability of supply but it will also provide Council with greater flexibility in maintenance planning.

As depicted in Figure 4.5, expansion and upgrade works should be undertaken progressively in conjunction with development to ensure security of a water supply in Buronga Gol Gol. Extension of the water reticulation mains to new subdivision areas would be funded by developers.

Council should develop an Integrated Water Cycle Management Plan that looks at water management on a holistic basis i.e. the combination of water supply, sewer and stormwater. In relation to water supply, the plan must incorporate a Strategic Water Supply Master Plan for facilitating the extension and upgrading of the reticulated water supply system. The master plan should be used to investigate and identify the location of the additional reservoir, pumps and pipework.

The integrated water management plan should also include a Water Demand Management Program aimed at reducing excessive water consumption to help defer the need for major capital works in future. The program should incorporate ongoing collection and monitoring of consumption data which constitutes essential components of water supply asset management processes. Finally, the plan should encourage onsite water capture, storage and use especially in the R5 Large Lot Residential area.

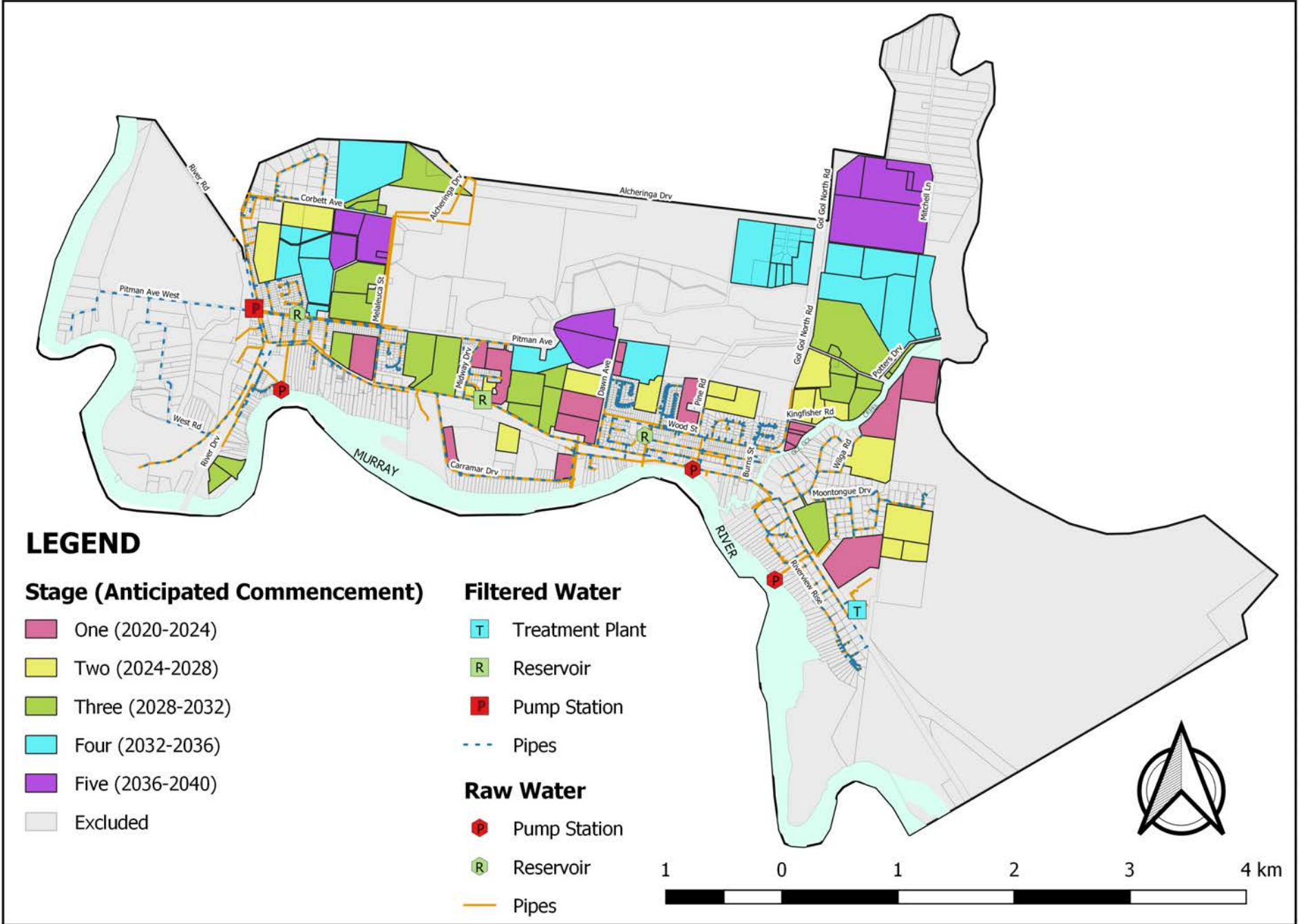


Figure 4.5 – Proposed Water Supply Infrastructure



#### 4.3.2 Sewerage Services

Existing sewerage infrastructure has adequate capacity to service the area covered in the structure plan.

The sewerage reticulation mains should be extended to the R5 Large Residential Lot zone east of Gol Gol within the short to medium term as shown in Figure 4.6. This extension will be supported by the proposed Trentham Cliffs pipeline. It is envisaged that connecting east Gol Gol to the sewerage system will capitalise on existing excess capacity of Gol Gol's sewerage treatment plant and mitigate aquatic pollution risks posed by on-site septic systems in that zone.

To further enhance sewerage management, it is recommended that Council prepare an Integrated Water Cycle Management Plan that looks at water management on a holistic basis i.e. the combination of water supply, sewer and stormwater. The integrated plan should include a Sewerage Infrastructure Master Plan based on the proposed staging and land development pattern to facilitate progressive extension of sewer mains to existing unserved and future development areas of Buronga Gol Gol. Developers will be responsible for the cost of designing and constructing sewerage reticulation infrastructure within new subdivisions.

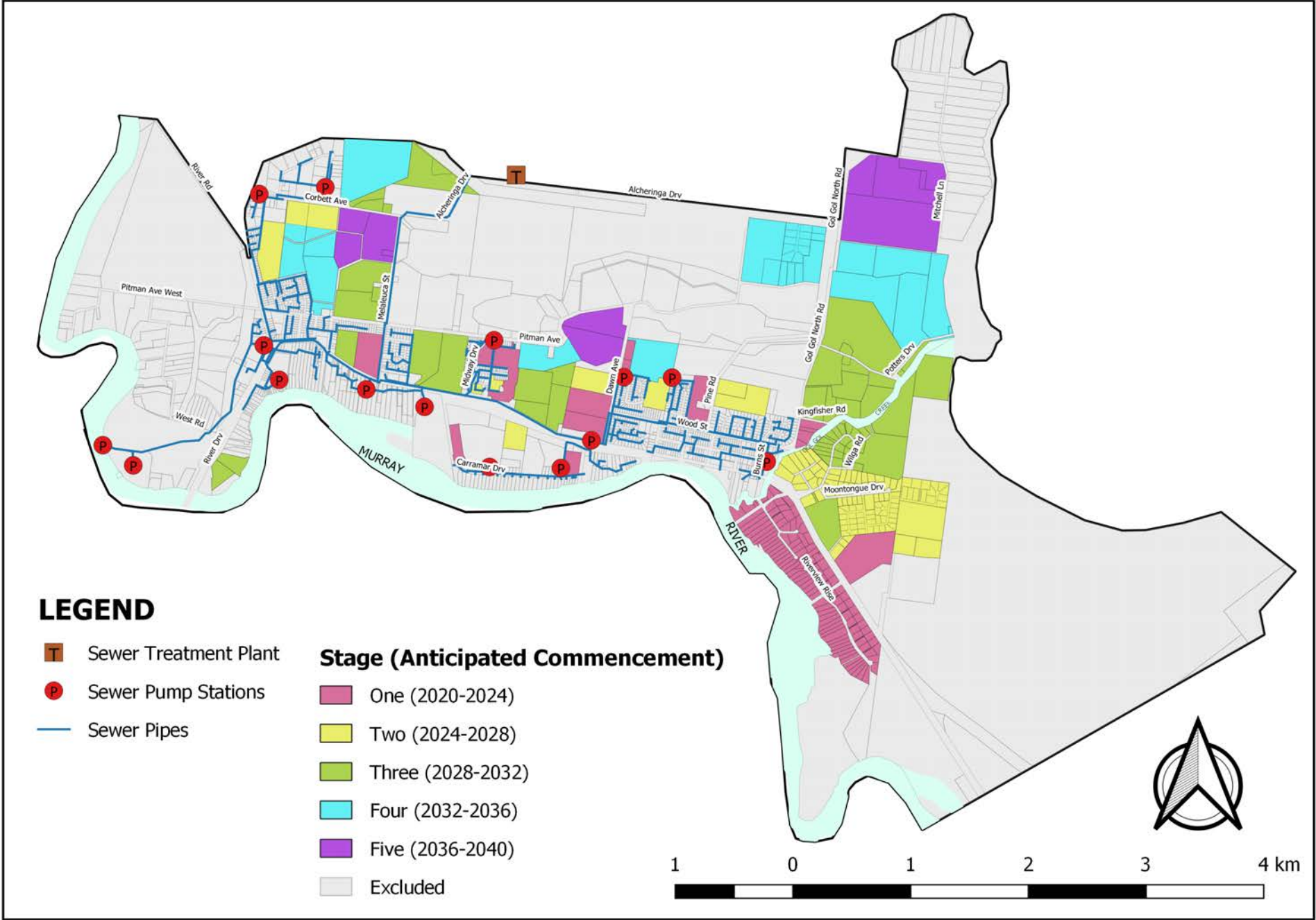


Figure 4.6 – Proposed Sewerage Infrastructure

4.3.3 Drainage Infrastructure

Most of Buronga Gol Gol has adequate stormwater management systems and this can be duplicated in future development areas by the extension of the existing drainage network. Nonetheless, it is anticipated that additional drainage/ stormwater infrastructure will be required in the future as development proceeds (see Figure 4.7).

It is recommended that the Dawn Avenue Depression and Pink Lake opportunities be investigated and developed as drainage/retention basins given their large water storage capacity and location in relation to the urban growth area of Buronga Gol Gol. Development of the Dawn Avenue Depression and Pink Lake drainage basins could incorporate recreational amenities such as boardwalks, cycle tracks and landscaping. In particular, the two basins should be linked with a boardwalk and cycle tracks through the proposed greenbelt along Dawn Avenue for recreational use. This approach is intended to create multi-purpose stormwater basins that also serve as open spaces and habitat for significant flora and fauna species. This proposal is however subject to further investigation and cost-benefit analysis for a holistic stormwater management program in the Buronga Gol Gol area.

To further enhance stormwater management, it is recommended that Council prepare an Integrated Water Cycle Management Plan that looks at water management on a holistic basis i.e. the combination of water supply, sewer and stormwater. The integrated plan should include a Stormwater Infrastructure Master Plan to guide the progressive expansion of stormwater pipelines and drainage basins to service future development in Buronga Gol Gol. The design and construction of stormwater infrastructure within new subdivisions will be the responsibility of developers.

The integrated plan should be used to explore and inform development of an On-site Stormwater Detention Policy. The policy should provide a framework for home owners requiring to install rainwater tanks, to collect and control runoff to pre-development overland flow before being released to Council’s drainage system.

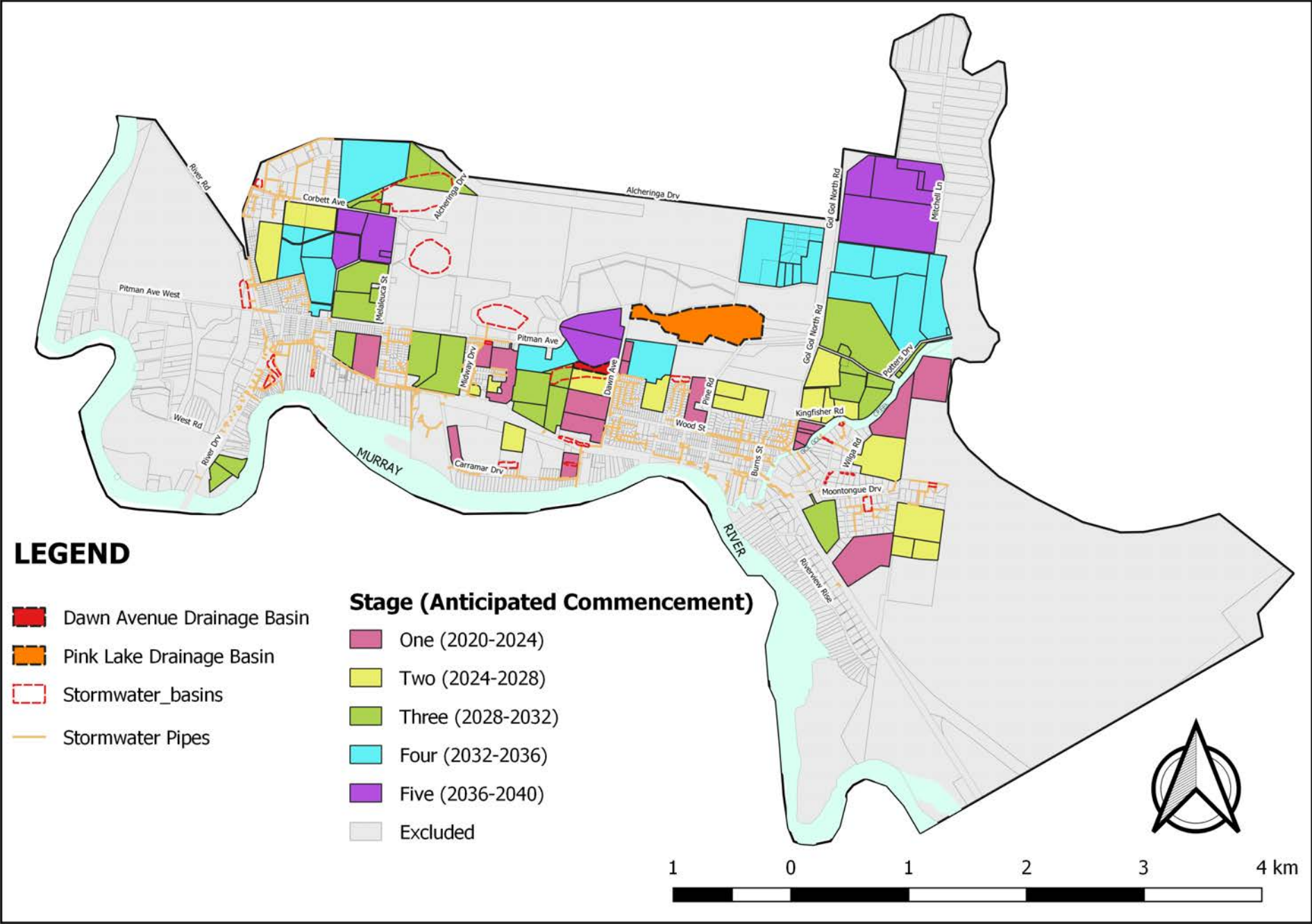


Figure 4.7 – Proposed Stormwater/Drainage Infrastructure



The structure plan supports the significance of the Sturt and Silver City Highways as national transport routes, while at the same time ensuring that traffic on these highways is safe for local pedestrian, cycle and vehicular traffic.

- a) Summer Drive should be extended to provide a connection from Mela-leuca Street through Midway Drive to Dawn Avenue through future subdivisions (refer Figure 4.8). It is expected that Summer Drive, Wood Street and Pitman Avenue will form a direct east-west connection for Buronga Gol Gol to enable residents to access facilities and services in the Midway Area and either end of the townships without requiring use of the highways. This will reduce the number of local traffic movements on the highways and preserve the highways for through traffic and freight transportation.

- b) It is proposed that a new service road be constructed behind the IGA Supermarket between Melaleuca Street and Midway Drive. The service road will provide easy and safe vehicular access to the proposed Hendy Road Commercial Precinct.
- c) It is proposed that a new service road be constructed on the northern side of the Sturt Highway between Dawn Avenue and the proposed B2 Local Centre zone. This service road will provide the required access for future development within that stretch without the need for creating new intersections with the highway. The eastern end of the proposed service road should connect to Dawn Avenue at T-junction as shown in Figure 4.8.
- d) The Melaleuca Street and Sturt Highway intersection needs realignment due to the need to improve the existing service road on the southern side of the highway. The highway will need to be realigned proportionally to the north into the existing horticultural land in order to rebuild the service road and ensure proper alignment of the intersection. Provision for road widening has been identified in DP 811922.

It is recommended that the eastern end of the service road be disconnected from the Sturt Highway and the road extended to link with Carramar Drive as shown in Figure 4.8. The objective of this change is to reduce the proliferation of intersections with the highway.

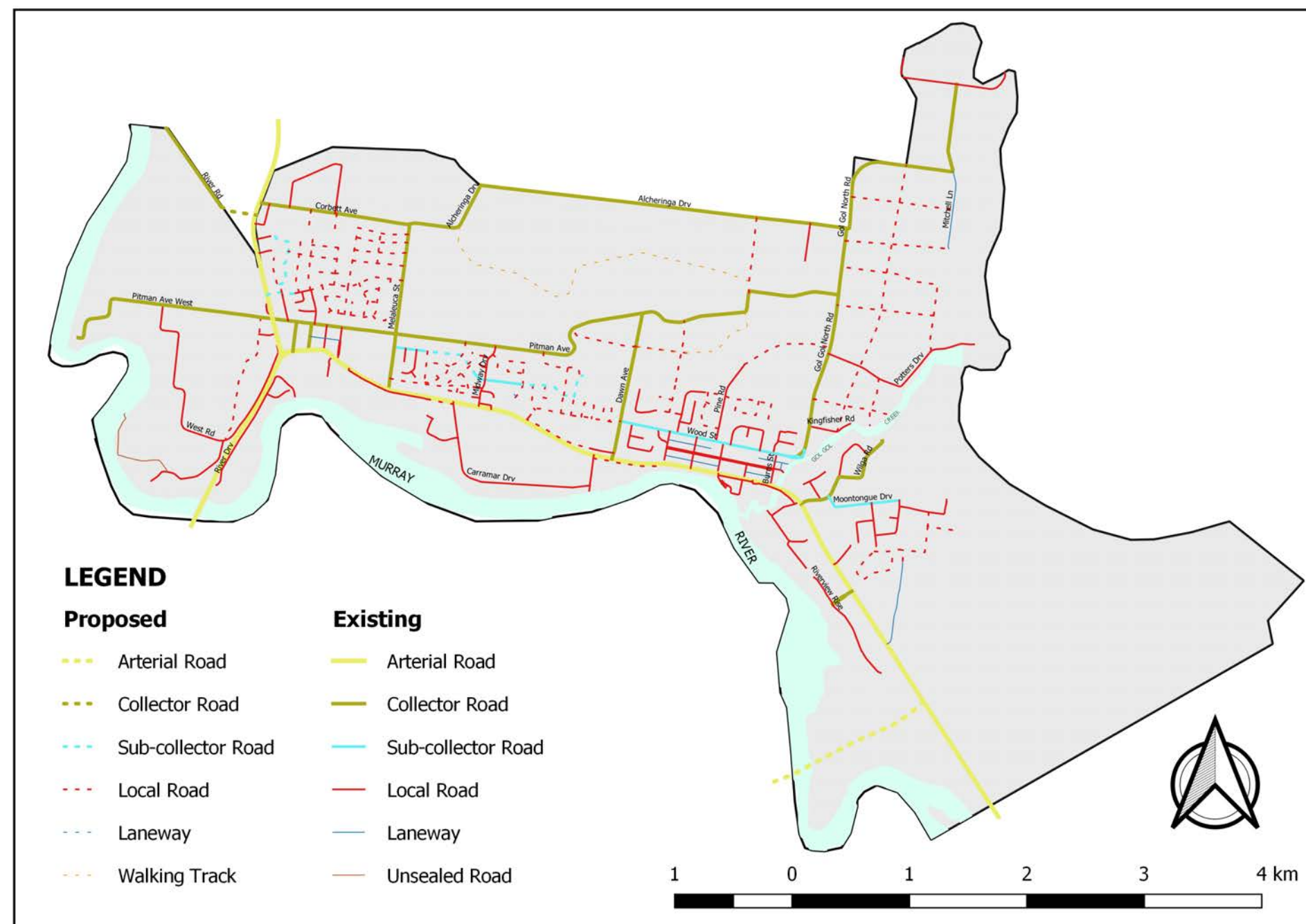


Figure 4.8 – Future Road Network and Indicative Subdivision

- e) The various fragmented dirt tracks/semi-improved roads south of the Sturt Highway should be rationalised and upgraded into local and/or service roads to provide formalised and constructed accesses to residences and parklands in the southern part of Buronga Gol Gol. These service roads should be connected to the highway at appropriate intersections as indicated in Figure 4.8.
- f) The Corbett Avenue and Silver City Highway intersection should be reviewed in consultation with Transport for NSW (TfNSW) to identify and implement suitable traffic treatments at the intersection. The review should aim towards developing the intersection as a western “entry gateway” to the urban area of Buronga. Ultimately, any implemented upgrade should help slow vehicular traffic on the highway, allow industrial traffic to enter/exit the highway safely and provide a higher level of safety to the community.
- g) The intersection of the River Road with Silver City Highway should be reviewed and possibly realigned to the north to address issues associated with its current acute angle connection with the highway (refer Figure 4.8).
- h) Council should collaborate with TfNSW to investigate and implement traffic treatments at the Midway Drive and Sturt Highway intersection. Traffic treatments at this intersection should focus on regulating and slowing traffic on the highway to provide safe pedestrian access to the proposed Hendy Road Commercial Precinct, the Midway Area and the Carramar Drive Sporting Complex. Options that should be considered at this location include pedestrian crossing traffic signals, pedestrian refuges and median strips.
- i) It is recommended that Council collaborate with TfNSW to investigate and identify further upgrades at the intersection of the Dawn Avenue with Sturt Highway to better accommodate the increasing right turning local traffic from the fast-expanding new residential estates in Gol Gol. It is considered that an “oval” roundabout type arrangement that possibly incorporates Punt Round may be more appropriate for this intersection.
- j) The Wilga Road/Wilga Road South and Sturt Highway intersection should be upgraded to a roundabout to enable it accommodate the increasing traffic from the large lot residential area in east Gol Gol. The roundabout would also form the eastern “entry gateway” to the urban area of Gol Gol which may slow vehicular traffic on the highway and provide a higher level of safety to the community.

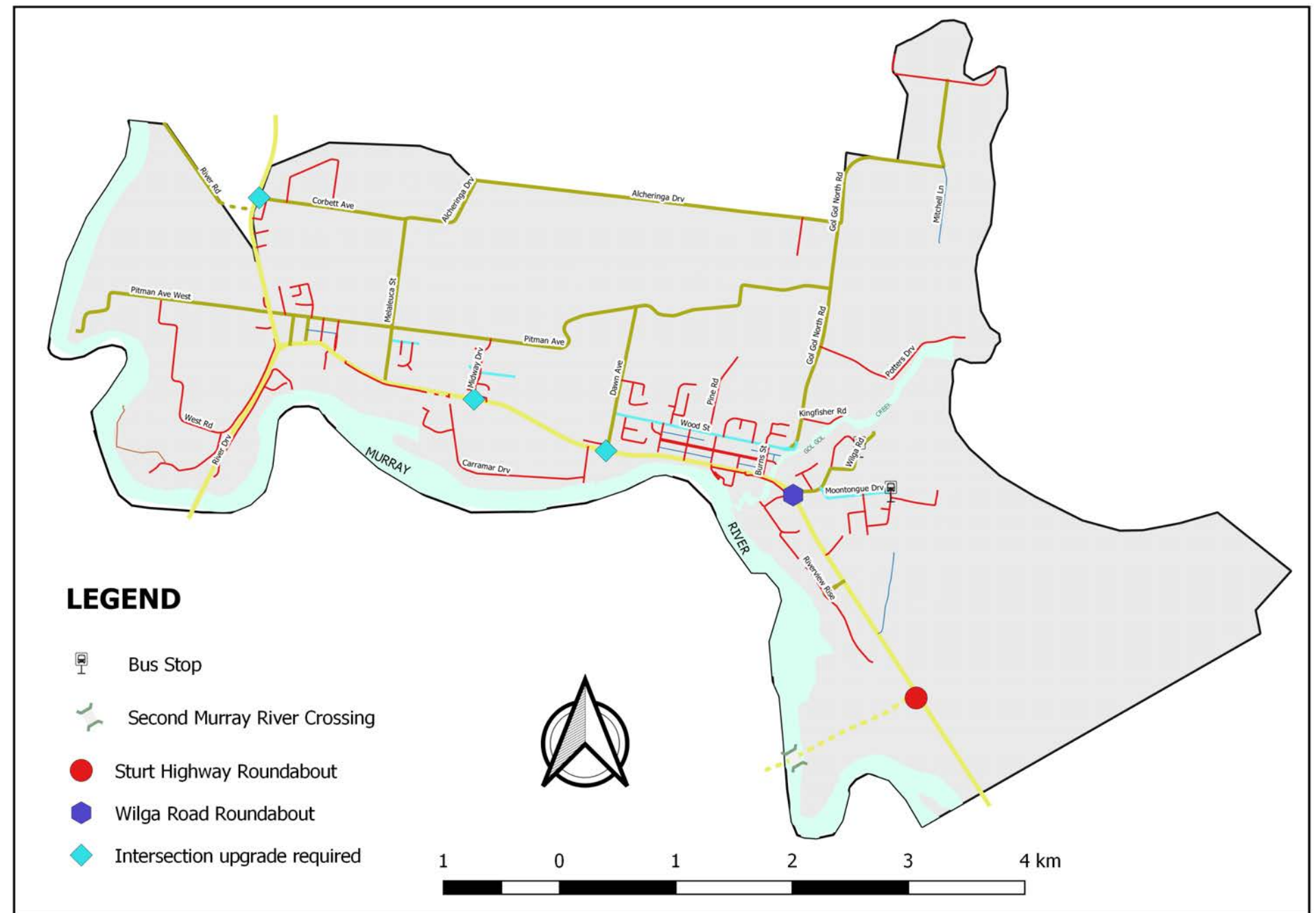


Figure 4.9 – Future Road and Intersection Improvements



- k) Council should collaborate with relevant organisations and agencies such as TfNSW, Regional Roads Victoria (RRV) and Mildura Rural City Council (MRCC) to actively explore options for a second Murray River crossing or highway bypass east of Gol Gol. A second bridge or bypass will significantly reduce freight and through traffic in the Buronga and Gol Gol townships and thus enhance the urban amenity of the area. Any investigations into the second Murray River crossing and/or the highway pass should give serious consideration to the local economic impact on the Buronga Gol Gol area and the wider region.

A possible location for the second river crossing is shown on Figure 4.9, albeit this is subject to in-depth feasibility and suitability analysis. It is noted that the proposed location for the second river crossing, if found suitable, will instigate strong demand for residential and commercial development in the immediate areas as opposed to the current large lot development. This potential change in the urban development dynamic should be accommodated in future review of this structure plan as the potential for a second river crossing becomes more certain.

- l) The Burns Street and Sturt Highway intersection should be converted to a left in left out intersection. This will alleviate vehicles queueing to turn right onto the highway, as well as ensure a continuous flow of local and through traffic on the highway. Local traffic seeking to travel westward can easily and safely perform a U-turn at the proposed Wilga Road Roundabout.
- m) The Gol Gol Creek Bridge is an important river crossing that connects the main Gol Gol Township to the expanding large lot residential area east of the township. While the bridge is currently in good condition and functions effectively, the increasing local traffic from the ongoing residential development in east Gol Gol coupled with growing freight and passing traffic may cause the bridge to deteriorate rapidly and/or reach its capacity in the near future. Residents of east Gol Gol could face compromised accessibility to and out of the town should the bridge crossings exceed its capacity or be completely cut off from the rest of the town should the bridge develop a major fault. Therefore, it is imperative to investigate a suitable location upstream of the Gol Gol Creek for the construction of another river crossing to provide alternative access for residents of Gol Gol should the existing bridge exceed its capacity or develop a major fault in the future. The additional bridge could reduce local traffic on the existing bridge and hence make more space available for freight or through traffic.
- n) Council should prioritise the provision of constructed and/or sealed roads to all developed areas throughout Buronga Gol Gol. This would involve formalising existing unsealed, dirt roads in Buronga Gol Gol. The short to medium term priority should focus on Bridge Road and Native Ridge Lane.

Council should seal and upgrade the intersection of Native Ridge Lane in the short term. This improvement is urgently required to provide alternative access to the fast-expanding large lot residential area, as well as disperse traffic away from Wilga Road.

It is proposed that Bridge Road is sealed and landscaped with a foot-path network linking to/from the existing Buronga Wetlands. This road upgrade would provide improved access to the existing private (residential) properties and businesses adjacent to it and the Sturt Highway, as well as improve access to Mildura and the Buronga Caravan Park for pedestrians and cyclists.

- o) Council should systematically review the role of Pitman Avenue as a collector road and progressively undertake appropriate upgrades or improvements. This should be done to ensure that the road has appropriate condition and capacity to accommodate the increased traffic expected from proposed residential subdivision developments in the Buronga Gol Gol. In addition, consideration should be given to realigning the Pitman Avenue to the south (below Lots 11 DP 756946) to remove the current bends (adjacent to Lot 109 DP 756946) to allow for ease of road connection in a north-easterly direction toward the proposed E4 Environmental Living zone.
- p) Council should collaborate with relevant State agencies to undertake continuous road safety audits on the Sturt and Silver City Highways to inform the need for introducing new traffic management treatments such as speed limit reductions, median strips, pedestrian refuges and pedestrian crossings at identified sections of the highways.





4.3.5 Footpaths and shared ways

Footpaths and shared ways should be retrofitted into existing road reserves and streetscapes throughout Buronga Gol Gol to improve walkability and pedestrian safety in area. This community access amenity should be prioritised and provided on all streets within residential and commercial areas. The provision of footpaths in the town centres and older parts of the Buronga Gol Gol should be carefully planned to link-up with the existing footpaths in the new subdivision areas to improve the overall connectivity and permeability of the township.

It is noted that the need for footpaths and shared ways has recently received attention with Council currently undertaking works to retrofit and/or extend footpaths on some streets in Buronga Gol Gol as part of the implementation of the Pedestrian Access and Mobility Plan (PAMP) (refer Figure 4.10.). It is expected that this staged plan when fully implemented, will improve path connectivity, pedestrian and cyclist movements, and safety of non-motorised travel in Buronga Gol Gol. However, the plan needs to be reviewed and updated in the short to medium-term to ensure other existing streets, especially in the large lot residential area in east Gol Gol, not initially planned for are captured and retrofitted with footpaths or shared ways as required. This is particularly important for achieving an active, healthy built environment and reducing car dependence in Buronga Gol Gol.

It is proposed that a footbridge be constructed over the Murray River at Punt Road to establish a strategic and useful connectivity between Buronga Gol Gol and Mildura. This will provide a better, safer link for active transport between Mildura and Buronga Gol Gol by enabling the local people to access both sides of the river by walking or cycling and thus addressing restrictions for active transport across the Chaffey Bridge. It is envisaged that the footbridge will facilitate the creation of an active corridor around the stretch of the Murray River between the proposed footbridge on the east and Lock Island on the west for walking, hiking and cycling (see Figure 4.11). In this regard, a footbridge is proposed to be constructed/overlaid over Lock 11 to allow crossing of the Murray River at the eastern end of the corridor. The looped active transport link will mostly follow existing active transport routes and only limited new infrastructure has to be added to complete the loop. It is expected that the active corridor will improve public access to the river and its immediate environment by residents and visitors as well as promote active healthy lifestyle in the across the border. The successful implementation of these proposals will require active engagement, collaboration and lobbying with RMS, MRCC and relevant state agencies in NSW and Victoria.

It is further recommended that all future subdivisions should be serviced with footpaths that connect to existing infrastructure. This can be imposed as a condition of development consent on development applications for residential subdivisions.

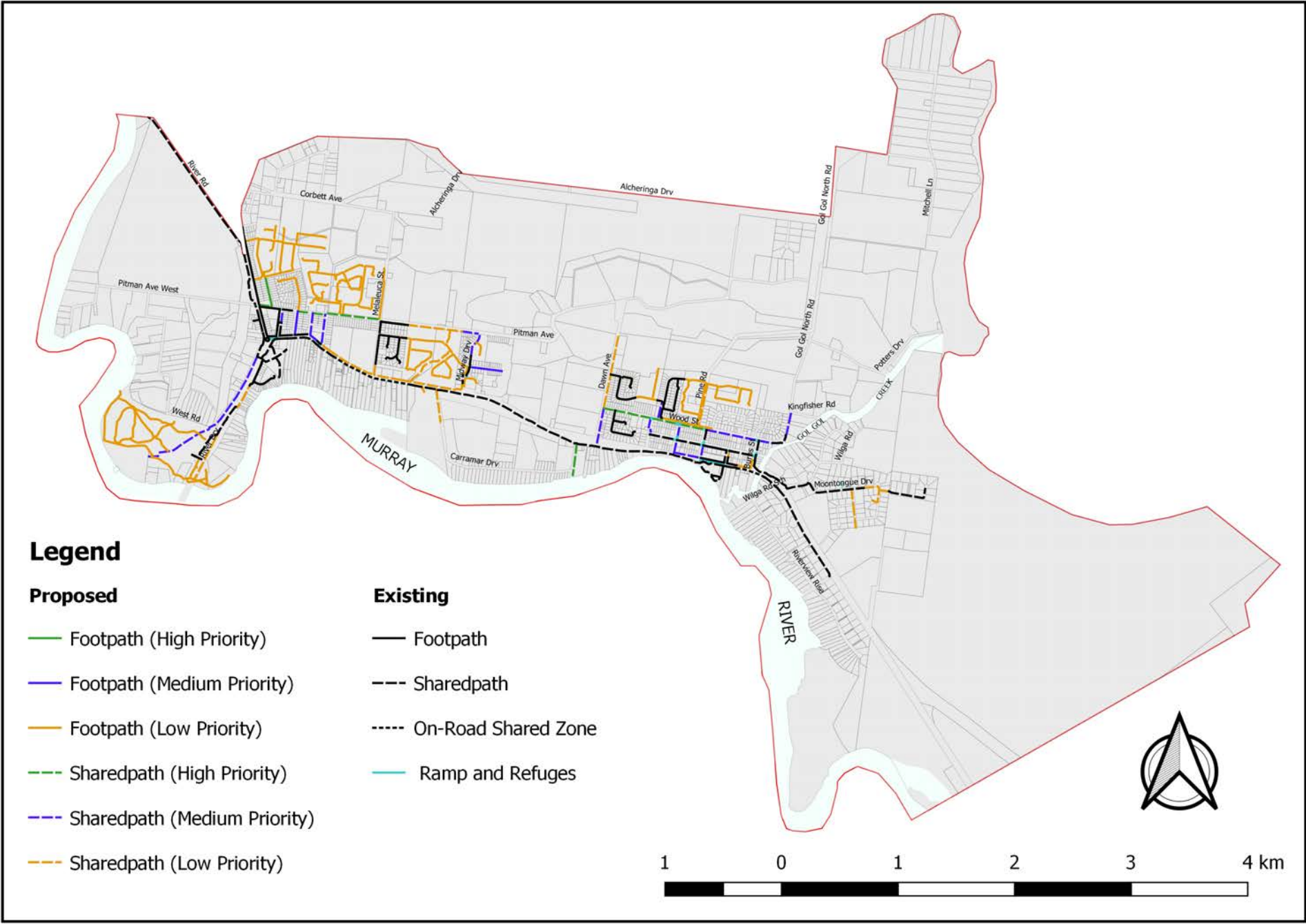


Figure 4.10: Pedestrian access and mobility plan: Proposed path priorities plan for Buronga Gol Gol



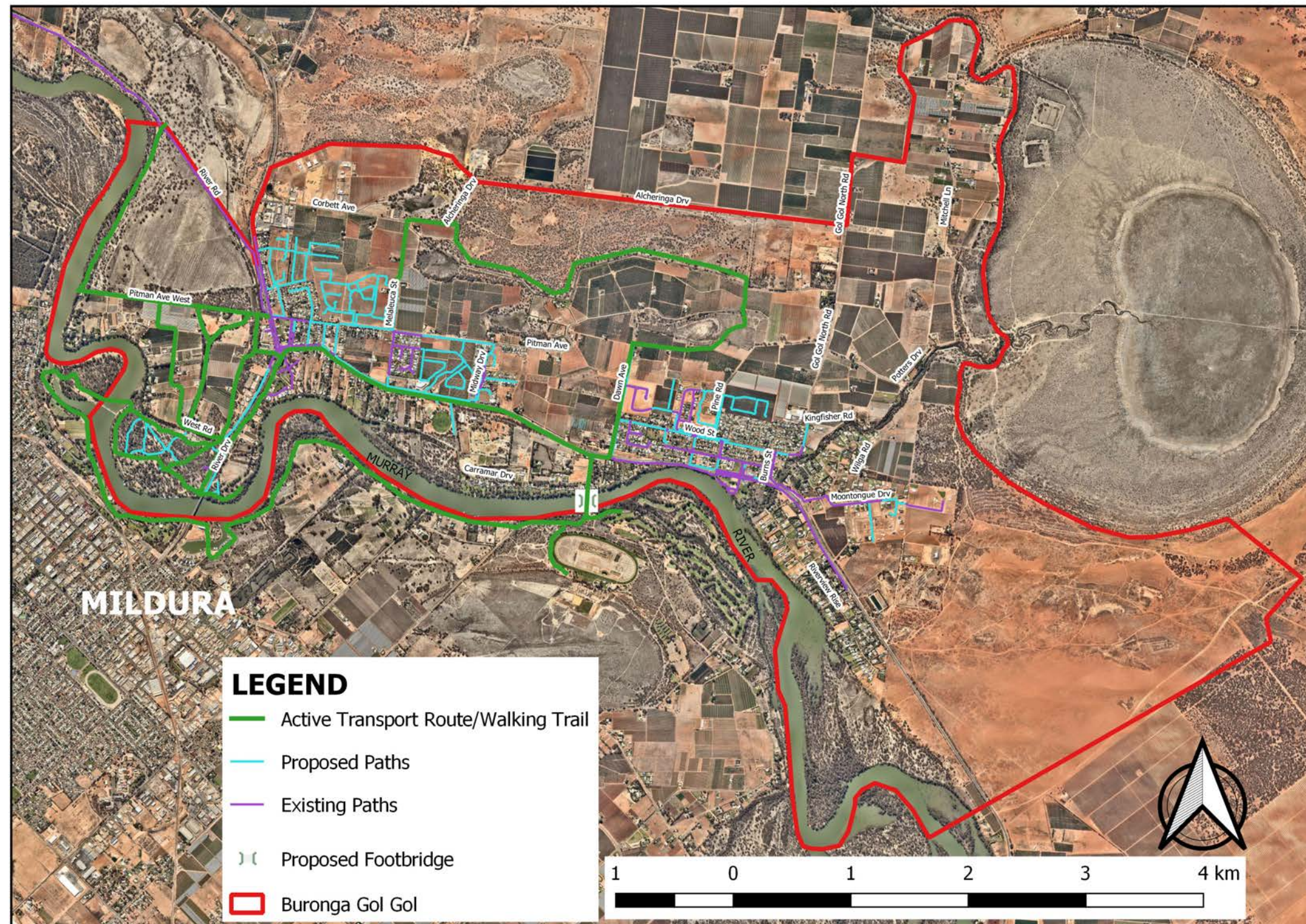


Figure 4.11 – Proposed Active Transport Route/Corridor



#### 4.3.6 Power and Telecommunication Services

Power and telecommunication infrastructure with the capacity to service future development already exists in Buronga Gol Gol. Further improvement to the power and telecommunication capacity and quality is expected from proposed major infrastructure projects listed below:

- An approved \$1.5 billion electricity interconnector ‘Project EnergyConnect’ between South Australia and New South Wales. The junction of the electricity interconnector is located immediately outside the Buronga Gol Gol area.
- A planning proposal for solar farm “Buronga Energy Station” on Arumpo Road in Buronga is under consideration by the Department of Planning, Industry and Environment (DPIE).
- An approved Optus Telecommunication Tower on Gol Gol North Road in Gol Gol (refer Figure 2.18).

In addition, it is recommended that Council should:

- actively engage with and persuade Essential Energy to eliminate overhead powerlines in the main township areas. Of priority is the overhead powerlines around the James King Park as these constitute a visual blight area;
- ensure any future electricity and telecommunication network is constructed underground as this is conducive to enhanced urban landscape;
- promote renewable energy options such as installation of rooftop solar panels to the community; and
- encourage installation of at least one (1) electric vehicle charging station in the carpark of all future commercial developments and public buildings

#### 4.4 Community Services and Recreation Facilities

The community services and recreation facilities proposed to augment existing services in Buronga Gol Gol are represented in Figure 4.12. In addition, upgrades to specific amenities within some of the existing facilities are included in the implementation and development sequencing plan in Table 4.3.

##### 4.4.1 Educational Facilities

It is recommended that Council liaise with the Department of Education to investigate the possibility of consolidating and relocating the Buronga and Gol Gol public schools. This is needed to address the safety concerns and expansion constraints associated with the current location of the schools along the Sturt and Silver City Highways. It is suggested that the schools should be relocated to a site that is large enough to accommodate the establishment of an education precinct with a Year 1 to 12 institution to provide the educational needs of school aged children in Buronga Gol Gol from one location. The consolidated Buronga Gol Gol public school will also have less operational cost in the long-term.

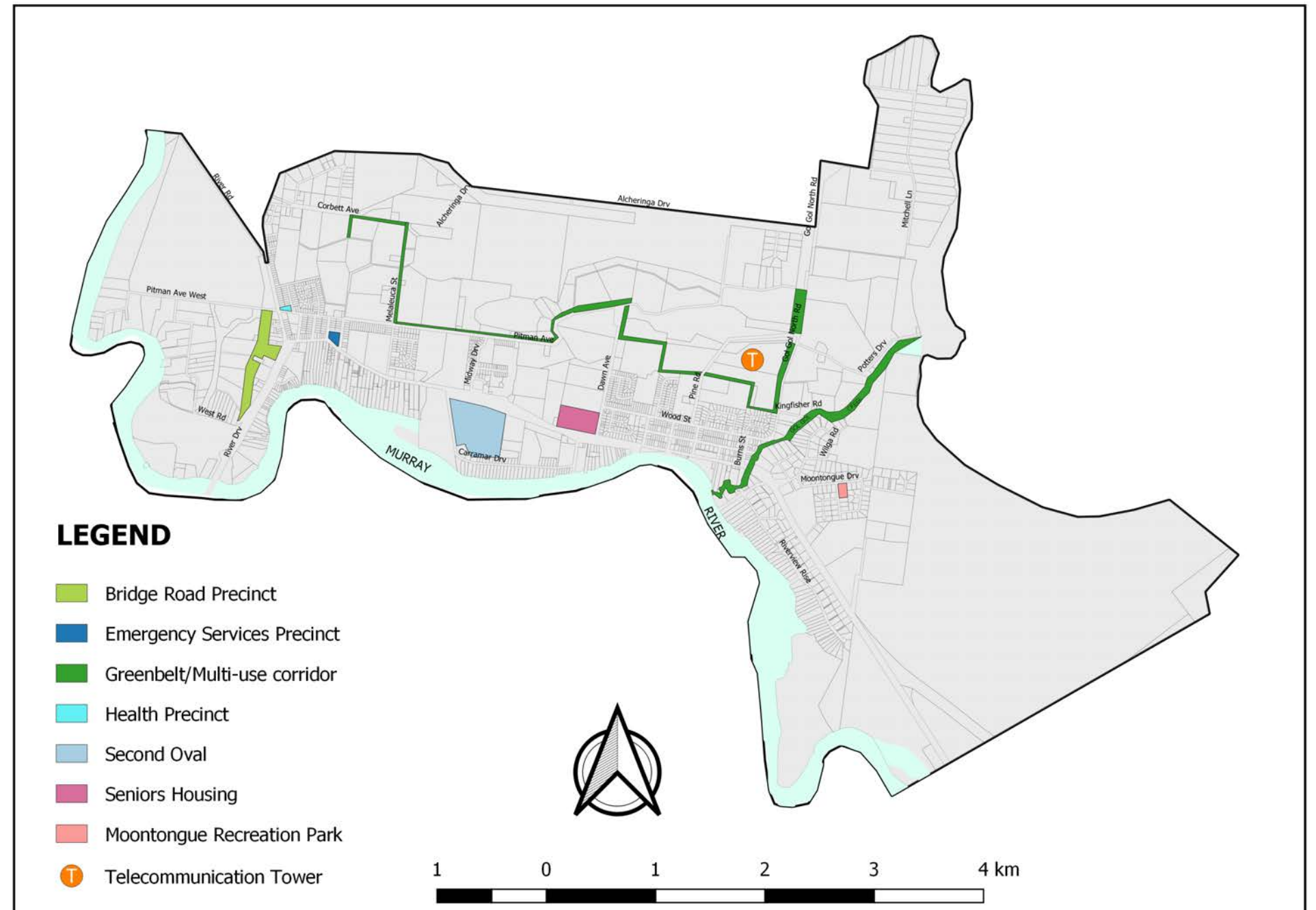


Figure 4.12 – Proposed Community Facilities, Recreation Areas and Green Spaces



#### 4.4.2 Sporting and Recreational Facilities

It is proposed that Carramar Drive Sporting Complex should be expanded to include a portion of the vacant E3 Environmental Management zoned land that adjoins it to the east (see Figure 4.12). The expansion will cover 22 ha of the existing E3 Environmental Management land and will allow for the provision of a second oval, for which there is strong community demand and support. It is noted that a second oval will allow juniors and seniors from the local football club to be able to train and play at the same time. Moreover, given the absence of a community swimming pool within Buronga Gol Gol, it is proposed that a swimming pool be constructed within the expanded Carramar Drive Sporting Complex, possibly located next to the new second oval and netball courts as shown in Figure 4.3.

The part of the E3 Environmental Management land to be included in the reserve should be rezoned to RE 1 Public recreation to make available the full suite of uses permissible in these areas, as well as give certainty to the community that the use will remain in the long-term.

#### 4.4.3 Health and Emergency Services

Although residents in Buronga Gol Gol have access to health and emergency services in Mildura, it is essential that these services are provided locally in the near future. This is particularly important considering the growing population and changing demographics of the area.

The area immediately north-east of the Silver City Highway and Pitman Avenue Intersection in Buronga is envisaged to become the Buronga Gol Gol health care precinct. It is also noted that the NSW Government is currently in the process of developing a “superclinic” (Health for everyone) in this area. It is expected that this clinic, when developed, will provide easy access to comprehensive GP care in conjunction with Allied Health and other primary health services from one convenient location.

The parcel of land situated on Hendy Road between Pooley and Rose Streets is recommended to be redeveloped as a consolidated emergency services precinct for Buronga Gol Gol. The high accessibility and visibility of the proposed site makes it an ideal location for emergency services. The consolidated emergency services precinct is expected to house key emergency service providers such as NSW Ambulance Service, NSW Police Service, Fire & Rescue NSW and Rural Fire Service to promote coordination in the delivery of emergency response services in the Buronga Gol Gol area. Relocating the Gol Gol Rural Fire Service to the proposed precinct will also make land available for potential future expansion of the Gol Gol Pre-School.

Council should liaise and cooperate with relevant state health departments/agencies to facilitate establishment of these facilities. Also, the proposed sites for health and emergency precincts should be rezoned to SP1 Special Activities. This will help protect the land for intended purposes, as well as facilitate the establishment of facilities and services.

The parcel of land located at the corner of Sturt Highway and Dawn Avenue intersection has been identified as suitable for development of seniors housing to help meet the residential accommodation needs of the aging population in Buronga Gol Gol and the region. The site’s high accessibility and close proximity to future commercial and business activities makes it a suitable location for development of residential accommodation for aged persons. It is considered that the location and size of the site would be suitable for a range of seniors housing types including a residential care facility and retirement village.





4.4.4 Public Open Spaces (Parks)

Bridge Road precinct has been identified as an opportunity to expand the Buronga Wetland Reserve and improve parkland connectivity in Buronga Gol Gol. The Bridge Road precinct should be cleared of scrubby, untidy vegetation and landscaped and maintained – in a very similar fashion to the Buronga Wetlands – by planting trees that are well suited to the region’s climate as depicted in Figure 4.13. It is anticipated that the existing underpass located under the Silver City Highway will continue to provide safe, unrestricted pedestrian movement for both pedestrians and cyclists between the linked Bridge Road Precinct and Buronga Wetlands.

Revamping the Bridge Road precinct is envisaged to deliver many benefits to Buronga Gol Gol including:

- a) doubling or even tripling the size of the Buronga Wetlands Reserve and creating additional and improved green-belt and public open space for recreational use,
- b) opening up and enhancing the usability of the existing pond in the area,
- c) creating a more visually appealing and useable entrance into Buronga Gol Gol and NSW from Mildura and Victoria, and
- d) removing the scrappy vegetation that has the potential to be a hazard in windy conditions and flood waters

Given that the Bridge Road land is Crown owned with Wentworth Shire Council as the Trustee, the proposed (re)development of the precinct should be seen as a strategic priority for Buronga Gol Gol.



Figure 4.13 – Bridge Road Precinct Concept Plan



As presented in Figures 4.12 and 4.14, greenbelts have been identified to separate or screen the different main land uses, as well as improve connectivity and permeability within Buronga Gol Gol.

A greenbelt is proposed to align with the interface of industrial, residential and rural lands to the north of Buronga. The greenbelt also runs along parts of Pitman and Dawn Avenues and Gol Gol North Road interfacing rural and residential land uses east of Buronga and north of Gol Gol, as well as for possible drainage corridors between the proposed Pink Lake and Dawn Avenue Depression stormwater retention basins. The Gol Gol Creek and its riparian area is expected to serve as a multi-use corridor linking the northern rural land to the remnant and riparian vegetation along the Murray River, as well as a movement corridor for birds and other animals between the north and south. Cumulatively, the various greenbelts are envisaged to function as multi-use corridors that deliver essential values such as protecting and enhancing wildlife, filtering stormwater, protecting residential development from localised flooding and providing local recreational opportunities in Buronga Gol Gol.

The improved Bridge Road precinct and the greenbelt corridors should be considered for rezoning to RE1 Public Recreation to ensure they are protected and maintained for their intended purposes in the future. Moreover, the existing and delineated public open spaces such as Buronga Children’s Playground, King Ridge Estate Park, Wilkinson Park, Wurlong Estate Park, Moontongue Recreation Park, Evans Flat Reserve and Pitman Avenue Recreation Reserve should be rezoned to RE1 Public Recreation, to accurately reflect their actual and intended uses.

Moontongue Recreation Park should be developed and equipped with the relevant facilities and play equipment. The development of the park should be prioritised to ensure the fast-growing community in the area has access to adequate recreational facilities to foster community cohesion and active lifestyle.

The need for additional open spaces and parks in Buronga Gol Gol should be considered in assessment of residential subdivisions to ensure these community facilities are provided within walking distance of the majority of residents and linked by pedestrian and cycle networks. This assessment should consider open space and recreation planning principles such as accessibility, equity, integration, cultural relevance and adaptability.

Council should ensure that the greater proportion of homes in new subdivision areas are within 10 minutes’ walk of a quality landscaped public open space. This is necessary for creating a network of walkable, connected and accessible public open spaces that promote healthier lifestyles and social cohesion.

It is expected that appropriate development of the greenbelts and open spaces would help minimise the impacts of urban heat associated with climate change in Buronga Gol Gol.

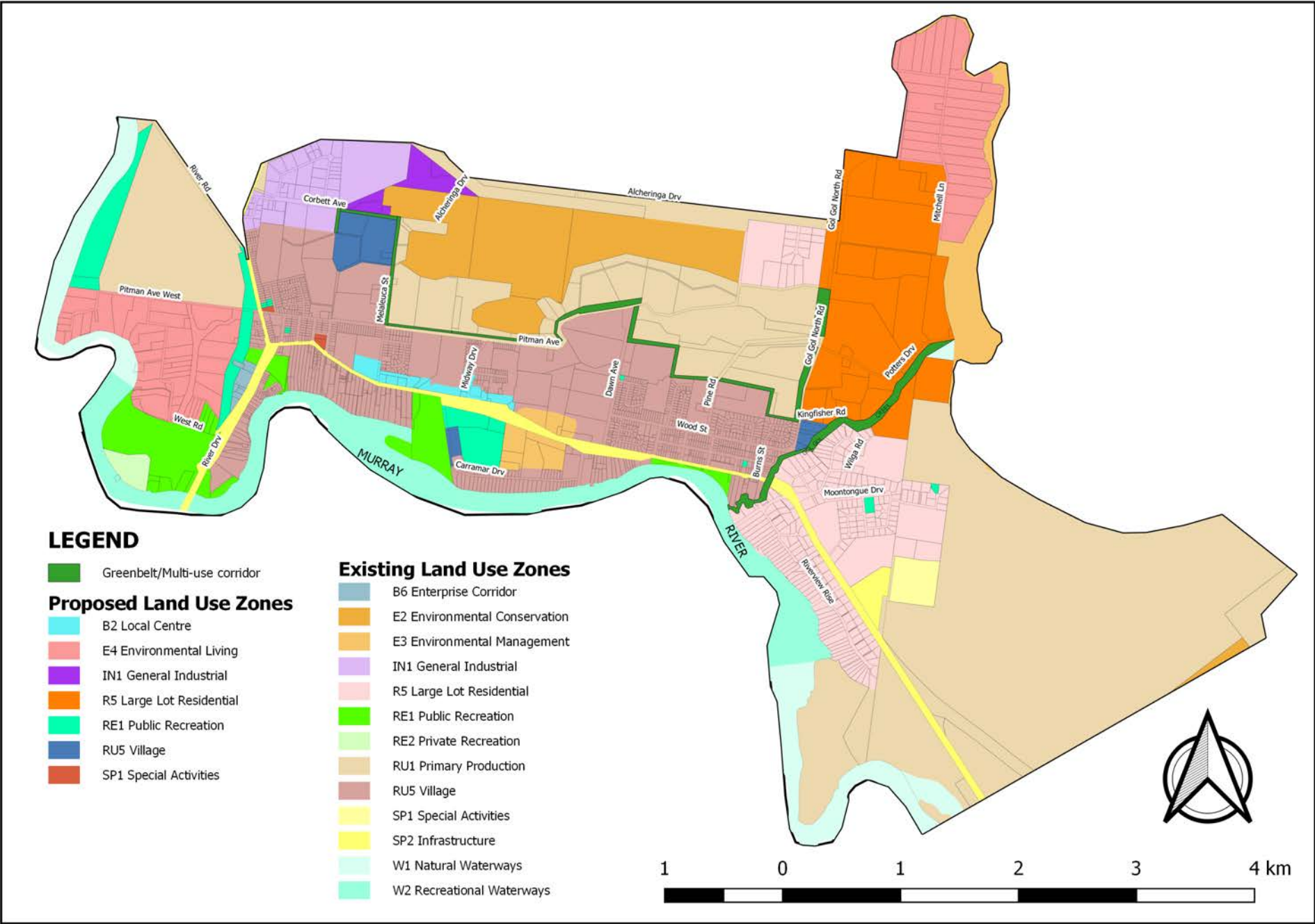


Figure 4.14 – Alignment of Proposed Greenbelts and Multi-Use Corridors

## 4.5 Natural Environment

As highlighted in Section 2.8, the Buronga Gol Gol area is endowed with a rich ecosystem and biodiversity. There are a host of endangered and vulnerable species and significant ecological habitats in the area.

The following general measures are proposed to preserve the health of the natural environment which is critical for ensuring healthy social and built environments in the area.

- Consolidate urban development to reduce impact on biodiversity and ecosystem functions
- Stabilise erosion and unstable river banks where possible
- Treat salt-affected land
- Remove noxious weeds (but not willows where it benefits bank stability)
- Remove agricultural, commercial and residential waste appropriately
- Control human access to areas of high environmental sensitivity, especially the Murray River Ecosystem
- Revegetate riparian zones and other degraded vegetation only with native vegetation that is local to the area
- Protect wetlands to maintain their ecological, recreational, flood storage and pollutant filtering ability
- Ensure that key habitats for bird and marine life are not affected by planning decisions

## 4.6 Summary of Recommendations and Implementation Plan

Table 4.3 presents the staged implementation of the recommendations of this structure plan. This implementation approach has been adopted to ensure coordinated land development and infrastructure while preventing undue pressure on Council resources.

Council would seek to fund implementation of infrastructure and community facilities projects in this planning through internal budgetary allocations and external grants. Council would also actively advocate for implementation of infrastructure projects that are outside its jurisdiction by engaging, collaborating and liaising with the relevant agencies and authorities.

It is however noted that most of the anticipated land use development would be private sector driven, as such Council will also pursue planning strategies and practices that attract investors to invest and develop in Buronga Gol Gol. These could include fast-track development application processing, developer charges concessions and voluntary planning agreements among others.

**Table 4.3 – Implementation Plan for Recommendations**

No.	Project Title/Description	Category	Responsible/Co-ordinating organisation or agency L: Lead S: Support	Timing (years) Short: 0- 3 Medium: 3-5 Long: 10+	Funding Source
1	Investigate and implement traffic treatments at intersection of Midway Drive with Sturt Highway	Infrastructure planning & development	L: TfNSW S: WSC	Short	NSW Federal WSC
2	Review Moontongue Drive	Infrastructure planning	WSC	Short	WSC
3	Provision of Bus Stop at Wilga Road and Modikerr Way intersection	Community facility/service	L: CDC Mildura S: WSC	Short	CDC Mildura WSC
4	Planning proposal to rezone proposed health and emergency precincts to SP1 Special Activities	Land use planning	WSC	Short to Medium	WSC
5	Planning proposal to rezone nominated existing public open spaces to RE1 Public Recreation	Land use planning	WSC	Short	WSC
6	Planning proposal to rezone land for expansion of Carramar Drive Sporting Complex to RE1 Public Recreation	Land use planning	WSC	Short	WSC
7	Planning proposal to rezone Hendy Road Commercial Precinct	Land use planning	WSC	Short	WSC
8	Planning proposal to rezone Buronga West and the Mitchell Lane areas to E4 Environmental Living and change minimum lot size	Land use planning	WSC	Short to Medium	WSC
9	Planning proposal to rezone Bridge Road precinct to RE1 Public Recreation	Land use planning	WSC	Short	WSC
10	Planning proposal to apply minimum lot size to RU5 Village zone	Land use planning	WSC	Short	WSC
11	Planning proposal to change minimum lot size of RU1 Primary Production land adjoining the RU5 Village land to the north	Land use planning	WSC	Medium	WSC
12	Planning proposal to rezone proposed RU5 Village land	Land use planning	WSC	Ongoing as per Urban Land Release Staging Plan	WSC
13	Planning proposal to rezone proposed IN1 General Industrial land	Land use planning	WSC	Ongoing as per Urban Land Release Staging Plan	WSC



14	Planning proposal to rezone RU1 Primary Production land to R5 Large Lot Residential	Land use planning	WSC	Ongoing as per Urban Land Release Staging Plan	WSC
15	Encourage and promote the development of housing solutions for the Shire's aging population	Land use planning	WSC	Ongoing	WSC
16	Development of Dawn Avenue Depression Drainage Basin	Infrastructure development	WSC	Short	WSC
17	Construction of service road between Dawn Avenue and the proposed B2 Local Centre zone	Infrastructure development	WSC	Medium	WSC
18	Construction and establishment of 'superclinic'	Community facility/service	L: NSW Health S: WSC	Short	NSW
19	Bridge Road Upgrade	Infrastructure development	WSC	Short	WSC
20	Acquisition and development of Pink Lake as Drainage Basin (including retention basin, boardwalk, landscaping, seats, play equipment)	Asset acquisition	WSC	Short	WSC
21	Water Demand Management Program	Infrastructure planning	WSC	Short to Medium	WSC
22	Upgrade the George Chaffey Bridge to accommodate for safe pedestrian and cyclist use or consider pedestrian & cyclist-only from Buronga Gol Gol (Buronga Riverside Caravan Park) to Mildura	Infrastructure development/planning	L: TfNSW S: WSC, MRCC	Short to Medium	NSW VIC Federal
23	Strategic Water Supply Master Plan	Infrastructure planning	WSC	Short to Medium	WSC
24	Stormwater Infrastructure Master Plan	Infrastructure planning	WSC	Short to Medium	WSC
25	Sewerage Infrastructure Master Plan	Infrastructure planning	WSC	Short to Medium	WSC
26	Integrated Water Cycle Management Plan	Infrastructure planning	WSC	Short to Medium	WSC
27	Development of residential aged care facility or retirement village	Community facility/service	WSC	Short to Medium	Private
28	Upgrade the Bus Pole at the northern end of Midway Drive to Bus Shelter	Community facility/service	L: CDC Mildura S: WSC	Medium	CDC Mildura WSC
29	Seal Pine Road	Infrastructure development	WSC	Medium	WSC
30	Traffic and Transport Infrastructure Master Plan	Infrastructure planning	L: WSC S: TfNSW	Short to Medium	WSC
31	Advocate for the relocation and consolidation of Buronga & Gol Gol Public Schools	Community facility/service	L: Dept of Edu S: WSC	Medium	WSC

32	Improve public transport network and service	Community facility/service	L: CDC Mildura S: WSC	Medium	CDC Mildura WSC
33	Development of Bridge Road Precinct	Community facility/service	WSC	Medium	WSC
34	Acquisition of land and establishment of greenbelt/ecological buffer at the interface of industrial, rural and residential land uses in north Buronga	Asset acquisition	WSC	Medium	WSC
35	Acquisition of land and establishment of greenbelt/ecological buffer at the interface of rural and residential land uses between Melaleuca Street and Dawn Avenue in north-east Buronga	Asset acquisition	WSC	Medium	WSC
36	Acquisition of land and establishment of greenbelt/ecological buffer at the interface of rural and residential land uses between Dawn Avenue and Gol Gol North Road in north Gol Gol	Asset acquisition	WSC	Medium	WSC
37	Acquisition of land and establishment of greenbelt/ecological buffer along northern part of Gol Gol North Road and between Gol Gol North Road and Mitchell Road at the interface of rural, rural residential and residential land uses in north east Gol Gol	Asset acquisition	WSC	Medium	WSC
38	Provision of 3.5 km trail through the zone E2 Environmental Conservation land to Pink Lake Drainage Basin	Infrastructure development	WSC	Medium to Long	WSC
39	Provision of 2.4 km trail from Pink Lake Drainage Basin to Dawn Avenue Depression Drainage Basin	Infrastructure development	WSC	Medium to Long	WSC
40	Prepare On-site Stormwater Detention Policy	Infrastructure planning	WSC	Medium to Long	WSC
41	Improvement of dirt roads and rural arterial networks	Infrastructure development	WSC	Medium to Long	WSC
42	Footy oval, netball court and swimming pool construction at Carramar Drive Sporting Complex	Community facility/service	WSC	Medium to Long	WSC
43	Extension of sewerage services to R5 Large Residential Lot zone	Infrastructure development	WSC	Ongoing as per Sewer Extension Staging Plan	WSC
44	Construction of service road south of Sturt Highway between Punt Road and Bligh Street	Infrastructure development	L: WSC S: TfNSW	Medium to Long	WSC NSW

45	Establishment of emergency precinct	Community facility/service	L: NSW Health, Police & RFS S: Ambulance VIC, WSC	Medium to Long	NSW
46	Construction of additional water reservoir and pumps	Infrastructure development	WSC	Long	WSC
47	Extension of stormwater services	Infrastructure development	Private Developers WSC	Ongoing as per Stormwater Extension Staging Plan	Private WSC
48	Sewerage reticulation system extension and upgrade	Infrastructure development	Private Developers WSC	Ongoing as per Sewer Extension Staging Plan	Private WSC
49	Retrofit footpaths & sharedways as per Pedestrian Access & Mobility Plan	Infrastructure development	L: WSC S: TfNSW	Ongoing as per PAMPs	WSC NSW
50	Water supply system upgrade and extension	Infrastructure development	Private Developers WSC	Ongoing as per Water Supply Extension Staging Plan	Private WSC
51	Routine maintenance of the Gol Gol Creek riparian areas	Environmental management	WSC	Ongoing	WSC
52	Road safety audit on Sturt and Silver City Highways	Infrastructure planning	WSC TfNSW	Ongoing	WSC NSW
53	Review and update Pedestrian Access & Mobility Plan	Infrastructure planning	WSC	Ongoing	WSC
54	Revamp Buronga Riverfront as per Buronga Riverfront Master Plan	Community facility/service	WSC	Ongoing	WSC
55	Provide and upgrade of bus stop facilities at vantage locations	Community facility/service	L: CDC Mildura S: WSC	Ongoing	CDC Mildura WSC
56	Explore options for a bypass or second river crossing	Infrastructure planning	L: TfNSW, Regional Roads Victoria S: WSC, MRCC	Ongoing	NSW VIC Federal
57	Amenities upgrade (Public Toilets)	Community facility/service	WSC	Ongoing	WSC
58	Wilga Road Roundabout	Infrastructure development	L: TfNSW S: WSC	Medium	NSW VIC Federal
59	Investigate and implement upgrades at Corbett Avenue and Sturt Highway Intersection	Infrastructure planning & development	L: TfNSW S: WSC	Long	NSW
60	Seal Native Ridge Lane and upgrade its intersection with Sturt Highway	Infrastructure development	WSC	Short	WSC

61	Investigate and implement upgrades at Dawn Avenue and Sturt Highway Intersection	Infrastructure planning & development	L: TfNSW S: WSC	Medium	NSW Federal
62	Improvements at Pitman Avenue, Pitman West & Silver City Highway intersection	Infrastructure development	L: WSC S: TfNSW	Long	WSC NSW
63	Explore and implement options for construction of bridge upstream of Gol Gol Creek	Infrastructure development	WSC	Medium to Long	WSC
64	Development of active transport loop	Infrastructure development	L: WSC, MRCC S: TfNSW Regional Roads Victoria	Medium	NSW VIC Federal WSC MRCC
65	Engage with Essential Energy to eliminate overhead powerlines	Land use planning Infrastructure development	L: Essential Energy S: WSC	Long	Essential Energy
66	Development of Moontongue Recreation Park	Community facility/service	WSC	Short	WSC
67	Widen and realign Sturt Highway at intersection with Melaleuca Street	Infrastructure development	L: Transport for NSW S: WSC	Medium	NSW
68	Extend service road south of Sturt Highway between Rose Street and Carramar Drive to connect with Carramar Drive	Infrastructure development	L: WSC S: TfNSW	Medium	WSC NSW
69	Construct service road north of Sturt Highway between Midway Drive and Melaleuca Drive	Infrastructure development	L: WSC S: TfNSW	Medium	WSC NSW





## **Chapter 5: Conclusion and Review**



## Chapter 5: Conclusion and Review

### 5.1 Conclusion

The Buronga Gol Gol Structure Plan sets a vision for future land development and provides a framework to guide land use planning decisions in Buronga Gol Gol for the next 20 years. The structure plan promotes long term village style growth in the area and consolidation of development to facilitate amalgamation of the villages of Buronga and Gol Gol into one contiguous unified sustainable built environment.

A range of land uses and amenities including rural housing, shopping centre, recreational facilities and footpaths among others are proposed to cater for existing and emerging needs of community and enhance general quality of life in Buronga Gol Gol (see Figure 5.1).

The structure plan incorporates a staged approach to urban land release and infrastructure and service delivery to ensure high quality urban development and enhanced liveability in the area. The structure plan is intended to be a dynamic and flexible document, responsive to changing conditions and subject to regular review.

### 5.2 Review of the Structure Plan

Review of the structure plan is necessary for ensuring that it is achieving its objectives and responding to changing conditions in Buronga Gol Gol. The responsibility for monitoring and review of the structure plan is with Wentworth Shire Council as the primary source of information.

It is recommended that the Structure Plan be reviewed every four (4) years to coincide with other budgeting and administration requirements. In the intervening period, Council must regularly monitor development within the structure plan area and if necessary, bring forward any scheduled review if there is an indication that factors affecting development which were not identified earlier, are adversely influencing the direction of implementation.

Review of the structure plan must be in accordance with an agreed process developed in conjunction with community, DPIE and other relevant agencies. Inputs are to be encouraged from other sources such as Mildura Rural City Council and other relevant organisations.



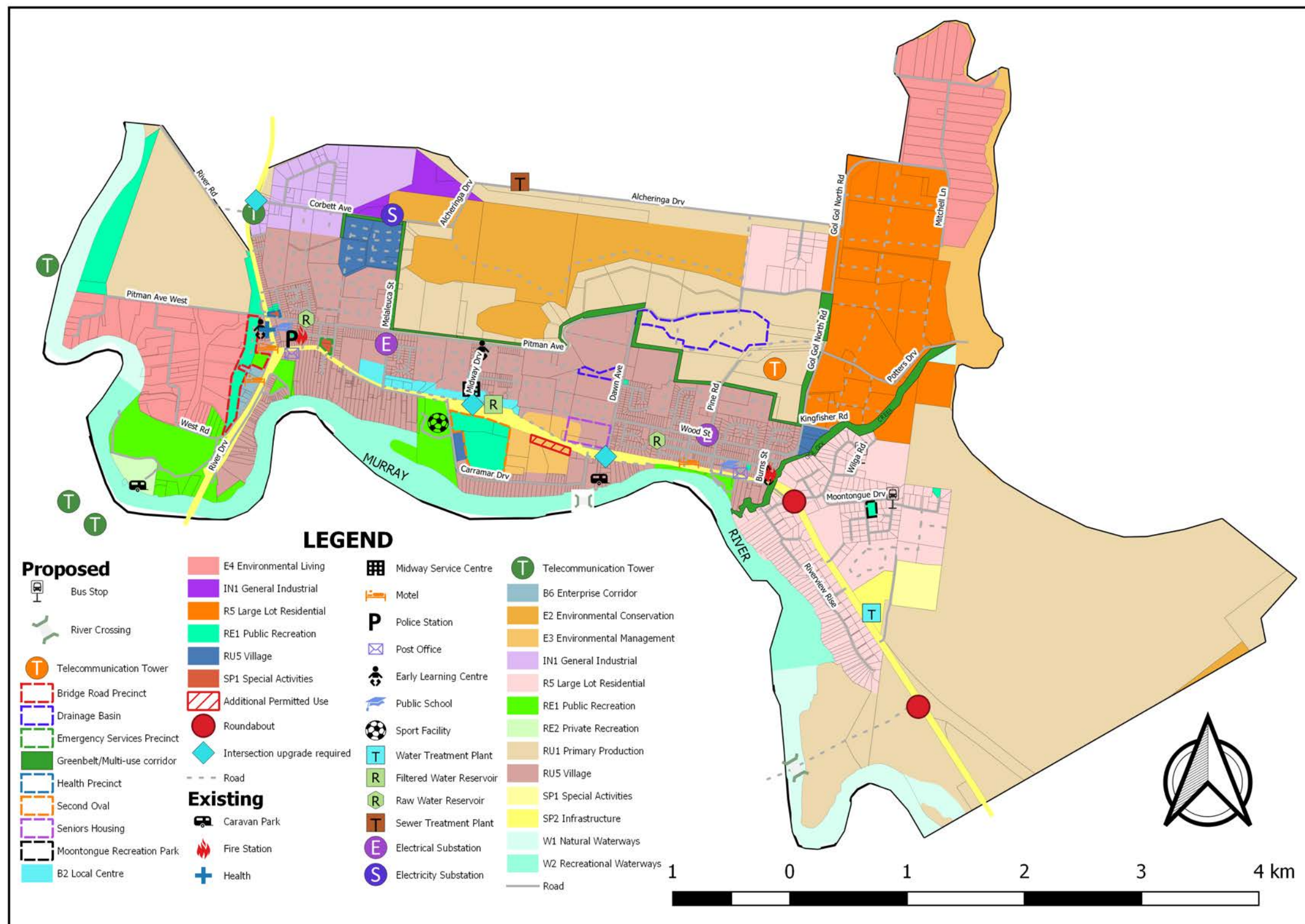


Figure 5.1 – Composite Structure Plan Map