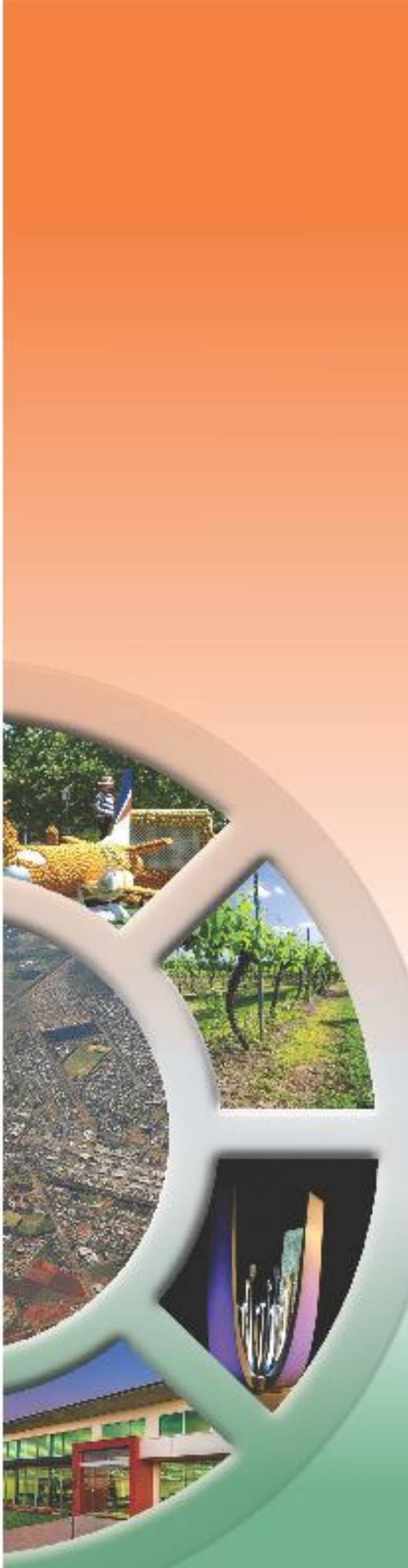
Roads, Parks & Pathways Enhancement Committee

Thursday, 26 June 2025



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March 2014

PLAYGROUND STRATEGY

Executive Summary

The Griffith City Council has prepared the Griffith Playground Strategy (2013) to direct the provision and management of playgrounds within the Local Government Area.

Essentially, the strategy seeks to *"provide a diverse and experiential spread of quality play experiences for the community in a sustainable and economic manner"*.

It is the understanding of Council that quality playgrounds and play areas can significantly contribute to the physical health and increase the social connection that help develop a healthy and connected community. Recent study has revealed that access to parks can increase physical activity by 48.4% (Healthy Spaces & Places, 2011). Further, playgrounds play a pivotal role in the development of children, encouraging an increasing number of social connections and developing cognitive and problem-solving skills.

Griffith City Council faces a range of challenges as a number of playgrounds have deteriorating equipment and there is increasing financial restraint. There is also increasing concern over potential litigation that surrounds public open space, particularly playgrounds. However, playgrounds provide significant community benefit and it is Council's priority to establish a clear direction in the design, provision and maintenance of playgrounds.

The Strategy states that the provision of cost effective playgrounds necessitates extensive community engagement. The strategy looks at introducing alternative play environments such as nature-based and contextual-based play to increase Council's diversity of play while also promoting environmental sustainability.

Figure 1: Play is a fundamental element in our children's development

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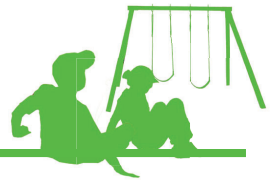


1.0 Background

Background

1.1 Purpose of the Strategy

The Griffith Playground Strategy (2013) has been developed to provide direction for the future provision and management of playgrounds within the Council.

Open space is an important feature within the Council area, providing both active and passive recreational experiences for residents and visitors. There are 41 playgrounds under the management of Council and a large number of parks and reserves that do not have a playground.

It is important to note that this Strategy only takes into account parks and playgrounds which are owned or under trusteeship of the Council. It is further noted that there are a few parks within the Local Government Area (LGA) which do not fall within this category, including Dave Taylor Park and Kubank Park which are under the ownership and management of the Department of Families and Child Services.

1.2 Background

Griffith City Council is committed to the continuing improvement of playground facilities within the LGA.

While there has been a significant number of new facilities developed from 2008-2012, Council has recognized there is a growing backlog of work to upgrade existing facilities. To further complicate the issue, Council is experiencing increasing financial constraint, placing considerable pressure to adequately maintain, upgrade and develop park facilities.

While a comprehensive and highly data rich strategy was prepared in February 2011 - Playground and Small Reserve Strategy (2011), Council chose not to adopt the strategy. It has been addressed that the recommendations of the previous strategy had significant budgetary and community implications that required review. Therefore, further direction was given to review the strategy and consider alternative approaches in tackling complicated issues facing playgrounds in Griffith City Council.

The interim position of Council is to remove and not replace playground equipment that is deemed unsafe (unless it is classified as a Regional or Precinct Park). This is a temporary initiative until a Strategy is adopted that can appropriately direct the design, provision and management of playgrounds in the future.

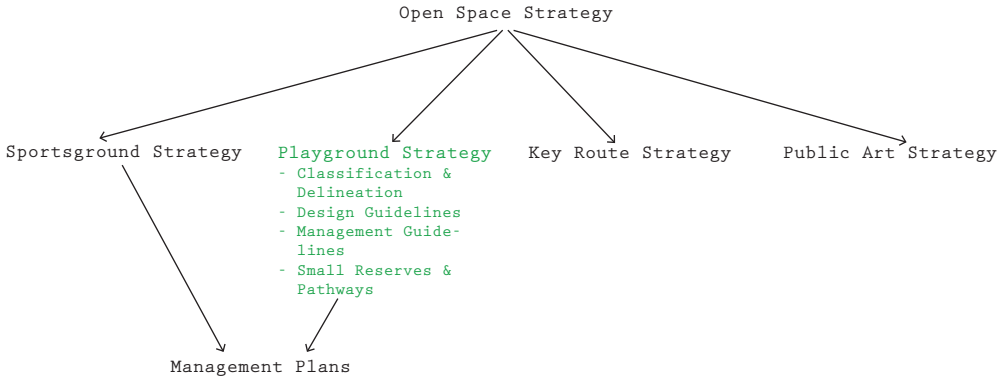
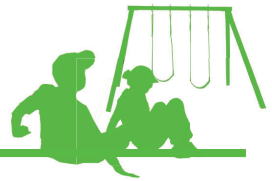


Figure 2: City of Griffith Planning Structure for Open Spaces



Background

1.3 Historical Context

The Wiradjuri people where the original custodians of the land contained within the Griffith City Council. Further, they were skilled fishers/hunters/gatherers of the land and their children had an intimate relationship with the natural environment. It is imagined that Wiradjuri children used the natural environment for unstructured play.

Playgrounds evolved as part of the Australian landscape post World War II. Generally, post war play equipment was rudimentary, consisting of swings, a slide and seesaw. Since the 1980s and 1990s there has been an increasing introduction of plastic play structures. These structures have been primarily designed and installed by the manufacturers and questions have been raised over the unimaginative nature of the play (Robbe, 2013). However, more recent trends have seen a revival in designer-led playgrounds that seek to capture the imagination of children.

In the past, children did not rely on playgrounds for play experiences, rather they used the environment at their disposal to create imaginative play. With increasing safety concerns, children are spending less time in parks.

1.4 Local Context

Griffith has ample supply of open space as originally planned for in Sir Walter Burley Griffin's initial Master Plan for the city. These open space areas provide a range of recreational spaces from wide road reserves to large drainage basins to expansive neighbourhood greens. Further, each of the surrounding villages addressed in the Strategy have access to at least one playground.

According to the Provision of Open Space and Community Facilities Report (URS, 2007) Griffith City Council has over 535Ha of recreational open space. At present, the Council area has 41 playgrounds under its jurisdiction and a number of parks and reserves that do not contain a playground. The playgrounds vary significantly in age and quality and there is little strategic direction to guide Council in the design, provision and management of these areas.

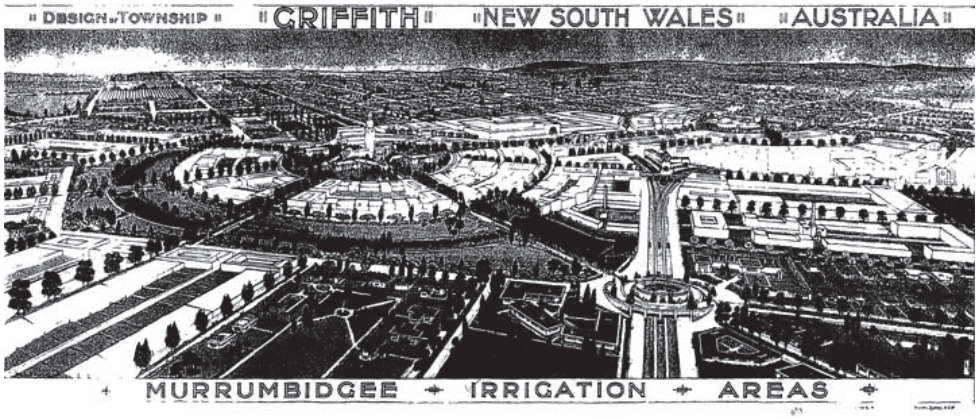


Figure 3 - View of Griffith according to Sir Walter Burley Griffin's Design

Background

1.5 Strategic Direction

It is important that the vision and objectives in the Griffith Playground Strategy (2013) represent economic outcomes without compromising the social benefit associated with play provision. Furthermore, the Strategy needs to uphold objectives that promote and ensure sustainable development in the future.

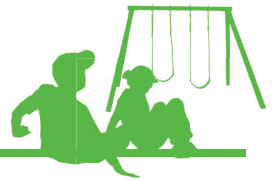
The vision of the Strategy is to:

> "Provide a diverse and experiential spread of quality play experiences for the community in a sustainable and economic manner"

In keeping with the vision, the Strategy seeks to prioritize more sustainable provision of open space and playgrounds. This will be achieved through three main objectives that have evolved from the vision:

- Environmental Sustainability;
- Community Benefit; and
- Financial Stewardship (as referenced in Figure 4 - Objectives Model).

Figure 4 - Objectives Model



Background

1.6 Legislative Context

Griffith City Council develops and manages playgrounds under several Government Acts. The acts include the following:

Local Government Act 1993
Local Government Act 1993 provides guidance for Council concerning the operation and management of parks under its ownership or trusteeship. Further, the Act guides Council regarding the funding, acquisition and classification of land and the preparation of Plans of Management for land deemed as Community Land.

Crown Lands Act 1989
Council commonly operates as the trustee for Crown Reserves and therefore must comply with the Crown Lands Act 1989. Essentially, the Act guides Council concerning the operation and management of Crown lands. In addition, the Act provides guidance regarding the procedure for preparing Management Plans relating to Crown Lands.

Environmental Planning & Assessment Act 1979
Environmental Planning & Assessment Act 1979 relates to planning of lands for environmental conservation and/or recreational purposes under the control of Council. The Act places a number of land use restrictions on the land to assist in its management and it provides guidance on the acquisition and transfer of deemed land to Council.

1.7 Ownership

The majority of park land within the Griffith City Council is either land owned by Council (classified as Community Land) or Crown Lands held by Council under trusteeship. This land has been identified and designated as land for recreation and public purposes.

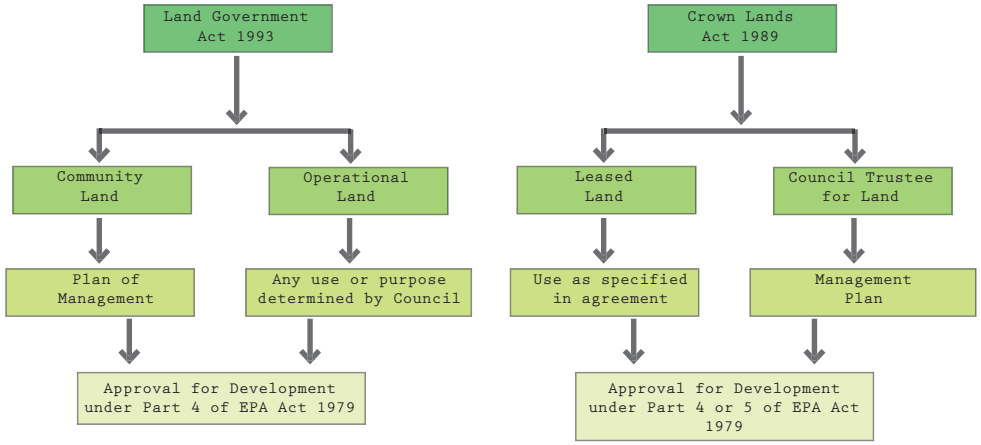


Figure 5: Lands Under the Local Government Act & Crown Lands Act

2.0 State of Play

Play

2.1 Importance of Play

"Play is an act that diverges from a normal life to create an imaginary one in which ideas and activities are developed, tested and performed within a safe environment"
(Sheppard-Simms, 2012).

Play is fundamental in our human development, shaping our physical social, cognitive and emotional development. But most importantly, play is fun, significantly contributing to our feeling of happiness (CABE, 2008).

A playground or play area provides a child with some of their first and most enjoyable outdoor experiences and hopefully develops an appreciation for the natural environment. In an age where child obesity is on the rise and children are spending less time outside, a playground becomes an important tool in encouraging families to be outside and regularly exercise (NSW Health, 2009).

A playground is an important meeting place for children and parents alike. With increasing levels of loneliness and isolation (Kelly et al, 2012), a play environment offers as much a social experience as it does a physical experience.

Access to play is viewed as a basic right for all children. The United Nations Convention on the Rights of the Child (1989) drafted several universal rights of children. Article 31 of the UN Convention states:

> *"That the right of the child to rest and leisure to engage in play and recreational services appropriate to the age of the child and to participate freely in cultural life and the arts."*

Therefore, it is of fundamental importance to the Griffith City Council that there is an adquate provision of quality play areas for children of a variety of ages to further promote a more healthy and sustainable community.

Figure 6: Play can happen in almost any environment

Figure 7: ...and at any age

Play

2.2 State of the Child

Griffith City Council has a high concentration of children (0-14 years) within its local government area (ABS, 2011). The health, well-being and development of these children is a high priority to Council because it will have lasting affect on the community.

The 2012 Australian Early Development Index found that 28.3% of children (0-5yrs) in the Griffith City Council were developmentally vulnerable on one or more domains which included physical health and wellbeing, social competence, emotional maturity and language and cognitive skills. The Index also revealed that 15.4% of the children were developmentally vulnerable on two or more domains mentioned (AEDI, 2012). These statistics are significantly higher than the state and national averages.

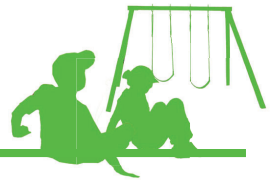
It is widely acknowledged that accessible and quality play areas significantly contribute to the physical health, social competence and cognitive development of children. A recent study has revealed that good access to parks can increase physical activity by 48.4% (Healthy Spaces & Places, 2011). Therefore, the design, provision and management of playground in Council plays an important role in children's development and building a more healthy community.

Legend Values	
Highest Proportion	
Lowest Proportion	

Figure 8: Proportion of Children Developmentally Vulnerable

GRIFFITH COMMUNITY	Children Surveyed	Proportion of Children Developmentally Vulnerable (%)						
		Physical Health & Wellbeing	Social Competence	Emotional Maturity	Language & Cognitive Skills	Communication skills & General Knowledge	Vulnerable on **one** or more domains of the AEDI	Vulnerable on **two** or more domains of the AEDI
Australia	289,973	9.3	9.3	7.6	6.8	9.0	22.0	10.8
New South Wales	94,572	8.3	8.5	6.2	4.8	8.5	19.9	9.2
Griffith	403	11.5	11.0	11.3	11.3	15.7	28.3	15.4
LOCAL COMMUNITY								
Griffith	274	12.3	13.4	14.2	13.4	18.4	33.7	18.4
Hanwood	20	6.3	0.0	0.0	6.3	6.7	20.0	0.0
Lake Wyangan and surrounds	56	9.1	5.5	3.6	9.1	14.5	18.2	9.1
Yenda	17	5.9	5.9	5.9	0.0	0.0	5.9	5.9
Yoogali/Bilbul/Beelbangera	36	15.2	9.1	9.1	6.1	9.1	18.2	15.2

Table adapted from the AEDI 2012 Community Results Table - Griffith Community, NSW
Source: Australian Early Development Index, 2013



Play

2.3 Unstructured Play

As a community, we have commonly accepted that a play area must consist of standard play equipment (swing, see saw, slide and sand pit). However, "the playground" is typically an artificial environment with heavily manicured and irrigated lawns and a combination of plastic/steel playground structures.

Councils nation-wide have also been guilty of placing an over-reliance on selecting play equipment from a catalogue and creating *'KFC' playgrounds - kit, fence and carpet* (as described by CABE (2008)). Designing play spaces in this manner produce environments that lack character and imagination.

More recently, researchers have become concerned that the decline in unstructured play is contributing to increasing levels of obesity in children (Sheppard-Simms, 2012).

Children often find natural environments such as creek beds, flora, fauna and rocks more stimulating than traditional playground environments. Further, these environments become important educational experiences as children explore nature.

Studies have shown that children quickly tire of playground equipment as they master the different pieces of equipment and as a result playground suppliers have needed to design increasingly complicated equipment to engage children. There has been a growing movement towards nature-based play as research has proven that it has numerous benefits to a child's development far beyond the traditional playground (Kid Safe NSW).

It is also thought that if children have little connection and knowledge of the natural environment, they will have little care for it in the future. Therefore, nature-based play will be a useful platform for promoting environmentally sustainable initiatives in the future.

Figure 8a and 8b is one example of how a traditional playground might be converted to a more unstructured (nature-based) play environment.

Figure 8a: Noel Hogan Park - one-dimensional nature of playgrounds

Figure 8b: Artist Impression of Noel Hogan Park with natural play setting

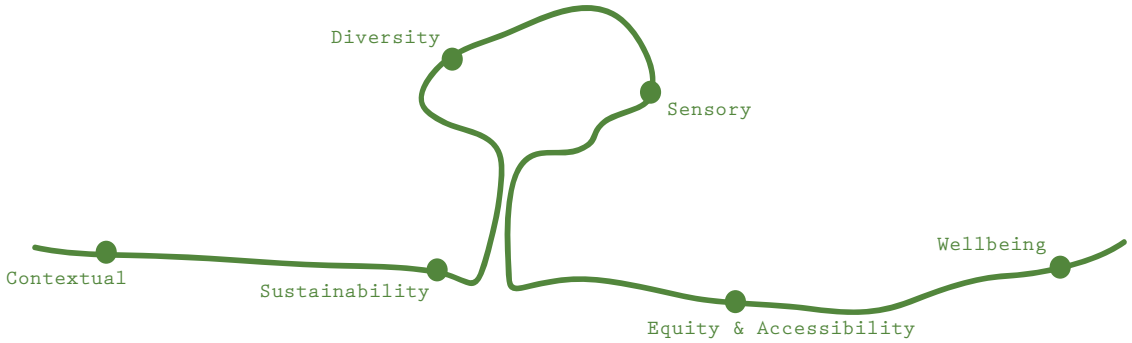
3.0 Play Design

Play Design

3.1 Guiding Principles

A significant body of research has confirmed that parks are good for us. It is also been identified that the quality of design of public open space has a direct bearing on how often a community uses public space, how safe they feel when they are there and what level of enjoyment they gain from the experience (Landcom, 2008). Therefore, the question isn't necessarily about the quantity of public open space but the quality and accessibility of such a space.

Importantly, the Strategy wishes to promote creativity, exploration and imagination within the design of playgrounds. Further, it is essential that the community are instrumental in the design process, particularly children and teenagers.



Contextual

Play space design needs to be in context with the site and surrounding environment. Having contextual elements provides greater identity and provides a point-of-difference from other areas.

Sustainability

Play space design should strive to be environmentally and financially sustainable. This should occur by applying water sensitive design principles and/or using recycled materials for play equipment.

Diverse

Play space design should cater for a diverse range of ages and abilities. No one play area should be the same but reflect the cultural diversity that is present in the community.

Sensory

Play space design should look to emphasise the five senses. It is important to design play spaces that consider touch, smell, sound, sight and taste.

Equity & Accessibility

Play space design must make parks accessible to the surrounding areas. It is also important that play areas cater for a variety of children that might have learning difficulties, sensory/ mobility impairments or mental health issues.

Wellbeing

Play space design must promote a more healthy lifestyle. The designed space should become a destination, encouraging the community to spend more time in public space.

Recommendation: Design Principles
Council employ the following principles when designing or contracting others to design play spaces

Play Design

3.2 Natural Play

Play areas within the Griffith City Council are typically one-dimensional, offering limited variety (as described in more detail in Section 4.6 - Condition of Play).

A potentially inexpensive and well supported form of play design centres around nature-based play. Kid Safe NSW describes natural play spaces to be a blend of natural areas, environmental features and plants designed to create unstructured play for children. It is considered that this allows for more diverse and creative play spaces that are more cost effective than traditional playgrounds.

Designing a natural play space might include (but not limited to) the following features:
- Dry creek bed
- Rocks and boulders
- Fallen trees
- Sand pit
- Mounds
- Water
- Frog ponds / nesting boxes
- Sensory landscaping
- Edible plant garden

However it is important to stress that the success of nature-based play is largely dependent on the level of community participation - particularly in consulting with children and teenagers.

3.3 Native Landscaping

A native landscape provides a diverse environment for children to explore, with opportunity to touch, smell, pick and experience nature. This will also reduce the irrigation and mowing requirements associated with extensive lawned areas.

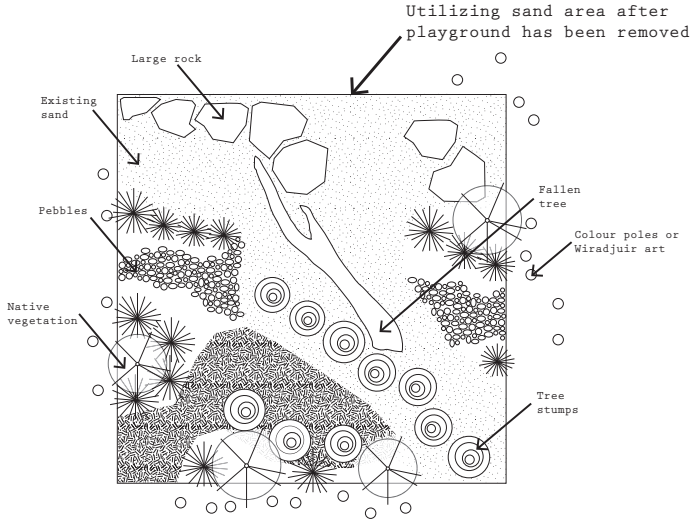


Figure 9: Design concept utlizing existing vacant play areas

Figure 10: Natural play area (Kathleen Day Playground)

Play Design

3.4 Contextual Play

There is opportunity to design playgrounds in context with the local community. The local community is an invaluable resource for designing a meaningful context and strengthening community image.

Effective contextual design often involves recycled or reused elements that are inexpensive and readily available. Shackell et al (2008) state that good play design must consider sustainable or recycled sourced materials. These elements might include:

- Recycled/retrofitted play equipment
- Storm-water drainage pipes
- Farm machinery
- Freight containers
- Tyre structures
- Interactive public art

> 'Good play spaces are designed and constructed bearing in mind sustainability but they are not necessarily tidy, and bits of scrub or long grass, fallen leaves and twigs, may all provide additional play opportunities.' (Shackell and others, 2008)

Traditional playgrounds incorporate play equipment that has a short life span and high carbon footprint. While Council has applied various methods in extending the life cycle of play equipment, they come with high maintenance costs.

With a large number of metal fabricators and skilled tradespeople in the Griffith region, there is opportunity to use their expertise in recycling disused play equipment.

Figure 11: recycled tyres and play equipment

Figure 12: recycled shipping containers

Play Design

3.5 Sensory Play

We have five senses - sight, sound, touch, smell and taste. These senses are well developed in children and are important areas to emphasize in play design.

Sensory design is the process of creating a play space to engage children in a sensory experience, where several of their senses are evoked through the play experience. In addition, sensory design is particularly important for the development of children with sensory impairments or learning difficulties.

Sensory design might include to following elements:
- Edible gardens
- Elevated flower beds
- Chimes, bells and bongos
- Colour varieties
- Artistic expression - blackboard
- Variety of ground cover
- Resting places (tepee or tent)

Play space design should question whether the play opportunity appeals to a variety of senses and whether the play experience provides interesting textures, shapes, weights, vibrations, movement, flexibility and temperatures to touch (Sensory Trust).

Figure 13: how many sensory experience are created in a running stream?

Figure 14: chimes (Hazelwood School, Glasgow)

Play Design

3.6 Community Engagement

The success of a playground is largely dependent on the level of community involvement at the initial stages of design - participatory design. Having children, parents, community groups and maintenance staff involved in the design process ensures quality play areas are created (White & Stoecklin, 1998). The community's input means that play areas establish greater community ownership.

Further, play areas are typically designed by adults, with play equipment designed by adults, which in turn greatly reduces the ability for the child to imagine play (CABE, 2008). Therefore, children and youth need to be extensively consulted in the design process.

Moreover, an engaged community, is a community which is given power to design, construct and manage their park. With greater decision-making power, a community willingly takes ownership over its neighbourhood park. It is of critical importance that those using and/or maintaining a park have a voice in the design process (Landscape Architecture, 2013). This ensures the park is well utilized and it provides community pride and identity.

INFORM

CONSULT

INVOLVE

COLLABORATE

EMPOWER

Levels of Community Engagement
(IAP2 Public Participation Spectrum)

Figure 15a: Land Army Park (Hanwood)has limited community personality

Figure 15b: Artist Impression of Land Army Park with community personality

4.0 Play Provision

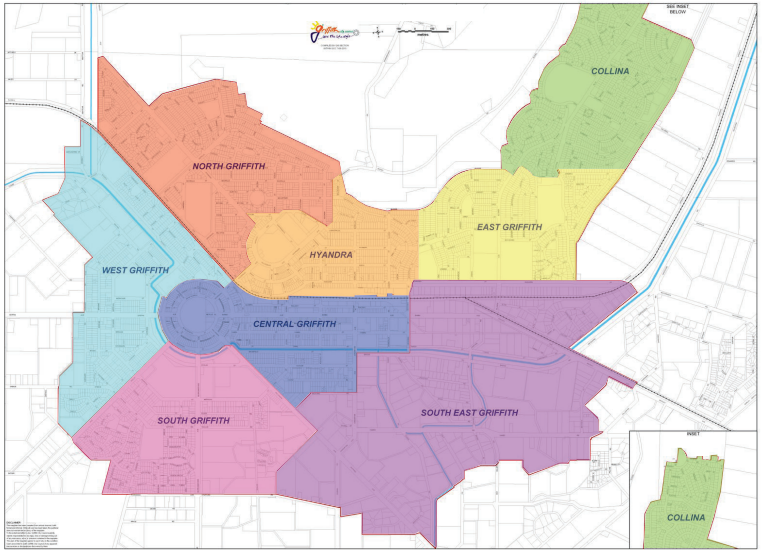
Play Provision

4.1 Play Planning

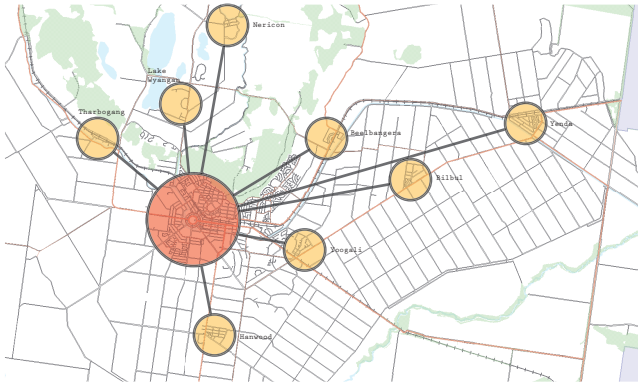
The Griffith Playground Strategy 2013 assesses playgrounds within the Griffith City Council, this includes 30 playgrounds in the Griffith municipality and another 11 in the surrounding villages.

Ideally, Council desires a playground within walking distance of every residence in the Griffith urban area and the surrounding villages. A distance of 500 metres has become generally accepted as a reasonable distance for people to walk (NSW Health, 2009). In applying a 500m radius around existing playgrounds, an adequate assessment can be given of shortfalls in supply

It is also essential that the strategy is supported by considerable demographic analysis, particularly focusing on the proportion and expect growth of children (between 0-14 years) in a precinct. This will establish current and future demand in the Council area.



Map 1a: Griffith Precinct Map



Map 1b: Villages Map

Play Provision

4.2 Demographic Analysis

4.2.1 City of Griffith

The data set out in the Griffith Economic Study and Australian Bureau of Statistics (ABS) figures indicate that Griffith LGA is one of the strongest growth centres in New South Wales. The Griffith City Council had 24,364 people at the 2011 Census. The Council area has steadily grown in the last 10 years and it is forecasted that it will have a population of 30,299 by 2031 (forecast.id, 2013).

Griffith City Council has a larger proportion of children compared to the state and national statistics, as shown below:

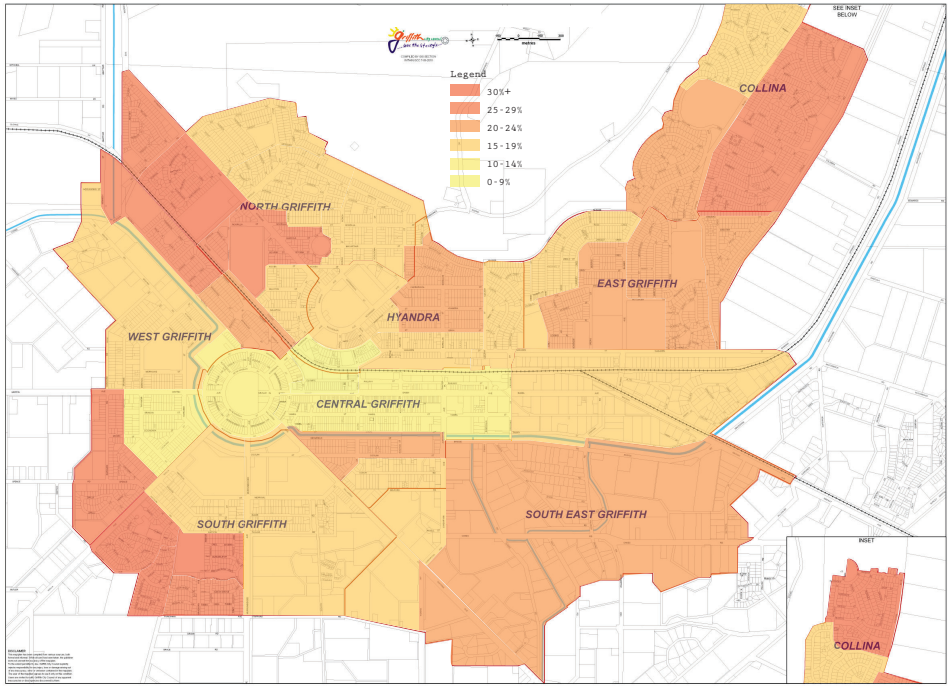
Table 1: Proportion of Children Compared to State and National Statistics (ABS CData, 2011)

Age Structure	Griffith Population	Griffith LGA	NSW	Australia
0-4	1805	7.4%	6.6%	6.6%
5-9	1855	7.6%	6.3%	6.3%
10-14	1824	7.5%	6.3%	6.4%
15-19	1667	6.8%	6.4%	6.5%

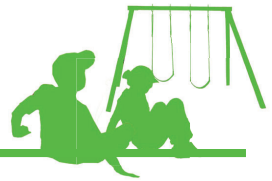
Map 2(a) illustrates the concentration of children aged 0-14 years in the urban area of Griffith. There is a high concentration of children at the urban fringes of Griffith, particularly to the north west, south west and north east.

Forecast.id (2013) suggests that areas such as East Griffith, Collina and Lake Wyangan typically attract young and mature families and areas such as South Griffith, Central Griffith and North Griffith tend to attract young couples without children.

Projections forecast that there is likely to be growth in the proportion of children aged 0-14 years over the next 20 years, particularly as young adults begin to start having families. With a higher proportion of children in the Council area and likely continued growth in this age group there will be increasing demand for quality playgrounds and play areas and careful consideration and planning into the provision and management of playgrounds across Council is needed.



Map 2(a): Child (0-14 yrs) Concentration in Griffith Precincts



Play Provision

4.2.2 Surrounding Villages

From the available statistics it is difficult to accurately assess the population growth or decline of the surrounding villages. Generally, villages in close proximity to the city of Griffith have growing populations, whereas Yenda has a declining population.

Map 2(b) illustrates the concentration of children aged 0-14 years in the surrounding villages. The surrounding villages of Tharbogang, Nericon, Hanwood, Bilbul, Lake Wyangan, Yenda, Beelbangera and Yoogali have relatively high distributions of children (0-14 years of age), ranging between 20-30% of the total populations.

There are slightly higher distributions of children occurring in Lake Wyangan and Hanwood.

Map 2b: Child (0-14 yrs) Concentration in Villages

Play Provision

4.3 Supply of Playgrounds

4.3.1 City of Griffith

The Griffith City Council currently maintains 41 playgrounds. In comparison with other regional Councils, Griffith has a large proportion of playgrounds for its population.

There is a playground for every 594 residents and every 134 children between the ages of 0-14 years. This is a relatively high ratio in comparison to the national average which has a playground for every 300 children.

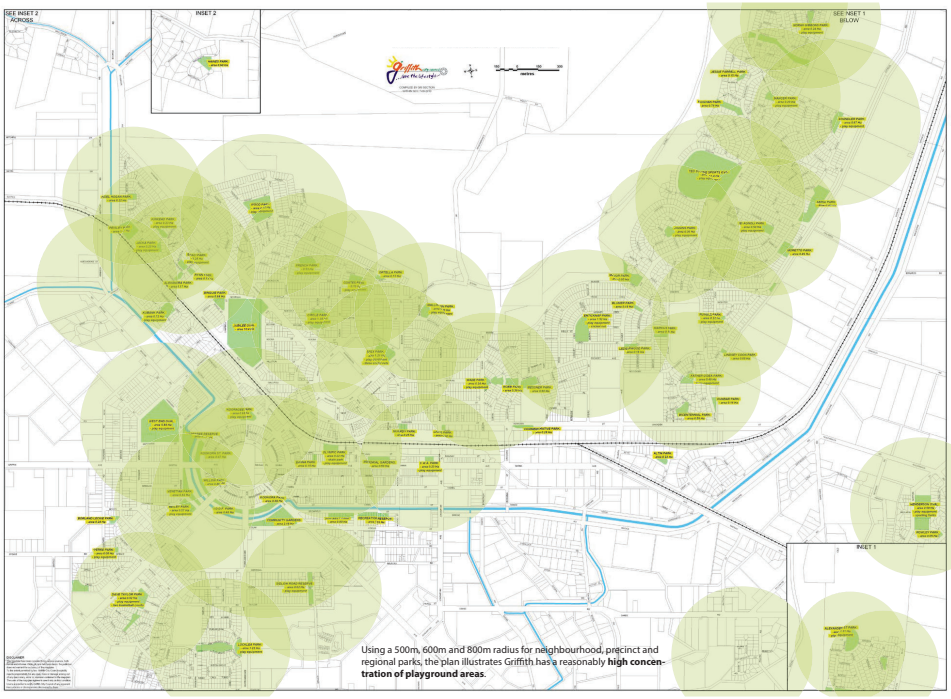
Table 2: Distribution of Existing Playgrounds

Precinct	Child Population (0-14yrs)	Number of Playgrounds	Playground Ratio
Collina	804	7	1:115
North Griffith	629	7	1:90
Cental Griffith	83	2	1:42
East Griffith	522	3	1:172
West Griffith	405	3	1:135
Hyandra	410	3	1:137
South Griffith	592	3	1:197
South East Griffith	334	1	1:334

Source: Australian Bureau of Statistics

In applying a 500m, 600m or 800m radius around existing playgrounds (depending on the playgrounds classification), Maps 3(a) and 3(b) illustrate that Griffith City Council has a reasonable spread of playgrounds.

However, Map 3(a) illustrates there is disparity between the distribution of playgrounds and concentration of children in the southern region of Griffith. While it might be argued that City Park alleviates any potential shortages in play provision in the south, this region has a growing population of children and there is demand for playgrounds at the fringes of the South Griffith Precinct and South East Griffith Precinct.



Map 3(a) - Playground Walkability Survey (Griffith)

Recommendation: Playground Development

Council establish a greater distribution of playground facilities in the southern region of Griffith

Council develop an appropriate play spaces in consultation with the relevant communities in South Griffith, West Griffith and South East Griffith.

Play Provision

It is further mentioned that the southern region of Griffith is a low socioeconomic area placing greater inequity in the distribution of playgrounds. With significantly higher health issues in this region, a greater provision of play spaces may encourage greater physical activity and alleviate a number of the health problems in the region.

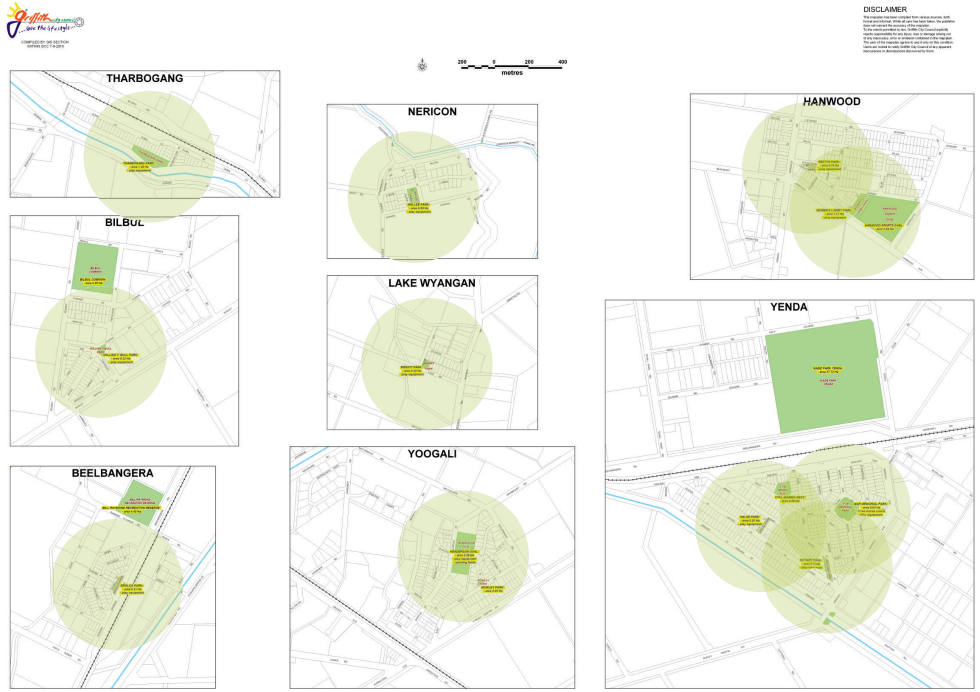
4.3.2 Surrounding Villages

Each of the surrounding villages have at least one playground. There is a relatively even distribution of playgrounds in comparison to the number of children in each village.

Table 3: Distribution of Existing Playgrounds

Villages	Child Population (0-14yrs)	Number of Playgrounds	Playground Ratio
Yenda	249	3	1:83
Yoogali	194	1	1:194
Hanwood	154	2	1:76
Nericon	62	1	1:62
Lake Wyangan	85	1	1:85
Bilbul	58	1	1:58
Beelbangera	81	1	1:81
Tharbogang	56	1	1:56

Planned population growth within the Council area is likely to occur in the Lake Wyangan area, between Collina and Beelbangera and adjacent Hanwood. While there is ample supply of playgrounds in Collina/Beelbangera and Hanwood, population growth in Lake Wyangan would require an additional playground.



Map 3b - Playground Walkability Survey (Villages)

Play Provision

4.4 Park Hierarchy

There are many factors that should determine a particular location for a playground or play space. In establishing a clear hierarchy, it will assist Council in planning and designing an appropriate play area for a particular space. Further, a hierarchy will be useful in determining the necessary cost associated to maintaining and upgrading certain parks.

It is noted that the Council area has a number of open space areas labelled as parks that do not necessarily serve as parks and might be more appropriately labelled and managed as reserves (as discussed in more detail in Section 4.7.3).

The playground hierarchy is illustrated in Figure 16.

4.4.1 Regional Parks

A regional park is generally a large park with unique features of important cultural and social significance. This type of park should be highly accessible, having a high level of amenity and be well patronized by residents across the Council area.

A regional park should be well designed, catering for a range of ages and providing a variety of play experiences. For example, City Park represents a regional park in Griffith City Council.

4.4.2 Precinct / Large Village Parks

A precinct park or large village park is a medium to large scale park with several play experiences on offer. This type of park is well accessible within a city precinct or village and has a reasonable level of amenity. A precinct or large village park should be within a 800 metre radius and/or a 10 minute walk from every residence.

A precinct park should be designed in context to the surrounding area and have a well developed theme to attract interest. It should provide a range of play experiences for children and teenagers. For example, Chandler Park represents a precinct park and Yenda's War Memorial Park represents a large village park in the Griffith City Council.

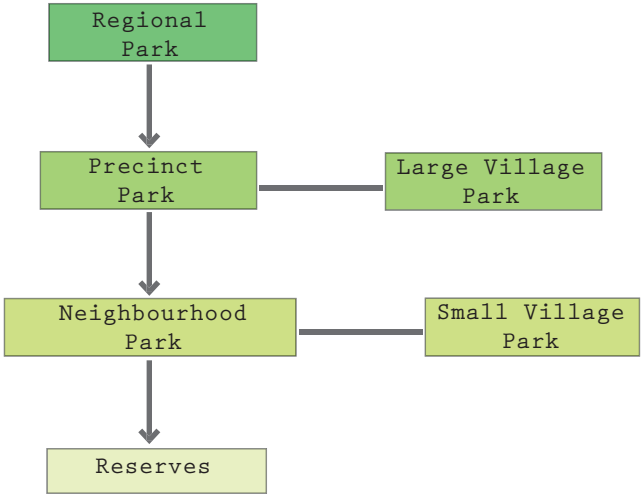
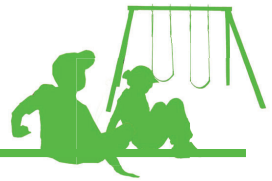


Figure 16: Park & Reserve Hierarchy



Play Provision

4.4.3 Neighbourhood / Small Village Parks

A neighbourhood park or small village park is usually a small park that offers a more narrow scope of play than regional and precinct parks. Essentially, this type of park serves the immediate neighbourhood or village and does not have the same level of amenity of precinct and city parks.

A neighbourhood park or small village park should be located within a 500 metre radius of every residence. For example, Beilby Park represents a neighbourhood park and Nericon's Mallee Park represents a small village park within the Griffith City Council.

It is envisaged that a number of neighbourhood parks will be redeveloped as natural play spaces in accordance with community input and the level of community resources.

Figure 16: William Bull Park, Bilbul

4.4.4 Reserves

A reserve is land set aside for urban infrastructure requirements or environmental protection. In relation to the Strategy, this primarily encompasses urban infrastructure, such as stormwater detention and road reserves.

A reserve has a low level of amenity with little or no amenities. It has no structured play experiences or play equipment.

Sidlow Road Reserve is the one exception as it accommodates a playground.

Figure 17: Memorial War Park, Yenda

4.4.5 Large & Small Village Parks

It is important to address that village parks play a slightly different role than precinct and neighbourhood parks in the city. These parks have an important social and cultural role within their immediate communities.

Play Provision

4.5 Application of Hierarchy

According to the definitions prescribed in the park hierarchy, Griffith City Council currently has the following:
- 1 Regional Park;
- 6 Precinct Parks;
- 1 Large Village Park;
- 23 Neighbourhood Parks;
- 10 Small Village Parks.

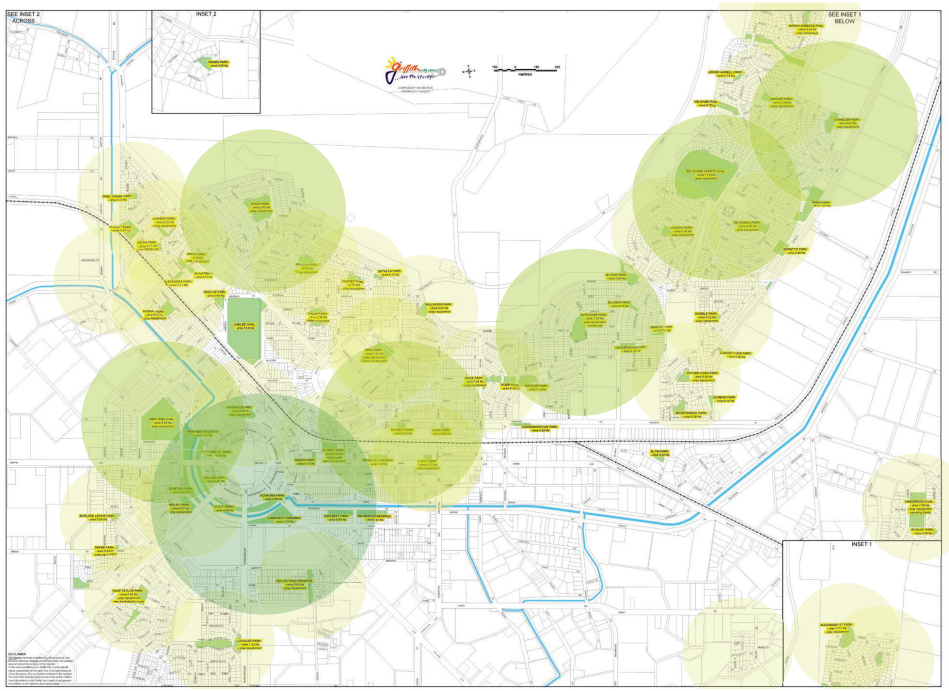
This is further illustrated in Map 4: Park Hierarchy.

Table 4: Park Hierarchy

Playground Hierarchy	Street Address	Precinct
Regional Park		
City Park	Kookora St	Griffith LGA & South Griffith

Playground Hierarchy	Street Address	Precinct
Precinct Park		
West End Oval	Merrigal St	West Griffith
Enticknap Park	Langley Cres	East Griffith
Chandler Park	Polkinghorne St	Collina
Ted Scobbie Oval	Doolan Cres	Collina
Wood Park	Messner St	North Griffith
McKirby Park	Wakaden St	Hyandra
War Memorial Park	Yenda Pl	Yenda

Playground Hierarchy	Street Address	Precinct
Neighbourhood Park		
Circle Park	The Circle	North Griffith
Coates Park	Gordon Ave	North Griffith
French Park	Gordon Ave	North Griffith
Ieraci Park	Northgrove Dr	North Griffith
Kinkead Park	Dickson Rd	North Griffith
Noel Hogan Park	Nelson Dr	North Griffith
Beilby Park	Yarrabee St	West Griffith
Kooragee Park	Bringagee St	West Griffith
Locklea Park	Riverdale Pde	South Griffith



Map 4 - Park Hierarchy (Griffith)

Play Provision

Sidlow Road Reserve	Sidlow Road	South Griffith
Unknown Park Name	Catanzariti Dr	South East Griffith
Father O'Dea Park	Turnell St	East Griffith
Rumble Park	Hoad St	East Griffith
Mallinson Park	Mallinson St	Hyandra
Apex Park	Kooba St	Hyandra
Wade Park	Wade St	Hyandra
Alexander Park	Alexander St	Collina
Jiggins Park	Graham St	Collina
Mancer Park	Meakin St	Collina
Norah Gibbons Park	Pauling St	Collina
Dei Agnoli Park	Summer St	Collina
CWA Park	Banna Ave	Central Griffith
Olympic Park	Olympic St	Central Griffith
Brolga Park	Rankins Springs Rd	Beelbangera
William Bull Park	The Crescent	Bilbul
Restyn Park	Yarran St	Hanwood
Woman's Army Park	Beech St	Hanwood
Meggit Park	Mason St	Lake Wyangan
Tharbogang Park	Goodfellow Pl	Tharbogang
Halse Park	Allen St	Yenda
Rotary Park	Bingar St	Yenda
Henderson Oval	Gorton St	Yoogali
Mallee Park	Alpen St	Nericon

The Griffith LGA has a number of other parks that do not contain a playground and which haven't been included in the hierarchy. It is also stressed that there are a number of open space areas that have been poorly classified and while they have been labelled as parks they primarily act as reserves.

Figure 18: City Park - Regional Park

Figure 19: Chandler Park - Precinct Park

Figure 20: Bielby Park - Neighbourhood Park

Play Provision

4.6 Condition of Play

Playgrounds in Griffith City Council are in varying states of condition. The Council area still retains a number of the functional "four Ss" (swing, sand box, slide and seesaw) established post World War II, while also accommodating numerous adventure play sets established in the 1990s. More recent playground development has occurred in Collina and along the southern side of the canal.

In general, playgrounds in the Council area are one-dimensional and provide a narrow scope of play.

4.6.1 Play Space Development Model Assessment

In applying the Play Space Development Model to current playground provision in Griffith City Council (Figure 21), Griffith has ample supply of Active Play and Open Space elements of the model but there is limited provision of other elements, particularly Creative/ Explorative Space.

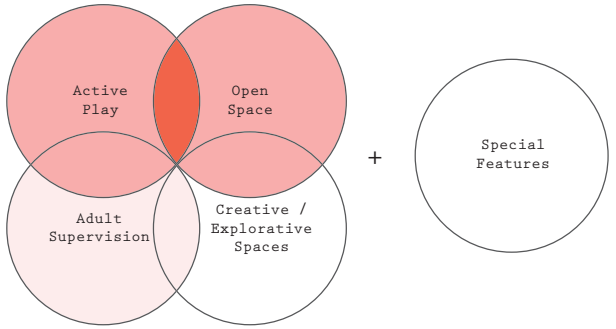


Figure 21: Play Space Development Model

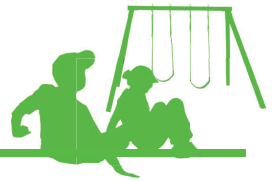
4.6.2 Playground Condition Assessment

A number of the parks have been identified as being in need of repair, replacement or upgrade. A playground audit regarding the condition of playgrounds is as follows:

	Number of Parks	Percentage
Excellent	3	7.5%
Good	3	7.5%
Average	11	27.5%
Poor	**17**	**42.5%**
Very Poor	6	15%
TOTAL	40	100%

The audit reveals that the majority of playgrounds are either in an average or poor condition - nearing the end of their life cycles. This will result in a significant need to replace, redevelop and/or retrofit a large number of playgrounds in the near future to reestablish a quality spread of playgrounds across the Council area.

Recommendation: Play Space Development Model
Council provide a greater variety of play spaces including Creative/Explorative Space and Special Feature elements



Play Provision

4.6.3 Accessibility

While Griffith City Council generally has a healthy distribution of playgrounds, this does not ensure that playgrounds are accessible. Physical barriers and poor quality pedestrian infrastructure significantly affects the accessibility of playgrounds to the community.

There is generally a limited supply of neighbourhood footpaths in the LGA and few parks provide good connection. It should be acknowledged that this reduces the quality of experience for current and future playground users. Research suggests that the more desirable the destination and quality of journey, the further people are willing to walk or cycle to access it (Kent, Thompson and Jalaludin, 2011). Further, research has suggested that improving connectivity is effective in combating community chronic disease.

The Pedestrian Access and Mobility Plan (PAMP) prepared by Council in 2004, provides a detailed plan on pedestrian access but does not consider parks as a significant pedestrian trip generator and focuses on other areas. It is necessary that a pedestrian and cycle access plan be prepared by Council to inform playground provision and development.

Essentially, people with good access to open space are significantly more likely to be physically active which promotes a more healthy community (Kent, Thompson and Jalaludin, 2011).

Figure 22: Lions Park - fronting railway line

Recommendation: Accessibility
Council prepare a pedestrian and cycle access plan to better inform playground planning and development The proposed Pedestrian & Cycle Access Plan should be in conjunction with the current PAMP but consider pedestrian and cycle access to parks. This study might be further extended to include pedestrian and cycle access to employment areas and inform the CBD Strategy.

Play Provision

4.7 Park Closures & Reclassifications

4.7.1 Park & Reserve Closures

The initial "Playgrounds and Small Reserves Strategy, 2011" identified several parks that might be considered for closure, however issues over ownership (with a large number of parks being owned on Crown Land) and anticipated community resistance has significantly limited the potential for any park closures.

4.7.2 Park to Reserve Reclassifications

Griffith City Council has a number of parks that are primarily acting as urban reserves.

Table 5: Reclassification of Parks to Reserves

Park Name	Precinct	Current Use	Reclassification
Peisly Park	North Griffith	Detention Basin	Urban Reserve
Dunbar Park	East Griffith	Detention Basin	Urban Reserve
Moretto Park	Collina	Detention Basin	Urban Reserve
Sergi Park	Collina	Detention Basin	Urban Reserve
Vaughan Park	Collina	Drainage	Nature Reserve
McIvor Park	Collina	Drainage	Nature Reserve
Commemorative Park	South East Griffith	Road	Road Reserve
Ortella Park	North Griffith	Road	Road Reserve
Haines Park	Maegraith Place	Detention Basin	Natural Reserve

The reclassification of parks to reserves will not change the purpose of the land use but reduce Council responsibilities, particularly in respect to mowing and irrigating the land. This will result in reserve land no longer being irrigated and grass would be mown at 40mm in comparision to 25mm in parks.

Recommendation: Park Provision

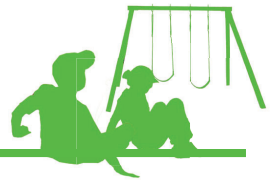
Council ensure that comprehensive assessment is given before removing playgrounds

In assessing the removal of a playground it is important to assess its condition and evaluate the risk alongside the benefit of keeping the equipment. It is also important that consideration is given to the existing provision of playground facilities in the area and the removal of a playground coincides with the development of a new playground in the area.

Recommendation: Park to Reserve Reclassification

Council move to reclassify several parks as reserves, namely:
- **Dunbar Park to Dunbar Reserve**
- **Moretto Park to Moretto Reserve**
- **Sergi Park to Sergi Reserve**
- **Vaughan Park to Vaughan Reserve**
- **Ortella Park to Ortella Reserve**
- **Haines Park to Haines Reserve**

The reclassification of several parks to reserve land will reduce Council's maintenance obligations.



Play Provision

4.7.3 Playground Removals

The state of playground facilities in the Council area means that a number of playgrounds will need to be removed in future. If any playground becomes unsafe and no longer complies with the Australian Standards it needs to be removed.

Considering Griffith City Council has a high supply of playgrounds (as referred to in Section 4.3.1 and Map 3(a)) there is some justification in removing and not replacing a few playgrounds while still maintaining a good spread across the Council area. However, these playgrounds should not be removed before they are deemed unsafe or without considerable community consultation

Collina and North Griffith have a high supply of playgrounds and there are several playgrounds in pockets of the precincts that can be removed whilst still providing a playground in walking distance to each residence. Considering the nature, condition and concentration of playground provision it is proposed that the playgrounds are removed from the following parks:
- Norah Gibbons Park
- Coates Park
- Woman's Land Army Park (Hanwood)

The strategy recognizes ~~requires~~ that any other playground removed from a park would need to have a plan in place to replace the playground and maintain an even distribution of play across Griffith City Council.

Figure 23: Aging Infrastructure (West End Oval)

Recommendation: Park Provision
Council to remove and not replace playgrounds in the following parks: **- Norah Gibbons Park** **- Coates Park** **- Woman's Land Army Park (Hanwood)** However the playground equipment should not be removed before they are deemed unsafe and not without considerable community consultation.

Play Provision

4.8 Future Play Provision

To date the current provision of open space is high in the Council area (approximately 2.8 hectares of open space per 1,000 people). However, open space, parks and playgrounds have not always been developed well and have served little function. For example, Figures 24 and 25 illustrate two playgrounds that are located less than 500m of one another and represent an over supply of play facilities in the area.

The strategy suggests that lesser open space might be considered in the future development of residential land as long as it is well designed and serves multiple functions to the community. This would also reduce maintenance costs and increase developer contributions to reflect the lesser amount of land provided by the developer.

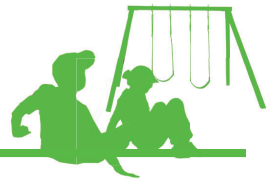
It is also important that future playground provision include greater partnership with Council and developers. A Plan of Management is proposed that requires developers consult with the Parks & Gardens and Urban Design units at Council before a playground can be signed off. Further, the Playground Strategy should provide direction for Council, designers, developers and the community in achieving better playground outcomes.

Figure 24: Alexander Street Park

Figure 25: Nora Gibbons Park

Recommendation: Developer Contribution
Council consider reducing piecemeal open space provision in place of well designed and multiple purpose parks in new housing estates This recommendation should be reflected in the new Development Control Plan concerning public open space provision

Recommendation: Developer Contribution
Council encourage a participatory design approach in designing future community infrastructure. Council are to put in place a Plan of Management which ensures developers consult with the Urban Design and Parks & Gardens units at Council before signing off on any community infrastructure.



Play Provision

4.9 Future Replacement Priorities

In keeping with the design priorities discussed earlier in the strategy, future provision of parks should incorporate a diverse range of play experiences. It is important to stress that the future design and development of park facilities should be done in extensive consultation with the community, particularly with children and teenagers.

As mentioned in Section 4.6.2 Playground Condition Assessment, approximately 70% of Griffith City Council's playgrounds are in an average or poor state of condition. This requires that an accelerated replacement program is in place to improve the state of play across the Council area.

It is critical Council prioritize the redevelopment and upgrade of several precinct parks, including West End Oval, McKirby Park (new development), Wood Park, Enticknap Park and Memorial War Park (Yenda). It has been assessed that precinct parks are destination points in a neighbourhood. If each of the precinct parks are developed to a high standard, connected to other facilities (sport, corner shop and school) and in response to community needs there might be less pressing need to redevelop neighbourhood parks.

It is also identified that village playgrounds are often the only play facility in the village, therefore the space often has greater social and cultural significance than neighbourhood parks in the precincts). Therefore, it is important that the redevelopment of play spaces in the villages have priority.

Recommendation: Park Provision

Council prioritize developing and/or upgrading the precinct and village parks stated in the Strategy

Precinct parks are destination points in the Council and should be given a degree of preference. The design of precinct parks should involve wide and extensive community consultation and incorporate points-of-difference.

Village parks are usually important reference points in the villages and there is opportunity to emphasise and celebrate a village's identity in each playground upgrades, particularly if the planning and design stages have a strong community engagement focus.

Recommendation: Park Provision

Council replace a number of lawn areas in parks with native landscapes

While acknowledging that lawn areas provide important recreational spaces for a variety of activities, the lawn areas in Griffith are excessive and a number could be replaced by native landscapes. This would reduce irrigation costs, create more diversity in park environments and provide alternative unstructured play environments for children to play in.

5.0 Play Management

Play Management

5.1 Maintenance

The management of playgrounds falls under the role and responsibility of the Parks & Gardens Unit of Griffith City Council. Parks & Gardens manage 41 playgrounds and 100 parks. While Griffith City Council is fortunate to have such a large supply of open space, this places considerable pressure on the Parks & Gardens to manage the playgrounds at a standard in keeping with community expectations. This issue is further complicated by Council being stretched for resources.

Playgrounds require regular and ongoing management and maintenance, involving regular inspections, repair and/or replacement of worn or damaged equipment, continual sifting of sand and the removal of graffiti and rubbish. While maintenance costs are somewhat unavoidable, costs can be minimized through the better design of play areas and greater community participation.

5.1.1 Neighbourhood Working Parties

The community can play a greater role in the management and maintenance of parks and playgrounds. Equipped with the appropriate training and equipment, it is proposed that Council consider facilitating community groups (neighbourhood working party) to be responsible for mowing and irrigating the park. In return, this party would be given considerable decision-making power in the future direction of the park.

While this will take considerable organization, the long-term benefits of the community owning and managing public open space in the Council area are considerable - reducing maintenance costs, minimizing instances of graffiti and vandalism and increasing potential sources of finance.

Figure 26: Community participation (Rye's Up! Community Playground)

Recommendation: Community Participation
Council encourage and support the creation of neighbourhood working parties to manage and maintain parks and playgrounds through the Council area

Play Management

5.1.2 Minimizing Mowing & Irrigation

Mowing and irrigation of community land is a regular and repetitive commitment, conducted by the Parks & Gardens Unit.

Griffith City Council have a number of open space areas with extensive lawns. While these areas remain important for both active and passive recreational purposes, the extend of lawn areas should be reduced to minimize ongoing maintenance costs.

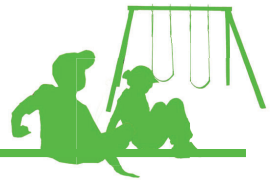
It is proposed that Council consider reducing lawn areas through the replacement of native water-sensitive landscaping. While establishing these landscapes would result in an initial cost, this would be compensated in the long-term by reduced mowing and irrigation requirements. It is also a sustainable initiative that compliments the objectives within Council.

Council has conducted similar projects through the rehabilitation of native vegetation as part of several Griffith Urban Salinity Projects within the council area.

Figure 27a: Kooragee Park - typical large lawn areas associated with Griffith parks

Figure 27b: Artist Impression of Kooragee Park incorporating areas of native vegetation

Recommendation: Minimizing Ongoing Maintenance Costs
Council seek to reduce ongoing maintenance costs through replacing extensive lawn areas with native landscaping



Play Management

5.1.3 Vandalism & Graffiti

A large portion of Council resources are spent repairing vandalized equipment and removing graffiti. This is both a frustrating and unnecessary occurrence that happens throughout Local Governments and especially a problem experienced throughout Griffith City Council.

Research suggests that with greater and regular community engagement graffiti and vandalism can be significantly minimized. If community engagement strategies seek to empower the community, it gives them decision-making power and in turn the community takes greater ownership over the space. It also helps establish stronger community pride and value in the park and increases the frequency in which the park is used.

Deakin University has revealed that the introduction of natural landscapes in parks (coupled with good play design) reduces crime and fosters wellbeing (CFbD, 2010).

5.1.4 Playground Removals

With aging playground equipment, Griffith LGA has seen a number of playgrounds removed and there is likely to be a number of playground removals in future. With limited finance, Council has been unable to replace playground equipment resulting in the parks having limited purpose.

Future playground removals require extensive consultation, primarily to inform the community as to why the playground will be removed and what Council's future plan is for the park in question. It is important that playground removals are done in coordination with the development and upgrade of the existing park or another park in close proximity. The community should be able to see an added benefit in the removal.

Figure 28: Community ownership has numerous benefits in the management of playgrounds

Recommendation: Community Consultation
Council adopt meaningful community consultation in the removal and design of playground facilities Council needs to avoid tokenistic attempts to engage the community and be transparent at any opportunity.

Play Management

5.2 Risk Management

Risk is something that we and our children are faced with everyday. It is essential that children both assess and manage their own risk and that playgrounds encourage challenging elements. It should also be stated that playgrounds remain low risk environments for children (Ball, Gill and Spiegal, 2008), even though they are commonly perceived as high risk environments. Moreover, in the last 10 years Griffith City Council has not reported a single claim over a playground injury.

Of the playground injuries that resulted in hospitalization, the main reasons for the injury were:
- Condition or state of repair of equipment;
- Height of apparatus;
- Nature or type of playing surface; and
- Depth of playing surface (Helps & Pointer, 2006).

Council has a 'duty of care' which requires it take reasonable care to avoid foreseeable risks of injury to patrons using the play areas under its jurisdiction. A playground is an environment that has a number of potential hazards that Council is responsible for managing. But this duty must not run the risk to reducing playgrounds uninspiring and risk adverse environments. The Australian National Quality Standards (2011) state that designers are to:

> *"plan learning environments with appropriate levels of challenge, where children are encouraged to explore, experiment and take appropriate risks in their learning"*

It should also be noted that children are generally good at assessing their own risk and it is essential that there are environments in the community that promote a level of challenge for children to play within.

Designing playgrounds or play spaces involves designing challenging play areas, while avoiding unnecessary risk. It is important that Council does not fall into the trap of playing it too safe, resulting in uninspiring and one-dimensional play spaces.

5.2.1 Risk-Benefit Assessment

Risk-benefit assessment weighs the benefit of a play area and its features to children against the potential risks. It allows a play area to be designed with challenges important in a child's development but offers protection from unacceptable risk of death or serious injury (Play England, 2008).

It is important Council apply thoughtful and comprehensive risk-benefit assessment for the removal, replacement and development of play spaces. Those responsible for assessing risk must question; does the benefit to the child outweigh the risk the equipment presents to the child? (Dodd, 2013)

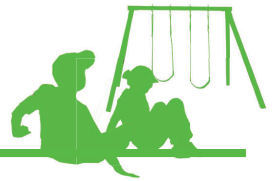
5.2.2 Community Risk Assessment

There are various examples across Europe where the communities have agree to a level of acceptable risk that is higher than a Council's threshold for litigation. This was in response to there being a number of playgrounds that lacked challenge that were not being used by the community. The agreement between the community and Council allowed for far more creative and challenging play environments.

With greater community consultation it is foreseeable that neighbourhoods might agree to a higher level of acceptable risk if they can see the benefit associated with such an agreement.

Recommendation: Risk Management
Council adopt a risk-benefit assessment appropriate to designing challenging play experiences but avoiding unacceptable harm.

Recommendation: Risk Management
Council write a Risk Management Plan for assessing the risk (and benefit) associated with Nature Play and other alternative forms of play.



Play Management

5.2.3 Australian Standards

An over-reliance and an absolute application of standards ultimately produces one-dimensional playgrounds. The standards are a guide on how to avoid unacceptable risk, but not applied absolutely without consideration of the local context (Ball, Gill and Spiegal, 2008). Often the Australian Standards have been used as an absolute requirement towards assessing risk in a play environment and this is at times at the expense of common-sense (Dodd, 2013).

As stated by David Eager (Associate Professor in Risk Mangement), designers and engineers need to work together and use the latitude within the relevant standards to create imaginative and exciting play spaces (Sheppard-Simms, 2012).

It should also be noted that the current Australian Standards are soon to be changed, essentially adopting the European Standards. This change is likely to make the standards more flexible, creating slightly higher free height of fall and slightly smaller fall zones (Dodd, 2013).

Recommendation: Australian Standards
Council must strive to design creative play spaces while also complying with the relevant Australian Standards: - AS 4685:2004 (General safety requirements and test methods) - AS/NZS 4486.1: 1997 (Playgrounds and Playground Equipment - Development, Installation, Inspection, Maintenance and Operation) - AS/NZS 4422:1996 (Playground Surfacing) - AS 1428.3: 1992 (Design for Access and Mobility)

Play Management

5.3 Marketing & Promotion

At present, Council provides little promotion or marketing of its existing playgrounds. Playgrounds are an important and attractive community asset and are sought after and used by a variety of people within and outside the Council area.

With a comprehensive community directory and several facility guides, the community can be better informed of existing and future play facilities in Griffith City Council. In addition, Council's website can be a powerful platform for engaging the community. It might also be used for sourcing community and corporate finance.

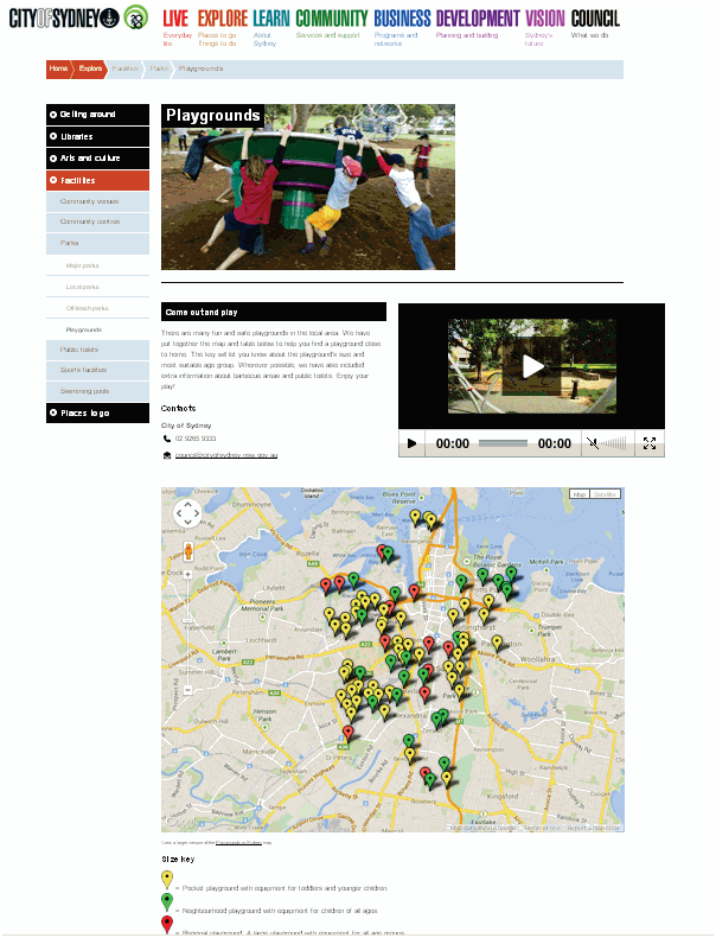


Figure 29: Sydney City Council Playground Directory

6.0 Play Implementation

Play Process

6.1 Play Process

The play process has been adapted from the Play Space Design Cycle model in *Design for Play: A Guide to Providing Successful Play Spaces* (Shackell, Butler, Doyle & Ball, 2008) and is to be applied to the design or redevelopment of playgrounds or play spaces in Griffith City Council.

1. PREPARE

The planning and preparation behind play space management is important and should not be rushed. Essentially, a well considered development will save time and money to develop and lead to a better quality design. It is important to give due diligence in assessing and identifying the need and to involve the community at the earliest point in planning and preparing a play space.

2. PARTICIPATORY DESIGN

The design of play spaces should always involve the community and relevant stakeholders. It is important that the design process includes a combination of local knowledge and professional expertise, formulating a working team that is committed to seeing a quality play space designed, constructed and managed. Play design must illustrate an understanding and application of the design principles mentioned in the Strategy and be a "value for money" project. Further, play space development should have a clear budget and project time-line.

3. BUILD

The construction of playgrounds has typically involved procuring external contractors. With greater community consultation, it is envisaged that more of the construction of a play space can be built by the community (or at the very least local contractors). It is essential that the community is involved during the construction process.

4. USAGE

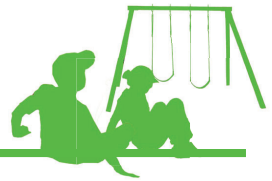
Utilize the initial excitement of a new play space by celebrating its opening and arranging community events around the play space.

5. MAINTAIN

It is envisaged that a greater degree of the maintenance and inspection of the play space might be given to the community. This would require establishing working relationships between the community and Council. A general Plan of Management should be prepared which clearly assign roles and responsibilities of each party.

6. EVALUATION

It is important to have an honest review and evaluation for play space development - to learn from past mistakes and understand that a play space needs to evolve and adapt over time. Further, it gives an opportunity to celebrate successes that might be applied to other projects in Council.



Play Budget

6.2 Budget

The budget allocation for playground equipment replacement is minimal. The budget prioritizes between $50,000 - 70,000/annum over the next 10 years has been allocated for the replacement and upgrade of playground equipment in the Griffith LGA.

To put the existing budget into perspective, playgrounds are increasingly expensive to install and $50,000 would only cover a single neighbourhood playground upgrade. The problem is further compounded by the increasing need to remove and replace aging playground equipment requiring Council commit to several playground redevelopments each year to improve the state of play facilities across ~~in~~ the Council area.

The strategy not only looks at replace play equipment but seeks to completely redesign each play area, ensuring that they are more accessible, imaginative and quality experiences.

6.2.1 Projected Need

In assessing the condition of play facilities in Griffith City Council, it has been found that the majority of playgrounds are in poor or average condition, necessitating that immediate priority is given to redeveloping and/or replacing existing play equipment (Section 4.6.2).

In projecting the need for playground replacement over the next 20 years, it is calculated that approximately 20 playgrounds will need replacing in between 2013 - 2020, another 14 playgrounds replaced between 2021 - 2027 and 6 replaced between 2028 - 2033 (as illustrated in the Figure 30).

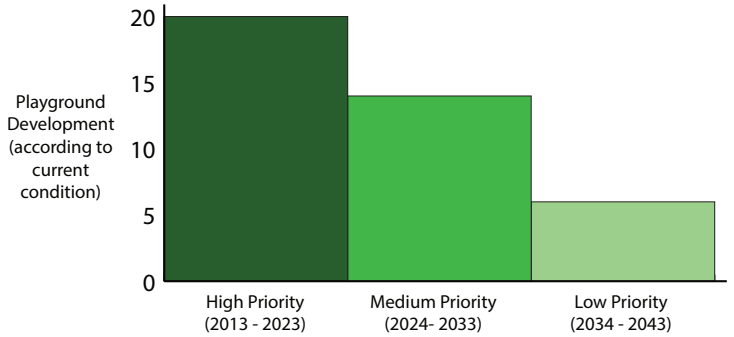


Figure 30: Staged Need for Replacing and Redeveloping Playground Equipment

Play Budget

6.2.2 Proposed Budget

If the life span of a playground is 20 years, Griffith City Council needs to apply an accelerated process in replacing and redeveloping its existing play environments. The existing budget would not allow this accelerated process to happen and therefore the Strategy proposes a budget increase.

In applying the proposed hierarchy, it is estimated that a redeveloped playground (on a significant budget) would cost the following:

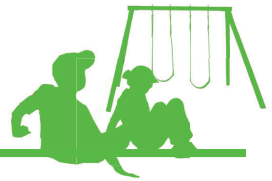
- Regional Park $250,000
- Precinct Park $100,000
- Neighbourhood Park $50,000

Therefore, over the next 10 years the strategy requires the following financial contributions:

	Existing Budgeted Amount for New Play Equipment	Proposed Budgeted Amount for Upgrading Playgrounds	New Budget
2013/14	$51,750	0	$51,750
2014/15	$53,561	$67,439	$121,000
2015/16	$55,436	$69,799	$125,235
2016/17	$57,376	$72,242	$129,618
2017/18	$59,384	$74,771	$134,155
2018/19	$61,462	$77,388	$138,850
2019/20	$63,614	$80,096	$143,710
2020/21	$65,840	$82,900	$148,740
2021/22	$68,145	$85,801	$153,946
2022/23	$70,530	$88,804	$159,334

The proposed budget from 2013-2023 has been based on committing to two playground redevelopments each year. The budget also accounts 10% for initial maintenance of playground replacement or redevelopment. As the strategy requires an accelerated process, financial contribution beyond 2023 should be significantly less.

It should also be noted that a 3.5% increase has been applied each year for inflation (consistent with Council's current budgetary process).



Play Budget

6.3 Alternative Financial Sources

As playgrounds play an important role in the community there are often a variety of alternative financial sources in the community that might be utilized to part fund a playground replacement and/or development.

6.3.1 Community Participation and Funding

"Community consultation is an opportunity for community participation"
(Marion City Council, 2008)

There are numerous examples of communities successfully raising funds to provide better or larger play environments. With limited Council funds allocated for playground renewal and redevelopment, the community should be encouraged and supported in sourcing additional funding for playground development.

An example of community funding might include the community being able to purchase fence posts or brick pavers with their name on it. This not only becomes a source of finance but ties the community to the park, creating greater identity and ownership.

Another example might include utilizing community skills and abilities in the construction and design of the park and/or playground - a money in kind process. Not only does this potentially reduce construction costs but it fosters community participation and creativity.

6.3.2 Corporate Sponsorship and Donations

Griffith City Council accommodates a diverse number of businesses, who are often willing to invest in the community as part of their corporate social responsibility. It is commonly accepted that businesses that invest into the community receive the benefit of community goodwill. This should be utilized further in the future development of playgrounds in the Council area.

Figure 31: Community pavers

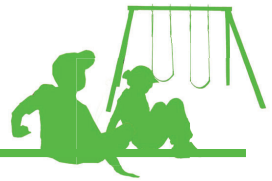

Figure 32: Community pickets (Rye's Up! Community Playground)

Recommendation: Alternative Financial Sources
Council investigate a range of alternative financial sources in funding the redevelopment of parks and playgrounds across the Council area

North Griffith Precinct

It is important to note that the following assessment of the existing playgrounds is not an extensive analysis required for any redevelopment or upgrade of playground facilities. This should only be used as a brief guide towards identifying some of the needs and opportunities within each playground environment.

Playground	Type	Description	Area	Opportunities	Priority	Comments
Wood Park	Precinct	The park is a large open park with a variety of trees. The park has no under-storey vegetation but extensive lawns. The playground is located the southern corner of the park and has old equipment situated on sand.	2.43 Ha	The size and location of Wood Park make it ideal for a precinct park but it lacks quality facilities. The park needs to create interest and encourage more activities. This might occur in locating a sports field, native grades and natural play areas. Wood Park is likely to be well patronized if it had quality facilities.	High	- 'Wood' Park - play on words, incorporate wood structures / elements into park design - Develop mounds to break up flat topography - Establish under storey vegetation around mature trees - Design a variety of experiences at the park - Design paths through the park that direct pedestrian to areas of activity - Upgrade play equipment
Circle Park	Neighbourhood	Circle Park is a large circular park, the circle being indicative of Griffin's initial plan for Griffith. The park has a number of mature trees and extensive lawns. The park also has a strong N-S path axis but with no experiences along the pathway. The playground has a mixture of old and new equipment which is located on sand.	1.38 Ha	New development should focus a variety of experiences along the existing pathway. This might involve having several pieces of public art alongside the path. The park could incorporate more private / serene areas, seating nestled in native gardens.	Medium	- Incorporate a historic theme for the park - Relocate the playground to be closer to the existing path - Establish under storey vegetation around mature trees - Design a variety of experiences along the existing path - Upgrade swing equipment
Coates Park	Neighbourhood	Coates Park is a medium park with several dwelling having frontage to the space. The park has a number of mature trees and extensive lawn area. The playground has old equipment situated on sand.	0.70 Ha	The park should establish a focal point and stronger connections.	Medium	- Potential to remove play equipment as French Park and Circle Park are nearby - Establish a natural play area
French Park	Neighbourhood	French Park is an almond shaped park and well framed by mature vegetation. The playground has relatively new equipment.	0.53 Ha		Medium	
Ieraci Park	Neighbourhood	Ieraci Park is a small park with young vegetation. The playground has relatively new equipment. The park has little character.	0.25 Ha	The park should develop a stronger character or personality to the park.	Low	- Develop a stronger character or personality to the park - Establish hedge vegetation along the northeast boundary of the park
Kinkead Park	Neighbourhood	Kinkead Park is a small park with little vegetation. The park provides good connection between streets and the playground is relatively new. The park has little distinguishing character.	0.23 Ha	The park should develop a stronger character or personality to the park.	Medium	- Establish a path connecting the Robson Road and Northgrove Drive - Establish more vegetation - Establish hedging along the fence lines
Noel Hogan Park	Neighbourhood	Noel Hogan Park is a small park with randomly placed vegetation. The park has limited connection with three sides bound by residential development. The play equipment is relatively new.	0.22 Ha	The park should develop a stronger character or personality to the park.	Medium	

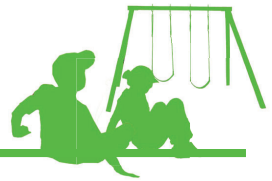


West & South Griffith Precincts

Playground	Type	Description	Area	Opportunities	Priority	Comments
City Park	Regional	City Park is a celebrated park offering a range of play experience to all ages. it also provides barbecue and shelter facilities and a food forest experience.		Develop better connection to Benerembah Street	Low	
West End Oval	Precinct	West End Oval is a large sports ground accommodating a range of sports (i.e.. hockey, cricket, basketball and badminton). The area is well framed by mature native trees. An aged playground is located at the north point of the ground. It is isolated from the rest of the sports ground.	6.44Ha	The current playground facilities at West End Oval is desperately in need of an upgrade and the size, nature and location of the area provide a great opportunity to develop the playground into a precinct area. The play area could possibly support a sport theme and have better connection to the oval and surrounding residential development.	High	- Develop a sport theme - Create stronger connections between the oval and residential area - Design a variety of experiences at the park - Upgrade play equipment
Borland Leckie Park	Neighbourhood	Borland Leckie Park is a small park and well vegetated. The park has been vegetated and maintained by a local resident. There is no play equipment or amenities located within the park.	0.24Ha	The park is located in a residential area absent of play facilities. As the park already has a high degree of community ownership it is opportune to develop strengthen facilities in the park.	High	- Establish a play space in the park in accord to community advice - Establish a seating area
Kooragee Park	Neighbourhood	Kooragee Park is a medium park with extensive lawn areas and mature vegetation. The park has little character. The playground equipment is poorly positioned and aging.	0.68Ha	The park is in close proximity to the town and should provide better connection between the surrounding neighbourhood, town centre and hospital. Further, the extensive lawn area could be supplemented with native gardens, becoming a public meeting place.	Medium	- Design strong connections to town centre and hospital - Develop a character for the park - Establish native gardens - Establish meeting area - Upgrade play equipment and/or develop a natural play area
Perre Park	Neighbourhood	Perre Park is a very small park with two road frontages - Spence Road and Johnson Place. The park has recently had its play equipment removed.	0.08Ha	While being small, the park has good connection between residential development. It would benefit from having a distinguishable feature.	Medium	- Establish a distinguishable feature - natural play area, native garden or public art
Sidlow Road Reserve	Neighbourhood	Sidlow Road Reserve is a long narrow reserve between the two road carriages of Sidlow Road. The reserve is well vegetated but upkeep and a aged playground is located to the southern end of the park.	0.62Ha	The playground is located in an adequate location but it is also one of only a few playgrounds in South Griffith. The playground is in need of an upgrade and the reserve should be reclassified as a park to better represent its purpose.	Medium	- Upgrade the playground facility - Higher maintenance requirements - Seating and shelter facilities to encourage greater usage - Implement traffic calming techniques to reduce incidents
Bielby Park	Neighbourhood	Bielby Park is a small park on the north west side of the Griffith Showground. The park has a sound playground, with a reasonable theme and relatively new equipment. The park also has good vegetation and signage.	0.57Ha	In general, Bielby is a reasonable example of a neighbourhood park. However, the park is located too close to City Park. In addition, the park could benefit from developing better connection to the canal and showground.	Low	
Locklea Park	Neighbourhood	Lecklea Park is a long park also acting as a detention basin. The play equipment is relatively new and the vegetation frames the park well. There is a decent grassed area for ball games and picnicking.	1.22Ha	The park would benefit a barbecue and shelter area to further support recreational activity in the park.	Medium	- Develop a barbecue and shelter area

East Griffith & Hyandra Precincts

Playground	Type	Description	Area	Opportunities	Priority	Comments
Enticknap Park	Precinct	Enticknap Park is a large park with extensive vegetation. The playground in the park has old equipment and is in desperate need of replacement. Further, there is limited connectivity through the park.	1.52Ha	Enticknap Park is in desperate need of an upgrade. It is a central park within the neighbourhood but its deteriorating facilities do not attract public usage. The park should look to establish a playground facility, providing a range of play experiences. In addition, a shelter and barbecue would facilitate more usage.	High	- Provide a distinct image for the park - Upgrade the playground and provide a range of play experiences for all ages - Support informal sport games (i.e... soccer nets, volleyball, table tennis) - Establish a shelter and barbecue area - Emphasize the mature vegetation by creating native gardens in the park - Design paths through the park that direct pedestrian to areas of activity
McKirby Park	Precinct	McKirby Park is a reasonably small park but is located within medium density residential development and in close proximity to the city centre. The park is no playground facilities and limited amenity.	0.25Ha	McKirby Park might incorporate a play area or sporting activity to promote greater community interaction in the area. Even with limited amenity, the park is well used by the community.	High	- Establish a link between the rail freight terminal and park (i.e. incorporate containers into the park design) - Develop a play area and/or sporting activity (volleyball) - Establish informal seating areas in the park
Apex Park	Neighbourhood	Apex Park is a large park, well connected to community and sport facilities and schools. It has a generous playground and fenced steam train as it main features.	1.21Ha	Apex Park in close proximity to community facilities and plays and important role with the neighbourhood. It needs to establish better connection between the schools and community facilities. In addition, the train is a prominent feature which is lessened by fencing.	Medium	- Establish pedestrian connection from schools to the park - Emphasise steam train theme and remove fencing - Develop shelters and/or natural shade for encouraging families to use the park for longer periods
Rumble Park	Neighbourhood	Rumble Park is a small park, with the playground situated at the centre of the space. The playground has minimal and dated equipment.	0.22Ha	The park needs a playground upgrade and strong pedestrian connection.	High	- Establish a nature-based play space in the park - Improve the pedestrian connection to and through the park
Mallinson Park	Neighbourhood	Mallinson Park is a medium size park with a playground situated at the centre. The park has good pedestrian and cycle connection and is adjacent Scenic Hill.	0.45Ha	Mallinson Park is a prominent park along Macarthur Street and there is potential to highlight this by incorporating interesting play elements or public art that might make people stop. The park should also develop connection to Scenic Hill Reserve and establish native landscaping along the park's boundary.	Medium	- Establish a pedestrian connection from the park to Scenic Hill Reserve - Incorporate native landscaping along the park boundary - Upgrade the playground
Wade Park	Neighbourhood	Wade Park is part of four connected parks (Messener, Robb, Bobb and Wade Parks). Wade is a small park at the end of the parks with a generous sized playground at its centre. There is a path and lighting that connects the parks but this considerable dated and in need of repair.	0.24Ha	The four parks provide an intriguing pedestrian connection through Griffith's residential suburbs. There is potential to emphasise the journey by creating points of interest along the path.	High	- Upgrade the footpath and lighting through the parks - Upgrade the playground - Establish points of interest (public art, natural play area, native garden, etc) along the pathway - Develop a theme through the four parks
Father O'Dea Park	Neighbourhood	Father O'Dea Park is a medium size park with good road frontage. The playground is situated at the centre of the space. There are several mature trees that frame the park.	0.49Ha	The park would be better served with seating, pathways and trees that shade the play area.	Low	- Improve the pedestrian connection to and through the park - Establish seating areas and natural shade around the play area - Upgrade the playground

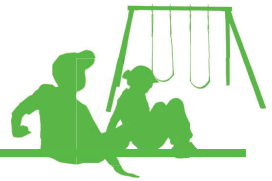


Collina & Central Griffith Precincts

Playground	Type	Description	Area	Opportunities	Priority	Comments
Chandler Park	Precinct	Chandler Park is a relatively new park with a variety of play equipment, gardens and a shelter.	0.67Ha		Low	- Landscaping lacks cohesion and planting is too close to the play area
Ted Scobie Oval	Precinct	Ted Scobie Oval is a large sportsground (primarily soccer) and a play area is situated towards the southern portion of the oval, providing a good mixture of play experiences. There is also a fitness track running around the boundary of the space.	11.4Ha	Ted Scobie Oval has a clear theme and purpose - active recreation and this should be further emphasized. The oval has prominence in the city and operates almost as a second regional park in the city.	Low	- Good use of native landscaping surrounding the play area
Alexander Park	Neighbourhood	Alexander Park is a reasonably new park and accommodates a new playground. The park also acts as a stormwater detention area.	1.11Ha	Alexander Park lacks character. It is just a playground facility with little distinction and poor accessibility.	Medium	- Establish a theme or park identity (orange orchards and Scenic Hill provide an interesting backdrop) - Native landscaping to replace manicured lawns
Jiggins Park	Neighbourhood	Jiggins Park is a small park with relatively new play equipment. The play equipment is geared for teenagers and provides good variety.	0.36Ha	Jiggins Park is well patronized and could be better served with a shelter and seating area.	Low	- Establish a shelter and seating area to encourage greater usage
Mancer Park	Neighbourhood	Mancer Park has a playground facility and pathway connecting Meakin and McMahon Streets.	0.29Ha	The pedestrian connection in the park makes it prominent in the neighbourhood	Medium	- Upgrade playground
Norah Gibbons Park	Neighbourhood	Norah Gibbons Park is a small park with limited play equipment. The park also acts as a stormwater detention area.	0.24Ha	The playground equipment has little purpose and it should be questioned as to why it is there.	Medium	- It is questionable whether a playground is necessary in this area as other playgrounds are in close proximity to the location - Limited character or purpose
Dei Agnoli Park	Neighbourhood	Dei Agnoli Park is a medium sized park with limited play equipment, native landscaping and seating areas. There is good connection through the park.	0.5Ha	The park has been well designed with effective landscaping and well shaded seating areas, but it has been desperately neglected.	Medium	- Reestablish landscaping, particularly ground cover - Strengthen the play area with additional equipment - Upgrade seating - Existing street trees are not necessary against the native landscaping
Olympic Park	Neighbourhood	Olympic Park is a long stretch of land between Olympic Street and the railway line. The park has aging play equipment to the east and a skate park to the west. There is a youth community centre with outdoor basketball courts and bicycle circle in the middle.	0.62Ha	This is an important play area particularly for teenagers in the Griffith area but has been neglected. The skate park and youth centre is well patronized. The park could be developed into a teenage play precinct.	Medium	- Remove and upgrade new play facilities, particularly with teenagers in mind - Provide the skate park and bicycle track with a face-lift (urban art work for the skate park and native landscaping
CWA Park	Neighbourhood	CWA Park (more affectionately known as Egg Park) is located on the northern side of Banna Avenue. It has good play facilities and is well patronized.	0.23Ha		Low	- Disability swing is a good inclusion but is isolated from the rest of the park

Surrounding Villages

Playground	Type	Description	Area	Opportunities	Priority	Comments
War Memorial Park	Large Village	War Memorial Park is located in the centre of Yenda and operates more as a town square than a traditional park. It has a dated playground, tennis courts and seating facilities.	0.62Ha	The park is an important meeting place in the village and should be celebrated in such a way with strong established pathways, quality seating and shelter areas and a mixture of play activities.	High	- Park is in desperate need of an upgrade - Develop the park as a gathering place - Incorporate public art and gardens
Rotary Park	Small Village	Rotary Park is a medium sized park with a swing and seating area. The swing is old but the grounds are well kept.	0.39Ha	The park is beginning to formulate character with an interesting shade structure made of machinery. This type of ingenuity should be further encouraged.	Medium	- Establish a more comprehensive play facility at the park
Halse Park	Small Village	Halse Park is a long narrow strip of land with a playground to the middle of the space. It is well vegetated.	0.2Ha	Halse Park is not that well connected to the village.	Low	- Incorporate seating areas - Establish native landscaping
Henderson Oval	Small Village	Henderson Oval is a medium sized oval with sporting fields, toilets and a playground in Yoogali. The playground is dated and limited.	2.59Ha	Considering the size of Yoogali and that Henderson Oval provides the only play equipment in the village there is pressing need to upgrade the play facilities at the oval.	High	- Upgrade play equipment
Tharbogang Park	Small Village	Tharbogang Park lies along the canal to the rear of residential development facing Dunne Street in Tharbogang village.	1.28Ha		High	- Hidden location with limited surveillance
Mallee Park	Small Village	Mallee Park is a medium sized park with a playground in Nericon. The play equipment is aging. The park is true to its name accommodating a number of Mallee trees.	0.58Ha	The park would ideally suit a nature-base play area, in keeping with the existing Mallee vegetation.	High	- Build on native vegetation theme - Establish a nature-base play area - Upgrade play equipment
Meggit Park	Small Village	Meggitt Park is a reasonably large play area with various play equipment but it is starting to age.	0.2Ha		Medium	- Upgrade play equipment
Lake Wyangan Recreational Reserve	Recreational Park	The recreational reserve is a large recreational area, popular during warmer months. The reserve contains toilets, wildlife sanctuary, barbeque facilities and a playground. The playground is outdated and isolated from the rest of the reserve.	307.7Ha	The recreation reserve is in need of a greater Master Plan and the design of a new play area should be considered in this process. The playground should be located in a more prominent location.	Medium	- Development should be done in conjunction with a larger Master Plan for the area - Playground does not serve Lake Wyangan community and is more likely to serve greater Council area.
Women's Land Army Park	Small Village	The park is to the western end of Hanwood Sports Oval. The park has a small stone memorial, toilet, playground and carparking, however the park is in desparate need of a facelift.	1.13Ha	The Women's Land Army has an interesting history and this should be reflected in the park. Further the playground and toilet needed to be removed. A new play area should compliment the history of women in the army.	High	- Establish a strong historical theme - Upgrade play equipment - Upgrade toilet facility - Upgrade memorial
Restyn Park	Small Village	Restyn Park is a small triangular park adjacent the Hanwood Primary School. The has a central play equipment with aging equipment but is well maintained.	0.19Ha		Medium	- Upgrade play equipment
William Buck Park	Small Village	William Buck is a small park within Bilbul with the playground as its main feature. Swing set needs to be replaced	0.22Ha	The park could be better served with a shelter and barbeque area to encourage greater usage.	Medium	- Upgrade play equipment
Brolga Park	Small Village	Brolga Park is a small central park within Beelbangera. The park has an attractive garden and playground.	0.31Ha	Brolga Park appears to have good community ownership and is an effective meeting place. Establishing a shelter and barbecue area would encourage greater community usage.	Medium	- Upgrade play equipment



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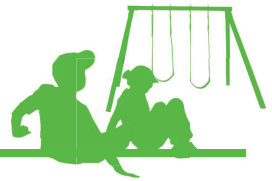

Griffith Pedestrian & Bicycle Strategy

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Distribution: Griffith City Council

Griffith Pedestrian & Bicycle Strategy

Griffith City Council

July 2021

Executive Summary

Walking and cycling are important modes of travel, for both solely pedestrian journeys and also as a part of trips where the major method of transport is bus, train or car. Increasing the proportion of pedestrian and bicycle journeys can make a significant contribution to achieving a better quality of life and environment for all. There are considerable benefits that may be achieved by encouraging more pedestrian activity within the city, particularly for shorter distance trips. These benefits include improved health, better environmental conditions, decreased traffic congestion and improved safety.

The purpose of the review of the PAMP and Bicycle Plan is to improve and amend the existing plan to suit the expanded pedestrian and bicycle infrastructure built since 2009. Due to the similar nature of the two plans; the review incorporates the merger of the plans into the Griffith Pedestrian and Bicycle Strategy. The strategy encompasses all areas previously addressed by the Griffith PAMP and Griffith Bicycle Plan.

The development of the Strategy is a step towards Griffith becoming a fully accessible community with high quality pedestrian and bicycle facilities that encourage walking and cycling as legitimate and sustainable modes of transport in the city. Three broad strategic goals were developed by Griffith City Council to supplement the original aim of the PAMP and Bicycle Plan and coincide with the above. These are:

- *An equitable and accessible transport network that allows for consistent and reliable travel.*
    - Provide good connectivity to key landmarks and attractors;
    - Improve the footpath and cycleway network;
    - Provide safe and convenient crossing locations;
- *A safe and attractive transport network where the severity and risk of accidents are minimised.*
    - Reduce conflicts between all road users;
    - Improve safety for all road users;
    - Improve the environment around pedestrian footpaths and cycleways;
- *A transport network that promotes walking and cycling as a mode of transport.*
    - Encourage walking and cycling to replace trips usually made by motor vehicles;
    - Provide suitable end of trip facilities across the network, especially at key landmarks and attractors.

The analysis of methodology outlined in several guidelines and documents (such as the NSW Roads and Maritime Services (RMS) Guidelines, *How to Prepare a Pedestrian Access and Mobility Plan* (2002), as well as data analysis of pedestrian crash history and community consultation, allowed Griffith City Council to produce the Griffith Pedestrian and Bicycle Strategy as a review of the 2009 PAMP and Bicycle Plan; combining them into a simplified and more precise document.

The amended plans provide an important framework for addressing the needs of pedestrians and cyclists within the Griffith area and the management of resources and funding required to construct such infrastructure. The review also outlined the engineering actions that need to be executed to achieve the overall goal of the document which resulted in an estimated cost of approximately $42 million.

Ongoing monitoring and updating of the document will be undertaken on a regular basis as works are completed or part completed as listed in the implementation strategy. The ongoing amendments also provide the opportunity to correct or rectify any infrastructure that will need to be taken into consideration as Griffith expands into the future.

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Definitions

Active Transport – Movement undertaken by active means, e.g. walking, cycling, jogging, skating, roller blading etc. - including access to public transport.

Attractor – A destination (whether built or natural) that attracts people. Below is a list of the types of attractors that are found in the Griffith LGA:

- ***Retail/commercial attractors***: including shopping centres (Griffith Central, Griffin Plaza); shopping strips (such as Banna Avenue); village centre/ local shops (such Yenda Place, Yoogali).
- ***Commercial/industrial attractors***: including offices, banks, smash repairs, salvage yards, and industrial areas (such as Wickham Hill and Mooreville).
- ***Recreational attractors***: including Lake Wyangan; Scenic Hill; sporting ovals and fields (such as Ted Scobie Oval, Jubilee Oval, Westend oval); local parks and reserves; golf courses, Griffith Regional Aquatic Leisure Centre; multi-use trails and walking/cycling.
- ***Educational facilities***: including day care centres, preschools, primary schools, secondary schools, tertiary education facilities (such as Griffith TAFE).
- ***Community facilities***: including libraries, Council offices, community health centres, disability services, community youth centres, community gardens.
- ***Health and medical facilities***: including doctors' surgeries, dentists, alternative health practitioners, medical centres, hospitals.
- ***Public Transport stops***: including bus stops, taxi ranks and community service vehicles.

Bicycle – A vehicle with two or more wheels that is built to be propelled by human power through a belt, chain or gears.

Bicycle Lane – A marked on-road lane provided for the movement of cyclists.

Cycleway – An off-road cycling path — in almost all instances in NSW, these are shared walking and cycling paths.

Cyclist – A person who is riding a bicycle.

Footpath – The designated walking path along the footway.

Footway – The property boundary to kerb pedestrian movement space which generally includes a footpath and nature strip.

Generator – The place from where people live, and from where they commence their trips. Generators then are largely residential areas which can be classified as:

- ***Low density housing***: includes detached houses (these are the most common type of housing in Griffith)
- ***Medium density housing***: villas, townhouses; defined as at least 2 but less than 20 dwellings in the RTA Guide to Generating Developments;
- ***High-density housing***: apartment blocks, flats, units; a building containing 20 or more dwellings as per the RTA Guide to Generating;
- ***Aged care facilities***: nursing homes, retirement villages, self-care or assisted care units; Most residents at these facilities rely solely on others for driving, so it is important to provide accessible pedestrian facilities to nearby shops, library, or parks, to allow residents some autonomy in their personal mobility.
- ***Accessible housing***: these residences allow for semi-independent living for people with some form of developmental disability; accessible pedestrian paths and safe crossings to nearby

facilities such as shops, parks, swimming pools, a community centre, or bus stops are important for fostering and maintaining independence.

- ***Public transport stops***: considered both pedestrian attractors and generators: bus stops and taxi ranks are attractors because people travel to these locations for further travel (forming part of their trip); public transport stops are also generators because pedestrians are generated from these locations, from outside the area.

Pedestrian – Everyone is a pedestrian at some time, even if just walking from the car to a destination. In the Strategy, pedestrians include:

- A person on foot – all ages, ably or with an impairment (for example, using a cane, guide dog, walking frame, crutches; or with assistance from another person);
- A person using a wheelchair;
- A person pushing a pram, shopping trolley, wheelchair etc.;
- A person using a motorised wheelchair or mobility scooter (that is limited to 10km/h); and
- A person using a wheeled recreational device or wheeled toy.

Road Reserve – The entire street space from property boundary to property boundary.

Roadway – The kerb-to-kerb vehicular movement space.

Vulnerable User Groups – in the context of the pedestrian environment, user groups with specific needs include:

- Children;
- A person who requires assistance with walking (for example, using a guide dog, cane, walking frame, crutches or assistance from another person);
- A person using a manual wheelchair;
- A person pushing a pram, shopping trolley, wheelchair etc.;
- A person using a motorised wheelchair or mobility scooter (that is limited to 10km/h);
- Learner cyclists and child cyclists.

1. Introduction

Walking and cycling are important modes of travel, for both solely pedestrian journeys and also as a part of trips where the major method of transport is bus, train or car. Increasing the proportion of pedestrian and bicycle journeys can make a significant contribution to achieving a better quality of life and environment for all. There are considerable benefits that may be achieved by encouraging more pedestrian activity within the city, particularly for shorter distance trips. These benefits include improved health, better environmental conditions, decreased traffic congestion and improved safety.

Universal access is the ability of all road users to safely travel along a transport network, including pedestrians and cyclists. The development of a Pedestrian Access and Mobility Plan provides a way for Councils to address the principles of universal access based on current traffic science and engineering practices.

Griffith City Council's Pedestrian Access and Mobility Plan (PAMP) was originally completed by GHD Consultants in February 2004. The PAMP was based on the NSW Roads and Traffic Authority (RTA) Manual 'How to Prepare a Pedestrian Access and Mobility Plan'. A PAMP provides an important framework for the development of pedestrian and cycling infrastructure and increasing the sustainable safety, convenience and mobility of areas identified by the community.

Griffith City Council's Bicycle Plan was originally completed in 1996. The production of a Bicycle Plan allows Griffith City Council to coordinate investments on safe, convenient and accessible cycling infrastructure.

A review of both the PAMP and Bicycle Plan was conducted by UrbanArc Pty Ltd in conjunction with Griffith City Council's engineering staff in 2009. The aim of the review was to improve and amend the existing plans to suit the needs of the expanded urban area of Griffith. The review considered the future needs of the pedestrians and cyclists in the area and addressed the management of resources and funding to meet the needs identified.

The existing plans provide an important framework for addressing the needs of pedestrians and cyclists within the Griffith urban area and the management of resources and funding to meet the needs identified. The PAMP and Bicycle Plan also allow Council to coordinate investments on safe, convenient and accessible pedestrian and cycling infrastructure on key pedestrian, shared and/or cycling routes throughout the Local Government Area.

The purpose of the review of the PAMP and Bicycle Plan is to improve and amend the existing plan to suit the expanded pedestrian and bicycle infrastructure built since 2009. Due to the similar nature of the two plans, the review will also incorporate the merger of the plans into the Griffith Pedestrian and Bicycle Strategy. The strategy will encompass all areas previously addressed by the Griffith PAMP and Griffith Bicycle Plan.

The reviewed Pedestrian and Bicycle Strategy provides approximately 146km of designated path across the Griffith City Council Local Government Area. The cost of providing the entire Pedestrian and Bicycle network is approximately $42,000,000, which is well outside of Council's ten (10) year forecasted capital works budget. Council receives limited funding from Transport for New South Wales (TfNSW) for shared paths and kerb ramps and Council is required to pay half the construction costs if the work is on a local road. The funding from TfNSW is not guaranteed and must be applied for and approved annually before construction commences and the work must be approved once completed to ensure that the work meets TfNSW standards.

Council's current rate of construction means that the construction of the reviewed Pedestrian and Bicycle Strategy will not occur for almost 200 years. Council's current financial situation does not allow for

increased expenditure on footpaths or shared paths; as it is, Council is fortunate to be able to afford the limited development of footpaths around the city. Therefore a key component of the review will be identifying alternate revenue streams to assist in funding the proposed pedestrian and cycleway network.

1.1 Study Aims

The main aim of the Griffith Pedestrian & Bicycle Strategy is to develop a strategic pedestrian and cycleway infrastructure plan around Griffith and the surrounding areas to provide attractive, coherent, direct and safe access for pedestrians and cyclists.

The development of the Strategy is a step towards Griffith becoming a fully accessible community with high quality pedestrian and bicycle facilities that encourage walking and cycling as legitimate and sustainable modes of transport in the city. Three broad strategic goals were developed by Griffith City Council to supplement the original aim of the PAMP and Bicycle Plan and coincide with the above. These are:

- *An equitable and accessible transport network that allows for consistent and reliable travel.*
  - Provide good connectivity to key landmarks and attractors;
  - Improve the footpath and cycleway network;
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  - Improve the environment around pedestrian footpaths and cycleways;
- *A transport network that promotes walking and cycling as a mode of transport.*
  - Encourage walking and cycling to replace trips usually made by motor vehicles;
  - Provide suitable end of trip facilities across the network, especially at key landmarks and attractors.

1.2 Study Objectives

The principles of universal design highlight the rights of all road users, including pedestrians and cyclists, to access all destinations utilising the public road network. While motor vehicle travel is extremely popular, there are many people that need or prefer to travel on foot, by wheelchair, by motorised scooter or by bicycle. The universal design principles advise that all road users should be accommodated in the design and regulation of the transport network. The Universal Access Principles provide part of the basis of developing the Griffith Pedestrian & Bicycle Strategy.

In order to address the expansion of pedestrian and bicycle access along the road network and the concerns of the community since the 2009 review of the Griffith PAMP Study and Griffith Bicycle Plan; Council has commissioned the review of both documents. Several objectives were developed by Griffith City Council to ensure that the strategy addressed all of the community's concerns. The main objectives of the Griffith Pedestrian & Bicycle Strategy are:

i. to facilitate improvements in the level of pedestrian and bicycle access and priority; particularly in areas with high pedestrian and bicycle traffic;
ii. to reduce pedestrian and bicycle access severance and enhance safe and convenient crossing opportunities along major roads;
iii. to identify and resolve pedestrian and bicycle crash clusters;

iv. to facilitate improvements in the level of personal mobility and safety for all pedestrians and cyclists including children, disabled pedestrians, and seniors through the provision of enhanced pedestrian and bicycle infrastructure and facilities;
v. to ensure that pedestrian and bicycle facilities remain appropriate and relevant to the surrounding land use and user groups;
vi. to identify funding opportunities to assist Council in the future implementation of the Griffith Pedestrian & Bicycle Strategy;
vii. to facilitate the integration of walking/cycling into the transport system by providing a safe and visually pleasant environment; and
viii. to meet Council's obligations under the Commonwealth Disability Discrimination Act 1992.

1.3 Project Methodology

The Griffith PAMP was developed utilising the methodology outlined in the Transport for New South Wales Guidelines, *How to Prepare a Pedestrian Access and Mobility Plan* (2002). The methodology used is broken up into three broad stages; Objectives, Preparation and Implementation.

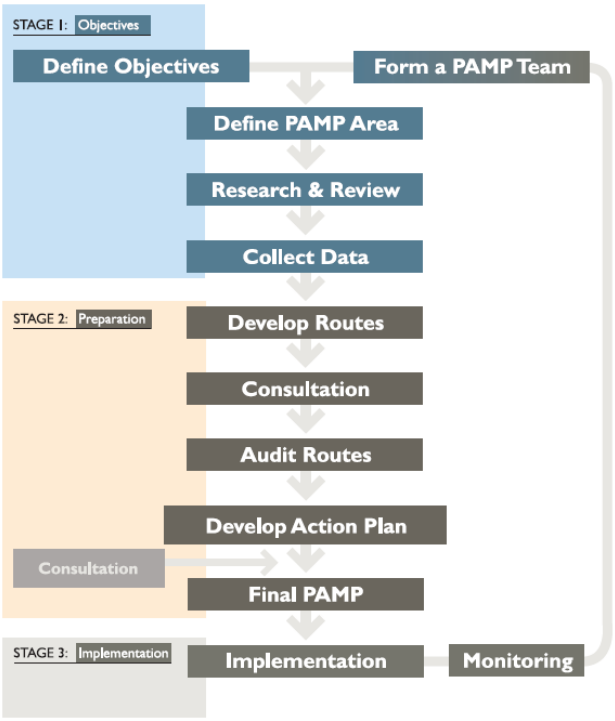


Figure 1 - PAMP Methodology (*How to prepare a Pedestrian Access and Mobility Plan*, 2002)

1.4 Universal Design

Universal design refers to set of seven principles applied to the design and construction of buildings, products and environments to ensure they are inherently accessible to all user groups including the

elderly, children and people with disabilities. The principles were developed by Ronald Mace and a group of architects, engineers, designers and design researchers at North Carolina State University in 1997. The intended use of the principles was 'to evaluate existing designs, guide the design process and educate both designers and consumers about the characteristics of more usable products and environments.'

Ronald Mace developed the term 'universal design' to describe the concept of designing all products and the built environment to be aesthetic and usable to the greatest extent possible by everyone, regardless of their age, ability, or status in life ("Ronald L. Mace on NC State University, College of Design" design.ncsu.edu. Retrieved 2013-07-26.). The principles developed guide the design of environments, products and communications. These principles are presented below:

I. **Equitable Use** – The design is useful and marketable to people with diverse abilities;
II. **Flexibility of Use** – The design accommodates a wide range of individual preferences and abilities;
III. **Simple and Intuitive Use** – Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level;
IV. **Perceptible Information** – The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities;
V. **Tolerance for Error** – The design minimizes hazards and the adverse consequences of accidental or unintended actions;
VI. **Low Physical Effort** – The design can be used efficiently and comfortably and with a minimum of fatigue; and
VII. **Size and Space for Approach and Use** – Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.

The Universal Access Principles form a key component in the development of Griffith's Pedestrian & Bicycle Strategy.

2. Griffith Local Government Area

Griffith is the regional service centre for the Murrumbidgee Irrigation Area and has become one of regional NSW's major industrial centres. Located at the junction of the Kidman Way, Burley Griffin Way and Irrigation Way, three major highways through the Riverina area, the Griffith City Council area covers approximately 1640.5 square kilometres and has a population of approximately 27,000 people.

Figure 2 - Griffith City Council - Locality Plan

Griffith and the surrounding area is a significant agricultural region in south-western New South Wales. The area has made significant contributions to the establishment and development of vineyards, orchards, cereal crops, pasture, rice, cotton and the emerging nut industry in the region and across the nation. The area's extensive agricultural sector is supplemented by Griffith's manufacturing, retail and commercial sectors. Recently there has been significant growth in the food processing, manufacturing, transport and logistics industries, which can be attributed to the decline of agricultural industries during the recent drought period and businesses diversifying in order to become more sustainable.

2.1 Physical Features and Topography

The topography of Griffith is typical of the western Riverina, flat, with the exception of the McPherson Range that provides variation to the landscape. The major physical features of the area include the National Parks, State Forests, mountain range and various water bodies.

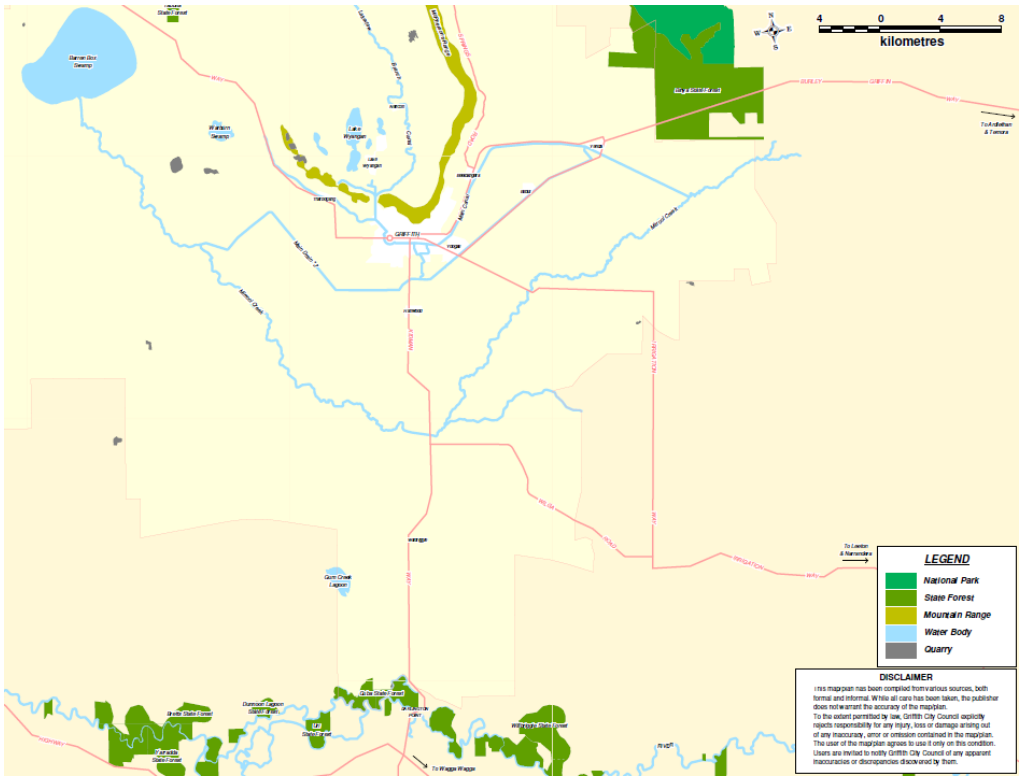


Figure 3 - Major Natural and Physical Features

Griffith is situated 35km north of the Murrumbidgee River, which flows for 1,690 km from its headwaters in the Snowy Mountains to its junction with the Murray River. The Murrumbidgee River supports large irrigated agricultural and irrigated pastoral developments in the western part of the catchment and includes the Murrumbidgee Irrigation Area (MIA) and Coleambally Irrigation Areas (CIA). There are high demands on surface water and ground water resources in terms of quality and quantity. Viticulture is a growth industry in the Griffith LGA and the numbers of agricultural processing industries are increasing demand on water resources.

The urban area of Griffith is set against the McPherson Range. The landform of the range and its existing vegetation provides a backdrop to the City in an otherwise flat cleared landscape. Consequently, its value as a visual element in the landscape is extremely high. The majority of the McPherson Range is preserved to date. Due to its elevation and steep terrain in the past it has not been suitable for agricultural purposes.

The McPherson Range is a small isolated natural reserve without connection to other fragments of natural ecosystems in the region. Within the range itself there are already developments which fragment parts of the range, such as roads, residential subdivision, orange groves and other agricultural land use.

2.2 Population Overview

2.2.1 Current Demographics

The population of the Griffith Local Government Area (LGA) was 25,641 as of the Australian Bureau of Statistics (ABS) 2016 Census. The Griffith Land Use Strategy's *Demographic Analysis of the Griffith LGA (2680 & 2681)* estimates that Griffith's population will increase to 34,905 by 2033.

A demographic analysis based on the ABS 2016 census of population and housing data for Griffith has been undertaken as part of the initial stages of the strategy. The analysis focused on age distribution, school attendance and journey to work information gathered in the census to justify the encouragement initiatives for walking and cycling developed as part of the strategy. The data has been compared to that of the Australian Bureau of Statistics 2011 and 2006 census surveys.

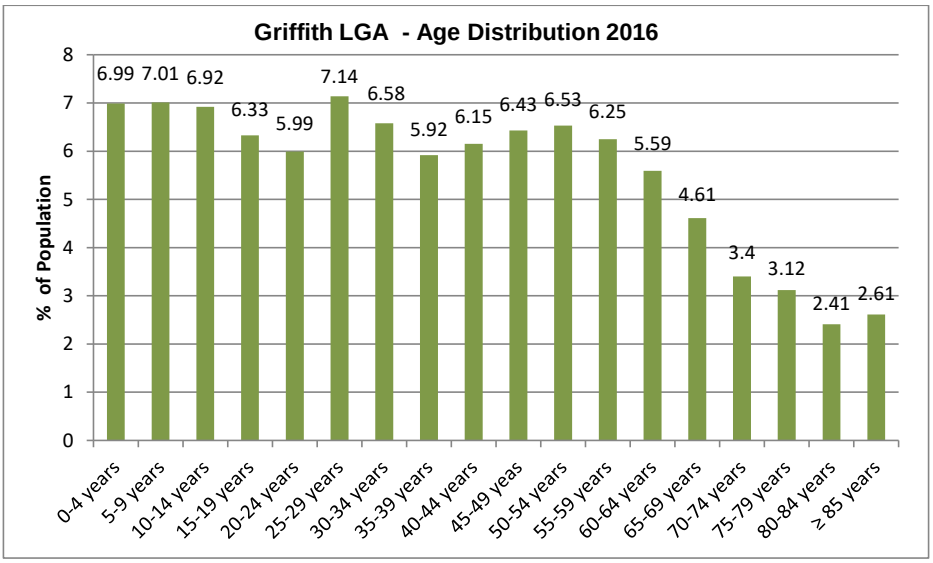


Figure 4- Age Distribution of Griffith's Population (ABS 2016 Census)

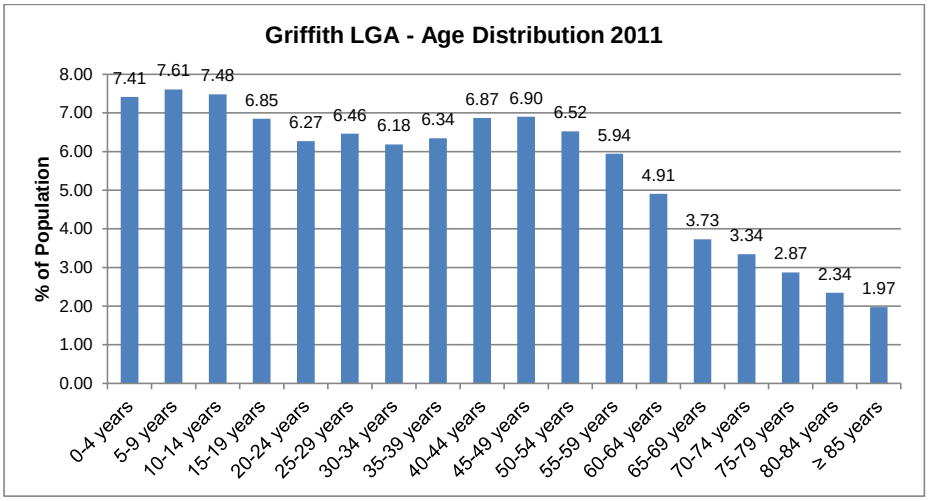


Figure 5 - Age Distribution of Griffith's Population (ABS 2011 Census)

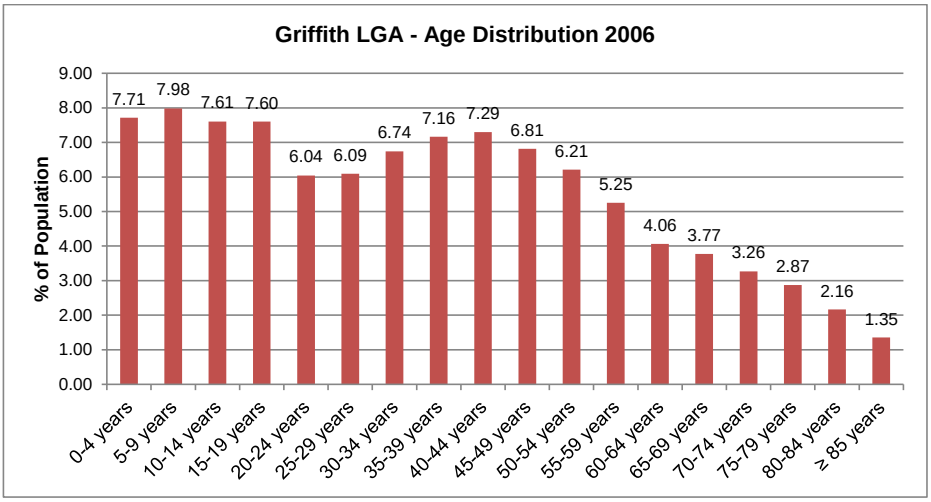


Figure 6 - Age Distribution of Griffith's Population (ABS 2006 Census)

The age distribution of Griffith's population in 2016 was analysed and compared with that of 2011 & 2006. The main outcomes of the analysis are detailed below:

- The working age population (15-59 years) accounts for 57.32% of Griffith's population, 14,697 people in 2016. This is compared to 58.33% of Griffith's population, 14,213 people, in 2011 and 59.19%, 14,901 people, at the time of the 2006 census. The working age population has increased however the proportion of the population that this age group represents has reduced by approximately two percent in ten years.
- Older people (over 65 years) account for 16.15% of Griffith's population, 4141 people, in 2016. This is compared to 14.25% of Griffith's population, 3,472 people, in 2011 and 13.43%, 3,195 people, at the time of the 2006 census. The older population of Griffith increased significantly in keeping with trends across Australia. The increasing age of Griffith's population results in the growth of the city's vulnerable user groups, which will

require specific infrastructure to increase the viability of walking or cycling as a legitimate mode of transport.

- Young people (15-29 years) account for 19.46% of Griffith's population, 4,990 people, in 2016. This is compared to 19.57%, 4,770 people at the time of the 2011 census and 19.74%, 4,697 people, at the time of the 2006 census. The amount and proportion of young people within Griffith has remained steady between the surveys. This is most likely attributed to the migration of young people to larger cities for tertiary education, careers and/or travel, however a significant number do return to Griffith. This user group is most likely to accept walking or cycling as a legitimate mode of transport for short distance journeys.
- The 0-14 age group accounts for the largest portion of Griffith's population at the time of all three surveys, but has decreased between 2006 and 2016. The vulnerable road users include people in this age group.

The population of the Griffith Local Government Area (LGA) that were attending an educational institution was 5,355 as of the Australian Bureau of Statistics 2016 Census. This represented an increase of 23 people from the 2011 ABS Census and an increase of 267 people from the 2006 ABS Census. The education trends identified in the 2006 census as part of the 2009 PAMP have altered minimally in the 2016 study; i.e. the infants/primary group remains the most prominent group attending an educational institution and approximately 49% of students attend secondary school or higher (previously 47%).

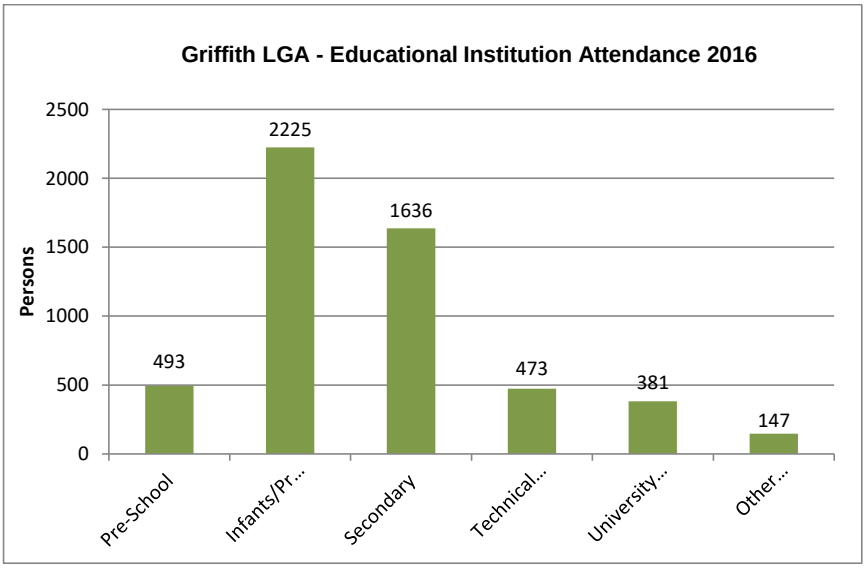


Figure 7 - Educational Institution Attendance (ABS 2016 Census)

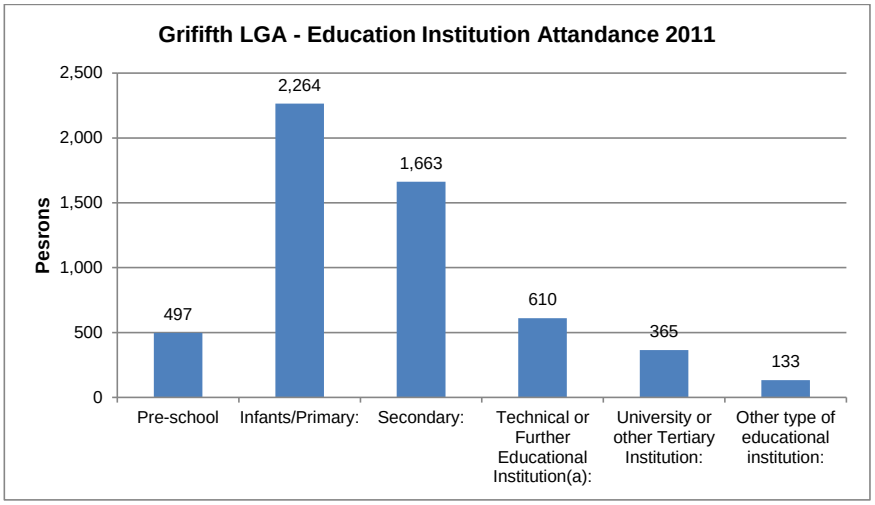


Figure 8- Educational Institution Attendance (ABS 2011 Census)

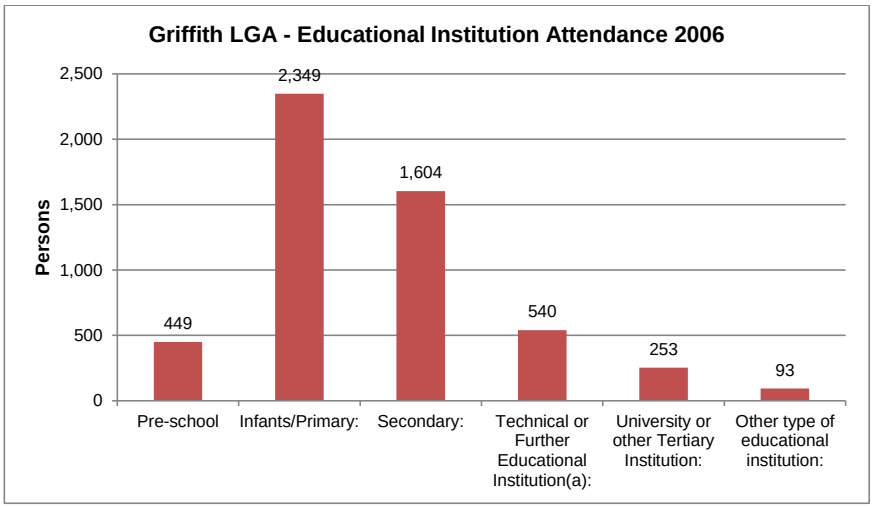


Figure 9 - Educational Institution Attendance (ABS 2006 Census)

Students have significant potential as a target user group to encourage walking and cycling as a legitimate mode of transport, especially secondary school and higher. Infants and primary school students are still vulnerable road users however with proper supervision and learning initiatives, such as the walking school bus, students will hopefully be encouraged to walk or ride to school.

The method of travel to work within the Griffith LGA is predominantly by car, with roughly 90% of people travelling either as the driver or passenger of a car. Griffith's regional locality has resulted in an over reliance on motor vehicles as the major mode of transport for all trips, this is reflected in the census data below. The data also shows that there was a marked increase of persons travel to work by car while the remaining modes of travel remained stable if not a slight decrease.

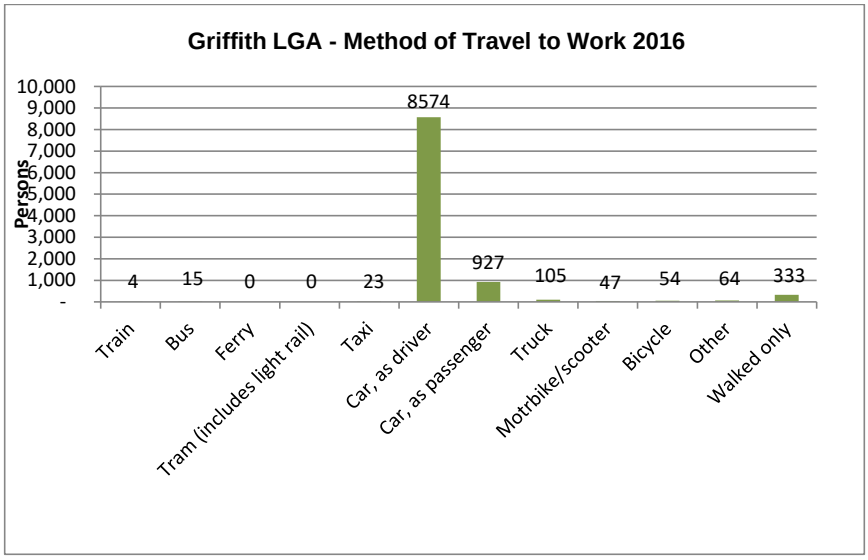


Figure 10 Figure 11 - Method of Travel to Work (ABS 2016 Census)

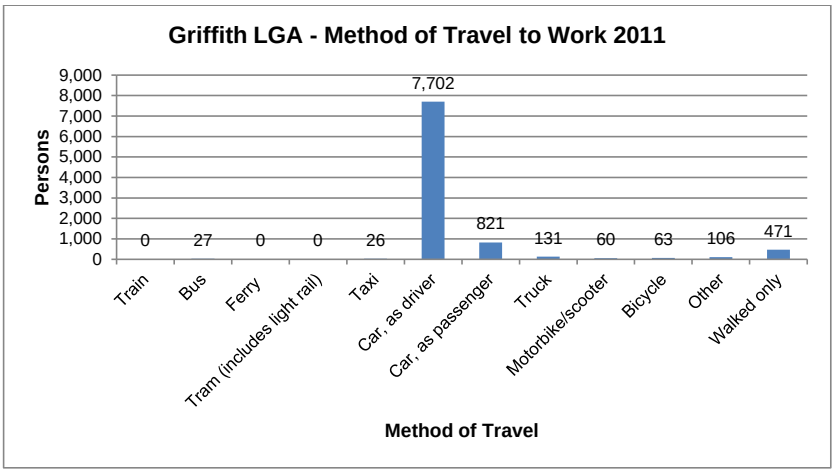


Figure 12 - Method of Travel to Work (ABS 2011 Census)

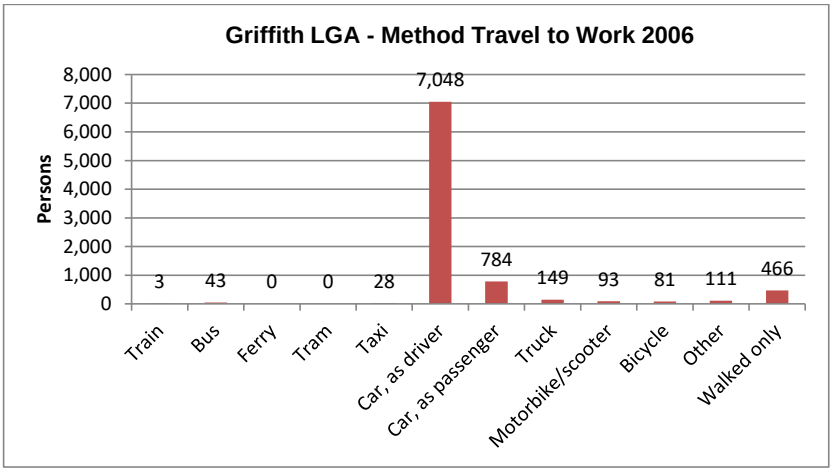


Figure 13 - Method of Travel to Work (ABS 2006 Census)

The method of travel to work in 2016 was analysed and compared with that of 2011 and 2006. The main outcomes of the analysis are detailed below:

- Car travel, either as a driver or a passenger, is the dominant choice for travel to work in Griffith. This accounts for roughly 93.6% in 2016, 90% of travel in 2011 and 89% in 2006.
- Walking accounts for approximately 5% of travel to work in both 2006 and 2011 and approximately 3.3% of travel to work in 2016.
- Bicycle travel is extremely limited in the Griffith LGA, accounting for less than one percent of all travel to work and has decreased over the past 10 years.

The method of travel to work information is solely based on the commute to and from employment, therefore other uses, i.e. recreation, tourism, etc.; are not measured. While this limits the scope of the information obtained through the census, it does provide a useful snapshot of the pedestrian and bicycle activity around Griffith.

2.2.2 Future Growth

Griffith City Council commissioned an independent research project to investigate the population growth of the local government area between 2008 and 2038 as part of the *Griffith Land Use Strategy*. Griffith's population growth is based upon a relatively volatile, but extremely prosperous local economy, therefore a number of factors based upon the strong population and economic growth had to be considered to determine the estimated population. Based on these factors, three estimates for Griffith's potential population were calculated, a conservative estimate, an increased growth estimate and a decreased growth estimate.

Conservative Estimate				Increased Growth Estimate				Decreased Growth Estimate			
2033		2038		2033		2038		2033		2038	
MIN	34,717	MIN	37,390	MIN	37,618	MIN	40,251	MIN	32,452	MIN	33,540
AVG	34,905	AVG	36,587	AVG	37,822	AVG	40,469	AVG	32,628	AVG	33,722
MAX	35,093	MAX	36,784	MAX	38,026	MAX	40,687	MAX	32,803	MAX	33,903

Table 1 - Griffith LGA Estimated Population Growth (*Griffith Land Use Strategy*)

The *Griffith Land Use Strategy* recommends that the average of increased growth rate estimate ne utilised for the purpose of the strategy, approximately 37,822 people. However given recent developments in relation to the water allocations for Irrigation areas due to the Murray-Darling

Basin Plan this is estimate is extremely optimistic. More recent analysis conducted by id Forecast has Griffith's population at approximately 28,900 people by 2031.

Griffith will continue to grow, especially as the local winery industry, particularly Casella Family Brands, McWilliams Winery and De Bortoli Wines, and Baiada Poultry continue to expand their current operations within the Griffith LGA. Griffith City Council have commissioned several strategies to address land development in response to the future growth of Griffith and surrounding areas. These include the Griffith Land Use Strategy, Griffith Local Environmental Plan 2014 and Griffith Growth Strategy 2030.

Based upon these strategies the majority of residential development that will occur within the Griffith LGA will be focused in three key areas; these are Collina/Beelbangera, Lake Wyangan and South Griffith. The will also be limited pockets of residential development allowed around the Bilbul, Hanwood, Yenda and Yoogali villages. In addition to the residential development, there is also provision for the expansion of the commercial sector along the Kidman Way, between Willandra Avenue and Thorne Road, and Along Mackay Avenue between Griffith and Yoogali.

2.3 Key Pedestrian Attractors and Generators

The urban layout, size and topography of Griffith means that most trips to schools, shops and recreation areas are relatively short and can be easily achieved by walking or cycling. The same is apparent for the villages surrounding the City.

The Griffith LGA is characterised by the centrally located city of Griffith with satellite villages surrounding the city centre that service the surrounding rural communities. The terrain throughout the LGA is relatively flat, with Scenic Hill providing steep terrain in the LGA. Griffith's terrain is conducive to the provision of a continuous, accessible path of travel throughout the LGA.

Public transport in Griffith is extremely limited with Griffith Buslines currently providing a public bus service for Griffith and the surrounding area accessing Griffith's suburbs Monday to Saturday. Patronisation of these services is very limited outside of school times with the majority of transport in Griffith focused upon personal modes, especially cars. This places emphasis on providing more footpaths to access the buses and provide a transport means when the bus is unavailable.

There are a number of pedestrian attractors and generators located throughout Griffith and the surrounding area. These usually consist of a combination of land uses including residential, educational, retail, commercial and industrial land uses which produce a broad range of pedestrian and bicycle activity. It is important that sufficient facilities are provided to cater for this activity.

2.3.1 Griffith's Central Business District

The central business district (CBD) of Griffith is the major centre of the Griffith City Council LGA. Griffith's CBD stretches from Crossing Street to the western end of Kookora Street from east to west and between Binya Street/Wakaden Street and Coolah Street from north to south.

Figure 14 - Griffith's Central Business District

The CBD of Griffith is the primary retail area of the LGA, with Banna Avenue and Yambil Street the main retail centres of Griffith. Griffith Central Shopping Centre and Griffin Plaza are both located off Yambil Street, between Jondaryan Avenue and Crossing Street, and have decentralised the retail sector of Griffith. These areas are the major attractors in Griffith with the majority of pedestrian activity in the city focused in this area, however this mainly associated with the end or start of trip phases of travel due to the significant amount of parking available within the city centre, especially in close proximity to these major retail areas, and the lack of connectivity to the rest of the city.

Griffith's CBD is also the major civic area with the Griffith City Council Chambers, Griffith Campus of TAFE, Griffith City Library, Griffith Regional Art Gallery, Griffith Police Station and the NSW State Government Office Block. In addition there are a number of recreational facilities located in the CBD including City Park, Griffith Regional Aquatic Centre, Griffith PCYC and a number of parks and playgrounds.

Griffith City Council's Urban Design and Strategic Planning Section have developed the Griffith CBD Strategy which was adopted by Council in October, 2015. The Griffith CBD Strategy and the Griffith Pedestrian and Bicycle Strategy will inform each other, as one of the main aims of the CBD strategy is to '*provide ideas that seek better management of traffic, car parking, cyclist and pedestrian movement*'.

One key area that the Griffith Pedestrian and Bicycle Strategy will have to address is increasing connectivity between the CBD and the residential areas of Griffith especially the north-south corridors. Currently there is limited connectivity in this area and there is need for improvement especially to Wakaden Street, Coolah Street and Canal Street where there is there is a significant percentage of higher density housing.

2.3.2 Local Village Centres

Griffith City Council's Urban Design and Strategic Planning Section are currently preparing village public realm strategies that will be informed by the updated Griffith Pedestrian and Bicycle Strategy. The Griffith LGA includes several village and neighbourhood centres in addition to the CBD of Griffith. These centres are spread around Griffith and service the villages and surrounding rural areas. The pedestrian facilities around these centres need to be improved to encourage multiple activities in the area which will support the local business activity. The areas identified by Griffith City Council include:

- Yenda;
- Yoogali;

- Hanwood;
- Beelbangera;
- Bilbul;
- Lake Wyangan;
- Tharbogang;
- Nericon;
- Driver;
- East Griffith; and
- North Griffith (Kelly Avenue)

Appendix B highlights the pedestrian and bicycle network in the above villages.

2.3.3 Residential Areas

The residential areas of the Griffith LGA are focused around Griffith and the surrounding villages, including Yenda, Yoogali and Hanwood. The residential areas in Griffith are mainly low to medium density housing with several pockets of higher density housing in close proximity to Griffith's CBD. The main objective of the strategy is to improve pedestrian and bicycle access throughout Griffith and the surrounding area, which will include the provision of appropriate pedestrians and bicycle facilities throughout Griffith's residential areas. The strategy will look to improve connectivity between the Griffith CBD, neighbourhood centres and residential areas.

2.3.4 Industrial Areas

Griffith and the surrounding area is a significant agricultural region in south-western New South Wales. Griffith is home to several of Australia's major agribusiness companies and several intensive industries such as food processing and wineries which are major employers in the Griffith area. In addition the Mooreville and Wickham Hill industrial areas service the Griffith LGA. The strategy will look to improve connectivity to these areas and encourage walking and cycling as a legitimate mode of transport to work.

2.3.5 Recreational Areas

Griffith and its surrounding villages offer residents and visitors a wide range of recreational experiences. These include natural attractions in addition to formal parks, playgrounds and sports centres for organised sports. The recreational attractors for the Griffith LGA include:

- *Ted Scobie Oval* – with playing fields, ovals, recreational activities and picnic areas;
- *Westend Sports Oval* – with playing fields, ovals, athletics track and sports stadium used for basketball, volleyball, badminton;
- *Griffith Showground* – with playing fields, ovals and recreational activities;
- *Lake Wyangan* – recreational water activities, multi-use trail, picnic areas;
- *Jubilee Sports Oval* – netball and tennis courts, multi-purpose ovals;
- *Scenic Hill* – extensive walking track, fire trails for use by mountain bike riders, some picnic areas and lookouts;
- *Griffith Regional Aquatic and Leisure Centre* - indoor heated swimming pools, learn-to-swim, gymnasium and social programs;
- *Golf Courses* – Griffith and Yenda;
- *City Park* – recreational activities, picnic areas;
- *E.W. Moore Oval* – sports stadium used for soccer, rugby league;
- *Ex-Servicemens Oval* – sports oval used for soccer, cricket, rugby league, Australian rules football;
- *Hanwood Sports Oval* – sports oval used for soccer, cricket;
- *Wade Park* – sports oval used for soccer, cricket, rugby league;
- Many other parks, sporting ovals and reserves around Griffith and the surrounding area.

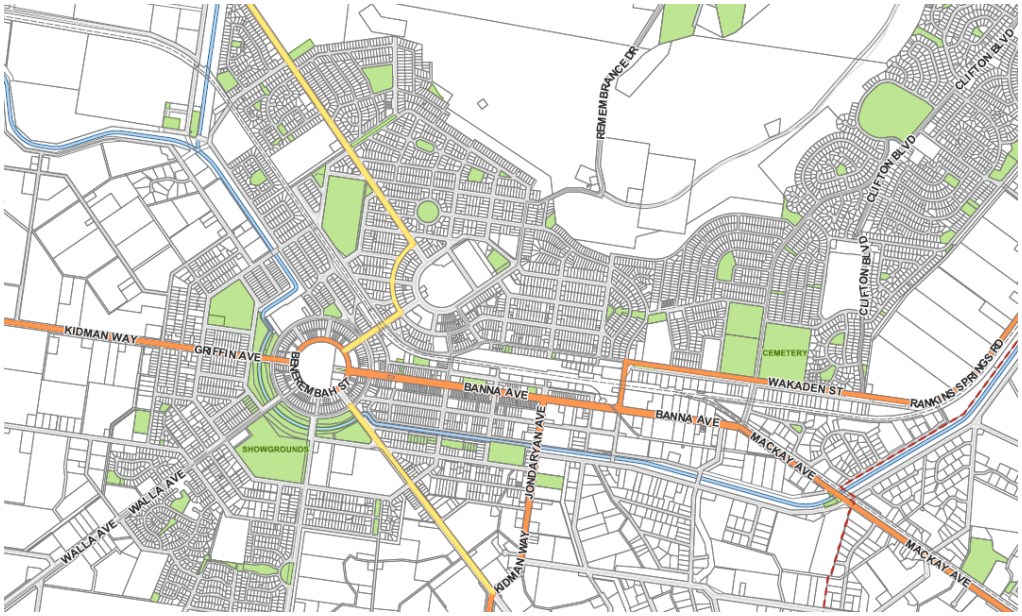


Figure 15 - Griffith's Parks & Recreational Facilities – shown in green

The PAMP and associated Bicycle Plan for Griffith is aimed at providing safe and accessible pedestrian paths and cycleways across the Griffith LGA. The review of these documents will address providing access along key recreational routes to provide access to the pedestrian attractions identified and encourage the public to walk to these facilities.

2.3.6 Vulnerable User Groups

There is a significant portion of the community that require additional support when walking to ensure that the safety and accessibility of the pedestrian infrastructure is maintained. These pedestrians are termed vulnerable or specific needs user groups and include children, parents with prams, people with mobility disabilities and the elderly. There are specific facilities/locations where these user groups are likely to be concentrated, in Griffith these include:

- Schools;
- Childcare facilities;
- Nursing homes;
- Retirement villages;
- Community facilities and centres;
- Disability service providers;
- Playing fields and sports facilities; and
- Parks and other recreational facilities.

Vulnerable user facilities are located throughout the Griffith LGA, therefore the PAMP will need to provide safe and accessible pedestrian routes between these facilities and the local centres identified.

2.4 Transport Infrastructure

The transport choices and existing infrastructure has important implications for the future pedestrian and cyclist's needs and demands of the Griffith LGA.

2.4.1 Traffic and Road Hierarchy

Griffith's role as a regional centre for the Murrumbidgee Irrigation Area and the western section of the Murray-Murrumbidgee region creates a significant amount of travel to the city. The Kidman Way (MR 321 & MR80), Irrigation Way (MR 80) and Burley Griffin Way (MR 84) form part of NSW's classified main road network and handle the majority of traffic entering and leaving Griffith.. These roads cater for most of the traffic accessing Griffith. Rankins Springs Road (MR 321) and Whitton Stock Route Road (MR 251), which form part of the state's classified regional road network, and a number of local roads, including Boorga Road, Beelbangera Road, Bringagee Road and Brogden Road provide a link to Griffith for the regions smaller town centres and agricultural areas.

Griffith's road network uses a hierarchy system to classify all of the remaining roads in the LGA. The road hierarchy is separated into five different classifications; arterial, sub-arterial, collector, local access and property access. The hierarchy can be used to assist in determining the type of footpaths required, crossing designs and the location of pedestrian and cycle facilities. Griffith's *Engineering Guidelines for Subdivisions and Development Standards* (2008) determines the level of service required for new subdivisions in regards to footpath and cycleways which can be used to determine the level of service required as part of the strategy.

Road Classification	Role	Examples
Arterial	Provide For major regional and inter-regional traffic movement High Traffic Volumes Carries bus and freight routes	Banna Avenue Mackay Avenue Jondaryan Avenue Griffin Avenue Wakaden Street
Sub-Arterial	Connects local areas and arterial roads Distribute traffic and bus services within urban areas Provides through route between arterial roads Carries bus and freight routes	Blumer Avenue Clifton Boulevard Wyangan Avenue Murrumbidgee Avenue Walla Avenue
Collector	Provide a link traffic between sub-arterial roads and local streets Distribute traffic and bus services within urban areas	Merrigal Street Binya Street Probert Avenue Noorilla Street Ortella Street
Local Access	Provide access to properties May be used for 'rat running' to avoid congested streets	Majority of roads within the Griffith LGA

Table 2 - Griffith City Council Road Classifications

Public transport in Griffith is extremely limited with Griffith Buslines currently providing a public bus service for Griffith and the surrounding area accessing Griffith's suburbs Monday to Saturday. Two services to Yenda are provided, one via Yoogali and Bilbul and the other via Beelbangera. A daily service to Darlington Point via Hanwood has also been established by Griffith Buslines in addition to the existing CountryLink services. Patronisation of these services is very limited outside of school times with the majority of transport in Griffith focused upon personal modes, especially cars. The promotion of bus transport as convenient alternative for local trips is required to help change the public's perception and increase patronage of bus services.

Community transport is available in Griffith for those that require assistance above that provided through normal public transport services. There is one community transport operators in the Griffith LGA; Intereach Griffith Community Transport who provide local and long-distance transport service for recreation, shopping, medical care, social services and social contact for older people or people with a disability.

The Griffith LGA is serviced by a sole taxi operator, Griffith City Taxis, with two taxi's being wheelchair accessible.

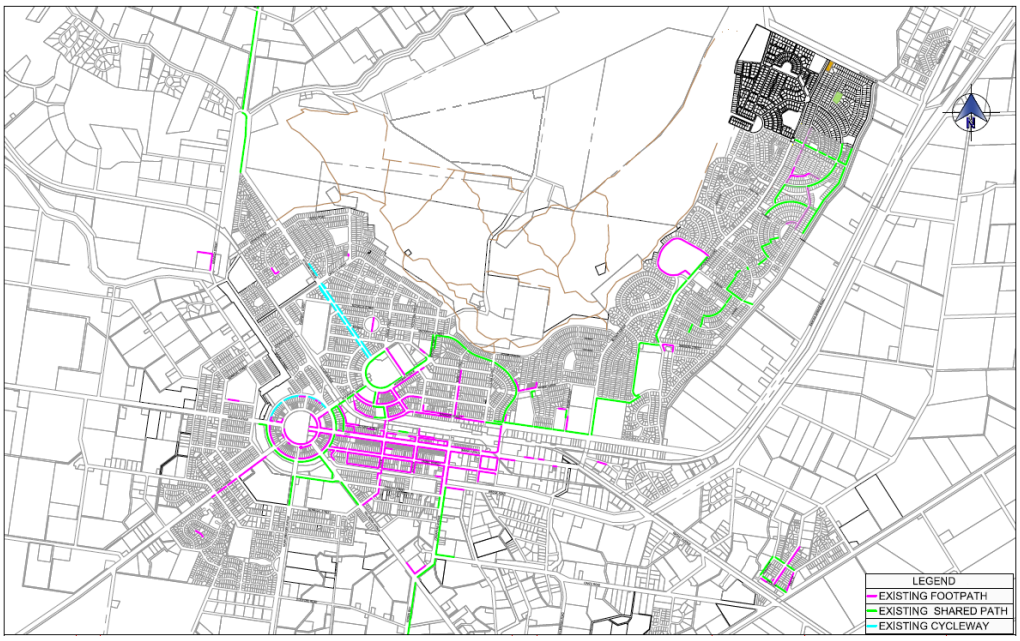


Figure 16 - Existing Footpath and Cycleway Infrastructure

2.4.2 Existing Infrastructure

The existing footpath, shared path and cycleway network servicing Griffith and the surrounding area does not provide adequate coverage. The footpaths are focused within the CBD of Griffith, the village centres of Yenda and Yoogali and several links extending to North Griffith, East Griffith, South Griffith, Collina and Lake Wyangan. There is an increasing demand and need for more extensive footpath coverage that caters for all levels of mobility.

There is a significant portion of Griffith that is not serviced by footpaths or where there are footpaths present these are too narrow or obstructed to allow wheelchair or pram access. The condition, including grades and widths, of footpaths, kerb ramps, and pedestrian crossing points is also inconsistent throughout Griffith. This can be attributed to a number of key factors these can include the time of construction, natural topography and driveway levels. The ageing population has resulted in the prevalence of motorised wheelchairs and mobility scooters utilising footpaths. In addition the prams are now wider. Therefore the minimum footpath width of 1.2m should be increased to accommodate these wider mobility aids.

Recently Griffith City Council has increased the amount of funding allocated to the development of Griffith's shared path network and has applied for funding from TfNSW to assist in the construction. However while this shift in funding allocation has increased the pedestrian infrastructure in Griffith significantly, at the current rate of construction the delivery of the 2009 PAMP will take approximately 200 years.

2.4.3 Future Needs

Griffith is one of regional NSW's major centres, with a strong economy and is set to grow in the future. The Griffith Local Environmental Plan and Griffith Land Use Strategy identify Collina/Beelbangera, Lake Wyangan and South Griffith as expansion areas for residential development over the next thirty years. Griffith's terrain and climate are ideal for walking and cycling, therefore upgrade and expansion of the existing infrastructure is necessary to promote these as a legitimate mode of transport.

The population of vulnerable road users living in Griffith is growing, including children (0-14 years old), the elderly (over 65 years old) and people with a disability or requiring assistance to conduct core activities. Pedestrian facilities should cater to a range of mobility aids, resulting in wider footpath and kerb ramp requirements. The facilities constructed/reconstructed should be level and provide sufficient crossing opportunities. New developments will provide facilities catering to pedestrian and cyclist amenity; this has been reflected in *Griffith's Engineering Guidelines – Subdivision and Development Standards*.

3. Literature Review

In order to properly develop the pedestrian and bicycle strategy, research regarding the guidelines and processes developed by national and state road authorities has been conducted. Walking and cycling are important modes of travel, increasing the proportion of pedestrian and bicycle journeys can make a significant contribution to achieving a better quality of life and environment for all.

Research has been conducted to establish the measures implemented by regional centres across Australia to improve pedestrian and bicycle access. Council's research determined that the majority of regional centres have conducted studies addressing the infrastructure requirements and potential active measures to encourage walking and cycling as a legitimate mode of transport.

Research regarding Griffith's road network and the transport planning Griffith City Council has previously completed has also been conducted. Griffith City Council's Pedestrian Access and Mobility Plan (PAMP) was originally completed by GHD Consultants in February 2004. Griffith City Council's Bicycle Plan was originally completed in 1996. A review of both the PAMP and Bicycle Plan was conducted by UrbanArc Pty Ltd in conjunction with Griffith City Council's engineering staff in 2009. The PAMP and Bicycle plan provide an important framework for the development of pedestrian and cycling infrastructure and increasing the sustainable safety, convenience and mobility of areas identified by the community.

3.1 Guidelines

Road authorities, including TfNSW and local Councils, have a responsibility to provide safe, convenient and coherent pedestrian and cycle network to encourage walking and cycling as legitimate modes of transport. This has led to the development of a significant amount of literature regarding the development of a pedestrian or cycleway network and the associated infrastructure by a variety of agencies, including Austroads and TfNSW. These documents establish the minimum standards required for pedestrian and bicycle access and provide management techniques to minimise the impact on the road network. These guidelines include:

- *How to Prepare a Pedestrian Access and Mobility Plan* (2002); Roads & Maritime Services
- *NSW Bicycle Guidelines* (2005); Roads & Maritime Services
- *Planning Guidelines for Walking and Cycling* (2004); Roads & Maritime Services and NSW Department of Infrastructure, Planning and Natural Resources
- *Guide to Road Design – Part 6A Pedestrian and Cyclist Paths* (2017); Austroads
- *Guide to Road Transport Planning* (2009); Austroads
- *Guide to Traffic Management – Part 4 Network Management* (2020); Austroads

Each of these guides address the issues concerning pedestrian and bicycle access in urban areas and provides details on the minimum design standards for the required infrastructure.

3.1.1 How to Prepare a Pedestrian Access and Mobility Plan

The guide was prepared by the RMS (known as the Roads and Traffic Authority at the time) to provide council staff, community groups and other parties a manual for the preparation of a PAMP. The guide provides interested parties, i.e. health authorities, an understanding of the pedestrian environment and the planning process. The guide is based on the methods several NSW councils used to develop their own plans, and provides a framework that is considered best practice.

The guide provides a step-by-step approach to pedestrian planning and details several significant issues that require consideration during all stages of the planning process.

3.1.2 NSW Bicycle Guidelines

The guidelines were prepared to provide assistance to road designers, engineers and planners when designing and constructing bicycle transport facilities. The document provides technical assistance for the development of the bicycle network across a number of different conditions. The document is intended to be used as a best practice guide for the development of bicycle transport networks across New South Wales.

The guide identifies the key principles for the development of an efficient and useable bicycle transport network that meets the needs of all cyclists. These principles can also be applied to pedestrian transport networks. The NSW Bicycle Guidelines identifies coherence, directness, safety, attractiveness and comfort as the key principles of the bicycle transport system. In addition to these principles the guidelines identify three issues required to be considered during design; the road/cycleway function, the priorities assigned to cycleways and adjacent roads and the surrounding speed environment.

The guidelines detail the different types of facilities utilised by cyclists, including intersection treatments, shared paths and separated paths, and details the functions of each facility including the most appropriate use for them. Information and guides regarding the surfacing, signposting and line marking of bicycle facilities are also provided.

3.1.3 Planning Guidelines for Walking and Cycling

The NSW Department of Planning developed the *Planning Guidelines for Walking and Cycling* in 2004 to assist land-use planners and associated professionals improve the understanding of walking and cycling as it relates to their work. The guide aims to improve planning practices in regards to walking and cycling to increase access to urban services and transport via pedestrian and bicycle facilities and reduce car use to create healthier urban areas. The guide highlights several support structures and policies, ranging from international to local, that assist the planning for pedestrian and bicycle transport networks.

The guidelines also identify development as a key contributor to the provision of a safe and comfortable walking and cycling environment. The guidelines advise Council's to include pedestrian and bicycle facilities when drafting contribution plans and planning policies/instruments for developments. Developments are an opportunity to improve the planning for walking and cycling within an area through Transport Management and Accessibility Plans, Transport Access Guides and provision of bicycle parking and end-of-trip facilities.

3.1.4 Guide to Road Design – Part 6a Pedestrian and Cyclist Paths

The guide forms part of the Austroads *Guide to Road Design* series and is concerned with the design of paths for safe and efficient walking and cycling. The guide provides a brief introduction to planning and the need for a path, describes the types of path and covers the requirements of path users. However, the main focus of Part 6A is the geometric design of paths and related facilities such as intersections between paths, and terminal treatments. Detailed guidance is provided on path location, alignment, width, clearances, cross fall, drainage and sight distance requirements.

The location and design of paths may be influenced by a range of aspects that need to be considered and facilities that need to be accommodated within roadsides. In particular, designers should refer to the Part 6: Roadside Design, Safety and Barriers and Part 6B: Roadside Environment of the Austroads *Guide to Road Design*.

The design of pedestrian and cyclist paths may also be influenced by design considerations and requirements covered in other parts of the *Guide to Road Design*. In addition, road designers should also refer to relevant parts of the Austroads *Guide to Traffic Management* in relation to

traffic management devices and requirements that may need to be accommodated within a roadside or may otherwise influence the design.

3.1.5 Guide to Road Transport Planning

The guide reviews the developments in transport planning across Australia and New Zealand and identifies the issues which are required to be addressed when developing network or route infrastructure. The guide highlights the key issues of transport planning identified through consultation with the relevant government authorities and literature review from around the globe. The guide identified the development of 'planning processes consistent with the expectations of both the community and industry, interface between planning and operations within road agencies at the national and state/territory levels and principles for road transport planning adopted for urban and rural areas at the different levels of the network, in particular road route and link-level planning'.

The guide identifies the critical aspects of good transport planning by examining the current guidelines, processes and practices of road authorities. The guide provides an introduction into road transport planning initially focusing upon network and corridor planning. The guide then details the concepts required to undertake proper road route and link planning focusing on the planning principles and processes currently used. The aim of the guide is to compare current Australian practices with the best practices from across road transport planning.

The guide provides an insight into the issues required to be addressed in all forms of road transport planning, including pedestrian and bicycle transport planning. The guide also identifies the processes and practices in road transport planning considered to be best-practice and applies them to those currently utilised in Australia.

3.1.6 Guide to Transport Management – Part 4 Network Management

The guide forms part of the Austroads *Guide to Traffic Management* series and is concerned with the management of traffic at the network level. The guide identifies the different categories and characteristics of road user and network, the needs of the road user and the processes used to balance/prioritise the needs of the competing users. The guide also identifies different traffic engineering solutions that are used to address traffic needs at the network level, including access, traffic signals, parking and lane allocation measures.

The guide briefly discusses the management of the pedestrians and cyclists on the transport network. The report identifies the issues presented by pedestrian and cyclist movements within urban areas and provides several strategies used to manage the associated networks.

The guide provides an insight into the management of all forms of road transport networks, including the pedestrian and bicycle transport networks. The guide identifies the processes and practices used to successfully manage pedestrian and bicycle networks.

3.1.7 Disability Discrimination Act 1992

The Disability Discrimination Act 1992 (DDA) provides that a person with a disability has a right to have access to places used by the public. The definition of "disability" in the DDA includes physical, intellectual, psychiatric, sensory, neurological, and learning disabilities, as well as physical disfigurement, and the presence in the body of disease-causing organisms. This broad definition is meant to ensure that everyone with a disability is protected.

The Disability Discrimination Act (DDA) makes it against the law for public places to be inaccessible to people with a disability. Places used by the public include: public footpaths and walkways, parks, public swimming pools, public toilets, pedestrian malls, libraries, retail and commercial premises, sporting venues, social and sporting clubs, Government offices, public transport, hospitals, Government-run services.

This applies to existing places as well as places under construction. To comply with the DDA existing places may need to be modified to be accessible (except where this would involve "unjustifiable hardship"). Every area and facility open to the public should be open and available to people with a disability. They should expect to enter and make use of places used by the public if people without a disability can do so.

3.2 Pedestrian Access & Mobility Plans

Griffith's situation is not unique in Australia, as a major regional centre required to provide significant pedestrian and bicycle transport network throughout the city and surrounding area that is coherent, direct, accessible and safe. Most regional centres across Australia have addressed this issue through the development of a Pedestrian Access and Mobility Plan or similar documents. These studies address the use, extent and condition of the existing infrastructure and the future needs of the community including the development of infrastructure and programs promoting walking and cycling as a legitimate mode of transport.

A selection of Pedestrian Access and Mobility Plans and similar documents were reviewed during the preparation of the Griffith Pedestrian and Bicycle Strategy. The documents selected represented a diverse cross-section of Council areas and presented a broad range of strategies developed to address pedestrian and bicycle access within urban and rural areas. These plans included:

- *Warringah Pedestrian Access and Mobility Plan* (2011); Aurecon Australia;
- *Kyogle Council Pedestrian Access and Mobility Plan* (2009); Kyogle Council;
- *Pedestrian Access & Mobility Plan* (2010 Review); Ballina Shire Council;
- *Clarence Valley Council Bike Plan and Pedestrian Access and Mobility Plan* (2008); QED
- *Port Macquarie-Hastings Pedestrian Access and Mobility Plan DRAFT* (2014); Port Macquarie-Hastings Council;
- *Albury City Pedestrian Access and Mobility Plan (PAMP) 2010-2015* (2010); Albury City Council; and
- *Albury City Bicycle Plan 2014-2019* (2014); Albury City Council.

Each of these reports has addressed the issues concerning pedestrian and bicycle transport in the area of the study. The review of these documents provided Griffith City Council with an understanding of the issues being addressed across Australia and how they can be applied to Griffith and the surrounding area.

3.3 Griffith Studies

Griffith City Council has conducted several investigations of traffic behaviour throughout the city and its surrounds. The reports developed through these investigations form the basis of traffic management around Griffith, including pedestrian and bicycle transport. These reports include:

- *Griffith Pedestrian Access & Mobility Plan Review* (2009); UrbanArc;
- *Griffith Bicycle Plan Review* (2009); UrbanArc;
- *Griffith Central Business District Strategy (Draft)* (2015); Griffith City Council;
- *Assessment of Traffic Growth and Impacts in Griffith* (2002) – Scott Wilson Nairn;
- *Traffic Impact Study, Kidman Way* (2002) – Brown Consulting; and
- *Griffith Land Use Strategy Beyond 2030* (2012); Griffith City Council.

Each of these reports has addressed different issues concerning traffic in Griffith. While the investigations have addressed vehicular movements and behaviour and formulated recommendations for the improvement of traffic flow throughout the city, only the Griffith Pedestrian Access & Mobility Plan Review and Griffith Bicycle Plan Review include a strategy the development of a pedestrian and bicycle transport network around Griffith.

3.3.1 Griffith Pedestrian Access & Mobility Plan Review

In 2009 Griffith City Council engaged Urban Arc to undertake a Pedestrian Access and Mobility Plan (PAMP) Review for Griffith town centre and surrounding villages. The bounds of the study include the limits of the Griffith City town area, approach feeder corridors to the township and the periphery villages.

The focus of the study was to identify new pedestrian facilities, upgrade of existing facilities and the integration of the network to achieve a coherent and direct pedestrian network for Griffith and the surrounding villages.

Existing and potential pedestrian / cycling routes were identified. These were prioritised to produce a pedestrian action plan for short, medium and long term implementation. The actions identified on high priority routes were to be completed first subject to the availability of appropriate funding.

3.3.2 Griffith Bicycle Plan Review

In 2009 Griffith City Council engaged Urban Arc to undertake a Bike Plan Review for Griffith town centre and surrounding villages. The bounds of the study include the limits of the Griffith City town area, approach feeder corridors to the township and the periphery villages.

The focus of this study was to identify new cycling facilities, upgrade the existing facilities and integrate the network of cycle ways to achieve a coherent and direct cycling network for Griffith city and villages.

Existing and potential cycling routes were identified. These were prioritised to produce a bicycle action plan for short, medium and long term implementation. The actions identified on high priority routes were to be completed first subject to the availability of appropriate funding.

3.3.3 Griffith Central Business District Strategy

The Griffith CBD Strategy is a working document aimed at directing the future development of Griffith's city centre. The purpose of the strategy is:

- To develop an attractive place to live, work and stay;
- To improve the connection and quality of public open space;
- To reinforce Griffith's role as a regional centre; and
- To promote sustainable development and lifestyles.

The strategy identifies that Griffith has poor pedestrian and bicycle infrastructure within the CBD, this includes poor connectivity of paths and the lack of a dedicated cycle network through the CBD. The strategy makes several recommendations for the improvement of the pedestrian and cycleway network in Griffith's CBD. These recommendations focus on the improvement of the existing pedestrian facilities and developing the cycleway network in the CBD.

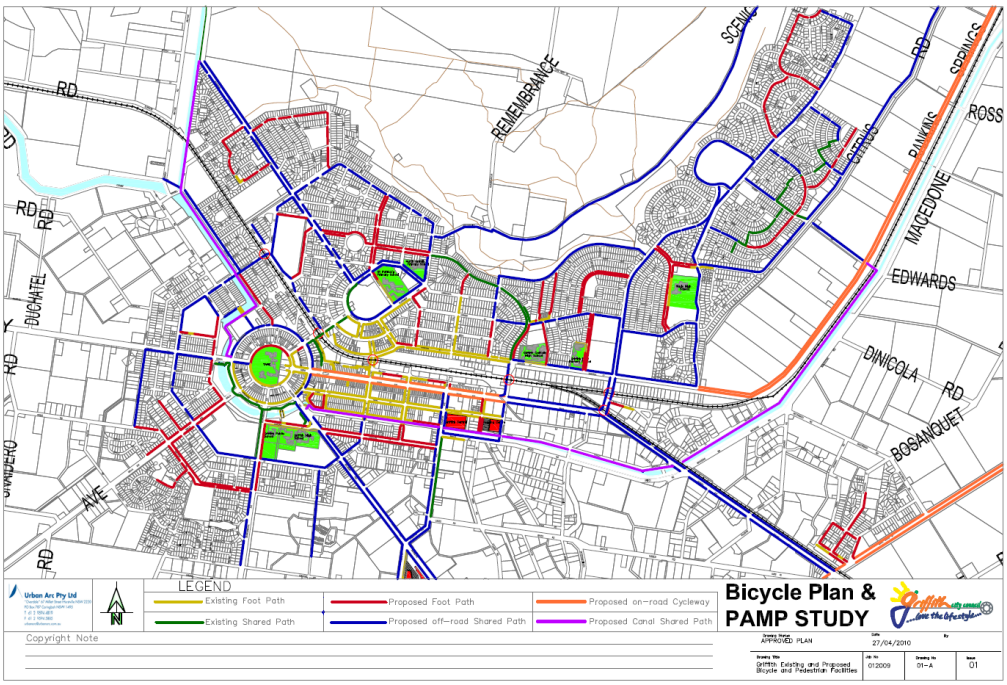


Figure 17 - Griffith Bicycle Plan and PAMP Study - Existing and Proposed Network

3.3.4 Assessment of Traffic Growth and Impacts in Griffith

The Scott Wilson Nairn report was commissioned by Griffith City Council and formed part of the development of the Section 94 Contribution Plan for Griffith City Council. The report investigated the transport routes and facilities required to service the growth of Griffith to the year 2030. This included the development of a ten-year capital works infrastructure to improve the city's key road and traffic infrastructure and improve the road network for future urban expansion.

The report addressed the improvements required to Griffith's road and traffic infrastructure to ensure that the city's road network is able to operate effectively in the future. The study does not differentiate between the different types of traffic and therefore has not considered the impacts of the heavy vehicle travel through Griffith. The report provides a good framework for the development of key road and traffic facilities.

The report also identified the 1996 Griffith Bicycle Plan as the framework for the development of bicycle infrastructure within Griffith. The report recommends Council develop and maintain the city's bicycle infrastructure in accordance with the plan to meet the present and future needs of Griffith's cyclists.

The study does not consider pedestrian access.

3.3.5 Traffic Impact Study, Kidman Way

Griffith City Council commissioned Brown Consulting to undertake a Traffic Impact Assessment of the Kidman Way between Griffith and Hanwood. The assessment was conducted to identify the current and future impacts of traffic along the Kidman Way and produce a strategy to provide the best level of transport service to the community. The assessment focused on traffic efficiency, minimising traffic conflict and improving road safety along this section of the Kidman Way.

The report details the strategies and improvements required to the road network to the south of Griffith to ensure that future traffic demands are met. The report assumes that the land between Griffith and Hanwood will be developed for commercial and retail purposes. The completion of the report's recommendations is required to cater for this development. The report states that should this development not occur; Griffith's economy may not be able to support the proposed improvements.

The report indicates that the number of pedestrian and cycleway movements were not significant at the time of the study, other than within the Hanwood village especially within close proximity to the Hanwood Public School and Hanwood Store.

The study recommends the provision of a footpath and a cycleway upon either side of the Kidman Way. In addition to the paths, the study also recommends the construction of pedestrian crossings at each intersection along the Kidman Way with locations in Hanwood and at Willandra Avenue being identified as possible locations for an overpass/underpass.

3.3.6 Griffith Land Use Strategy Beyond 2030

The Strategy was developed to provide direction for the land use and spatial development of the Griffith Local Government area over the next thirty years. The document forms the framework for the development of the Griffith Local Environmental Plan 2014. The main objectives of the strategy are to encourage:

- Spatial development responsive to the forecasted and/or perceived needs of the community and local economy;
- Spatial development carefully managed to prevent or minimise impacts on the natural environment; and
- The protection of natural and built assets from inappropriate rural and urban development that would prejudice the rural and urban attributes of Griffith.

The strategy identifies the constraints to the development of land throughout the Griffith Local Government Area and proposes the future use of this land. The strategy also included the development of revised implementation plans, i.e. the Local Environmental Plan, Development Control Plans, etc.

4. Pedestrian Crash Data

The pedestrian crash data for the Griffith LGA over the past five years 2015 to 2019 has been obtained from Transport for New South Wales. The data was examined and plotted to identify crash clusters and any contributing factors to the incidents.

The collected data details 16 pedestrian crashes within the Griffith LGA between 2015 and 2019. However a detailed breakdown of the crash data was not available for all of this period.

The results of the crash analysis are summarised below:

- **16 crashes** occurred, including 1 fatal crash and 14 crashes causing injuries; and
- The majority of crashes, 13, occurred during the day. The remaining crashes occurred at dusk or in darkness.

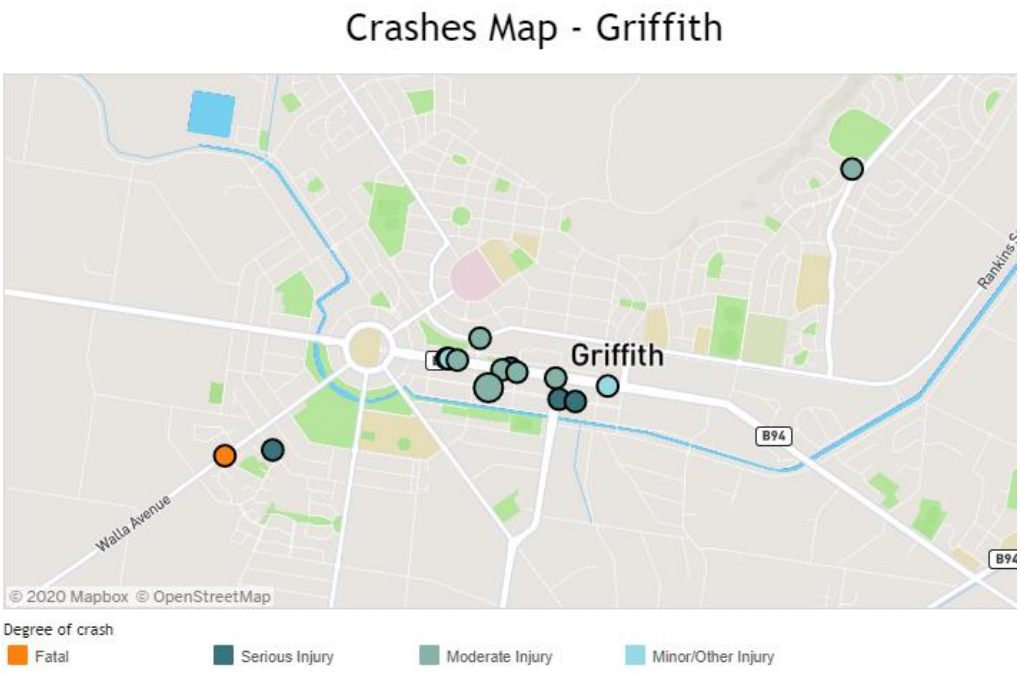


Figure 18 - Pedestrian Injury Crashes

50% of pedestrian crashes occurred along Banna Avenue, most of these crashes were reported within a 600m stretch of the road between Kooyoo Street and Wayeela Street. The remaining crashes occurred within close proximity to a large pedestrian generator/attractor, such as Griffith Central Shopping Plaza, Collina Oval and Dave Taylor Park/Pioneer Playground. These statistics highlight the need to improve pedestrian safety and driver awareness in these areas, especially along Banna Avenue.

The single pedestrian fatality occurred at night in fine weather along Walla Avenue, an urban collector road to the south west of Griffith with no street lighting or footpaths. The circumstances surrounding the incident are uncertain; however the contributing factors to the incident, such as time of day, weather, types of vehicles and whether alcohol, speed or fatigue contributed, are detailed in the data provided by NSW Centre for Road Safety.

5. Prioritised Network Development

The proposed pedestrian and cycleway network developed as part of this strategy was established based upon the Griffith Pedestrian Access & Mobility Plan Study 2009, the Griffith Bicycle Plan 2009, the recent development of Griffith and the changing priorities of the community. The prioritised pedestrian and bicycle network developed as part of this Strategy is illustrated in Appendix C. The network has been prioritised based upon a number of factors; including the route hierarchy, surrounding land uses, traffic impact, safety and continuity. The Strategy comprises of a series of footpaths, cycleways and shared paths throughout Griffith and the surrounding area linking key pedestrian and cyclist generators and attractors. Council staff have also developed a weighted criteria scoring system which is also used in the assessment of priorities for paths and their ranking determination. The weighted criteria scoring system has been developed using the methodology, literature reviews and Transport for New South Wales technical directions.

5.1 Route Hierarchy

A route hierarchy has been developed for the proposed pedestrian and cycleway network to assist in determining the appropriate infrastructure to be installed along the routes identified in the strategy. The main factors considered when determining the route hierarchy were the number of generators and/or attractors along the route and the adjacent road hierarchy. Any evidence of pedestrian desire lines and the potential for use by vulnerable user groups were also considered.

The route hierarchy of the proposed pedestrian & bicycle network is divided into Principal, Secondary, Collector or Recreational routes. The different categories identified within the hierarchy determine the purpose and role of a route. These have been summarised in the table below.

5.1.1 Primary Routes

Principal routes were identified by the presence of all or a number of the below characteristics along the route:

- ***A major attractor/generator;***
- ***Many attractors and generators;***
- ***A strong pedestrian desire line;***
- ***Significant volume of vulnerable user groups;*** and/or
- ***Adjacent to and arterial road or a collector road serviced by public transport.***

Principal routes focus on providing suitable facilities for the pedestrian types and activities undertaken in an area. Footpaths, preferably shared paths, should be provided along both sides of the roadway with convenient road crossing points with accessible kerb ramps at suitable locations.

5.1.2 Secondary Routes

Secondary routes were identified by the presence of a number of the below characteristics along the route:

- ***Connection between nearby Principal Routes;***
- ***Areas of medium-intensity pedestrian activity;***
- ***Along strong recreational or local routes;***
- ***Vulnerable user groups links;*** and/or
- ***Adjacent to and arterial road, sub-arterial road or a collector road serviced by public transport.***

Secondary routes still focus on providing suitable facilities for the pedestrian types and activities undertaken in an area. A footpath, preferably a shared path, should be provided along one side of the roadway with convenient road crossing points with accessible kerb ramps at suitable locations.

5.1.3 Collector Routes

Collector routes were identified by the presence of a number of the below characteristics along the route:

- ***Connection between isolated generators/attractors to principal or secondary routes;***
- ***Areas of medium- to low-intensity pedestrian activity;***
- ***Intra-regional recreational routes;*** and/or
- ***Intra-regional links between centres.***

Collector routes generally link Principal and Secondary route to the wider pedestrian population. A footpath should be provided along one side of the roadway with convenient road crossing points with accessible kerb ramps at suitable locations.

5.1.4 Recreational Routes

The routes identified as part of the Pedestrian & Bicycle Strategy have incorporated recreational links, reflecting the lifestyle of Griffith's residents where walking is a major recreational activity. The paths identified in the strategy fulfil two roles, providing both an alternate means of transport and facilities for recreational walking and cycling for residents of the Griffith LGA.

The main recreational route identified is the shared path between Griffith and Lake Wyangan, including a path around the shore of the lake. A shared path currently exists along Boorga Road and Jones Road, beginning at the cul-de-sac north of Crump Close and terminating at the causeway on Jones Road. The existing path sees frequent use by recreational walkers and cyclists especially during daylight savings. The continuation of this path between the lakes along Jones Road and then along the shore of the North Lake is a natural progression of this recreational path.

The existing off road trails located around Scenic Hill have also been identified as recreational routes, although no works have been proposed for the trails. An off road shard path has been identified along Scenic Drive to compliment the trails and provide a link to the Hermits Caves located along the eastern face of Scenic Hill.

5.2 Generation of Preliminary Network

The Griffith Pedestrian & Bicycle Strategy is both a review and amalgamation of the Griffith Pedestrian Access & Mobility Plan Study 2009 and the Griffith Bicycle Plan 2009. The routes identified as part of these documents form the basis for the strategy. Council staff have reviewed the all routes identified to reflect the recent development of Griffith and the current requirements for pedestrian footpaths, shared paths and cycleways.

Public transport options are minimal in Griffith, being limited to a single public bus service and a sole taxi operator servicing the Griffith LGA. The limited availability of public transport and Griffith residents' reliance on personal transport options emphasises the necessity of providing pedestrian footpaths, shared paths and cycleways for access to the public transport and as a separate mode of transport. The provision of high quality pedestrian and bicycle infrastructure that is coherent and direct will enhance safety and attractiveness of walking and cycling as a legitimate mode of transport.

Transport Authorities must compete for funding with other levels of government. Funding for pedestrians and cyclists can usually be facilitated if the wider community benefits are identified. Many expensive initiatives are applicable only to a small range of problems. The wider range of low cost minor measures must also be given due consideration.

In reviewing the Griffith Pedestrian Access & Mobility Plan Study 2009 and the Griffith Bicycle Plan

2009 an attempt was made to measure its performance. Measurements of a plan performance against the study objectives is challenging because the objectives are qualitative, which makes measurement difficult, and rating of the importance of different objectives is a difficult task. The demographic analysis clearly indicates pedestrian usage as the main method of travel to work to be five percent in the 2006 and 2011 Census data. The Census data also indicates that bicycle travel is extremely limited as a mode of transport, accounting for less than one percent of travel to work. This is relatively consistent with other regional town centres. Unless pedestrian and cycling infrastructure is provided the modal shift from the private motor vehicle to walking or cycling will not easily occur.

Implementation of individual pedestrian, shared or cycle routes necessitates the adoption of the strategy by Council, allocation of funding and resources and continual community input in the development of individual projects. These principles were used to derive new preliminary routes for walking, cycling and access.

The strategy's action plan focuses on the engineering actions and recommendations. The site inspections of potential pedestrian routes were undertaken by Council staff. The Action Plan has been developed primarily through pedestrian inspections on routes throughout Griffith LGA.

The main considerations of the inspections included:

- Paths of travel;
- Major intersections;
- Pedestrian crossings and crossing points; and
- General comments (land use, road user behaviour, road environment).

The pedestrian and cycle network in the city is quite coherent consisting of footpaths and shared paths. This is the result of the implementation of several recommendations from the Griffith Pedestrian Access & Mobility Plan Study 2009 and the Griffith Bicycle Plan 2009. Improvements could be made to the support facilities for the pedestrian and cycleway network to include the following:

- Signposting;
- Mid-block improvements;
- Pram ramp upgrades; and
- Maintenance of existing facilities.

As the area attracts tourists the potential exists to encourage more walking and cycling along tourist generators. As these tourists are unfamiliar with the area and as such they will have a greater reliance upon the proper presentation of the pedestrian facilities in the City. Directional and other signage is essential for good route coherence, high visibility and overall consistency along the length of the route.

Pedestrians and especially people with special mobility needs require the construction of ramps so that the transition from footpath to the roadway, when crossing the road, is seamless and smooth. Also, they require the facilitation of improvements in the level of pedestrian access and priority, particularly in areas of high pedestrian concentrations. Through the implementation of the Griffith Pedestrian Access & Mobility Plan Study 2009 and the allocation of funding, pedestrian access throughout Griffith has greatly improved. This strategy aims to further reduce pedestrian access severance and enhance safe and convenient crossing opportunities on roads.

Bicycles need clear space to operate and when they go through intersections they are expected to share operating space with other road users. Intersections provide important access to most destinations and sometimes they lack direct connectivity for cyclists along the route, have no directional signposting and are complex to interpret. This is the case also for roundabouts that may

display the same difficulty characteristics.

Poorly maintained road shoulders can also become a deterrent to cyclists due to the resultant punctures and inability to continue safely along the route. The provision of high quality bicycle routes, both on and off road, is considered a fundamental requirement to encourage cycling and will eventually lead to higher rates of cycling participation.

The provision of end-trip facilities such as bicycle parking at key trip attractors is an essential requirement for an integrated transport system. Bicycle parking will be used only if it offers security that effectively minimises the risk of theft and is located in an area with a high amount of passing pedestrians. Deterring theft is an effective way to reduce the short trip barrier for cycling.

6. Pedestrian and Bicycle Network

The proposed pedestrian and bicycle network was identified based upon the identified generators and attractors, recreational attractions, areas of future development and areas frequented by vulnerable user groups. The network has been prioritised to reflect the importance of the proposed infrastructure based upon these factors. The network has been prioritised into primary routes, secondary routes, collector routes and recreational routes.

Griffith's Central Business District (CBD) has been given a separate classification within the strategy, due to the greater proportion of pedestrian and bicycle activity in the area. The CBD is also subject to the Griffith CBD Strategy which details the recommendations for pedestrian and bicycle infrastructure in the area. The Strategy will reflect these recommendations.

This section of the Griffith Pedestrian and Bicycle Strategy outlines each priority area with focus on location and type of footpath for its specific use. It should be noted that some roads are proposed to have new paths constructed or existing paths upgraded along both sides of the road or a section of the road; the construction or upgrade of a path along one side of such a road will result in the priority of the path for the other side of the road moving down the long-term priority list significantly, allowing funding to be allocated to other footpaths for construction.

6.1 Griffith Central Business District

Griffith's Central Business District has been given a separate classification within the strategy as the majority of pedestrian activity is generated in this area. The CBD also generates a significant amount of bicycle activity. The area consists of major pedestrian attractors and generators such as; retail businesses, commercial businesses, hotels, recreational facilities and restaurants. All of these attractors and generators are the main source of pedestrian and bicycle activity within a city. The high prevalence of activity in the area justifies the provision of an extensive footpath network throughout the CBD.

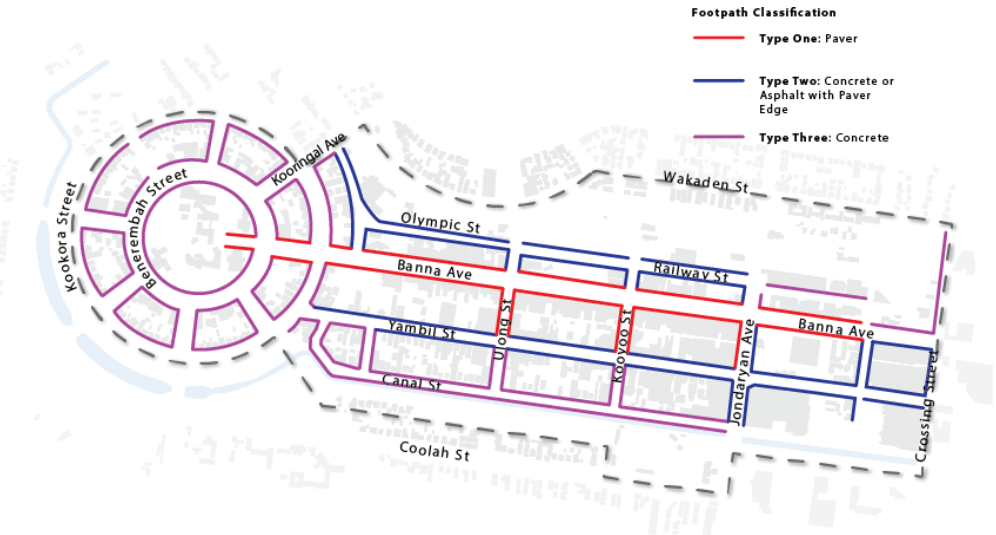


Figure 19 - Recommended Footpath Finishes Griffith *Central Business District Strategy*

Griffith City Council have developed the Griffith Central Business Strategy identifies that Griffith has poor pedestrian and bicycle infrastructure within the CBD, this includes poor connectivity of paths and the lack of a dedicated cycle network through the CBD. The strategy makes several recommendations for the improvement of the pedestrian and cycleway network in Griffith's CBD. These recommendations focus on the improvement of the existing pedestrian facilities and developing the cycleway network in the CBD. The identified network reflects these recommendations.

Figure 20 - Proposed Pedestrian Network Griffith *Central Business District Strategy*

The strategy aims to strengthen the existing pedestrian network in the CBD through a number of different recommendations. The primary recommendation is to increase the north to south connectivity for pedestrians into the CBD. This will be achieved through the development of pedestrian and cycle access over the railway at Kooyoo Street and Jondaryan Avenue and the upgrade of the existing bridges over the main canal to support shared access.

Figure 21 - Proposed Bicycle Network Griffith's *Central Business District Strategy*

The strategy aims to develop the bicycle network in the CBD through a number of different recommendations. The primary recommendation is to install a comprehensive bicycle path/lane network throughout the CBD. In addition, the strategy recommends the installation of bicycle facilities across the CBD.

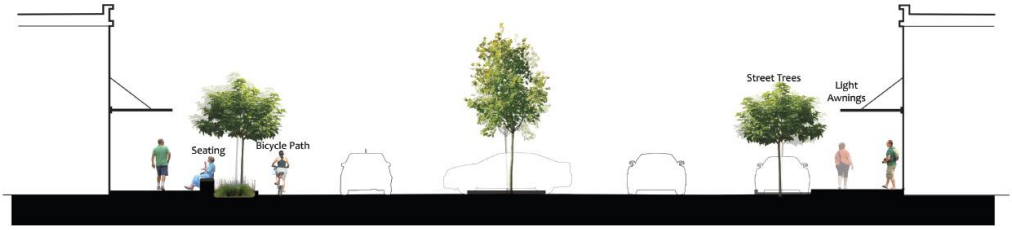


Figure 22 - Proposed Yambil Street Streetscape Griffith *Central Business District Strategy*

The footpaths within the CBD have been identified as relatively high priority routes where identified in the strategy. The high prioritisation of the proposed footpaths within the CBD ensures that the accessibility and safety of Griffith's main high pedestrian activity area is improved.

Road	From	To	Location of Path	Type of Path
Banna Avenue	Jondaryan Ave	Blumer Ave	Both Sides	**Shared path**
Banna Avenue	Benerembah St	Jondaryan Ave	Both Sides	**Footpath**
Yambil Street	Kookora St	Crossing St	Both Sides	**Footpath**
Railway Street	Banna Ave	Wayeela St	Northern Side	**Shared path**
Railway Street	Banna Ave	Wayeela St	Southern Side	**Footpath**
Olympic Street	Ulong St	Wayeela St	Northern Side	**Shared Path**
Olympic Street	Ulong St	Wayeela St	Southern Side	**Footpath**
Canal Street	Jondaryan Ave	Kookora St	Southern Side	**Shared Path**
Canal Street	Jondaryan Ave	Yambil St	Northern Side	**Footpath**
Crossing Street	Bridge Rd	Wakaden St	Western Side	**Shared Path**
Bonegilla Road	Banna Ave	Twigg Rd	Both Sides	**Footpath**
Jondaryan Avenue	Banna Ave	Canal St	Both Sides	**Shared Path**
Tranter Place	Banna Ave	Railway St	Both Sides	**Footpath**
Kooyoo Street	Railway Street	Canal St	Both Sides	**Footpath**
Ulong Street	Wakaden St	Railway St	Both Sides	**Shared path**
Ulong Street	Railway St	Canal St	Both sides	**Footpath**
Wayeela Street	Banna Ave	Kooringal Ave	Both Sides	**Shared path**
Kookora Street	Willandra Ave	Kooringal Ave	Outer Circumference	**Shared path**
Kookora Street	Willandra Ave	Kooringal Ave	Inner Circumference	**Footpath**
Benerembah Street	Willandra Ave	Kooringal Ave	Both Sides	**Footpath**
Kooringal Avenue	Kookora St	Wakaden St	Eastern Side	**Shared path**
Kooringal Avenue	Benerembah St	Kookora St	Both Sides	**Footpath**

Table 3 - Proposed CBD Routes

6.2 Primary Routes

The primary routes provide a connection between the major residential areas of Griffith with the CBD and other identified generators/attractors for pedestrians and cyclists. The proposed primary route network will increase the connectivity to these generators/attractors, i.e. schools, shopping centres, recreational facilities, etc.

Primary routes should allow for both pedestrian and bicycle movements therefore the typical design width of a pedestrian path is recommended to be a 2.5m wide shared path commonly expected on both sides of the road. The footpath requirements for the proposed routes have been detailed below.

Road	From	To	Location of Path	Type of Path
Griffith				
Banna Avenue	Mackay Ave	Jondaryan Ave	Both sides	**Shared path**
Animoo Avenue	Wyangan Ave	Noorebar Ave	Eastern side	**Shared path**
	Wyangan Ave	Noorebar Ave	Western side	**Footpath**
Blumer Avenue	Banna Ave	Probert Ave	Both sides	**Shared path**
	Probert Ave	Doolan Cr	Eastern side	**Shared path**
Boonah Street	Noorebar Ave	Macarthur St	Both sides	**Shared path**
Clifton Boulevard	Wakaden St	Rifle Range Road	Both sides	**Shared path**
Griffin Avenue	Kookora St	Harward Rd	Southern side	**Shared path**
Jondaryan Avenue	Canal St	Willandra Ave	Both sides	**Shared path**
Kidman Way	Willandra Ave	Stafford Rd	Both sides	**Shared path**
Kookora Street	Willandra Ave	Kooringal Ave	Western side	**Shared path**
	Willandra Ave	Kooringal Ave	Eastern side	**Footpath**
Kooringal Avenue	Kookora St	Animoo Ave	Eastern side	**Shared Path**
Macarthur Street	Boonah St	Wakaden St	Southern side	**Shared Path**
Mackay Avenue	Banna Ave	Bridge Rd	Both sides	**Shared Path**
Noorebar Avenue	Animoo Ave	Boonah St	Northern side	**Shared Path**
	Animoo Ave	Boonah St	Southern side	**Footpath**
Rankins Springs Road	Wakaden St	Davis Rd	Northern Side	**Shared path**
Wakaden Street	Kooringal Ave	Rankins Springs Rd	Northern side	**Shared path**
	Ulong St	Crossing St	Southern Side	**Footpath**
Willandra Avenue	Jondaryan Ave	Kookora St	Both sides	**Shared path**
Wyangan Avenue	Animoo Ave	Wood Rd	Both sides	**Shared path**
	Wood Rd	Boorga Rd	Eastern side	**Shared path**
Beelbangera				
Rifle Range Road	Rankins Springs Rd	Clifton Boulevard	Southern side	**Shared path**
Hanwood				
Kidman Way	Stafford Rd	Jack Mcwilliam Rd	Eastern side	**Shared path**
	Leonard Rd	Hanwood Ave		**Footpath**
Yoogali				
Burley Griffin Way	Mackay Ave	McCormack Rd	Northern Side	**Shared path**
Mackay Avenue	Bridge Rd	Burley Griffin Way	Northern side	**Shared path**

Table 4 - Proposed Primary Routes

6.3 Secondary Routes

The secondary routes provide link the residential areas of Griffith with the primary routes of the network. The proposed secondary route network also provides direct links to Griffith's major facilities and the surrounding villages.

Secondary routes still focus on providing suitable facilities for the pedestrian types and activities undertaken in an area. A footpath, preferably a shared path, should be provided along one side of the roadway with convenient road crossing points with accessible kerb ramps at suitable locations.

Road	From	To	Location of Path	Type of Path
Griffith				
Anzac Street	Binya St	Noorebar Ave	Western side	**Shared path**
	Binya St	Noorebar Ave	Eastern Side	**Footpath**
Animoo Avenue	Wyangan Ave	Konoa St	Eastern side	**Shared path**
	Wyangan Ave	Konoa St	Western side	**Footpath**
Binya Street	Kooringal Ave	Burrell Pl	Southern side	**Shared path**
	Kooringal Ave	Burrell Pl	Northern Side	**Footpath**
Boonah Street	Macarthur St	Ortella St	Western side	**Shared path**
Bridge Road	Lenehan Rd	Jondaryan Ave	Southern side	**Shared path**
Burrell Place	Binya St	Wakaden St	Western side	**Shared path**
Calabria Road	Rankins Springs Rd	Clifton Boulevard	Eastern side	**Shared path**
Campbell Street	Ortella St	Cutler Ave	Eastern side	**Shared path**
Citrus Road	Rifle Range Rd	Sanders St	Eastern side	**Shared path**
Cutler Avenue	Campbell St	Kooringal Ave	Eastern side	**Shared path**
Goondooloo Street	Cutler Ave	Merrigal St	Eastern side	**Shared path**
Illiliwa Street	McNabb Cr	Wakaden St	Western side	**Shared path**
Kooba Street	Boonah St	Konoa St	Southern Side	**Shared path**
	Boonah St	Konoa St	Northern Side	**Footpath**
Lenehan Road	Oakes Rd	Bridge Rd	Western side	**Shared path**
McCudden Street	Clifton Blvd	Blumer Ave	Southern side	**Shared path**
McNabb Crescent	Blumer Ave	Macarthur St	Northern side	**Shared path**
Merrigal Street	Goondooloo St	Willandra Ave	Eastern side	**Shared path**
Murrumbidgee Avenue	Kookora St	Stafford Rd	Western side	**Shared path**
Oakes Road	Jondaryan Ave	Kurrajong Ave	Northern side	**Shared path**
Ortella Street	Boonah St	Campbell St	Southern side	**Shared path**
Probert Avenue	Blumer Ave	Macarthur St	Southern side	**Shared path**
Sanders Street	Citrus Road	Clifton Boulevard	Southern side	**Shared path**
Stafford Road	Murrumbidgee Ave	Kidman Way	Northern side	**Shared path**
Walla Avenue	Kookora St	Middleton Ave	Eastern side	**Shared path**

Table 5 - Proposed Secondary Routes

6.4 Collector Routes

Collector routes provide additional access improving connection to the primary and secondary routes which accommodate residential pedestrian and bicycle traffic. These routes are mainly designed for medium to low density pedestrian traffic. Collector routes mainly consist of footpaths on local access roads with a minimum footpath width of 1.2 metres.

Road	From	To	Location of Path	Type of Path
Griffith				
Alexander Street	Nicholls St	Manera St	Southern side	**Footpath**
Barellan Street	Macarthur St	Wakaden St	Eastern side	**Footpath**
Benerembah Street	Willandra Ave	Kooringal Ave	Both Sides	**Footpath**

Road	From	To	Location of Path	Type of Path
Binya Street	Burrell Pl	Whitton St	Both Sides	**Footpath**
Burley Street	Clifton Blvd	Sanders St	Eastern side	**Footpath**
Cavenagh Street	Ledgerwood St	Marcus St (through Marcus park)	Northern side	**Footpath**
Coolah Street	Willandra Ave	Jondaryan Ave	Both sides	**Footpath**
Dickson Road	Wyangan Ae	Noorla St	Eastern side	**Footpath**
Ellimo Street	Yarrabee St	Kywong St	Southern side	**Footpath**
Erskine Road	Moses St	Walla Ave	Eastern side	**Footpath**
Evanside Parade	Little Rd	Murrumbidgee Ave	Northern side	**Footpath**
Gibbs Street	McNabb Cr	Probert Ave	Eastern side	**Footpath**
Griffin Avenue	Kookora St	Benerembah St	Northern side	**Footpath**
Groongal Avenue	Wyangan Ave	Cutler Ave	Western side	**Footpath**
Hart Street	McNabb Cr	Probert Ave	Western side	**Footpath**
Harward Road	Griffin Ave	Spence Rd	Eastern side	**Footpath**
Hickey Crescent	Probert Ave	Wakaden St	Eastern side	**Footpath**
Hillam Drive	Clifton Blvd	Verri St	Northern side	**Shared path**
	Verri St	Christina Pl	Western side	**Footpath**
	Christina Pl	Clifton Bvd	Southern side	**Shared path**
Hyandra Street	Noorebar Ave	Illiliwa St	Northern side	**Footpath**
Kelly Avenue	Wood Rd	Ortella St	Western side	**Footpath**
Konoa Street	Ortella St	Animoo Ave	Western side	**Footpath**
Langley Crescent	Probert Ave	Blumer Ave	Eastern side	**Footpath**
Ledgerwood Street	Blumer park	Ledgerwood park	Western side	**Footpath**
Little Road	Middleton Ave	Evanside Parade	Eastern side	**Footpath**
Madden Drive	Hillam Dr	End of Madden Dr	Southern side	**Footpath**
Merrowie Street	Yarrabee St	Merrigal St	Northern side	**Footpath**
Middleton Avenue	Walla Ave	Watson Rd	Western side	**Footpath**
Moses Street	Harward Rd	Erskine Rd	Southern side	**Footpath**
Nicholls Street	Clifton Blvd	Alexander St	Eastern side	**Footpath**
Noorebar Avenue	Hyandra St	Carathool St	Eastern side	**Footpath**
Noorilla Street	Campbell St	Boonah St	Northern side	**Footpath**
North Grove Drive	Wyangan Ave	Robrick Cl	Western side	**Footpath**
Polkinghorne Street	Madden Dr	End of Polkinghorne St	Eastern side	**Footpath**
Robertson Street	Clifton Blvd	Nicholls St	Western side	**Footpath**
Sidlow Road	Stafford Rd	Merrigal St	Eastern side	**Footpath**
Speirs Street	Probert Ave	Existing footpath	Eastern side	**Footpath**
Spence Road	Harward Rd	Walla Ave	Northern side	**Footpath**
Ulong Street	Willandra Ave	Coolah St	Eastern side	**Footpath**
Warrambool Street	Animoo Ave	Noorebar Ave	Both sides	**Footpath**
Watson Road	Walla Ave	Murrumbidgee Ave	Southern side	**Footpath**
Whitton Street	Hyandra St	Wakaden St	Eastern side	**Footpath**
Wood Road	Kelly Avenue	Wyangan Ave	Southern side	**Footpath**
Yarrabee Street	Griffin Ave	Merrigal St	Western side	**Footpath**
Hanwood				
Ash Street	School St	Wilga St	Western side	**Footpath**
School Street	Hanwood Rd	Ash St	Northern side	**Footpath**
Wilga Street	Hanwood Rd	Ash St	Southern side	**Footpath**
Yarran Street	School St	Club St	Northern side	**Footpath**
Lake Wyangan				
Todd Road	Boorga Rd	Mason St	Northern side	**Footpath**
Yenda				
Bingar Street	Henry St	Leaver St	Western side	**Shared path**
East Avenue	Yenda Pl	Mirrool Ave	Both sides	**Footpath**

Road	From	To	Location of Path	Type of Path
Henry Street	Park St	Bingar St	Southern side	**Shared path**
Mirrool Avenue	Dredge St	Twigg Rd	Western side	**Shared path**
Park Street	West Ave	Henry St	Western side	**Shared path**
Railway Parade	Henry St	Mirrool Ave	Southern side	**Shared path**
	Myall Park Road	Mirrool Ave	Northern side	**Shared path**
South Avenue	Yenda Pl	Mirrool Ave	Eastern side	**Footpath**
Twigg Road	Burley Griffin Way	Beelbangera Rd	Western side	**Shared path**
West Avenue	Railway Pde	Yenda Place	Northern side	**Shared path**
	Yenda Pl	Bingar St	Southern side	**Footpath**
Yoogali				
East Street	Edon St	Moura St	Western side	**Shared path**
Edon Street	Burley Griffin Way	Hebden St	Northern side	**Shared path**
	Burley Griffin Way	Hebden St	Southern side	**Footpath**
Gorton Street	Edon St	Henderson Oval	Eastern side	**Footpath**
Hebden Street	Edon St	Moura St	Western side	**Shared path**
Moura Street	Hebden St	East St	Southern side	**Shared path**
Rae Road	Kidman Way	Watkins Avenue	Northern side	**Footpath**

Table 6 - Proposed Collector Routes

6.5 Recreational Routes

Recreational routes link Griffith's attractions. The main purpose of the network is to provide the community the ability to enable walking and cycling as a legitimate form of recreation. These recreational links provide the community connection to Griffith's tourist attractions which include:

- Lake Wyangan;
- Scenic Hill;
- Pioneer Park Museum;
- Sports centres, ovals; and
- The main canal.

Achieving a strong link to these recreational attractions will assist in increasing pedestrian activity, public satisfaction and increased health benefits. The routes have ultimately been designed as a grand loop around Griffith.

Road	From	To	Location of Path	Type of Path
Beelbangera Road	Myall Park Rd	Rankins Springs Rd	Both sides	**Bicycle Lane**
Boorga Road	Jones Rd	Wyangan Ave	Western side	**Shared path**
Burley Griffin Way	Mackay Ave	Whitton Rd (Yenda)	Both sides	**Bicycle Lane**
Jones Road	Boorga Rd	Lakes Rd	Northern side	**Shared path**
	McCarthy Rd	Boorga Rd	Both sides	**Bicycle Lane**
Kidman Way	Lakes Rd	Harward Rd	Both sides	**Bicycle Lane**
Kurrajong Avenue	Old Willbriggie Rd	Mackay Avenue	Both sides	**Bicycle Lane**
Lakes Road	Jones Rd	Lake Wyangan Picnic area	Eastern side	**Shared path**
	Kidman Way	Jones Rd	Both sides	**Bicycle Lane**
Main Canal	Calabria Rd	Wyangan Ave	Northern side	**Shared path**
Old Willbriggie	Kurrajong Ave	Oakes Rd	Both sides	**Bicycle Lane**

Road	From	To	Location of Path	Type of Path
Road				
Remembrance Dr	Noorilla St	Scenic Dr	Southern side	**Shared path**
Rifle Range Road	Rankins Springs Rd	Scenic Dr	Both sides	**Shared path**
	Scenic Dr	McCarthy Rd	Both sides	**Bicycle Lane**
Scenic Drive	Rifle Range Rd	Remembrance Dr	Southern side	**Shared path**
Thorne Road	Kidman Way	Old Willbriggie Rd	Both sides	**Bicycle Lane**
Watkins Avenue	Old Willbriggie Rd	Rae Road	Both sides	**Bicycle Lane**

Table 7 - Proposed Recreational Routes

7. Design Standards

Griffith City Council's ambition for an extensive pedestrian network is an important issue but designing the pedestrian network to last for years to come is just as important as the development. A set of design standards have been formed to ensure the network will be sustainable for the future. The design standards refer to the minimum requirements, dimensions and materials used to accomplish a project. Griffith City Council has commissioned a standard design scope for pedestrian and bicycle infrastructure around the city to ensure a safe, equitable, accessible and long term network. The design standards outlined in this section provide both a minimum standard and a recommended standard for the construction of specific infrastructure. Consideration has been focused on providing suitable access to a range of pedestrian groups including the disabled.

The design standards in relation to the PAMP apply to:

- Footpaths;
- Shared Paths;
- Road crossings (Pedestrian Refuges);
- Kerb ramps;
- Gradients; and
- Associated pedestrian furniture e.g. handrails, seats, bus stops etc.

The specific design standards have been adapted from a range of sources including:

- Australian Standards 1428.1;
- The Austroads series; and
- Griffith City Council Engineering Guidelines.

7.1 Path Width and Construction

Whether it is footpaths or shared paths, these pedestrian facilities ultimately provide the public with the capability of safe connection across Griffith. Guidance on the specifications of footpaths has been sought through various documents including Austroads and Australian Standards. Griffith City Council staff have adapted its own minimum and recommended requirements which are outlined in the table below.

Type of Path	Minimum Width	Recommended Width
Footpath	1.2m	1.5m
Shared Path	2.0m	3.0m
Recreational Path	2.5m	3.0m

Table 8 - Recommended Path Widths

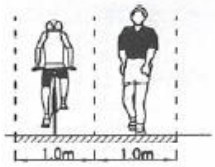
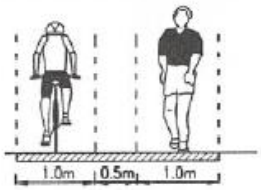
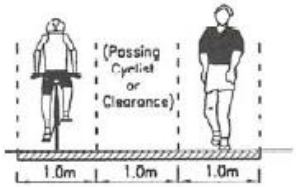
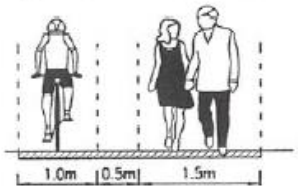
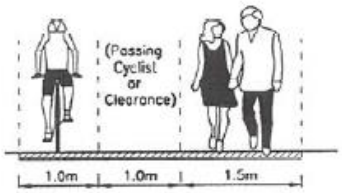
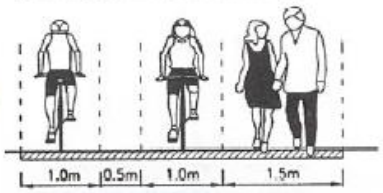
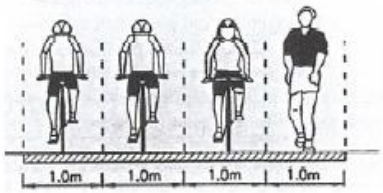
Scenario	Overall width of path	Predominant path purpose • Typical circumstances of use	
A	2.0 m	Local access •Constrained conditions •'Tidal flow' •Low use	
B	2.5 m	•Commuting and local access •Regular use •20 km/h	
C	3.0 m	Commuting •Frequent and concurrent use in both directions •30 km/h+	
D	3.0 m	Recreation •Regular use •20 km/h	
E	3.5 m	•Commuting and recreation (concurrent) •Frequent and concurrent use in both directions •30 km/h+	
F	4.0 m	Major recreational path •20 km/h •Heavy and concurrent use in both directions	
G	4.0 m	Major recreational path •Regular group rides •Heavy and concurrent use in both directions •Generally low speed due to congestion	

Figure 23 - Operation of Shared Paths (*Austroads Guide to Road Design - Part 6A: Pedestrian and Cyclist Paths*)

7.2 Plans and Sections of Paths

Footpaths and shared paths are required to be constructed in accordance with Council's *Engineering Guidelines – Subdivision and Development Standards*.

Path Thickness	100mm (minimum)
Path Materials	Reinforced Concrete (SL72)
Path Base	100mm Compacted Road Building Gravel
Path Location	1-metre from the property boundary

Table 9 - Path Design/Construction Requirements

Alteration to the above standards is possible; the alterations shall be justified to and approved by Council.

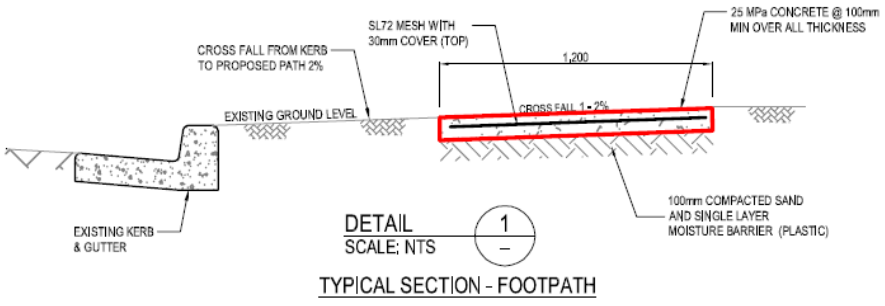


Figure 24 - Typical Section - Path

7.3 Road Crossing and Accessibility

Accessibility to paths and other pedestrian and bicycle infrastructure is crucial to the successful use of these facilities. Designing the infrastructure to be accessible by all user groups will promote the use of such.

Pedestrian infrastructure must also be able to effectively connect and provide the safe movement of pedestrians across roads. Throughout Griffith's CBD there are six pedestrian crossings that link the northern and southern sides of Banna Avenue. This form of pedestrian infrastructure is an effective measure to ensure the safe movements of pedestrians crossing the road.

The general rule is that pedestrians should not have to cross a road that is more than eight metres (average trafficable lane plus a parking lane) without some form of refuge or crossing. This rule applies to all streets with more than 1000 vehicle movements per day and has been sourced from the *Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings*.

The following sections provide Griffith City Council with the specifications required to be met for all new footpath, kerb ramp and pedestrian refuge construction. This infrastructure has not been specifically planned for but shall be considered where new construction occurs providing it is warranted.

7.3.1 Pedestrian Refuges/Medians

Medians and pedestrian refuges are designed for safe navigation of roads for pedestrians. This infrastructure increases the safety of pedestrian and cyclist activity where there is a need. The technical direction TDT2011/01a provides guidance and a standard to abide by when designing and installing pedestrian refuges.

7.3.2 Kerb Ramps

Kerb ramps are an important aspect of developing an accessible and suitable pedestrian network. Kerb ramps provide ease of access to footpaths for the disabled and the elderly that utilise wheelchairs or mobility scooters. This treatment requires specific design standards to be adhered to, ensuring vulnerable user groups, such as the disabled, are catered for.

Griffith City Council has developed standards in the design of kerb ramps with guidance from Australian Standard 1428.1. These standards outline the maximum gradient and associated clearances around a ramp which is displayed in the below figure.

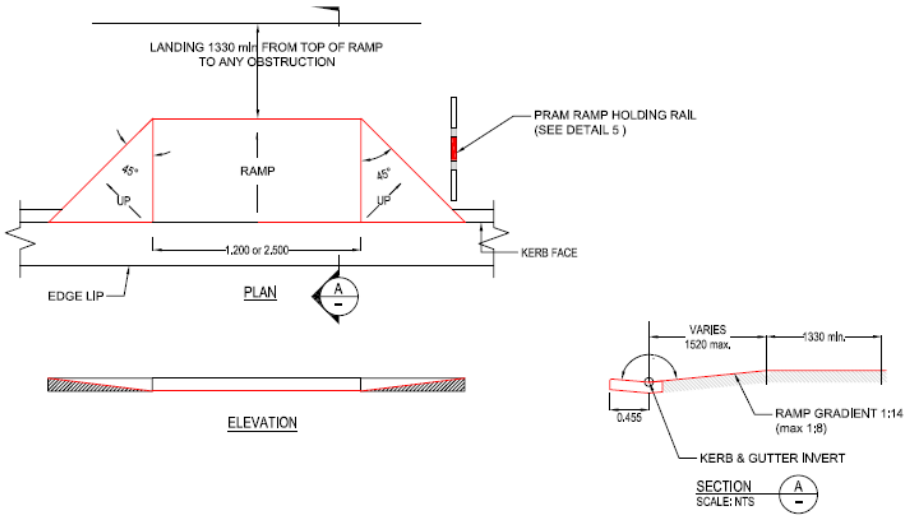


Figure 25 - Typical Details - Kerb Ramp

7.4 Gradients, Cross falls and Vertical Clearance Standards

7.4.1 Gradients

Gradient refers to the vertical rise over the horizontal (longitudinal) run of a path and ultimately provides a ratio on how steep a footpath has been designed. Standards have been established to provide guidance on the recommended gradient for paths for appropriate accessibility. The following gradients outlined in Australian Standard 1428.1 provide guidance on the construction of such infrastructure.

- A desired gradient of 1:14 is recommended but this may not be achievable and so the absolute maximum gradient permissible is 1:8 (AS 1428.1); and
- Gradients for footpaths as per AS 1428.1 – *"Where the gradient is 1:33 level rest areas 1.2m long should be provided at not greater than 25 m intervals whereas at 1:20 the interval should not exceed 15 m. Between gradients of 1:33 and 1:20 the interval should be interpolated. Landings are not required on gradients less then 1:33. Paths with a gradient steeper than 1:20 are to be considered as ramps for design purposes."*

In some cases the recommended gradients cannot be achieved due to the natural topography of the land and this should be noted.

7.4.2 Cross fall

Cross fall refers to the vertical rise over along the run of a path at right angles to the centreline.

In areas where the road reserve is to be totally paved from the top of the kerb to the adjacent boundary (i.e. the CBD), the cross fall is to be 1 in 50 towards the kerb (2%).

In areas where the footpath is unpaved or partially paved, cross fall from kerb to the adjacent boundaries is to be 1 in 35 towards the kerb (3%). Alternative treatments that achieve water sensitive urban design outcomes are encouraged subject to prior approval as part of the concept design development.

The design of footpath cross fall shall comply with the drainage requirements in Australian Rainfall and Runoff. 1 in 100 ARI flows shall be contained within the road reserve, public reserves or piped.

Vehicle access is to be checked using standard vehicle templates.

7.4.3 Vertical Clearances

Vertical Clearance standards are set out in the Australian Standards 1428.1 and Australian Standard 1742.2. Council abides by these standards set out which state a 2.5m vertical clearance above the top of kerb shall be maintained at all times.

8. Implementation Strategy

Griffith's pedestrian and bicycle network identified within this document can be achieved through the staged implementation of engineering actions. These actions have been divided into short-term and long-term works to indicate the projects considered in Council's immediate Top 30 priorities program, and the projects in the long-term strategy.

The implementation strategy has been developed by Griffith City Council's Infrastructure and Operations Assistant who applies for funding for the projects. This ensures that due consideration has been taken into account for the likelihood of the construction of infrastructure and the availability of funding. Community consultation is also factored into the implementation strategy to gauge if priorities have been accurately arranged.

Refer to Appendix D for the priority / implementation strategy.

8.1 Funding Sources

The staging and implementation of any strategic plan is dependent on the availability of funding. Being able to access funding allows the commencement of any engineering actions that are required to be carried out. Griffith City Council currently funds projects from various sources such as community rates, developer contributions and most importantly Transport for New South Wales who provide annual funding on a 50:50 basis.

The implementation of the Griffith Pedestrian and Bicycle Strategy requires the adoption of the strategic plan by Griffith City Council. The development of individual projects identified will then require the allocation of Council funding and resources. Preliminary costings of the proposed works have been completed by Council and are detailed below. It should be noted that these costings are estimates only and are used when applying for funding to indicate the expected cost of the project/s applied for. Also, these estimates capture the entire cost of the project including earthworks, concreting, relocation of services, and the construction of ancillary features to the project/s.

The implementation of the Griffith Pedestrian and Bicycle Strategy will cost in excess of $42 million. Given Griffith City Council's limited budget and the scope of the proposed works, alternate funding sources are required.

The reviewed Pedestrian and Bicycle Strategy provides approximately 146km of designated path across the Griffith City Council Local Government Area. The cost of providing the entire Pedestrian and Bicycle network is approximately $42,000,000 which is well outside of Council's ten (10) year forecasted capital works budget. Council receives limited funding from the Transport for New South Wales for shared paths and kerb ramps and Council is required to pay half the construction costs if the work is on a local road. The funding from the RMS is not guaranteed and must be applied for and approved annually before construction commences and the work must be approved once completed to ensure that the work meets RMS standards.

Council's current rate of construction means that the construction of the reviewed PAMP will not be completed within 200 years. Council's current financial situation does not allow for increased expenditure on footpaths or shared paths. Council is fortunate to be able to afford the limited development of footpaths around the city. Alternate revenue streams to assist in funding the proposed pedestrian and cycle way network include:

- Developers contributions;
- Transport for NSW;
- NSW Department of Trade and Investment, Regional Infrastructure and Services;
- Commonwealth Department of Infrastructure and Transport; and
- Commonwealth Department of Regional Australia, Local Government, Arts and Sport.

9.0 Conclusion

The Griffith Pedestrian & Bicycle Strategy is an important document for Griffith City Council and within the Griffith community. The strategy enables Griffith City Council to provide the community with a pedestrian and bicycle network that is attractive, safe, direct and accessible to all demographics ultimately providing a suitable link to all of Griffith's attractors and generators such as schools, shopping centres and recreational facilities.

The development of the Strategy is a step towards Griffith becoming a fully accessible community with high quality pedestrian and bicycle facilities that encourage walking and cycling as legitimate and sustainable modes of transport in the city. Three broad strategic goals were developed by Griffith City Council to supplement the original aim of the PAMP and Bicycle Plan and coincide with the above. These are:

- *An equitable and accessible transport network that allows for consistent and reliable travel.*
    - Provide good connectivity to key landmarks and attractors;
    - Improve the footpath and cycleway network;
    - Provide safe and convenient crossing locations;
- *A safe and attractive transport network where the severity and risk of accidents are minimised.*
    - Reduce conflicts between all road users;
    - Improve safety for all road users;
    - Improve the environment around pedestrian footpaths and cycleways;
- *A transport network that promotes walking and cycling as a mode of transport.*
    - Encourage walking and cycling to replace trips usually made by motor vehicles;
    - Provide suitable end of trip facilities across the network, especially at key landmarks and attractors.

Walking and cycling should be a method of travel that all user groups can utilise proactively. With the implementation of the Griffith Pedestrian and Bicycle strategy, the Griffith community is empowered to use the infrastructure and ultimately increase a wellbeing which is sustainable, and beneficial for not only health purposes but for traffic congestion and improved safety across the city.

The analysis of methodology outlined in several guidelines and documents (such as the NSW Roads and Maritime Services (RMS) Guidelines, *How to Prepare a Pedestrian Access and Mobility Plan* (2002), as well as data analysis of pedestrian crash history and community consultation, allowed Griffith City Council to produce the Griffith Pedestrian and Bicycle Strategy as a review of the 2009 PAMP and Bicycle Plan combining them into a simplified and more precise document. The aim of the review was to improve and amend the existing plans to suit the needs of the expanded urban area of Griffith. The future needs of the pedestrians and cyclists in the area were also considered as part of the review and addressed the management of resources and funding to meet the needs identified.

The amended plans provide an important framework for addressing the needs of pedestrians and cyclists within the Griffith area and the management of resources and funding required to construct such infrastructure. The review also outlined the engineering actions that need to be executed to achieve the overall goal of the document which resulted in an estimated cost of $42 million.

Ongoing monitoring and updating of the document should be undertaken on a regular basis as works are completed or part completed as listed in the implementation strategy. The ongoing amendments also provide the opportunity to correct or rectify any infrastructure that will need to be taken into consideration as Griffith expands into the future.

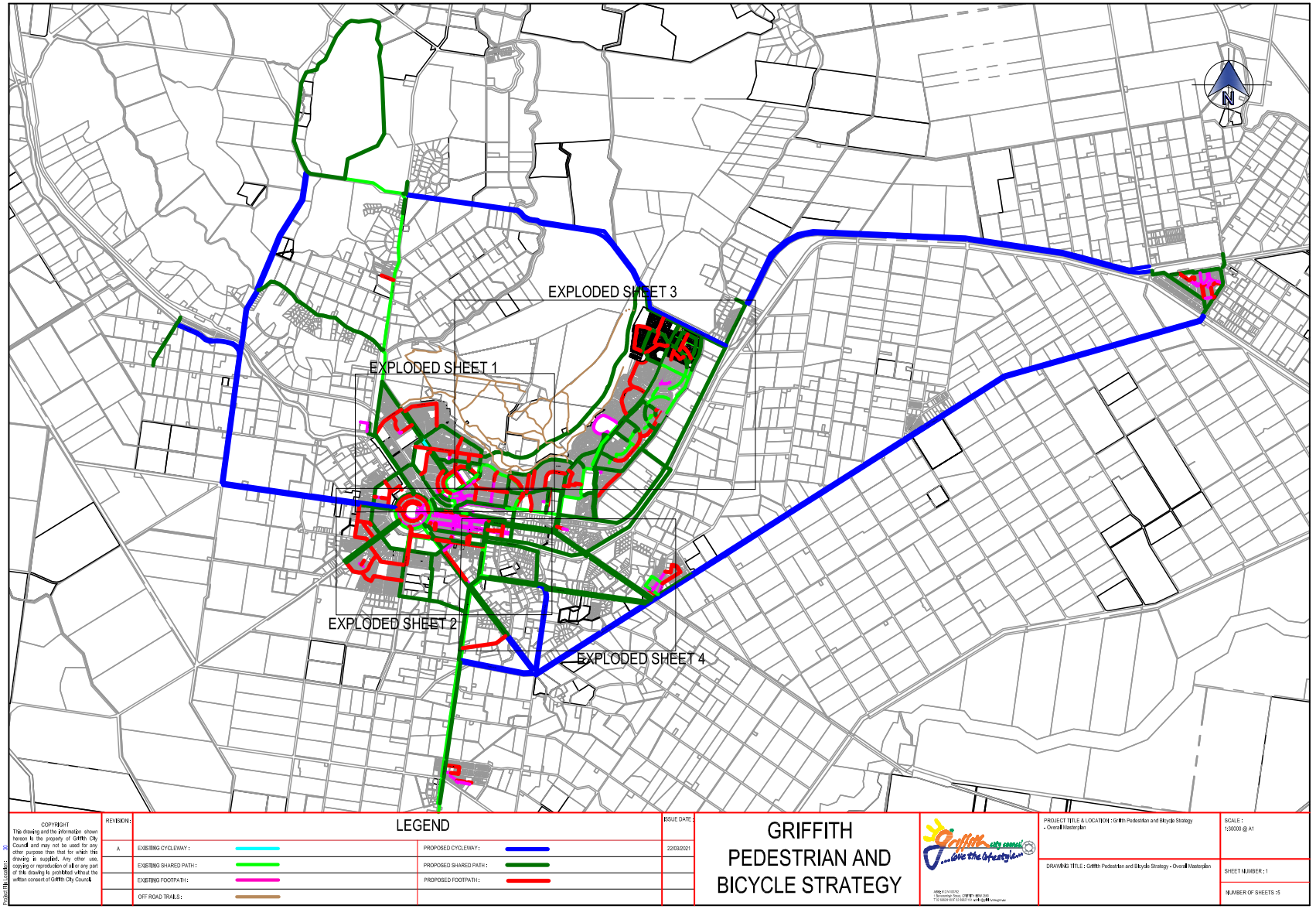
10.0 Community Consultation

Public consultation is a key element in the development of a pedestrian and bicycle access plan. The local community is directly affected by the standard and extent of the footpath and cycleway network who use the facilities daily for work, transport or recreation. The development of the *Griffith Pedestrian & Bicycle Strategy* involved several stakeholder consultations including Council's Transport and Logistics Committee and the Disability Inclusion and Access Committee. These involved a broad cross-section of the Griffith community to capture the different viewpoints of users. The committees meet regularly discussing access and transport issues to be bought to Council staffs attention.

The Draft Pedestrian and Bicycle Strategy was exhibited for a period of 42 days. Griffith City Council's webpage, the local newspaper, and an information brochure were used to advertise the exhibition of the Strategy and to inform the public of the dates, times and locations to view the document. General submissions were accepted and considered in the final revision of the strategy.

Appendices

Appendix A – Pedestrian and Bicycle Masterplan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22/03/2021
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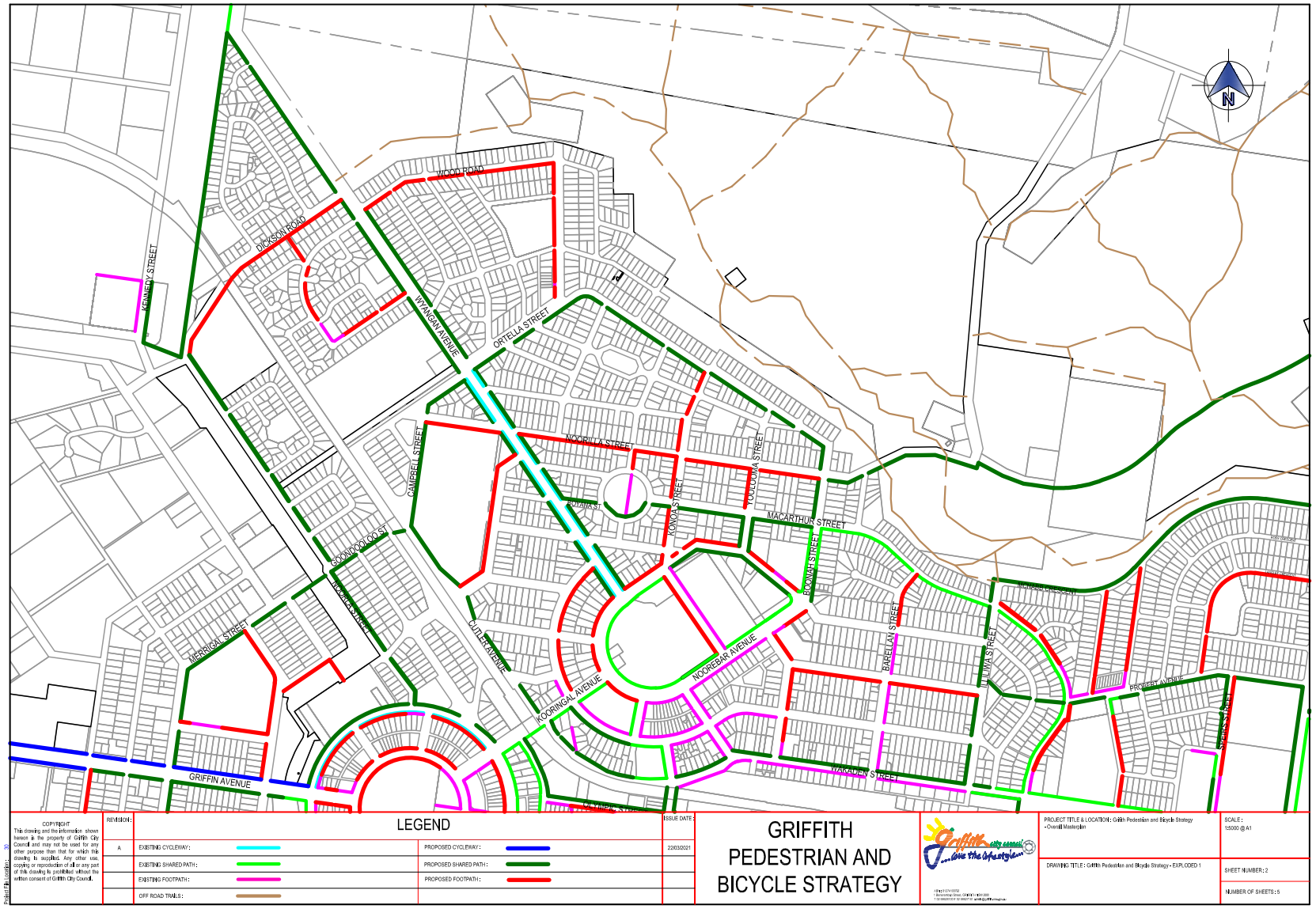
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COLEDALE STREET
MACARTHUR STREET
BOONAH STREET
BARELLAN STREET
ULLIMA STREET
PROSSER AVENUE
SHERIDAN STREET
WARDEN STREET
NOOREBAR AVENUE
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CUTLER AVENUE
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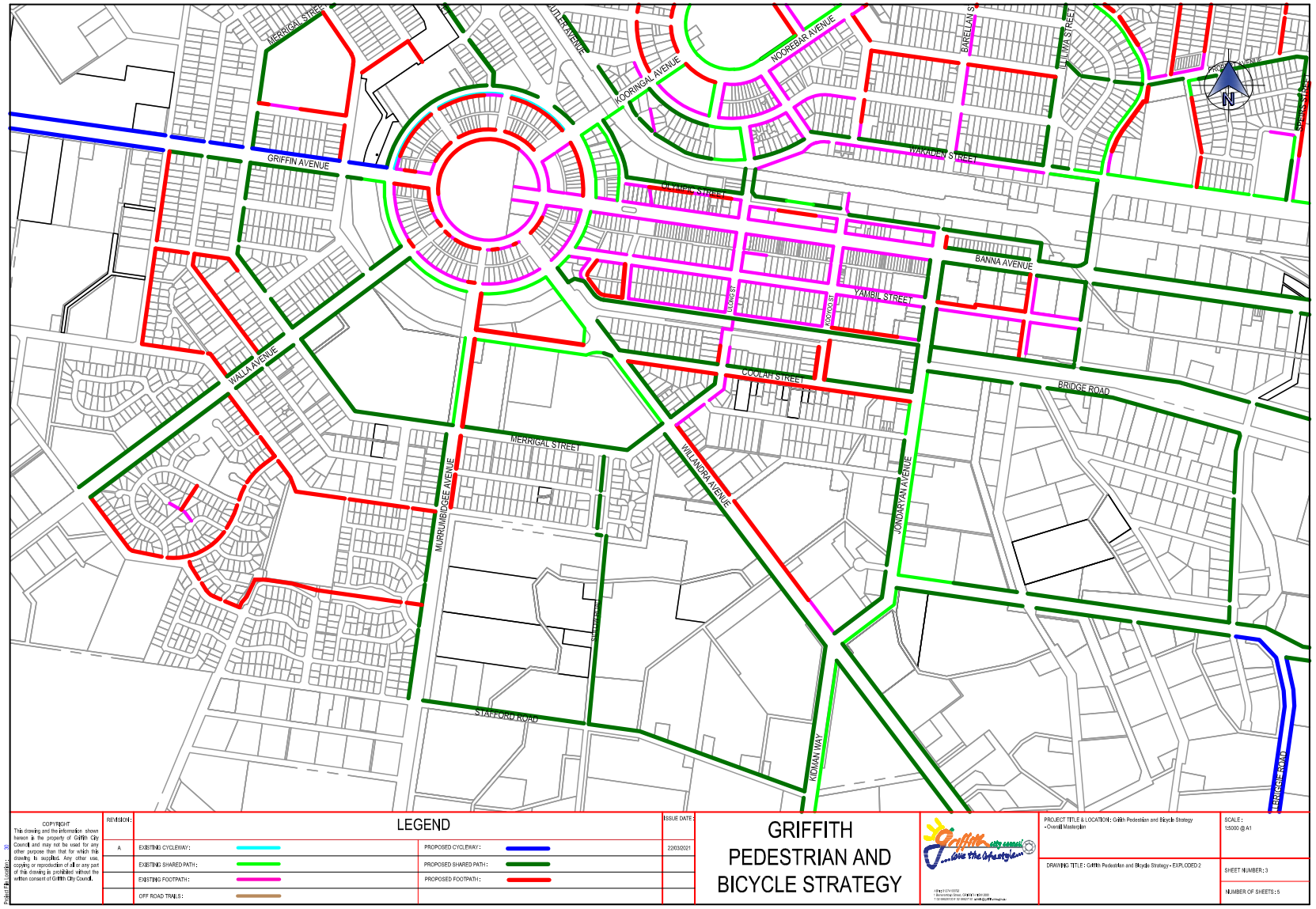
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BANNA AVENUE
YAMBIL STREET
COOLAH STREET
BRIDGE ROAD
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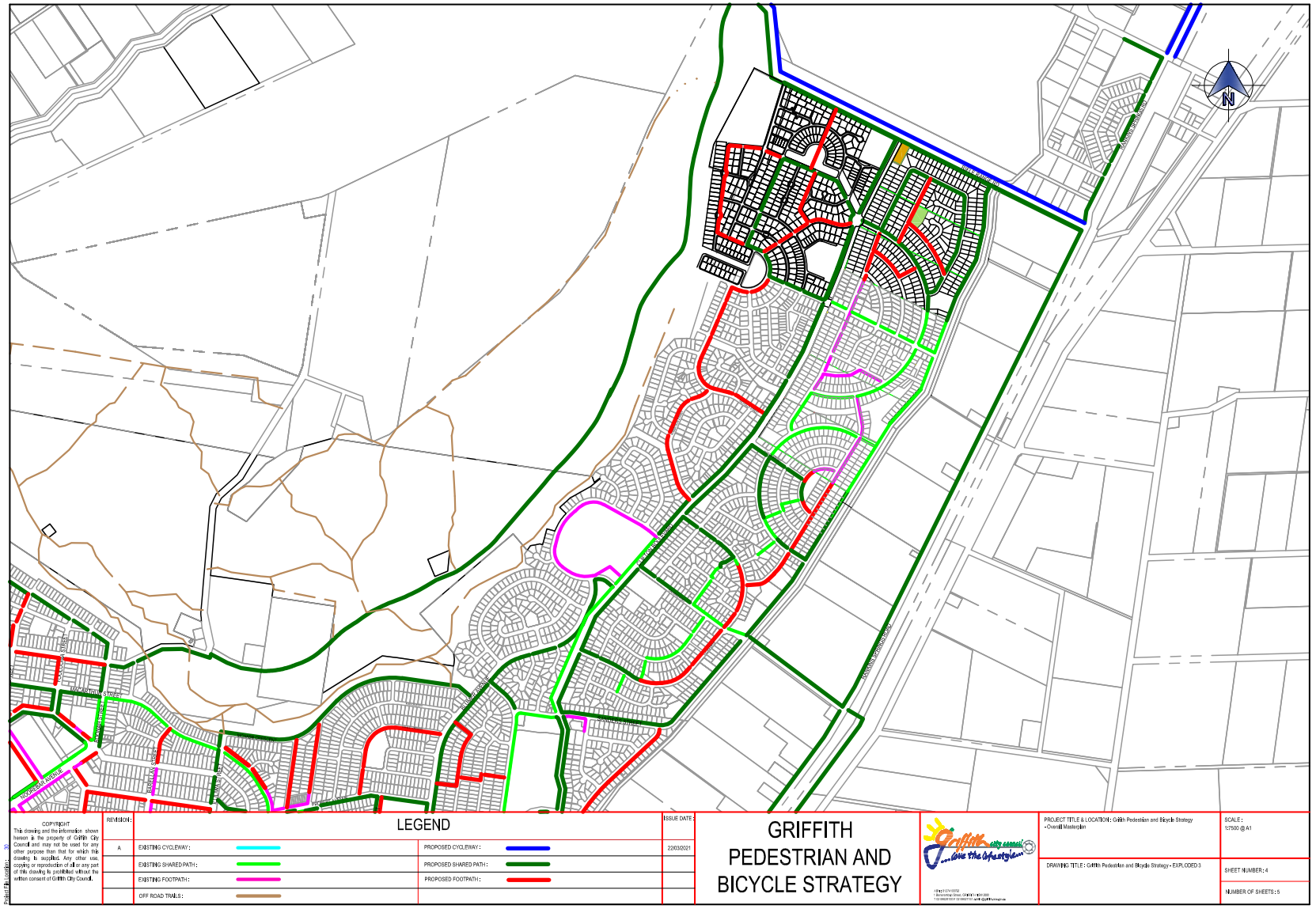
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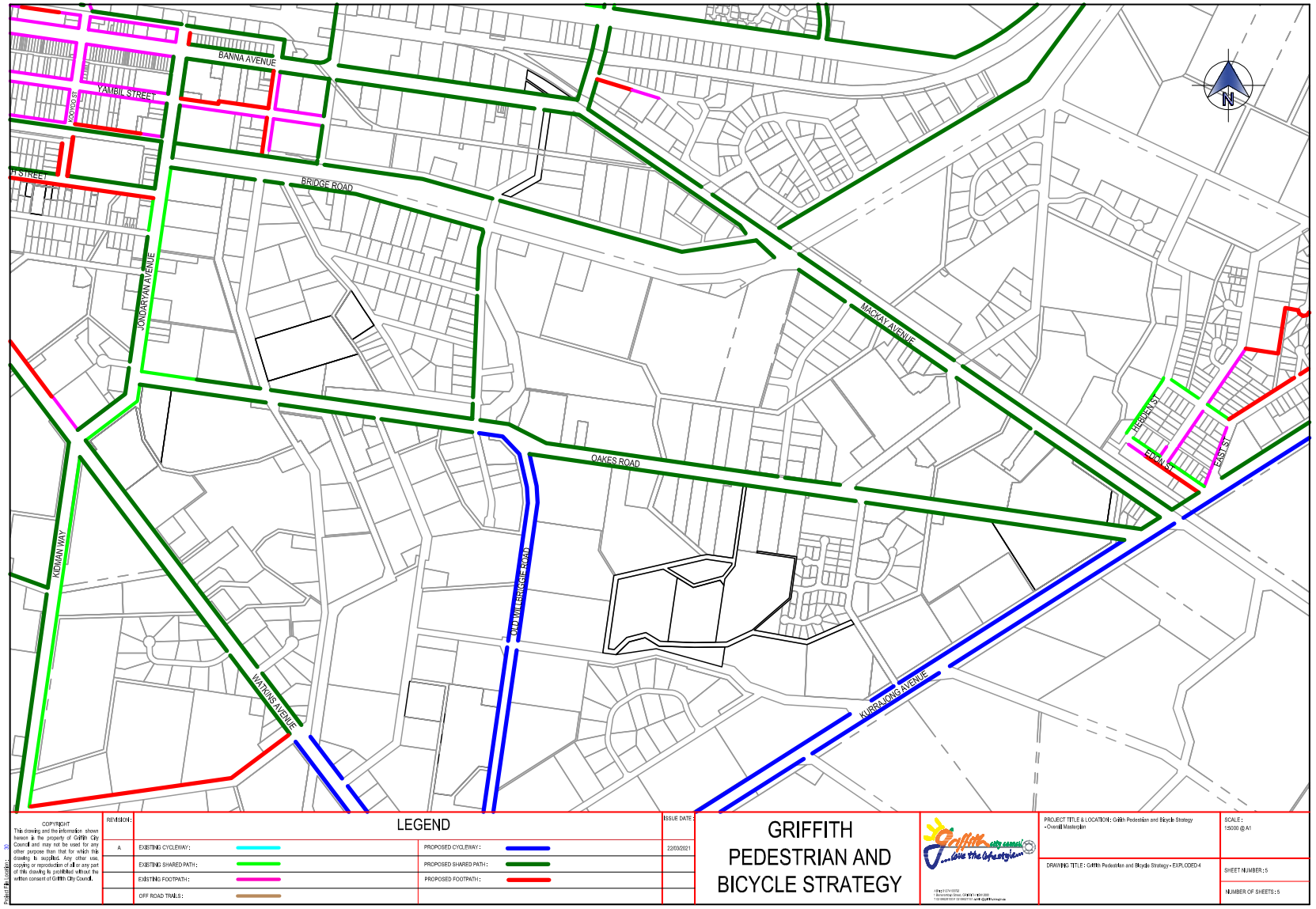
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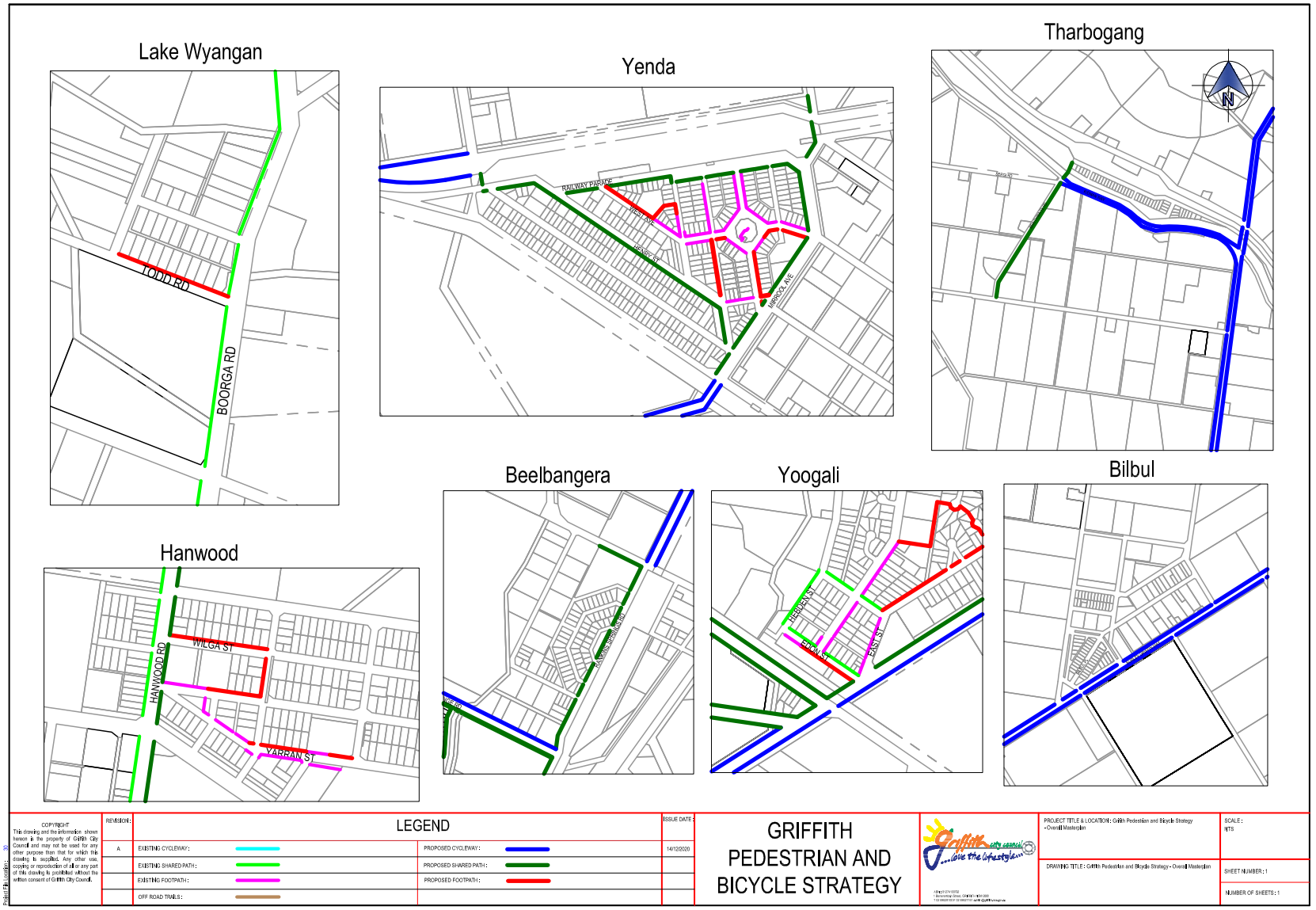
Appendix B – Village Maps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EAST ST
Bilbul
Hanwood
HANWOOD RD
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YARRAN ST
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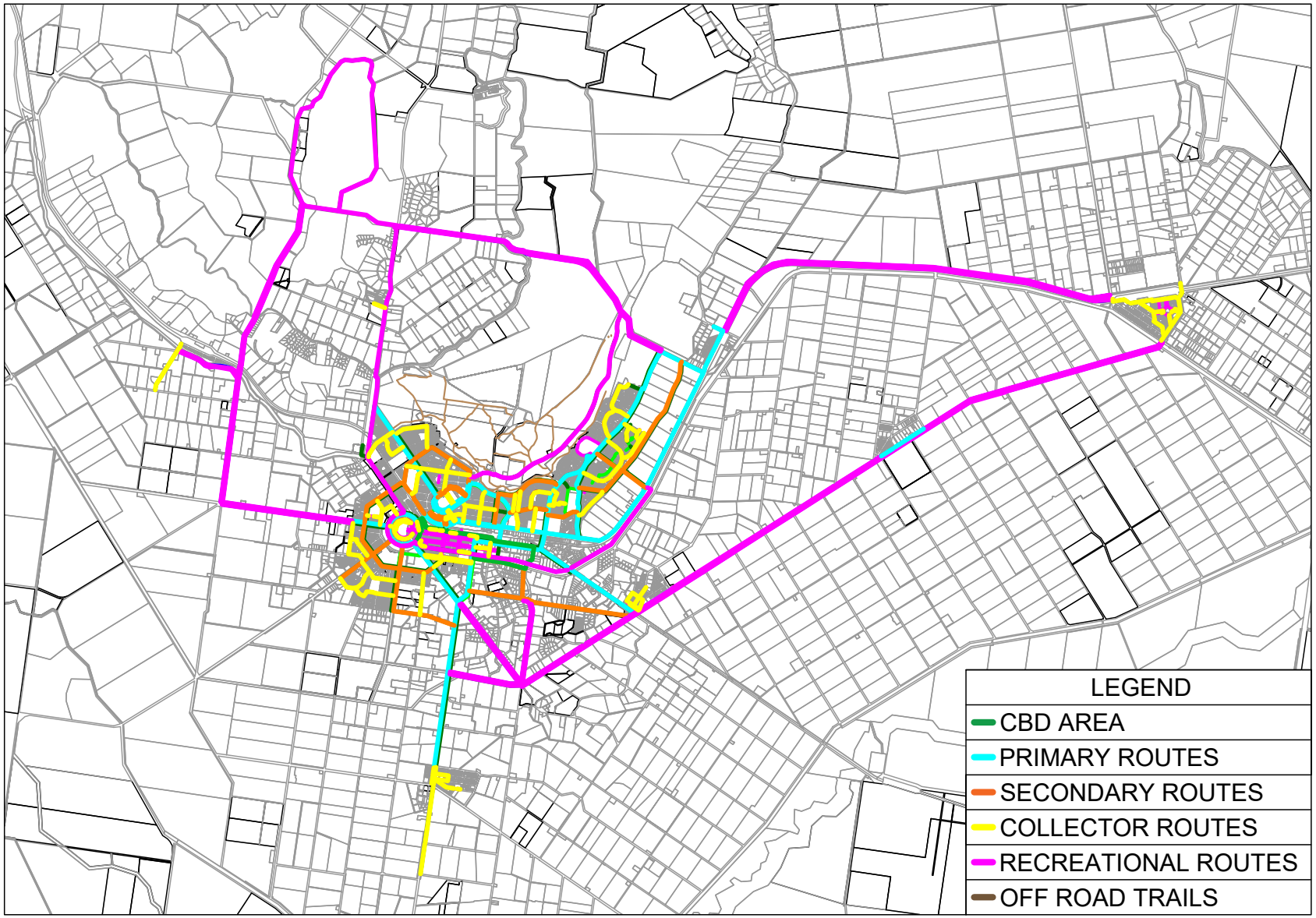
Appendix C - Pedestrian and Bicycle Prioritised Route Network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PRIMARY ROUTES
SECONDARY ROUTES
COLLECTOR ROUTES
RECREATIONAL ROUTES
OFF ROAD TRAILS

Appendix D – Priority Table / Implementation Strategy table

Griffith Pedestrian and Bicycle Strategy
Priority Table - Top 30

PAMP Priority	Route Type	Location	Suburb	Description	Type	Width	Length (m)	Estimated $
1	Local	Merrigal Street	Griffith	Construction of a 2.5m wide shared path between Willandra Ave and Sidlow Road (Park) Reserve	Shared Path	2.5	200	$ 60,000
2	Local	Sidlow Road	Griffith	Construction of a 2.5m wide shared path between Merrigal St and Pioneers Lodge.	Shared Path	2.5	300	$ 80,000
3	Local	Coolah Street	Griffith	Construction of a 2.5m wide shared path between Willandra Ave and school crossing	Shared Path	2.5	50	$ 16,250
4	Local	Wyangan Avenue	Griffith	Construction of an off-road 2.5m wide shared path linking pedestrian ramps at intersection of Ortella Street and Wyangan Ave.	Shared Path	2.5	120	$ 39,000
5	Local	Coolah Street	Griffith	Construction of a 2.5m wide shared path between Jondaryan Ave and Willandra Ave.	shared Path	2.5	900	$ 292,500
6	Local	Noorla Street	Griffith	Construction of a 2.5m wide shared path between Goondooloo St and Kennedy St along the northern side of Noorla St	Shared Path	2.5	820	$ 266,500
7	Local	Goondooloo Street	Griffith	Construction of a 2.5m wide shared path between Cutler Ave and Noorla St along Goondooloo St	Shared Path	2.5	245	$ 79,625
8	Local	Kennedy Street	Griffith	2.5m shared path along Kennedy Street from Noorla Street to Goolagong Street	Shared Path	2.5	250	$ 81,250
9	Local	Merrigal Street	Griffith	Construction of a 2.5m wide shared path between West End Oval (Yarrabee Street) and Noorla St	Shared Path	2.5	265	$ 86,125
10	Local	Yoolooma Street	Griffith	Construction of a 2.5m wide footpath on both sides of Yoolooma Street between Kooba Street and Macarthur Street	Footpath	2.5	200	$ 65,000
11	Local	Macarthur Street	Griffith	Construction of a 2.5m wide footpath between the Circle and Boonah St along the southern side of Macarthur St	Shared Path	2.5	430	$ 139,750
12	Local	The Circle	Griffith	Construction of a 2.5m wide shared path between Boyana St and Macarthur St along the southern side of the Circle	Shared Path	2.5	160	$ 52,000
13	Local	Boyana Street	Griffith	Construction of a 2.5m wide footpath between Wyangan Ave and the Circle along both sides of Boyana St	Shared Path	2.5	115	$ 37,375
14	State	Benerembah Street	Griffith	Construction of a 1.2m wide footpath between Griffin Ave and Kooringal Ave along the inside diameter of Benerembah St	Footpath	1.2	340	$ 53,040
15	Local	Olympic Street	Griffith	2.5m shared path along the northern side of Olympic street between Wayeela Street and Ulong Street	Shared Path	2.5	300	$ 97,500
16	Local	Kooyoo Street	Griffith	Construction of a 1.2m wide footpath between Coolah St and Canal St along both sides of Kooyoo St	Footpath	1.2	125	$ 19,500
17	Local	Speirs Street	Griffith	Construction of 2.5m wide footpath between Probert Ave & Wakaden St along the western side of Speirs St	Shared Path	2.5	370	$ 120,250
18	Local	Probert Avenue	Griffith	Construction of a 2.5m wide shared path between Blumer Ave and Macarthur St along the southern side of Probert Ave	Shared Path	2.5	570	$ 185,250
19	Local	Yambil St	Griffith	Construction of a 2m wide footpath along the northern side of Yambil Street between Jondaryan Avenue and Bonegilla Road	Footpath	2	275	$ 71,500

PAMP Priority	Route Type	Location	Suburb	Description	Type	Width	Length (m)	Estimated $
20	State	Banna Avenue	Griffith	Construction of a 2.5m wide shared path between Jondaryan Ave and Blumer Ave along both sides of Banna Ave	Shared Path	2.5	625	$ 203,125
21	State	Mackay Avenue	Griffith/Yoogali	Construction of a 2.5m wide shared path between Blumer Ave and Burley Griffin Way along both sides of Mackay Ave	Shared Path	2.5	2100	$ 682,500
22	Local	Merrigal Street	Griffith	Construction of a 2.5m wide shared path between Sidlow (Park) Road Reserve and (West End Oval) Yarrabee Street	Shared Path	2.5	2150	$ 698,750
23	Local	Willandra Avenue	Griffith	Construction of a 2.5m wide shared path between Merrigal St and the Kidman Way along the western side of Willandra Ave	Shared Path	2.5	520	$ 169,000
24	Local	Blumer Avenue	Griffith	Construction of a 2.5m wide shared path between Banna Ave and Doolan Cres along Blumer Ave	Shared Path	2.5	1800	$ 585,000
25	Local	Poole Street	Griffith	Construction of a 2.5m wide footpath between Blumer Ave and Sanders St along Poole St	Shared Path	2.5	200	$ 65,000
26	Local	Boonah Street	Griffith	Construction of a 2.5m wide shared path between Macarthur St to Ortella St along the western side of Boonah St	Shared Path	2.5	240	$ 78,000
27	Local	Ortella Street	Griffith	Construction of a 2.5m wide shared path between Wyangan Avenue and Boonah Street along the southern side Ortella Street	Shared Path	2.5	180	$ 58,500
28	Local	Campbell Street	Griffith	Construction of a 2.5m wide shared path between Ortella St and Cutler Ave	Shared Path	2.5	365	$ 118,625
29	Local	Cutler Avenue	Griffith	Construction of a 2.5m wide shared path between Kooringal Ave and Goondooloo St along the northern side of Cutler Ave	Shared Path	2.5	730	$ 237,250
30	State	Griffin Avenue	Griffith	Construction of a 2.5m wide shared path between Kookora St and Harward Rd along the southern side of Griffin Ave	Shared Path	2.5	535	$ 173,875

Griffith Pedestrian and Bicycle Strategy
Long Term Priority Table

Route Type	Location	Suburb	Description	Type	Width	Length (m)	Estimated $
Local	Abattoir Road	Griffith	2.5m shared path along the Canal Adjacent to Abattoir Road meeting up with the existing shared path on Wyangan Avenue	Shared Path	2.5	1000	$ 325,000
Local	Alexander Street	Griffith	Construction of a 1.2m wide footpath between Nicholls St and Manera St along the southern side of Alexander St	Footpath	1.2	160	$ 24,960
Local	Altin Street	Griffith	Construction of a 1.2m wide footpath between Blumer Ave and the existing footpath along the southern side of Altin St.	Footpath	1.2	100	$ 15,600
Local	Animoo Avenue	Griffith	Construction of a 2.5m wide shared path between Warrambool St to Kooba St along the eastern side of Animoo Ave	Shared Path	2.5	120	$ 39,000
Local	Animoo Avenue	Griffith	1.2m foot path along the northern side of Animoo Avenue between Anzac Street to Kooba Street (clockwise direction)	Footpath	1.2	485	$ 75,660
Local	Antonio Place	Griffith	Construction of a 2.5m wide shared path between the existing shared path and Hillam Drive along the northern side of Antonio Pl	Shared Path	2.5	80	$ 26,000
Local	Ash Street	Hanwood	Construction of a 1.2m wide footpath between Wilga Street and School Street	Footpath	1.2	140	$ 21,840
Local	Barellan Street	Griffith	Construction of a 1.2m wide footpath between Macarthur St and Carrathool St along the eastern side of Barellan St	Footpath	1.2	150	$ 23,400
Local	Beelbangera Rd	Griffith	2.5m on road cycleway on both sides of Beelbangera Road from Rankins Springs Road to Myall Park Road	On road Cycleway	2.5	8600	$ 2,795,000
State	Benerembah Street	Griffith	1.2m foot path along the outer diameter of Benerembah Street from Banna Avenue to Kooringal Avenue	Footpath	1.2	800	$ 124,800
Local	Bingar Street	Yenda	Construction of a 1.2m wide footpath between West Ave and Pre-school along the western side of Bingar St	Footpath	1.2	235	$ 36,660
Local	Bingar Street	Yenda	2.5m shared path along the western side of Bingar Street between Mirrool Avenue and Short Street	Shared Path	2.5	140	$ 45,500
Local	Binya Street	Griffith	2.5m shared path along the southern side of Binya Street between Kooringal Avenue and Anzac Street	Shared Path	2.5	110	$ 35,750
Local	Bonegilla Road	Griffith	Construction of a 2m wide footpath between Twigg St and Banna Ave along Bonegilla Rd	Footpath	2	200	$ 52,000
Local	Boorga Road	Griffith	2.5m shared path from the existing shared path to the intersection of Boorga Road and Jones Road (small length of path)	Shared Path	2.5	250	$ 81,250
Local	Briathwaite Road	Tharbogang	2.5m shared path along the eastern side of Braithwaite Road between White Road and Kidman Way	Shared Path	2.5	860	$ 279,500
Local	Bridge Road	Griffith	2.5m shared path along the southern side of Bridge Road from Jondaryan Avenue to Lenehan Rd	Shared Path	2.5	1000	$ 325,000
State	Burley Griffin Way	Yoogali	Installation of a 2.5m wide shared path between Mackay Ave and McCormack Rd along the western side of Burley Griffin Way	Shared Path	2.5	820	$ 266,500

Route Type	Location	Suburb	Description	Type	Width	Length (m)	Estimated $
State	Burley Griffin Way	Griffith	2.5m on road cycleway on both sides of Burley Griffin Way from McCormack Road to Whitton Road	On road Cycleway	2.5	10600	$ 3,445,000
Local	Burley Street	Griffith	1.2m footpath along the southern side of Burley Street between Clifton Blvd and Sanders Street	Footpath	1.2	650	$ 101,400
Local	Calabria Road	Griffith	Construction of a 2.5m wide shared path between Clifton Bvd and Rankins Springs Rd along the northern side of Calabria Rd	Shared Path	2.5	800	$ 260,000
Local	Canal Street	Griffith	Construction of a 1.2m wide footpath between Jondaryan Ave and Kooyoo St along the northern side of Canal St	Footpath	1.2	235	$ 36,660
Local	Canal Street	Griffith	Construction of a 1.2m wide footpath between Yambil St and Daines St along the northern side of Canal St	Footpath	1.2	160	$ 24,960
Local	Canal Street	Griffith	2.5m shared path along the Southern Side of Canal street from Jondaryan Avenue to the existing bridge crossing	Shared Path	2.5	1100	$ 357,500
Local	Cavenagh St	Griffith	Construction of a 1.2m wide footpath between Ledgerwood St and Marcus St connecting the proposed footpaths through Ledgerwood Park and Marcus Park	Footpath	1.2	360	$ 56,160
Local	Citrus Road	Griffith	Construction of a 2.5m wide shared path between Sanders St and Gillmartin along the northern side of Citrus Rd.	Shared Path	2.5	785	$ 255,125
Local	Citrus Road	Griffith	Construction of a 2.5m wide shared path between Gillmartin Dr and Rifle Range Rd along the northern side of Citrus Rd	Shared Path	2.5	1640	$ 533,000
Local	Clifton Boulevarde	Griffith	Construction of a 2.5m wide shared path between Wakaden St and Rifle Range Rd along the western side of Clifton Bvd	Shared Path	2.5	3000	$ 975,000
Local	Clifton Boulevarde	Griffith	Construction of a 2.5m wide shared path between Wakaden St and Haines Street along the eastern side of Clifton Blvd	Shared Path	2.5	2500	$ 812,500
Local	Coolah Street	Griffith	Construction of a 1.2m wide footpath between Jondaryan Ave and Murrumbidgee Ave along the southern side of Coolah Street	Footpath	1.2	1250	$ 195,000
Local	Coolah Street	Griffith	Construction of a 1.2m wide footpath between Willandra Ave and Murrumbidgee Ave along the northern side of Coolah Street	Footpath	1.2	335	$ 52,260
Regional	Crossing Street	Griffith	Construction of a 2.5m wide shared path between Wakaden St and Railway pedestrian crossing along the western side of Crossing St	Shared Path	2.5	100	$ 32,500
Regional	Crossing Street	Griffith	Construction of a 2.5m wide shared path between Banna Avenue and Bridge Road along the western side of Crossing St.	Shared Path	2.5	200	$ 65,000
Local	Cyril Morris Rest Area	Yenda	Construction of a 1.2m wide footpath path between the existing 1.2m path through the walkway connecting to the existing 1.2m path on Park St.	Footpath	1.2	180	$ 28,080
Local	Daines Street	Griffith	Construction of a 1.2m wide footpath between Yambil St and Canal St along the western side of Daines St	Footpath	1.2	95	$ 14,820
Local	DeLuca Road	Tharbogang	2.5m shared path along the eastern side of DeLuca Road between Kidman Way and Dunn Street	Shared Path	2.5	120	$ 39,000
Local	Dickson Road	Griffith	Construction of a 1.2m wide footpath between Noorla St and Wyangan Ave along the southern side of Dickson Rd	Footpath	1.2	170	$ 26,520

Route Type	Location	Suburb	Description	Type	Width	Length (m)	Estimated $
Local	Edon Street	Yoogali	Construction of a 1.2m wide footpath between Burley Griffin Way and the existing footpath along the southern side of Edon Street.	Footpath	1.2	205	$ 31,980
Local	Ellimo Street	Griffith	Construction of a 1.2m wide shared path between Yarrabee St and Kywong St.	Footpath	1.2	140	$ 21,840
Local	Erskine Road	Griffith	1.2m foot path between Walla Avenue and Moses Street on the western side	Footpath	1.2	380	$ 59,280
Local	Gibbs Street	Griffith	Construction of a 1.2m wide footpath between Probert Ave and McNabb Cr along the eastern side of Gibbs St	Footpath	1.2	260	$ 40,560
Local	Gillmartin Drive	Griffith	Construction of a 2.5m wide shared path between Citrus Rd and the existing shared path along the eastern side of Gillmartin Dr	Shared Path	2.5	120	$ 39,000
Local	Gillmartin Drive	Griffith	Extension of the existing 2.5m shared path along the southern side of Gillmartin Drive to Haines Street	Shared Path	2.5	350	$ 113,750
State	Griffin Aveune	Griffith	Construction of a 1.2m wide footpath between Kookora St and Benerembah St along the both sides of Griffin Ave	Footpath	1.2	110	$ 17,160
Local	Groongal Avenue	Griffith	Construction of a 1.2m wide footpath between Cutler Ave and Wyangan Ave along the western side of Groongal Ave	Footpath	1.2	405	$ 63,180
Local	Haines Street	Griffith	Construction of a 2.5m wide shared path between Polkinghorne St and Clifton Bvd along the southern side of Haines St	Shared Path	2.5	215	$ 69,875
Local	Hart Street	Griffith	Construction of a 1.2m wide footpath between Probert Ave and McNabb Cr along the western side of Hart St	Footpath	1.2	300	$ 46,800
Local	Harward Road	Griffith	Construction of a 1.2m wide shared path between Griffin Ave and Spence Rd along the eastern side of Harward Rd	Footpath	1.2	510	$ 79,560
Local	Heath Crescent	Griffith	Construction of a 1.2m wide footpath between Raphael Walkway and Middleton Ave along the northern side of Heath Cr	Footpath	1.2	115	$ 17,940
Local	Henry Street	Yenda	Construction of a 2.5m wide shared path along the southern side of Henry Street between Railway Parade and Bingar Street.	Shared Path	2.5	150	$ 48,750
Local	Hickey Crescent	Griffith	Construction of a 1.2m wide footpath between Probert Ave and Wakaden St along the western side of Hickey Cr	Footpath	1.2	300	$ 46,800
Local	Hillam Drive	Griffith	Construction of a 2.5m wide shared path between Clifton Bvd and the existing shared path along the northern side of Hillam Dr	Shared Path	2.5	275	$ 89,375
Local	Hillam Drive	Griffith	Construction of a 1.2m wide footpath between the existing shared path and Antonio Pl along the western side of Hillam Dr	Footpath	1.2	640	$ 99,840
Local	Hillam Drive	Griffith	Construction of a 2.5m wide shared path between Antonio Pl and Clifton Bvd along the southern side of Hillam Dr	Shared Path	2.5	220	$ 71,500
Local	Hyandra Street	Griffith	Construction of a 1.2m wide footpath between Whitton St and Noorebah Ave along Hyandra St	Footpath	1.2	85	$ 13,260
Local	Hyandra Street	Griffith	1.2m foot path along Hyandra Street from Whitton Street to Illiliwa Street	Footpath	1.2	580	$ 90,480

Route Type	Location	Suburb	Description	Type	Width	Length (m)	Estimated $
Local	Illilliwa Street	Griffith	Construction of a 2.5m wide shared path between Robb Park and Macarthur St along Illilliwa Street	Shared Path	2.5	235	$ 76,375
Local	Illilliwa Street	Griffith	Construction of a 2.5m wide shared path between Robb Park and Wakaden St	Shared Path	2.5	240	$ 78,000
State	Jondaryan Avenue	Griffith	Construction of a 2.5m wide shared path between Banna Ave and Willandra Avenue along both sides	Shared Path	2.5	990	$ 321,750
Local	Jones Road	Lake Wyangan	Construction of a 2.5m wide shared path between Lakes Rd and the existing shared path along the northern side of Jones Rd	Shared Path	2.5	580	$ 188,500
Local	Kelly Avenue	Griffith	Construction of a 1.2m wide footpath between Ortella St and Wood Rd along the western side of Kelly Ave	Footpath	1.2	360	$ 56,160
State	Kidman Way	Griffith	2.5m shared path along the eastern side of Kidman Way from Murphy Road to Jack McWilliam Road	Shared Path	2.5	1700	$ 552,500
State	Kidman Way (Hillston Rd)	Griffith	2.5m on road cycleway on both sides of Kidman Way from Harward Road to Braithwaite Road	On road Cycleway	2.5	6500	$ 2,112,500
Local	Kinkead Park	Griffith	Construction of a 1.2m wide footpath between North Grove Dr and Dickson Rd through Kinkead Park	Footpath	1.2	95	$ 14,820
Local	Konoa Street	Griffith	Construction of a 1.2m wide footpath between Animoo Ave and Ortella St along western side of Konoa St	Footpath	1.2	450	$ 70,200
Local	Kooba Street	Griffith	Construction of a 2.5m wide shared path between Animoo Ave and Noorebah Avenue along the southern side of Kooba St	Shared Path	2.5	250	$ 81,250
Local	Kooba Street	Griffith	1.2m foot path alon the northern side of Kooba Street between Animoo Avenue and Boonah Street	Footpath	1.2	380	$ 59,280
Local	Kookora Street	Griffith	2.5m wide shared path along the outer diameter of Kookora Street between Griffin Avenue and Kooringal Avenue	Shared Path	2.5	700	$ 227,500
Local	Kookora Street	Griffith	1.2m foot path along the southern side of Kookora Street between Griffin Avenue and Kooringal Avenue	Footpath	1.2	600	$ 93,600
Local	Kooringal Avenue	Griffith	Construction of a 1.2m wide footpath between Benerembah Ln and Kookora St along the western side of Kooringal Ave	Footpath	1.2	45	$ 7,020
Local	Kurrajong Avenue	Griffith	Construction of a 2.5m wide cycleway between Mackay Ave and Watkins Ave along both sides of Kurrajong Ave	On road Cycleway	2.5	2110	$ 685,750
Local	Kywong Street	Griffith	Construction of a 1.2m wide footpath between footbridge and Ellimo Street.	Footpath	1.2	30	$ 4,680
Local	Lake Wyangan Shared Path	Lake Wyangan	Construction of a 2.5m wide shared path around the shore of the North Lake. Beginning from Jones Rd and extending around through the Lake Wyangan Picnic Area to Lakes Rd	Shared Path	2.5	5570	$ 1,810,250
Local	Lakes Road	Lake Wyangan	Construction of a 2.5m wide shared path between the Lake Wyangan Picnic Area and Jones Rd along the eastern side of Lakes Rd	Shared Path	2.5	1920	$ 624,000
Local	Lakes Road	Griffith	2.5m on road cycleway on both sides of Lakes Road from Jones Road to Kidman Way	On road Cycleway	2.5	3500	$ 1,137,500

Route Type	Location	Suburb	Description	Type	Width	Length (m)	Estimated $
Local	Langley Crescent	Griffith	Construction of a 1.2m wide footpath between Probert Ave and Blumer Ave along eastern side of Langley Cr	Footpath	1.2	500	$ 78,000
Local	Ledgerwood Street	Griffith	1.2m foot path along the western side of Ledgerwood Street between Blumer Park and Ledgerwood Park	Footpath	1.2	250	$ 39,000
Local	Lenehan Road	Griffith	2.5m shared path along the western side of Lenehan Road from Bridge Road to Oakes Road	Shared Path	2.5	600	$ 195,000
Local	Little Road	Griffith	1.2m foot path between Middleton Ave and Evanside Parade along the western side	Footpath	1.2	230	$ 35,880
Local	Locklea Park	Griffith	1.2m foot path in the middle of Locklea Park meeting up with the 1.2m path on Little Road.	Footpath	1.2	640	$ 99,840
Local	Macarthur Street	Griffith	Construction of a 1.2m wide footpath between Illilliwa St and Wakaden St along the eastern side of Macarthur St	Footpath	1.2	255	$ 39,780
Local	Madden Drive	Griffith	1.2m foot path along the southern side of Madden Drive between Hillam Drive Gillmartin Drive.	Footpath	1.2	640	$ 99,840
Local	Main Canal Reserve (Recreational Path)	Griffith	2.5m recreational path following the length of Canal from Kookora Street to Mackay Avenue. Continue following the Canal Along Macedone Rd from Mackay Avenue to Calabria Road	Shared Path	2.5	3700	$ 1,202,500
Local	Mallinson Road	Griffith	Construction of a 2.5m shared path along the northern side of Mallinson Road between Boorga and Lakes Road.	Shared Path	2.5	2770	$ 900,250
Local	Manera Street	Griffith	Construction of a 2.5m wide shared path between Alexander St and Clifton Bvd along the southern side of Manera St	Shared Path	2.5	215	$ 69,875
Local	McCudden Street	Griffith	Construction of a 2.5m wide shared path between Poole Street and Clifton Boulevard.	Shared Path	2.5	210	$ 68,250
Local	McNabb Crescent	Griffith	Construction of a 2.5m wide shared path between Macarthur St and Blumer Ave along the northern side of McNabb Cr	Shared Path	2.5	1065	$ 346,125
Local	Merrowie Street	Griffith	Construction of a 1.2m wide footpath between Merrigal St and Yarrabee St along the northern side of Merrowie St	Footpath	1.2	230	$ 35,880
Local	Middleton Avenue	Griffith	Construction of a 1.2m wide footpath between Walla Ave and Watson Rd along the western side of Middleton Ave	Footpath	1.2	790	$ 123,240
State	Mirrool Avenue (Burley Griffin Way MR84)	Yenda	Installation of a 2.5m wide shared path between Dredge Street and Twigg Rd along the western side of Mirrool Ave	Shared Path	2.5	960	$ 312,000
Local	Moses Street	Griffith	1.2m foot path between Merrigal Street and Harward Road along the southern side	Footpath	1.2	100	$ 15,600
Local	Murrumbidgee Avenue	Griffith	Construction of a 2.5m wide shared path between Kookora St and the Showground and between Merrigal St and Foreshaw Ave along the western side of Murrumbidgee Ave	Shared Path	2.5	800	$ 260,000
Local	Murrumbidgee Avenue	Griffith	Construction of a 1.2m wide footpath between Kookora St and Taylor Rd along the eastern side of Murrumbidgee Ave	Footpath	1.2	520	$ 81,120
Local	Nicholls Street	Griffith	Construction of a 1.2m wide footpath between Clifton Bvd and Alexander St along the eastern side of Nicholls St	Footpath	1.2	700	$ 109,200

Route Type	Location	Suburb	Description	Type	Width	Length (m)	Estimated $
Local	Noorebah Avenue	Griffith	Construction of a 1.2m wide footpath between Hyandra St and Carrathool St along the eastern side of Noorebah Ave	Footpath	1.2	105	$ 16,380
Local	Noorilla Street	Griffith	Construction of a 1.2m wide footpath between Campell St and Wyangan Ave along the southern side of Noorilla St.	Footpath	1.2	195	$ 30,420
Local	Noorilla Street	Griffith	Construction of a 2.5m wide shared path between Boonah St and Mallinson Street along Noorilla St	Shared Path	2.5	95	$ 30,875
Local	Noorilla Street	Griffith	Construction of a 1.2m wide footpath along the southern side of Noorilla Street between Wyangan Avenue and Boonah Street	Footpath	1.2	950	$ 148,200
Local	Noorla Street	Griffith	Construction of a 2.5m wide footpath between Kookora St and Goondooloo St along the northern side of Noorla St	Footpath	2.5	385	$ 125,125
Local	North Grove Drive	Griffith	Construction of a 1.2m wide footpath between Wyangan Ave and Kinkead Park along the northern side of North Grove Dr	Footpath	1.2	305	$ 47,580
Local	Nyora Street	Griffith	Construction of a 1.2m wide footpath between Noorilla Street and The Circle along the eastern side of Nyora Street.	Footpath	1.2	60	$ 9,360
Local	Oakes Road	Griffith	2.5m Shared Path from Jondaryan Avenue to Kurrajong Avneue along both sides of Oakes Road	Shared Path	2.5	6200	$ 2,015,000
Local	Off Road Shared Path	Griffith	Construction of a 1.2m wide shared path between Ellimo St and Kookora St along through the Canal reserve	Footpath	1.2	175	$ 27,300
Local	Ortella Street	Griffith	Construction of a 2.5m wide shared path between Wyangan Avenue and Campbell Street.	Shared Path	2.5	145	$ 47,125
Local	Palla Street	Griffith	Construction of a 1.2m wide foot path between Wyangan Avenue and Kooringal Avenue along the eastern side of Palla Street.	Footpath	1.2	350	$ 54,600
Local	Polkinghorne Street	Griffith	Construction of a 2.5m wide shared path between the existing shared path and Haines St along the eastern side of Polkinghorne St.	Shared Path	2.5	85	$ 27,625
Local	Rae Road	Griffith	Construciton of a 1.2m wide footpath between Kidman Way and Watkins Avenue along the northern side of Rae Road	Footpath	1.2	890	$ 138,840
Local	Railway Parade	Yenda	2.5m shared path along the southern side of Railway parade between Myall Park Road and Mirrool Avenue	Shared Path	2.5	1270	$ 412,750
Local	Railway Street	Griffith	2.5m shared path along the northern side of Railway Street between Ulong Street and Bonegilla Road	Shared Path	2.5	775	$ 251,875
Regional	Rankins Springs Road	Beelbangera	Construction of a 2.5m wide shared path between Rifle Range Rd and Beelbangera Rd along the western side of Rankins Springs Rd	Shared Path	2.5	620	$ 201,500
Regional	Rankins Springs Road	Beelbangera	Construction of a 2.5m wide shared path between Beelbangera Rd and the Beelbangera Public School along the southern side of Rankins Springs Rd	Shared Path	2.5	165	$ 53,625
Local	Rankins Springs Road	Griffith	2.5m shared path from Wakaden Street to Rifle Range Road along Rankins Spirngs Rd	Shared Path	2.5	4000	$ 1,300,000
Local	Remembrance Drive	Griffith	Construction of a 2.5m wide shared path between Noorilla St and Scenic Drive	Shared Path	2.5	350	$ 113,750

Route Type	Location	Suburb	Description	Type	Width	Length (m)	Estimated $
Local	Rifle Range Road	Griffith	2.5m on road cycleway on both sides of Rifle Range Road from Jones Road to Scenic Drive	On road Cycleway	2.5	3000	$ 975,000
Local	Rifle Range Road	Griffith	Construction of a 2.5m wide shared path between Scenic Dr and Rankins Springs Rd along the southern side of Rifle Range Rd	Shared Path	2.5	1740	$ 565,500
Local	Robb Park	Griffith	Construction of a 2.5m wide shared path between Macarthur St and Illilliwa St through Robb Park	Shared Path	2.5	205	$ 66,625
Local	Robertson Street	Griffith	Construction of a 1.2m wide footpath between Clifton Bvd and Nicholls St along the western side of Robertson St	Footpath	1.2	480	$ 74,880
Local	Sanders Street	Griffith	Construction of a 2.5m wide shared path between Clifton Bvd and Citrus road	Shared Path	2.5	450	$ 146,250
Local	Scenic Drive	Griffith	Construction of a 2.5m wide shared path between Remembrance Dr and Rifle Range Rd along the eastern side of Scenic Dr	Shared Path	2.5	4745	$ 1,542,125
Local	School Street	Hanwood	1.2m foot path along the northern side of School Street between school crossing and Ash St	Footpath	1.2	160	$ 24,960
Local	South Avenue	Yenda	Construction of a 1.2m wide footpath between Short St and Yenda Pl along the eastern side of South Ave	Footpath	1.2	155	$ 24,180
Local	Speirs Street	Griffith	Construction of a 1.2m wide footpath between Probert Ave and Wakaden St along eastern side of Speirs St	Footpath	1.2	380	$ 59,280
Local	Spence Road	Griffith	Construction of a 1.2m wide footpath between Harward Rd and Walla Ave along the northern side of Spence Rd	Footpath	1.2	240	$ 37,440
Local	Stafford Road	Griffith	2.5m Shared path along the Northern side of Stafford Rd from Jondaryan Avenue to Murrumbidgee Avenue	Shared Path	2.5	1180	$ 383,500
Local	Todd Road	Lake Wyangan	Construction of a 1.2m wide footpath between Boorga Rd and Mason St along the northern side of Todd Rd	Footpath	1.2	210	$ 32,760
Local	Twigg Road	Yenda	Installation of a 2.5m wide shared path between Mirrool Ave and Wade Park along the western side of Twigg Rd	Shared Path	2.5	215	$ 69,875
Local	Ulong Street	Griffith	2.5m shared path between Wakaden Street and Railway Street along both sides.	Shared Path	2.5	90	$ 29,250
Local	Wakaden Street	Griffith	2.5m shared path along the northern side of Wakaden street from Curtain Street to Kooringal Avenue	Shared Path	2.5	1380	$ 448,500
Regional	Wakaden Street	Griffith	Construction of a 2.5m wide shared path between Blumer Avenue and Clifton Bvd along the northern side of Wakaden St	Shared Path	2.5	640	$ 208,000
Local	Walla Avenue	Griffith	Construction of a 2.5m wide footpath between Kookora St and Middleton Avenue along both sides of Walla Ave.	Shared Path	2.5	1000	$ 325,000
Local	Warrambool Street	Griffith	Construction of a 1.2m wide footpath between Animoo Ave and Noorebah Avenue along western side of Warrambool St - adjacent to Hospital	Footpath	1.2	350	$ 54,600
Local	Watkins Avenue*	Griffith	Construction of a 2.5m wide shared path between Overs Road and Jondaryan Ave along both sides of Watkins Ave	Shared Path	2.5	2100	$ 682,500

Route Type	Location	Suburb	Description	Type	Width	Length (m)	Estimated $
Local	Watson Road	Griffith	Construction of a 1.2m wide footpath between Murrumbidgee Ave and Walla Ave along southern side of Watson Rd	Footpath	1.2	630	$ 98,280
Local	West Avenue	Yenda	Construction of a 1.2m wide footpath between Cyril Morris Park and Railway Parade along the northern side of West Ave	Footpath	1.2	360	$ 56,160
Local	Whitton Street	Griffith	Construction of a 1.2m wide footpath between Wakaden St and Hyandra St along the eastern side of Whitton St	Footpath	1.2	220	$ 34,320
Local	Wilga Street	Hanwood	1.2m foot path along the southern side of Wilga Street between Hanwood Road and Ash Street	Footpath	1.2	255	$ 39,780
Local	Willandra Avenue	Griffith	Construction of a 1.2m footpath along the north-eastern side of Willandra Avenue between Ulong Street and Jondaryan Avenue	Footpath	1.2	800	$ 124,800
Local	Wood Road	Griffith	Construction of a 1.2m wide footpath between Kelly Ave and Wyangan Ave along the southern side of Wood Rd	Footpath	1.2	490	$ 76,440
Local	Wyangan Avenue	Griffith	Construction of an off-road 2.5m wide shared path between Animoo Ave and Crump Cl along both sides of Wyangan Ave	Shared Path	2.5	1700	$ 552,500
Local	Yarrabee Street	Griffith	Construction of a 1.2m wide footpath between Merrigal St and Griffin Ave along the western side of Yarrabee St	Footpath	1.2	500	$ 78,000
Local	Yarran Street	Hanwood	Construction of a 1.m wide footpath between the existing footpath on Yarran St and the Hanwood Sports Club	Footpath	1.2	200	$ 31,200
Local	Yenda Place	Yenda	Construction of a 1.2m wide footpath between South Ave and East Ave along the eastern side of Yenda Pl	Footpath	1.2	90	$ 14,040
Local	Yoolooma Street	Griffith	Construction of a 1.2m wide footpath between Macarthur St and Noorilla St along the western side of Yoolooma St.	Footpath	1.2	150	$ 23,400
Local	Yoogali Walkway	Yoogali	Construction of a 1.2m wide path connecting Henderson Oval Playground to Altina Court, Katrina Place and East Street.	Footpath	1.2	380	$ 59,280