



Pedestrian Access and Mobility Plan

2015

Grafton
South Grafton
Yamba
Maclean
Iluka
Woombah
Ulmarra
Lawrence

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SUMMARY

Clarence Valley Council is committed to providing long term planning for pedestrian and cycling access and mobility. This is with the aim of promoting walking and cycling as sustainable modes of active transport for short trip destinations and thus also contributing to improving equity, health and the environment within the community.

The development of the Pedestrian Access and Mobility Plan and Bicycle Plan, and the subsequent construction of infrastructure, aim to meet the following contained within Council's "Our Community Plan":

Objective 2.2 - We will have town streets, footpaths and cycleways that are adequate, interconnected and maintained

Strategy 2.2.3 - Facilitate the enhancement and expansion of accessible walking and cycling networks where strategically identified and interconnect them with other transport and recreation

In 2008 Clarence Valley Council engaged QED Pty Ltd to prepare an initial Bike Plan and Pedestrian Access and Mobility Plan (PAMP) for the towns of Grafton, South Grafton, Yamba and Maclean in the Clarence Valley Council area.

In 2011 Clarence Valley Council prepared a second Bike Plan and Pedestrian Access and Mobility Plan (PAMP) for the towns of Iluka, Woombah, Lawrence, and Ulmarra.

In 2015, Council has reviewed these documents, with the view of improving their readability and relevance. Hence, the Bike Plan has been separated from the Pedestrian Access and Mobility Plan (PAMP), creating two stand alone documents:

- Clarence Valley Council Bicycle Plan
- Clarence Valley Council Pedestrian Access and Mobility Plan

Initially both documents included the following places within the Clarence Valley Council Area:

- Grafton
- South Grafton
- Yamba
- Maclean
- Iluka
- Woombah
- Lawrence
- Ulmarra

These documents are intended to be reviewed and updated regularly. Additionally there is scope to expand both documents to include other areas, for example Wooli, Brooms Head, Angourie, Coutts Crossing, Harwood, Junction Hill etc.

The PAMP is a comprehensive strategic approach to identifying a pedestrian network. The PAMP, will reflect the changes in the context for walking and cycling and lead to a consistent approach to these modes throughout the Council area. The towns included in the study area are not only the more populated towns in the area, but are also local centres attracting people from less populated regions and, in the cases of Yamba, Wooli, and Brooms Head in particular, significant numbers of tourists. The areas are well suited to increased walking and cycling due to their relatively moderate topography and clement climate.

It is envisaged that the principles, guidelines and criteria established through the PAMP will be applicable across the entire Council area and that this Plan will become a guiding document suitable for Council and developers.

These principles include (in no particular order):

- Providing the highest quality of walking facilities in the most-used areas, to create usable walking networks
- Allow the bike and pedestrian networks to complement each other (both existing and planned)
- Providing a basic network of routes suitable for use by people with disabilities (and thus also people with strollers and prams, etc)
- Separating walking from cycling where high pedestrian levels would lead to conflict with cyclists, providing shared (pedestrian / bicycle) use facilities where appropriate, but also recognising that children under the age of 12 are legally allowed to cycle on footpaths
- Reduce the number of bike and pedestrian accidents including trips, motor vehicles, bicycles and other wheeled forms of transport
- Identifying performance criteria for different types of routes, with different roles. Applying these to all works in the future will enable high quality facilities to develop over time, in addition to the works identified for funding in this PAMP.
- Balancing the different usage patterns and needs for walking routes, by identifying different types of routes e.g. those used for commuting or accessing shops, compared to those used for exercise and recreation.
- Provide pedestrian facilities that cater for the needs of all pedestrians including people with disabilities, commuters, children, seniors and recreational walkers
- Reduce the number of missing links and severance within the pedestrian network
- Improve connectivity with other transport modes primarily bus, car and train
- Link with Safer Routes to Schools projects
- Meet obligations under the Commonwealth Disability Discrimination Act (1996) and Disability Standards for Accessible Public Transport

INTRODUCTION

Together with the Roads and Maritime Services of New South Wales (RMS), all local councils in NSW have a responsibility to provide safe, convenient and connected pedestrian and cycling routes, which will encourage people to use active transport modes, rather than use their cars.

There is a need for Council to reconcile the different levels of walking and cycling provision in its area and to adopt a standard approach to providing new facilities. In developing its approach to new facilities the PAMP must cater for current and future demands and needs of the community. This is achieved in part by identifying routes in terms of a route hierarchy. The PAMP uses a weighting system to prioritise routes and facilities.

It is intended that the approach contained in the PAMP will also be applicable to other towns and villages in the council area. A map of the local government area is shown below.

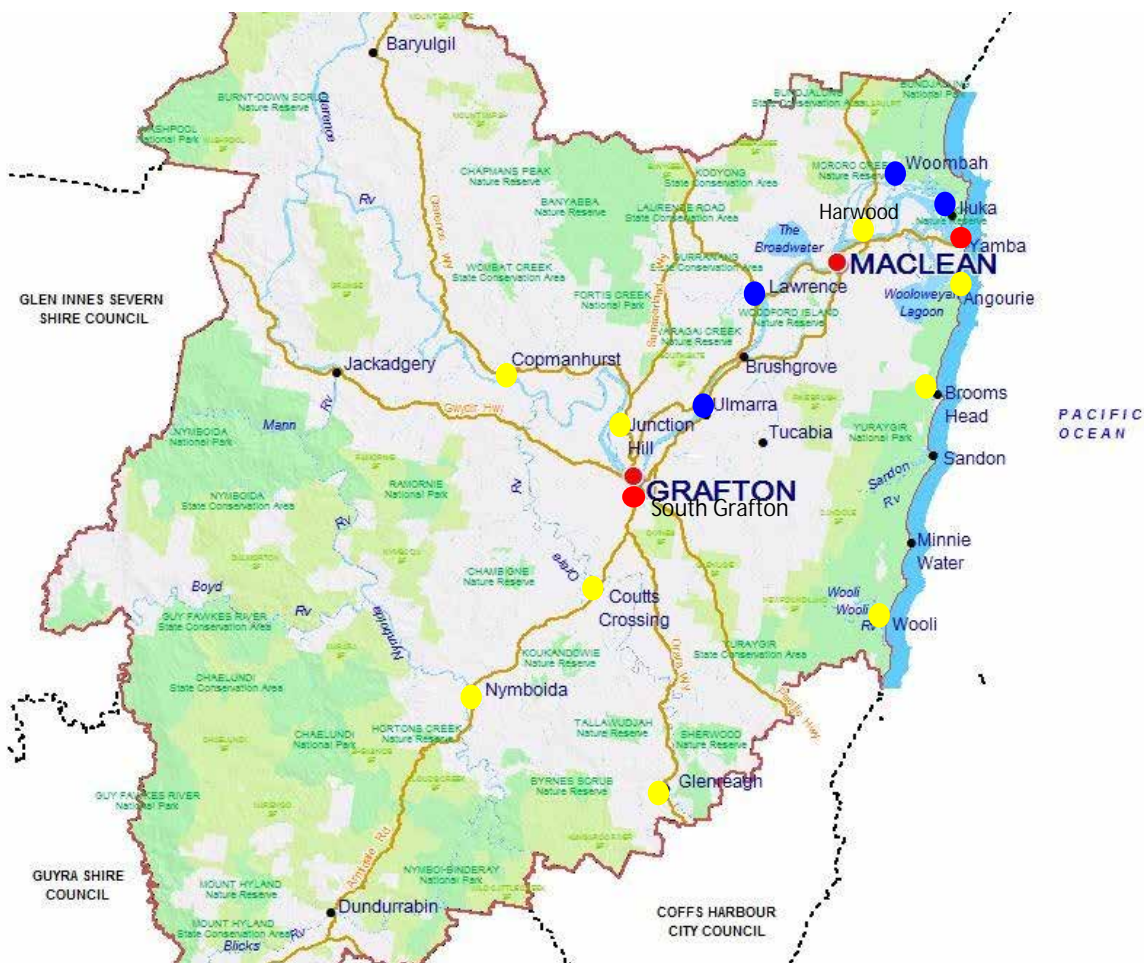


Figure 1. Clarence Valley Council area.

This Plan has been developed in accordance with the following guidelines outlined by the RMS and the relevant state and national policy and design guidelines.

- RTA NSW How to Prepare a Pedestrian Access and Mobility Plan – an easy three stage guide
- Planning Guidelines for Walking and Cycling – December 2004, NSW Government
- Austroads Part 6A Pedestrians and Cyclist Paths

It should also be kept in mind that providing infrastructure or providing programs and services aimed at improving accessibility and achieving mobility are not goals in themselves, although they can be indicators of how well access and mobility is being provided. Instead, Council's intent is to support and enhance people's lifestyles and quality of life. Above and beyond basic concepts of accessibility and mobility and duty of care, risk management and the like, which are associated with the provision of infrastructure in particular, is another concept: - that in providing for accessibility and mobility, independent access for the community can be achieved. This includes for children, people with disabilities, the frail elderly, people pushing strollers or carrying loads, teenagers, and other members of the community going about their daily activities. The concept of independent access relates to transport as a social good rather than as a demand derived from other activities, and is an aspirational goal for Clarence Valley Council. This PAMP aims to assist the Council in delivering this to its constituency.

BACKGROUND

THE CLARENCE VALLEY AREA

The Clarence Valley Council area is located in the Northern Rivers region of New South Wales, about 600 kilometres north of Sydney and 300 kilometres south of Brisbane. The Council area is bounded by the Kyogle and Richmond Valley Council areas in the north, the Pacific Ocean in the east, Armidale-Dumaresq, Coffs Harbour City and Bellingen Shire in the south and Glen Innes Severn Council area, Guyra Shire and Tenterfield Shire in the west. The area is serviced by the Pacific Highway and the North Coast railway with a station at Grafton.

Clarence Valley Council covers a total land area of 10,440 square kilometres, of which a significant proportion is National Park, State Forest and nature reserves, including beaches, rainforests, mountains and rivers.

The area has a diverse population of approximately 52,000 people living in 44 towns, villages and city environs, and like many coastal areas Clarence Valley has experienced growth in both its resident and tourist populations and has an increasing ageing population.

The Clarence Valley is part of the vibrant Northern Rivers region of NSW. The Northern Rivers has become Australia's premier lifestyle region. The region's appeal and success is a result of its natural beauty, relaxed country charm, service delivery and business innovation. CVC now represents an estimated 50% of the landmass of the northern rivers region.

Much of the rural area is used for forestry, agriculture and grazing, including beef cattle and sugarcane growing. Fishing is also an important industry. In more recent years tourism has become a major industry, especially along the coast.

The climate is largely warm ranging from subtropical on the coast to temperate on the tablelands, with an annual rainfall of up to 1500mm in some centres. The Clarence Council area encompasses a diverse set of environmental features, cultures, traditions, communities and industries. This diversity represents a significant opportunity now and in the future for Council, the community and commercial enterprise.

The Clarence River is the area's most significant natural feature. The river system is the east coast's largest waterway and drains close to 23,000 square kilometres of land. Its catchment area extends approximately 380 kilometres from Iluka and Yamba to the Queensland border districts; and to the edge of Great Dividing Range and deep into the Dorrigo Plateau. More than 100 islands form part of the Clarence River system.

GRAFTON

Grafton is a regional town renowned for its jacaranda trees, graceful old buildings, wide streets, sporting and cultural facilities, and its location on the banks of the Clarence River. It is the thriving commercial hub of the Clarence Valley. At the 2011 census Grafton had a population of 10038.

The Clarence River is a dominant feature in Grafton's landscape and lifestyle. Many of Grafton's buildings have been classified by the National Trust, including the Christ Church Cathedral, the Grafton Gaol, and some fine historic homes.

Grafton has wide road reserves laid out on a very regular grid pattern, with streets spaced to produce 200m by 200m blocks. The grid runs at about 45 degrees to a north-south orientation and is reinforced by mature street plantings along one or both sides of most streets. The grid extends from the Clarence River to North Street.

Although the road reserves are wide, the streets themselves are less so, with the remaining road reserve forming angled parking and/ or wide setbacks to the property boundaries. This also provides the verge width for street trees. Minor laneways provide additional connectivity in a number of locations.

This grid pattern is interrupted to the north-west by the racecourse and golf course and to a lesser extent closer to the CBD, in the area occupied by the showground, tennis courts, skate park, Ellem Oval, Fisher Park and the synthetic hockey fields.

The other major interruption to the grid pattern is caused by the Clarence River, which is bridged by the Grafton Bridge. This has a unique two storey construction with the railway and pedestrian paths running underneath the road and links Grafton with South Grafton. Along the river edge, Grafton's street grid tends to be augmented by additional streets and laneways, and has smaller block sizes as a result.

While the railway line runs along the north-eastern side of the CBD, this rarely severs connections at road level, as the line is elevated.

From North Street, there are only three major routes providing longer-distance connectivity: Great Marlow Road / Back Lane, Summerland Way, and Queen Street / Lawrence Road.

The main commercial district (CBD) extends from Pound Street to the waterfront and from Queen Street to Clarence Street, extending another two blocks along Prince Street, to Oliver Street. Hotels and small shops are dispersed about the rest of Grafton, but generally in isolation rather than in sufficient concentration to form mainstreet areas.

The schools are located about an axis aligned mid-way between a north-south alignment and the 45 degree grid alignment. This does not appear to be an intentional alignment, and partly reflects the way in which schools occupy blocks.

There is a school located at the southern end of this alignment – Clarence Valley Anglican School – fronting Victoria Street and abutting the Clarence River, close to the CBD. The Grafton TAFE is located about a block to the north-east.

The two largest schools are located on the opposite side of the CBD. Grafton Public School is located about a block to the north-west of the CBD, and Grafton High School in the block diagonally opposite and to the north-west of Grafton Public School.

Westlawn Public School is located between North Street, Hoof Street, Cranworth Street and Cassia Street, a block distant from the racecourse and golf course. There is also an infants school about

two blocks to the south-east of Westlawn Public School. St Mary's Primary School is also located near the racecourse in Turf Street.

There are numerous parks in Grafton. The skate park, at Oliver Street / Prince Street, is well used by skaters and children on bicycles.

The area occupied by the racecourse and golf course (and greyhound club) is the largest open space in the town. Although accessible from adjoining streets, there are no pathways across this area.

The Grafton Hospital is located on the block between Arthur, Crown, Mary and Queen Streets, about a block away from North Street and to the west of the CBD.

There is no signalised traffic control for traffic or pedestrians in Grafton. The most common traffic engineering device apart from give way and stop controls is the roundabout, which varies in scale from small one-lane roundabouts to large two-lane roundabouts.

Generally, with a well-connected grid, traffic volumes on most streets are relatively moderate (i.e. below 3,000 vehicles a day) as there are numerous alternative routes from most origins to destinations.

Most streets have only one lane of traffic in each direction, with some having turning lanes at T-junctions or four-way intersections. Exceptions are on the approaches to roundabouts and some intersections, and more generally along:

- Craig Street, Clarence Street to Villiers Street
- Fitzroy Street, Villiers Street to Prince Street
- Prince Street, south of Dobie Street
- Villiers Street, Fitzroy to Pound Street.

Grafton is basically flat, except close to the river on the south side of the town, where the river bank drops off dramatically. This is due in part to the construction of levees along the river bank to protect the town against flooding.

The Grafton Bridge forms a local topographical feature, being a railway bridge on the lower deck and road bridge on the higher deck. Pathways are provided either side of the railway bridge, which are accessed from Grafton via ramps up to path level. These are quite steep and would not meet disability standards. There is no pathway on the higher level.

Maclean is 45 km and Yamba 75 km north east of Grafton.

SOUTH GRAFTON

At the 2011 census South Grafton had a population of 6193.

The street pattern of South Grafton is basically radial, centred on the Bent Street/ Charles Street/ Ryan Street intersection. The radials are mainly major traffic routes, collecting traffic as they approach the town centre. The Pacific Highway forms two radial routes, one north-easterly and one south-easterly. These meet at Charles Street, just east of the main intersection.

Each of these radials provides a route to an onward destination. The Gwydir Highway leads to Waterview Heights, Copmanhurst, Jackadgery, and Washpool and Gibraltar Range National Parks. (It also leads to Glen Innes and is significant for the annual Grafton / Inverell Road Cycle Race.) The Pacific Highway continues in the north-easterly direction to Ulmarra, Maclean, Yamba and ultimately Brisbane, and in the south-easterly direction to Clarence Valley Regional Airport and Coffs Harbour. Armidale Road leads to Coutts Crossing, Nymboida and Armidale. Link roads (Orara Way) from the Armidale Road lead to Glenreagh and Coffs Harbour. Rushforth Road also leads to Coutts Crossing, as a 'back road' alternative to Armidale Road. Bent Street connects to Grafton via the Grafton Bridge.

Just south of the main intersection, Bent Street joins Ryan Street at a T-junction and forms a supplementary radial to the local area. As an east-west route connecting the Armidale Road, Skinner Street and Bent Street radials, Tyson Street is also locally important. Cambridge Street performs the same function closer to the main intersection but seems less busy, possibly due to the fewer land uses along it. Vere Street similarly links these radials, but at a distance of only one block from the main intersection and with an alignment parallel to the Gwydir Highway. Unlike Cambridge or Tyson Streets, Vere Street does not continue east of Armidale Road.

The remaining street system has a grid base from the Clarence River south to Tyson Street, after which the local street system follows more of a cul-de-sac pattern. At least one area, around Bimble Avenue, is a Radburn style development. (This is a development style that originated in the USA, which features houses fronting onto a pedestrian pathway through public open space, with no vehicular access through the open space or to the house frontages. Vehicular access occurs at the rear.)

Residential development on the east side of South Grafton is not close to the township but more of a parallel development area. This is Clarenza and is based around Centenary Drive, which is a north-south running road that links the two legs of the Pacific Highway. Centenary Drive is crossed by Duncans Lane / Washpool Road, which provides additional connectivity to the Pacific Highway. There are no other road connections between Clarenza and South Grafton. The highest density development in Clarenza is at Merton Mews, which has a limited cul-de-sac form. Further developments have been approved in this area.

Clarence Valley Regional Airport is located to the south east of South Grafton. Rex Airlines has flights directly accessing the Clarence Valley.

The traditional commercial centre of South Grafton is centred along Skinner Street, north of its intersection with Ryan Street/ the Gwydir Highway. This is essentially a main street area over the two blocks of Skinner Street and spilling over to the east for a block along Through Street and Spring Street. A Masterplan for Skinner Street has been prepared and its implementation has commenced.

A supermarket and shopping centre are located in the block bounded by Bent Street north of the main intersection, Ryan Street west of the main intersection, and Spring and Bligh Streets. Further development has occurred on the eastern side of Bent Street, extending a further block north to the rail station. This is bounded to the east by the railway line, which rises from ground level at the station to an elevated line as elsewhere, with more commercial development on the western side

around Iolanthe Street and the Pacific Highway. Further development has occurred to the east of Bent Street and Iolanthe Street, with the provision of fast food outlets and other retail businesses.

Industrial estates are located about 1.5km south of the main intersection, between Armidale Road and the Pacific Highway and bounded by the railway line, which runs between these roads.

There is also a small group of shops on the eastern side of Armidale Road, between Cambridge Street and Norrie Street.

West of Skinner Street, Through Street runs along the Clarence River, but views over the river are prevented by a levee wall. A narrow pedestrian walkway is provided on this.

The schools are not clustered or located close to the main commercial areas. Instead, most are located at a considerable distance from the centre of the township. In particular, Catherine McAuley College, St Andrews Christian Community School and Clarence Valley Anglican School (formerly Cathedral High School) are located in Clarenza.

Silver Jubilee Park occupies the south-eastern corner of the main intersection and houses the bus interchange near its southern edge.

Other parks are located mainly on the western side of Armidale Road, and most west of Bent Street.

As with Grafton, there is no signalised traffic control for traffic or pedestrians in South Grafton. Roundabouts are less prevalent in South Grafton than Grafton.

Most streets have only one lane of traffic in each direction, with some having turning lanes at T-junctions or four-way intersections. The main exception is Bent Street, between the main intersection and the Grafton Bridge. Lengths of turn lanes are provided at the Pacific Highway and Charles Street, near the intersection of these streets and Iolanthe Street. The south-eastern leg of the Pacific Highway becomes two lanes south-east bound at a point past Tyson Street, and has turn lanes on the approach to Centenary Drive and Tyson Street.

At Bent Street, Spring Street is left turn only from both east and west sides, with turns prevented by a central median. Vehicles heading to Grafton from Spring Street east of Bent Street instead use Crisp Avenue and Through Street to turn right at the Through Street/ Bent Street intersection. At the eastern Through Street approach to Bent Street, left turns are limited from 8:00am to 9:00am.

Through Street is one way westbound from Skinner Street to Cowan Street and Cowan Street is one way to Spring Street.

Speed limits within the township are generally 50km/h for local streets, and 60km/h for the major arterial roads. The Pacific Highway changes from a speed limit of 60km/h within the township to 80km/h east of its nominal intersection with Through Street, roughly in line with the rear of the Bunnings site.

Unlike Grafton, median islands at intersections are uncommon. Also unlike Grafton, the railway line forms a barrier in some locations.

The topography is defined by a mixture of floodplains and, south of Vere Street, a hill rising from Rushforth Street to a ridge along Bent Street.

At the Grafton Bridge, the bank of the Clarence River is higher than on the Grafton side. The railway line runs to the east of an embankment, with road access from Bent Street to the western area alongside the bridge descending from Bent Street. Access from this embankment descends further via Riverside Drive, to the general floodplain level. This becomes the level of the commercial area

located around Skinner Street and is essentially maintained west of Skinner Street / Rushforth Road, at least within the township. To protect against floods, a levee has been constructed along the Clarence River in this area.

Streets ascend from a floodplain level at Skinner Street to Bent Street, with most of the climb occurring close to Bent Street. This starts north of Ryan Street, but becomes more marked south of Vere Street, and is particularly obvious along Tyson Street and Roberts Drive.

Streets around Roberts Drive variously climb and undulate, with streets most directly linking Rushforth Road to Bent Street tending to have steep climbs while other streets curving around the local rise. Roberts Drive itself climbs steeply from Rushforth Road, while Bent Street undulates in this area.

The local rise drops back to floodplain level east of the railway line, but there are few streets in this area. Only Tyson Street crosses the railway line, to link the area west of the railway line with that east of the railway line.

YAMBA

Yamba is the Clarence Valley's major growth area and principal coastal resort. It is situated at the mouth of the Clarence River on the southern side and is surrounded by Yuraygir National Park, the Clarence River, Pacific Ocean and rural land. Opposite, on the northern side of the river mouth is Iluka.

The Port of Yamba is one of five deep water ports in NSW and used for sea freight and recreational voyaging as well as the harbouring of the fishing fleets.

At the 2011 census Yamba had a population of 6087, however during the holiday season, this population more than doubles. Yamba was named as NSW's most popular sea change location in 2006.

Past a development area at its western end, Yamba Road is located close to and south of the Clarence River. The eastern edge of Yamba is provided by the sea and beaches along this.

The street pattern for Yamba is of Yamba Road forming a main arterial spine, with distributor roads as ribs leading off this. These ribs may be long distance connections to other areas, such as Angourie, or pockets of local development.

The arterial spine ends at the historic township of Yamba, which has a relatively dense grid network of streets aligned at roughly 45° to compass north. Blocks are about 105 metres in width, measured in the north-west / south-east direction, and 230 metres in length, measured in the north-east / south-west direction. There are three main north-west / south-east running streets:

- River Street forms the western edge of the main historic Yamba township
- Yamba Street runs down the centre of the main historic Yamba township
- Clarence Street forms the eastern edge of the historic Yamba township

In a north-east / south-west direction, streets are generally larger every two block widths, with minor streets in between these providing local access to houses. This pattern is somewhat interrupted by double-width blocks on the south-western side of Yamba Street, and the pattern ceases south of Church Street, where roads start to curve to reflect the alignment of Pippi Beach, which provides an edge to the historic township.

With a relatively self-contained historic township, further development has been on available land to the west. Areas to the south of Yamba Road have been nominated for further land release to cater for future development, including the West Yamba release area on Carrs Drive.

There are two main developed areas, being the historic Yamba township and a newer area at the western end of the study area, north of Yamba Road.

The main Yamba CBD is located in the historic township, at the north-western end. This roughly runs between Convent Lane and Harbour Street, and River Street and the eastern side of Yamba Street, with some development along Clarence Street. Extension of the CBD further east to join with Clarence Street is constrained by the topography at this point, which will be discussed later. The CBD is increasingly servicing the tourist market.

A major shopping centre is located on Treelands Drive, not far off Yamba Road. This appears to be acting as a catalyst for other services to locate in this area. A seniors village has been constructed nearby and is also proposed for Oyster Cove. Further development south of Yamba Road is likely to reinforce use of this secondary commercial area, which is becoming the main area for utility shopping for Yamba residents. The distance along Yamba Road from River Street to Treelands Drive is a little over 3km.

A privately operated non-vehicular ferry, located at the end of River Street, connects Yamba with Iluka, which is a smaller settlement that also has high visitation levels.

The eastern edge of Yamba is defined by a series of beaches, with Clarence Street and Pacific Parade providing the main vehicular access adjacent to these beaches. These streets run in a northwest/southeast direction and northeast/ southwest direction respectively, with two short street areas running off Clarence Street on the beach side, being Pilot Street at its mid to north-western end; and a short section of Queen Street plus a crescent formed by Ritz Street/ Ocean Street / Point Street at its south-eastern end. Due to the topography, there is generally no development directly fronting the beach, that is, between the streets running along the beaches and the beaches themselves. The exceptions to this are Pilot Street and a small area of development on Ocean Street.

Clarence Street and Pacific Parade have been subject to significant residential development in recent years, including multi-storey units fronting the streets and a large single-storey residential area centred on River Street, between Pacific Parade and the golf course.

The two schools are relatively isolated from the main development areas.

- Yamba Primary School is located on the eastern side of Angourie Road, about 450 metres south of Yamba Road, with the rear of the site located across a stream from Mulgi Street – the western-most street connection to the historic Yamba township. (Mulgi Street becomes Coldstream Street past Claude Street.)
- St James Catholic School is located on Carrs Drive, about 650 metres east of Treelands Drive and 2km west of Angourie Road, on the northern side of the alignment for Miles Lane. There is no appreciable development nearby as yet, although this is planned.

The Yamba Sporting Complex / Stadium, including a heated indoor pool, and sporting fields is located on the western side of Angourie Road, about 300 metres south of Yamba Primary School.

There is one bicycle shop located in Yamba. Xtreme Cycle and Skate is located in the Yamba CBD.

A skate park is constructed on the west side of River Street, near Yamba Oval. Ford Park hosts a monthly market.

Traffic conditions vary greatly with season, with visitor numbers greatly increasing the population during holiday periods. Nonetheless, given the basic road network, the main traffic flows are along Yamba Road, which becomes Woolli Street in the historic township, and (to a lesser extent) Treelands Drive and Angourie Road.

Traffic speeds are posted at 50km/h along the main roads but traffic speeds are usually under 40km/h in the Yamba CBD and local streets. Generally, speed shows a correlation with road environment.

The historic Yamba township features a number of road calming measures, notably a high pedestrian activity area (40km/h) for the CBD.

Yamba is mainly flat, with the notable exception of its eastern edge, where it rises over heads to the sea in the north-east. Streets east of Yamba Street, and particularly at the northern end, rise steeply from Yamba Street to Clarence Street, which itself climbs steeply from Harbour Street. Yamba Street and Clarence Street also undulate from north-west to south-east. There is a slight gradient down from Woolli Street to the waterfront.

There are a few local streams that form minor barriers, but the largest impacts on access are channels into the Clarence River estuary, located west of the study area.

MACLEAN

Maclean is promoted as 'Australia's first Scottish town'. At the 2011 census Maclean had a population of 2612. However the population swells, during the Easter weekend, for the Highland Gathering held at the Maclean Showground.

The town is located on the side of a large hill adjacent to the Pacific Highway, at the confluence of the southern and northern arms of the Clarence River. The Clarence River is a major source of Australia's seafood, with a thriving prawn trawling industry.

Maclean is also the southern gateway of the sugar industry. Here, Harwood Island Sugar Mill, the oldest continuous working mill in Australia, has been crushing cane since 1874.

To some extent, Maclean has a similar layout to Yamba in terms of having a main spine with ribs of access into the local area from side streets. The main street is River Street in the north, becoming Cameron Street in the south.

In this case, however, virtually all access ribs are to the east, with the main spine running adjacent to the Clarence River and then down South Arm, which is a stream running into the Clarence River and spanned by the McFarlane Bridge. There are also many more side streets, and instead of the spine linking the CBD with other areas of development as at Yamba, the spine wraps around the CBD and main residential area, only providing longer distance access to Townsend, Gulmarrad and Grafton once the main township has been passed. The exception is the McFarlane Bridge, although even here this access is past the CBD and in an area where the number of side streets reduces.

The main commercial area runs along River Street, with the main development occurring between Union Street and Taloumbi Street.

The hospital is located on Union Street, east of McLachlan Street. Nearby development includes aged accommodation. The remainder of the large block occupied by the hospital is mainly car parking, a helipad, and open space (some of this area is earmarked for an extension to the car park).

The area east of Rannoch Street and north of Central Avenue is occupied by the Wherrett Park Sporting Complex / Stadium, which also features a skate park. The western side of Rannoch Street, between this street and McLachlan Street, houses squash courts and indoor cricket at its southern end, basketball/ volleyball/ gymnastics north of this, and aged accommodation at its northern end.

A sports / recreation theme is continued along McLachlan Street, with tennis courts located between Union and John Streets, the Maclean Swimming Pool, Maclean Bowling Club, and Cameron Park are in a block bounded by McLachlan Street to its east, Alexander and Stanley Streets to its south, Centenary Drive on its north-western side and Argyle Street on its north- eastern side.

Maclean Public School and St Joseph's Primary School are located close to the eastern edge of the township, and centrally in a north-south direction.

The showgrounds, Maclean High School and TAFE (and rowing club) are located south of Cameron Street.

Townsend features Pacific Valley Christian School, a mixed business service station, and an industrial estate, while another primary school is located in Gulmarrad.

With the Pacific Highway bypassing Maclean, traffic is mainly destination traffic (rather than through traffic) and volumes are moderate

Once the Pacific Highway re-alignment and duplication has been completed, access to Maclean will be via a new interchange.

As with the other towns of the Clarence Valley, there is no signal controlled intersections, but two pedestrian crossings are located on River Street within the CBD.

No streets have more than one lane in each direction, although lane widths can be wide with the provision for on-street parking.

River Street is a street-scaped main commercial area, with parallel parking on both sides of the street provided on a contrasting pavement. The central section of River Street is a high pedestrian area, with a 40km/h speed limit.

A roundabout has been constructed at the Stanley Street / River Street intersection.

Maclean is reasonably flat near the Clarence River, but is essentially built on the side of a steep hill. As a consequence, streets undulate in both north-west and south-west directions and can be reasonably steep along their lengths, climbing sharply at their eastern edge.

Wharf Street runs along a ridge, while Clarence Street is north of a local valley.

ILUKA

Iluka is located 17 km off the Pacific Highway, 60 km north of Grafton and 76 km south of Ballina and is surrounded by Bundjalung National Park; World Heritage listed Rainforest, the Clarence River and the South Pacific Ocean.

Iluka was proclaimed a township in 1885 and is a lifestyle and holiday destination centred on water based activities and bushwalking. At the 2011 census Iluka had a population of 1700.

Iluka has seaside (littoral) rainforest which is accessed via a gentle, well defined walking track through the forest and facilitates access for the disabled.

Iluka has visitor accommodation, a local pub and clubs, general commercial businesses and a school.

Iluka has existing pathways primarily located along Charles Street (local shops) and Queen Street (waterside pathway) and an on road cycle way from Iluka to the Woody Head camp ground to the north along Iluka Road.

The road reserves are generally wide with the notable exception of the Marandowie Drive / Duke Street intersection.

WOOMBAH

Woombah is a small bushland village in the north eastern region of the Clarence Valley Council Local Government Area. This hamlet is located to the south of the World Heritage Listed Bundjalung National Park, between the coastal town of Iluka and the Pacific Highway.

It is home to a pottery gallery and one of the world's southernmost coffee plantations. There is a significant aboriginal site at Woombah one of five in the Yamba area. There are also two caravan parks, one of these also incorporates the local general store.

At the 2011 census the Woombah area had a population of 746 people.

There are existing footpath assets in the village of Woombah, some recently constructed and some requiring reconstruction. These have been identified in this plan.

ULMARRA

Ulmarra is a small town on the south bank of the Clarence River approximately 15km north of Grafton on the Pacific Highway. At the 2011 census, Ulmarra had a population of 434 people.

The Ulmarra Ferry is a vehicular cable ferry, which crosses the Clarence River from a point about 1 kilometre north of Ulmarra, to Southgate on the north bank.

Ulmarra is home to a primary school located on the Pacific Highway as well as an aged care facility, numerous local shops, a hotel, the Clarence Valley office of the Rural Fire Service, parks and tennis courts.

There are existing footpath assets in Ulmarra. Some of these assets will require reconstruction. These have been identified in this plan.

LAWRENCE

Lawrence is a small town located 13km from Maclean. It is accessed by the Lawrence car ferry from Woodford Island or by travelling 30 kilometres north from Grafton. At the 2011 census, Lawrence had a population of 737 people.

Lawrence has a number of sporting facilities including, a cricket field and soccer fields, a golf course and tennis courts. Lawrence has a school, a general store and a nursery.

At present there are no footpaths in the township of Lawrence.

PUBLIC TRANSPORT

The CountryLink Rail and Coach network provides services through the Clarence Valley area. The north coast railway line operated between Brisbane and Sydney and the train station in the area is located in South Grafton.

Countrylink buses also link with this rail network to extend the service to Maclean, Yamba and Iluka. The Countrylink transport network is then extended locally by a number of existing local bus networks which, together with local school buses, service the Clarence Valley area and link the major centres of Grafton, Iluka, Maclean and Yamba and surrounding villages.

Bus services operated by locally based bus companies are available in Grafton, South Grafton, Yamba, Maclean, Iluka, Woombah, Lawrence and Ulmarra.

Community transport services serve people with disabilities, however these services have limited funding and therefore a lower frequency of services than standard bus services.

Local community bus services – related to bowling clubs, golf clubs, etc – while limited to localised areas, are becoming increasingly wheelchair accessible.

There are a number of ferry services operating across the Clarence River, between Yamba and Iluka (non-vehicular), Lawrence and Woodford Island (vehicular) and north of Ulmarra to Southgate (vehicular)

While accessible taxis operate in the Clarence Valley Council area, these can be difficult to secure and are most feasibly used for residents of Grafton and South Grafton. Currently there are no taxi services available in Iluka, Woombah, Lawrence or Ulmarra.

The Disability Standards for Accessible Public Transport sets timeframes at which public transport services must comply with the standards contained within it. For local government, this is most relevant in terms of bus stops, though other areas in which these standards would be relevant would be taxi stands, access paths to train stations and community transport.

For bus stops, the standards relate to:

- access paths
- manoeuvring areas
- passing areas
- ramps
- waiting areas
- boarding
- allocated space
- handrails and grabrails
- stairs
- symbols
- signs
- tactile ground surface indicators
- lighting
- street furniture

A SUMMARY OF WORK UNDERTAKEN

BACKGROUND INFORMATION REVIEW

Background information reviewed to identify issues regarding walking and cycling in the area comprised a:

Review of previous Council reports, including:

- Bike Plan and PAMP 2008 – Grafton, South Grafton, Yamba, and Maclean
- PAMP 2011 – Iluka, Woombah, Lawrence, and Ulmarra
- Open Space Strategic Plan 2012
- Our Community Plan 2015
- Design Specifications and Standard Drawings

Review of relevant State Government reports, including:

- How to Prepare a PAMP
- How to Prepare a Bike Plan
- Planning Guidelines for Walking and Cycling
- NSW Bicycle Guidelines 2004
- Action for Bikes – Bike Plan 2010
- Guide to Road Design – 6A Pedestrian and Cycle Paths

The review also included an analysis of traffic volumes and speeds and crash statistics for the period 2005 to 2013, provided by RMS.

PAMP APPROACH

APPROACH OVERVIEW

A consistent approach to pedestrian facilities and their prioritisation across all of the Clarence Valley area is desirable and would enable Council to use the same principles in all towns and villages. Overall, pedestrian and cycling routes are proposed to provide linkages within the entire walking and cycling network, but with acknowledgement of the limited budget of Council.

To achieve a consistent approach the following three concepts will be applied:

- Heirarchy of Routes
- Performance Standard
- Prioritisation of Works

HIERARCHY OF ROUTES

A Route Hierarchy was developed to identify the importance of network linkages between primary and secondary destinations, general access routes, which acknowledges benefits to the community.

Primary Destination Zones

These zones represent the most frequent destinations, or combination of destinations, located in a single area. Streets associated with primary destination zones will generally have high vehicular traffic volumes, with the traffic usually destination traffic rather than through traffic. Primary destination zones are the highest pedestrian interaction areas, and are usually concentrated around the commercial areas and schools.

Secondary Destination Zones

These zones tend to “frame” primary destination zones, or are areas that focus on individual land uses, concentrated around particular times of the day, or events. Streets associated with secondary destination zones will generally have above average vehicular traffic volumes, split between destination traffic and through traffic. Secondary destination zones can be high pedestrian interaction areas, and are usually concentrated around beaches, skate parks, sporting fields, showgrounds, and local shopping precincts.

General Access Routes

These provide for the basic level of access between residential areas and destination zones in the towns. They are also used to link aged care facilities and retirement facilities to the general walking network, where the pedestrian generation is not peaked as it is around schools or employment nodes, and the residents will need dedicated facilities to access the general walking network.

THE PEDESTRIAN NETWORK

A network has been devised, for each town, that recognises the infrastructure that currently exists (identified with boxes below) and the need for Council to prioritise proposed works (identified with numbers), in each township. The identifying numbers do NOT necessarily represent the future priority of works. This network is the first step for each town where it is envisaged to eventually have footpaths on all streets and with all streets suited to cycling.

GRAFTON

Grafton has a high potential as a walking and cycling city, with bicycle suitability on most streets and cut-throughs for those few locations where the grid street network is interrupted or incomplete.

The grid street network that helps to make Grafton an ideal cycling city also make it a difficult town for which to determine an appropriate pedestrian and cycling network, within an obvious hierarchy. Its grid pattern produces a high degree of choice and permeability, with most streets having reasonably moderate traffic volumes. Meanwhile, the (general) block sizes are quite large, hence omission of any one street from a network potentially leads to an inconvenient detour. These factors in combination make it difficult to identify a natural network for walking in particular, apart from the commercial area.

Networks have not been identified for new development areas. For relatively small development areas, destination zones will generally not be required, but general and/ or local access routes should be defined to produce a grid pattern for pedestrian and cyclist access.

PRIMARY DESTINATION ZONES

Commercial area

The designated zone extends along the highest use streets, on both sides of the street. These comprise:

- Prince Street, north side of Oliver Street to the Clarence River.
- East-west running streets that intersect with the Prince Street section of the primary destination zone, from about half way to Queen Street in the west to Duke Street in the east. This comprises Oliver Street, Bacon Street, Pound Street, Fitzroy Street and Victoria Street.
- Pound Street, from above section west to Queen Street.
- Duke Street, Pound Street to Fitzroy Street.
- King Street. A wombat crossing is required to form part of a continuously accessible route, as discussed in the site survey report.

SECONDARY DESTINATION ZONES

High pedestrian routes framing the primary destination zone

- Victoria Street, Duke Street to Villiers Street, south side
- Victoria Street, Queen Street to primary destination zone, north side
- Queen Street, Bacon Street to Fitzroy Street, east side
- Fitzroy Street/ Craig Street, Duke Street to Clarence Street, north side
- Fitzroy Street, primary destination zone to Queen Street, both sides
- Pound Street, primary destination zone to Villiers Street, south side
- Duke Street, Victoria Street to Fitzroy Street, west side

Schools near the primary destination zone

For schools, secondary destination zones are generally designated from main entry points. In Grafton, however, the proximity of schools with each other and the primary destination zone warrants a level of connectivity using secondary destination zones for those schools in the south of the town.

1. Mary Street, Bacon to Oliver Streets, partial east side
 - Mary Street, Oliver to Fry Streets, both sides
 - Mary Street, Bacon to Oliver Streets, west side
 - Oliver Street, Prince to Mary Streets, south side
 - Oliver Street, Mary to Matheson Streets, north side
2. Oliver Street, Mary Street to Turf Street, south side
 - Victoria Street, Villiers Street to Clarence street, south side
 - Queen Street, Bacon Street to Oliver Street, both sides
 - Queen Street, Oliver Street to Dobie Street, east side
3. Alice Street, Oliver Street to Fry Street, east side (on-road cycle lanes)
 - Clarence Street, Victoria Street to Fitzroy Street, east side
 - Bacon Street, primary destination zone to Queen Street, north side
 - Prince Street, primary destination zone to Fry Street, west side

Other school and land use frontages

- North Street, Cranworth Street to Cassia Street, south side
- 4. Hoof Street, Cassia Street to Cranworth Street, partial north side
- 5. Cranworth Street, Hoof Street to North Street, east side
- 6. Cassia Street, North Street to Hoof Street, partial west side
 - Turf Street, school frontage north of Hoof Street to Hoof Street, west side
 - Queen Street, Crown Street to Arthur Street, west side (outside the Grafton hospital).

GENERAL ACCESS ROUTES

A grid of general access routes has been designated, to provide a framework of routes for walking and cycling. Where relevant, an attempt has been made to define these routes on the side of the street that already possesses footpaths. This is to provide for established walking patterns, and to reduce the extent of capital works required to create a usable network.

A new bridge is to be constructed across the Clarence River, connecting Pound Street in Grafton with Iolanthe Street in South Grafton. RMS has indicated that provisions for pedestrians and cyclists will be incorporated into the design. To date the extent of these impacts are not yet known, and therefore have not been included in this report.

North-south routes (east to west)

7. Howe Street, North Street to Fry Street, east side. (The east side is preferred to link in with the east-west routes, which extend to the east; otherwise, the west side would also be acceptable.)
8. Cranworth Street, North Street to Oliver Street, west side. (The west side is preferred as most residences are on this side.)
 - Turf Street, North Street to Powell Street, east side. (A shared path exists between North and Hoof Streets on the east side.)
9. Turf Street, Hoof Street to Oliver Street, west side
 - The Summerland Way, Baker Street to North Street, east side. (This provides access to a local development on the east and a section of footpath already exists on this side. This also provides continuity from the Turf Street route.)

10. Mary Street, Crown Street to Arthur Street, east side. (This side services aged care and is part of a walking loop around the block on which the hospital is located. A section of local access street links this section with the remaining general access route south of Arthur Street.)
 - Mary Street, Arthur Street to Victoria Street, west side – excluding secondary destination zone, Fry Street to Bacon Street. (The west side services Grafton High School and is the side that possesses the greatest extent of existing footpath.)
11. Queen Street, Crown Street to North Street, west side.
12. Queen Street, Crown Street to Arthur Street, east side
 - Queen Street, Crown Street to Arthur Street, west side
 - Queen Street, Arthur Street to Hoof Street, both sides
 - Queen Street, Hoof Street to Dobie Street, east side
 - Queen Street, Bacon Street to Victoria Street both sides, and Fitzroy Street to Victoria Street, both sides. (These sections are defined in the high use area around the secondary destination zone, adding to this zone to provide footpaths on both sides of the street in this area.)
13. Prince Street, Arthur Street to Fry Street, west side. (The west side is preferred as most residences are on this side, and the greatest length of footpath is provided on this side already. This also matches in to the secondary destination zone on the west side from Fry Street to Oliver Street.)
14. Duke Street, Oliver Street to Pound Street, both sides. (Pound Street has the greatest amount of east-west travel. The general access routes are defined in the high use area around the primary destination zone, adding to this zone to provide footpaths on both sides of the street in this area.)
 - Duke Street, Fitzroy Street to Victoria Street, both sides
15. Duke Street, Victoria Street to the Clarence River, both sides
 - Villiers Street, Bacon Street to Victoria Street, both sides
16. Villiers Street, Bacon Street to Arthur Street, east side. (This route provides a second footpath in Villiers Street in the highest use area and services the TAFE and schools. It also runs on the side with the most residences.)
 - Clarence Street, Victoria Street to Fitzroy Street, both sides.
17. Clarence Street, Pound Street to Fitzroy Street, west side. (The west side is preferred as this services the TAFE. Some small sections of footpath are already provided on this side.)
18. Kent Street, Dobie Street to Pound Street, east side. (The shared use path from the east side Grafton Bridge path meets Villiers Street at Pound Street, on the eastern side. As the route on Villiers Street is on the east, this route provides a more distant route than if provided on the west side. Otherwise, the west side is acceptable.) An on-road cycleway exists on both sides.

East-west routes (south to north)

- Victoria Street, Alice Street to Queen Street, north side. (This section is defined in the high use area around the secondary destination zone, adding access to this zone. The greatest amount of footpath in this section of Victoria Street exists on the north side). Asset ownership requires further investigation.
- Victoria Street, Duke Street to Clarence Street, both sides, the northern side is a shared use path.
- Fitzroy Street, Duke Street to Kent Street, south side.
- Pound Street, Garden Street to Queen Street, both sides.
- 19. Pound Street, Turf Street to Garden Street, south sides. (Pound Street has the greatest use of the east-west streets. This route provides access from the west into the primary destination zone on both sides of the street.)
 - Pound Street, Villiers Street to Clarence Street, both sides.
 - Pound Street, Clarence Street to Greaves Street, south side.

- Pound Street, Greaves Street to Breimba Street, north sides; (Pound Street has the greatest use of the east-west streets. This route provides access from the east into the primary destination zone on both sides of the street.)
- Bacon Street, Prince Street to Mary Street, both sides.
- Bacon Street, Mary Street to Garden Street, south side.
- 20. Bacon Street, Turf Street to Garden Street, north side. (This section is defined in the high use area around the primary and secondary destination zones, adding access to these zones. The greatest amount of footpath provided in Bacon Street is on the south side.)
- Bacon Street, Prince Street to Duke Street, both sides.
- Bacon Street, Duke Street to Clarence Street, south sides.
- 21. Bacon Street, Clarence Street to Kent Street, south side.
- 22. Oliver Street, Cranworth Street to Turf Street, north side. (This should be constructed as a shared use path.)
- Oliver Street, Turf Street to Alice Street, north side. (This provides linkage to the secondary destination zone, but is provided as a general access route in contrast to the secondary destination zone provided on the southern side, which is associated with the Olympic Pool.)
- 23. Oliver Street, Turf Street to Mary Street, south side. (This should be constructed as a shared use path.)
- 24. Oliver Street, Duke Street to Villiers Street, south side.
- 25. Oliver Street, Villiers Street to Kent Street, south side. (The south side is preferred as the greatest use of the primary destination zone is assumed to be on the south side, as land uses are more limited on the northern side. Otherwise, the northern side is acceptable.)
- 26. Fry Street, Howe Street to Cranworth Street, south side.
- 27. Dobie Street, Turf Street to Bowtell Street, south side – excluding local access sections. (The north side is preferred as most residences are on this side.)
- Dobie Street, Bowtell Street to Queen Street, south side.
- Dobie Street, Queen Street to Prince Street, both sides.
- 28. Dobie Street, Prince Street to Kent Street, either side.
- 29. Powell Street, Howe Street to Cranworth Street, south side. (Powell Street is strategic as it continues west of Turf Street.)
- 30. Powell Street, Cranworth Street to Alice Street, south side.
- 31. Hoof Street, Cassia Street to Turf Street, north side. (This side is preferred to continue past the school.)
- Pullen Close, aged care to Turf Street, north side. (This side services the aged care facility.)
- Arthur Street, Turf Street to Queen Street, north side.
- 32. Arthur Street, Queen Street to Prince Street, north side.
- 33. Crown Street, Mary Street to Morrison Street/ Queen Street, partial south side. (This services an aged care facility and is part of a walking loop around the block on which the hospital is located.)

LOCAL ACCESS ROUTES

These comprise the routes identified in the site survey in alphabetical order, with notes about condition and need for upgrade as per the site survey:

- Alice Street to Victoria Street: footpath link along the water side.
- Blackwood Close: pathway from the south-eastern end of this street to Victoria Street.
- Cassia Street: pathway to Powell Street, with connection to Cedar Street.
- Course Street: pathway to Hoof Street.
- Knotts Close: pathway to Arthur Street.
- Loxton Avenue: pathway to Powell Street.
- Matheson Street: pathway to Fry Street.
- Powell Street: pathway to Turf Street.
- Richards Close: pathway to Hoof Street.

- Robinson Avenue: pathway to Mary Street.
- See Street / Pound Street: pathway adjacent to the roadway, underneath the railway line, southern side.

Additional cut-throughs

Other desirable local access routes are all shared use:

34. Tweed Street, east from Howell Street (this is an existing route that was not covered in the site survey).
 35. Maud Street, to Oliver Street (this is a grassed area at present).
 36. Cut-through Westward Park (Alice Street alignment, Oliver Street to Bacon Street), connecting over the existing bridge.
 37. Crown Street, Alice Street to Mary Street.
 38. Mary Street, from Arthur Street through Gordon Wingfield Park (as part of a walking loop around the block on which the hospital is located.)
 39. Powell Street, from Bowtell Avenue to Queen Street.
 40. Fry Street, Prince Street to Villiers Street, between the skate park / oval / hockey fields and tennis courts/ showgrounds.
- Grafton Bridge paths

These paths, and links to these, provide a strategic level of access.

- See Street underpass. This is the connection under the railway bridge at See Street.
- 41. Showground/ skate park circuit. Reference should be made to notes above regarding Prince St / Oliver St / Villiers St / Dobie St circuit around the hockey fields, showground etc.
- Duke Street to Prince Street internal path at the cricket field.
- Duke Street to Prince Street, adjacent to Memorial Park. This is currently signed to prohibit cyclist access. With improvement of the linkages to Prince Street, this would be suitable for cyclist use, and is identified in the GIS mapping as a cycleway. As the only section of path provided along the waterfront, it is desirable that this be a high- profile path.

SOUTH GRAFTON

South Grafton is distinctive as a focus for long-distance routes. There is also a real opportunity for the Skinner Street commercial area to be better connected to the Clarence River foreshore – an opportunity that does not currently exist in Grafton.

The networks for South Grafton are concentrated on the western side of the railway line, which is currently the area with the most residential development. As Clarenza develops, internal networks for this area will be formed and should be connected to the existing development areas. In the absence of a structure plan for Clarenza, only a few possible routes have been identified for this area. The exact amount, location and phasing for routes in Clarenza will depend on development patterns.

Although South Grafton has a reasonable (and growing) amount of commercial development, it is distributed and most access would be via off-street car parks.

PRIMARY DESTINATION ZONES

- Skinner Street commercial area.

This is the main commercial area in the older part of South Grafton. A masterplan has been prepared for Skinner Street, featuring a wide kerbside lane treatment for cyclists.

- Bent Street commercial area

This is designated within the property boundary of a shopping centre located between Spring Street and Ryan Street, on the western side of Bent Street. As this shopping centre features a large off-street car park, the destination traffic related to this is not focused on the footpath along Bent Street but on the access footpaths within the shopping centre, which are also used for outdoor dining in some locations. The local bus service stops at the shopping centre, although the location is unknown. An accessible parking space is provided within the car park, with a linkage to the shopping centre.

Council has a limited ability to be able to alter the existing footpath design and the shopping centre is relatively new, but this is still designated as a primary destination zone for consideration in any future upgrade proposal of the shopping centre or change of use of the neighbouring land use (currently a car wash). It might also be possible for Council to work with the shopping centre owners/ management to reconfigure certain elements of the car park to better provide for the destination uses, such as by offering to install bicycle parking rails and/ or landscaping if a suitable location can be identified, or identifying/ providing an accessible route from the footpath to the shopping centre.

SECONDARY DESTINATION ZONES

Areas framing the primary destination zones

- Bent Street, Spring Street to Ryan Street, both sides. A number of businesses are located along this section of Bent Street, with patronage of the shopping centre appearing to assist in supporting this local trade.
- Skinner Street, primary destination zone to Ryan Street, both sides
- Through Street, Skinner Street to Crisp Ave, both sides.
- Spring Street, Skinner Street to Bent Street, both sides, consideration should be given to linking both sides to Crisp Ave.
- Spring Street, Crisp Avenue into the Iolanthe Street retail area.
- Vere Street, Bligh Street to Bent Street, both sides.
- Hyde Street, school frontage to Bent Street, north side.
- 1. Hyde Street, school frontage to Bent Street, south side.

- Tyson Street, school frontage to Bent Street, north side. This connects to a pedestrian refuge crossing located in Bent Street.
- 2. Tyson Street, Bent Street to Armidale Road, north side. This linkage should be considered as it provides access to the local shops and the gym / pool complex.
- Armidale Street, Vere Street to Cambridge Street, west side.
- Armidale Road, Cambridge Street to Norrie Street, east side.
- 3. Armidale Road, Cambridge Street to Norrie Street, west side.
- 4. Access to McAuley Catholic College via the Pacific Highway, from Iolanthe Street to Hennessy Drive, south side.
- 5. Access road to Cathedral High School from Centenary Drive, north side.

GENERAL ACCESS ROUTES

North-south routes, river to Ryan Street area

These routes form a local network linking the Grafton Bridge paths, the shared use path provided to the rail station on the east side of the Grafton Bridge, the Skinner Street and shopping centre primary destination zones and the Bent Street secondary destination zone. The network in this area is extensive, reflecting the existing provision of footpaths. This local network then connects to the broader South Grafton network. The routes in this area are:

- Crisp Avenue, east side. This route is a strategic link between two existing shared use paths.
- 6. Riverside Drive, Grafton Bridge to Through Street, west side. This should be constructed as a shared use path.
- Bent Street, Grafton Bridge to secondary destination zone, west side. For pedestrians, the west side should form part of a continuously accessible route for people with disabilities (and passes an aged care facility).
- Wharf Street, Clarence River to Ryan Street, both sides.

A new bridge is to be constructed across the Clarence River, connecting Pound Street in Grafton with Iolanthe Street in South Grafton. RMS has indicated that provisions for pedestrians and cyclists will be incorporated into the design. To date the extent of these impacts are not yet known, and therefore have not been included in this report.

East-west routes, river to Ryan Street area

- Ryan Street, Abbott Street to Waterview Street, north side.
- Ryan Street, Skinner Street to Abbott Street, both sides. This is a continuation of the eastern Ryan Street route, to the edge of the main built-up area on this side of Skinner Street (and the study area for South Grafton). This route is a shared use path on the northern side.

North-south routes south of Ryan Street and west of the railway line

- Bligh Street, western side. A footpath already exists along this side of J.J. Lawrence Fields, and both sides of the rest of Bligh Street.
- Bent Street, Ryan Street to Tyson Street, west side. In this area, Bent Street is the most centrally located street and can be accessed from the east and west.
- 7. Bent Street, Tyson Street to Fairway Drive, west side. These works could be staged, with costs levied from private developers.

The residential density decreases south-west of Bimble Avenue and the section north-east of Bimble Avenue therefore has the highest priority. The section to Bush Drive then has a higher priority than the section to Fairway Drive, as residential density decreases further (although the Grafton Golf Club would also be serviced by completion of the section to Fairway Drive, and become an additional destination on the route). Fairway Drive connects to Tallowood Street,

forming a circular walking route with Rushforth Road. It appears that cut-throughs will be provided between Tallowood Street and Bush Drive, also forming circular walking routes. A connection across Bent Street near Fairway Drive is required to service the Grafton Golf Club. The area south-west of Bush Drive is outside the study area for South Grafton.

- Rushforth Road, Tyson Street to Dean Place, east side.
- Rushforth Road, Dean Place to Tallowood Street, partially constructed east side. The existing shared use path to Bob Liddiard Park is designated as an off-road facility, but also fulfils a general access role. The section from Bob Liddiard Park to Tallowood Street is required to provide a circular walking route with Bent Street, via either Fairway Drive or cut-throughs to Bush Drive.
- 8. Armidale Street, Ryan Street to Vere Street, west side.
- Armidale Street, Norrie Street to George Street, west side.
- 9. Armidale Street, George Street to Tyson Street, west side constructed as a shared use path.

The Ryan Street to Tyson Street route, on Armidale Street, is only identified to Tyson Street on the basis of usage levels, as residential density decreases south of Tyson Street. However, there is an existing footpath provided on the western side from Ellen Street to Maxwell Avenue, and a link is identified to this from this route via a section of local access route. This functionally extends the route as far as Maxwell Avenue. The western side is defined for the route due to this linkage, and also its linkage to Ryan Street.

- Armidale Street access road, Ryan Street to Cambridge Street, east side.
- Federation Street, Ryan Street to Cambridge Road, south/ west side.

East-west routes south of Ryan Street and west of the railway line

- Vere Street, Bent Street to Kelly Street, south side.
- 10. Vere Street, Kelly Street to Armidale Street, south side. This connects the secondary destination zone to Armidale Street. This side is preferred as a footpath exists on this side from Bent Street to Kelly Street, and this route also links to the secondary destination zone.
- Cambridge Street, Federation Street to Bent Street, north side.
- 11. Cambridge Street, Bent Street to Skinner Street, north side. This provides access from the eastern edge to the secondary destination zone at Armidale Street and is a strategic east-west route, and would continue the existing path on this side of the road.
- 12. Tyson Street, Skinner Street to school, north side.
- Tyson Street, school to Bent Street, north side.
- Tyson Street, Bent Street to Armidale Street, north side. This is also a strategic east-west route. This side is preferred due to the connection to the secondary destination zone, and as some sections of footpath are already provided on this side.
- Radburn development paths, between Bimble Avenue and Mc Farlane Street. These existing footpaths are also designated as off-road facilities, but fulfil a general access role.
- 13. Radburn development paths, between Tallowood Street and Bush Drive.

With existing low traffic volumes, walking and cycling along Tallowood Street is acceptable. However, as this area – including Fairway Drive – becomes more intensely developed, a need for at least footpaths will eventuate. This route has been shown as linking to Bush Drive, although no formal links between Tallowood Street and Bush Drive have been identified. There are certainly opportunities provided for through alignments of property boundaries to allow cut-throughs to be developed, and with future development of open space / green space.

Clarenza

As mentioned, the network shown for Clarenza is not extensive, in the absence of more detail regarding structure planning, staging and timing of the future development of this area. Clarenza is also generally outside of the study area for South Grafton. However, a few routes can be identified for the existing road network as part of future development.

14. Centenary Drive, Ed Ogilvie Drive to School, east side.
15. Fernance Road, providing access via Tyson Street into the southern section of South Grafton.

LOCAL ACCESS ROUTES

16. Bent Street to Peppermint Place, the cut-through requires extension on Bent Street to meet the refuge crossing on Bent Street, from Hyde Street and the schools.
 - Bimble Avenue to Silverton Street.
17. Armidale Road. A section of local access route is designated on the western side of Armidale Road, from Tyson Street to Ellen Street. This provides connection to the footpath from Ellen Street to Maxwell Street and thus extends utility of this existing infrastructure.
18. Tyson Street. The discontinuity from Hawthorn Street to Mackay Street is discussed in the site survey report. This local access route addresses this discontinuity as part of promoting use of Tyson Street to access Clarenza, from the southern part of South Grafton.
19. Railway Station access. There is no public road from Crisp Avenue to the railway station and thus the shared use path to the Grafton Bridge. A local access route adjacent to the car park driveway and through the car park to the shared use path is therefore proposed.

Recreational / off-road routes

20. Waterfront path, Riverside Drive to Skinner Street

As briefly mentioned and illustrated in the site survey report, a dirt path or access road runs through Alex Bell Park to the bowls club car park, while a desire line exists on the levee bank from the bowls club to Skinner Street. If these could be linked as a formal shared use path, they would provide a waterfront path along the Clarence River. There are few such opportunities in either Grafton or South Grafton and this is therefore considered to have a high level of desirability – particularly as this would also form a direct connection from the Grafton Bridge (and hence Grafton) to the primary destination zone of Skinner Street.

21. Waterfront path, Through Street, Cowan Street to Skinner Street

There is currently an elevated walkway on the northern side of this section of Through Street, from which pedestrians can view the Clarence River. However, this is narrow at about 1.0m (0.9m at a central location where steps are provided) and the potential of this as a waterfront path is not realised.

However, Through Street is 8.1m wide from kerb to kerb in this area, comprising a one-way single traffic lane and parallel parking on the southern side only, while landscaping from the kerb to the path is over 1.7m wide.

Through Street could be reconfigured to a total width of around 7.0m (e.g. 3.0m travel lane, 2.3m parking, 1.4m contra-flow bicycle lane and 0.3m clearance to the elevated walkway), with the additional road width plus the landscaping used to increase the width of the elevated walkway, to as much as 3.8m if the stairs were replaced with ramps at either end. This would be a much more usable waterfront promenade, as well as improving permeability for cyclists.

(NB Contra-flow cycling is arguably not required in Through Street on a strategic basis. Allocation of the contra-flow bicycle lane width to the elevated walkway could result in a path width of over 4.5m, even allowing clearance from the traffic lane to the path. At this width, outdoor dining could be supported on the elevated walkway, or the walkway designated for shared use, and/or tree plantings could be provided at intervals along the Through Street side.)

Again, as a waterfront path – and particularly one that linked in with a waterfront path from the Grafton Bridge and close to the popular Skinner Street area – this is considered desirable.

However, this would need to be well designed to produce an attractive urban design result and functional walking area.

22. Skinner Street / Rushforth Road shared use path. This path runs from Ryan Street to Bob Liddiard Park and is an existing path. With development along Tallowood Street and Fairway Drive, it should arguably be extended to Tallowood Street.

23. Alipou Creek

This is proposed as a long-term recreational route along this creek line. This would enable properties west of Centenary Drive to be linked along the creek line, with connection to the Pacific Highway about half way between Through Street and Duncans Lane – significantly reducing exposure on the Pacific Highway and, as it might be quite busy by this point, Centenary Drive. Depending on the exact alignment, the path could be used to bypass all of the 100km/h section of the Pacific Highway. Flooding and property ownership issues and their impact on the feasibility of this proposal have not been assessed.

YAMBA

Yamba has much more of a coastal atmosphere than the other towns in the study area. It also has a high potential as a leisure / recreational area, with walking and cycling facilities that are already well used. With the addition of good connections from the ferry terminal, Yamba can also service Iluka's resident and visitor populations.

There are a number of changes to the road network planned in response to future development. These have not been addressed in the pedestrian and bicycle networks due to uncertainty in their timing and exact future forms. An assessment of the role of future links for walking and cycling will need to be made as part of identifying the design requirements for new roads, when they are built. This should include the need for crossings, etc.

PRIMARY DESTINATION ZONES

These zones are mainly a formalisation of the existing high pedestrian activity areas.

- a) Harbour Street, b) Wooli Street, c) Coldstream Street and d) Beach Street, from about half-way between River Street and Yamba Street, to a short distance east of Yamba Street
- Yamba Street, Beach Street to Harbour Street. Western end
- Treelands Drive, Yamba Road to Roberts Close

SECONDARY DESTINATION ZONES

A number of short sections of secondary destination zones are designated adjacent to the primary destination zones, providing a transition from these higher activity zones to lower activity areas.

- a) Harbour, b) Wooli, c) Coldstream and d) Beach Streets, primary destination zone to River Street, both sides; and e) Yamba Street, primary destination zone to Campbells Lane, both sides
- River Street, Coldstream Street to Beach Street, east side
- Treelands Drive, primary pedestrian zone to Osprey Drive, both sides

A section of secondary destination zone is designated in Treelands Drive as a transition from the primary destination zone. This is north of the main traffic area of Treelands Drive, which is associated with the shopping centre. Given indications of other services locating in the area, sufficient space should be allocated for this to be upgraded to a primary destination zone in the future, however this should not be constructed prior to need (i.e. high pedestrian levels, interaction), to ensure that environmental cues associated with such designation are consistent.

- Yamba Road, shared use path from the Historic township to west of Treelands Drive.

This designation of secondary destination zone reflects the presence of an existing route along most of the north side of Yamba Road, and the strategic importance of linking the historic township to the new growth area at Treelands Drive. This route should also be provided as a continuously accessible route for people with disabilities. The route joins to the shared use path along the waterfront rather than following Yamba Road as Wooli Street into the historic centre, as the shared use path is more direct, more pleasant and an existing facility. It also services the ferry terminal.

School frontages and other land uses

1. Carrs Road, school frontage (to Miles Lane), east side.
 - Angourie Road, school frontage, east side (Shared Path)
 - River Street, car park opposite Campbells Lane to Coldstream Street.

- A route from the ferry terminal to Harbour Street – and thus the primary destination zone via the secondary destination zone on Harbour Street (north side).

This route is designated as part of forming a continuously accessible route for people with disabilities, in particular to improve access to services for people from Iluka.

GENERAL ACCESS ROUTES

Historic township of Yamba

A framework of routes is proposed for the historic township of Yamba. These reflect the most-used routes, as identified through the walking and cycling survey. These are:

2. Harbour Street, primary destination zone to Clarence Street, north side
 - Coldstream Street, primary destination zone to Clarence Street, north side (the south side is also acceptable)
3. Church Street, River Street to Clarence Street, north side (the south side is also acceptable). This provides a route connecting River Street to Yamba Street and Clarence Street, roughly midway between the primary destination zones and Pacific Parade
4. River Street, Harbour Street to Wooli Street, east side
 - River Street, Wooli Street to Coldstream Street, east side
 - River Street, Beach Street to Beachside Way, east side
5. River Street, Beachside Way to Pacific Parade, east side. This also provides access to Pippi Beach. The east side is preferred to avoid driveway interactions on the west side, to reduce the need to cross roads and to link with cut-throughs. This is also the side with lighting.
 - Clarence Street, Coldstream/ Pilot Street to Queen Street, west side
6. Pacific Parade / Clarence Street, Point Street to River Street, north-west
 - Mulgi Street / Coldstream Street, River Street to Claude Street, south side, and Claude St to end, north side

This links the school and ultimately Angourie Road to the primary destination zone. This services the motel and the gym, as well as residences. The link through the school might require negotiation to provide continuing public access, and allow signing of the route.

Historic township to Western end

7. Wooli Street/ Yamba Road, River Street to off-road/ recreational and local access routes; and Angourie Road to retirement village west of Treelands Drive, south side

This route provides a southern footpath along Yamba Road, which can be difficult to cross. This route includes connection from the primary destination zone to the Angourie Road recreational shared use path, with a link into Angourie Road to enable residents from Urara Street (and its local catchment) to walk from Urara Street to Angourie Road/ Yamba Road intersection, and cross either north-south or east-west using existing refuges.

- Carrs Road, school frontage to Yamba Road, east side
- Yamba Road, refuge west of Treelands Drive to Korora Lake, north side, and along Orion Drive, east side

West of the pedestrian refuge, there is limited development on the south side of Yamba Road (apart from Orion Drive). The general access route therefore continues on the north side, which is also the side with the secondary destination zone. Past Korora Lake, the Korora Lake shared use path provides general access to Witonga Drive.

A footpath exists from Angourie Road to Shores Drive, along part of Wooli Street, and from Osprey Drive to Treelands Drive, on the north side. A painted median exists at Orion Drive; this should be upgraded to a pedestrian refuge, to provide access to Orion Drive.

8. Gumnut Road (Witonga Road to The Link)/ The Link/ The Mainbrace (Shores Drive to Gumnut Road), south side

This route is designated to provide an east-west route north of Yamba Road. The western end is shown as additional to the proposed Korora Lake shared use path, but the shared use path would be used to provide the general access road. This is similarly the case along the eastern side of Acacia Court.

- Witonga Drive, Yamba Road to Gumnut Road, east side (Shared Path)

Currently, the priority for a general access route along Witonga Drive is low. As further development occurs on the western side of Witonga Drive, however, the need for facilities will increase. It is considered that the Korora Lake shared use path will cater for this need and a duplication of facilities is not proposed, unless the shared use path is circuitous or unsealed.

9. Orion Drive

In many ways, this is a hybrid between a general access route and a regional cycling route, in that it is not truly regional.

LOCAL ACCESS ROUTES

There is not extensive opportunity for local access routes to increase the walking and cycling permeability in Yamba. However, there are some locally significant routes and a few other identified opportunities.

- Casuarina Close to “Coles”
 - Heron Court to “Coles”
 - Lady Nelson Place to Roberts Close
 - The Halyard/ The Mainbrace to Admiralty Court
 - O'Grady's Lane to Yamba Road (existing, requires connection to the bus stop)
10. Miles Lane (existing, no improvement suggested at this point in time)
 11. Phoenix Close to Favourite Avenue (new)
 - Yamba Road, north side of Angourie Road
 - Yamba Road, south side from service road to Angourie Road
 - Mulgi Street to Yamba School
 - Queen Street stairs (existing) – these form a cut-through of a central median in Yamba Street, but some improvement to visibility at this location is desirable
 - Ocean Court to River Street cut-through
 12. Church Street, between River Street and Yamba Street
 13. Nautilus Place to Beachside Way cut-through (existing)
 14. Pippi Beach access.

Recreational / off-road routes

- Foreshore Shared Use Path, Yamba Road to Clarence Street
 - Foreshore path, Clarence Street to eastern end (existing) – This is constructed as a footpath rather than a shared use path but extends from the shared use path that ends at Clarence Street, and should be upgraded to be used by cyclists.
 - Hickey Island (unpaved). There is no suggested upgrade to this walking track.
 - Angourie Road path, Yamba Road to swimming pool (existing).
15. Deering Street route, with connections from Susan Street, Yamba Road, Freeburn Road and along Mulgi Street. Most of this route exists, but requires signage. Some further investigation of the desirability of developing this route is also required, in particular its

suitability for shared use and the implications of using the Deering Street alignment to provide for vehicular traffic in the future. It is proposed that any development of the route would be as an unsealed route, at least in the first instance.

- Korora Lake. There is a recreational shared use path around the lake shore.
16. Oyster Channel / Newport Island foreshore, with connections to the local road network. This is proposed mainly for local use, and as part of a philosophy of providing public access to attractive foreshore areas.

MACLEAN

Maclean is distinctive for its treatment of footpaths within the commercial area, and of course its Scottish heritage. It also has a degree of severance caused or perhaps exacerbated by the Pacific Highway in a way not true of the other towns. Although the Pacific Highway has originally been a bypass of Maclean, growth is changing the population balance and the highway now forms a barrier between Maclean and Townsend (and hence Gulmarrad).

PRIMARY DESTINATION ZONE

- River Street commercial area, Short Street/ Wharf Street to John Street
- Stanley Street, River Street to Short Street, both sides
- Centenary Drive, Stanley Street to Car Park, east side. This is designated due to the high levels of use associated with parking and access to the primary destination zone via pedestrian arcades.

These are essentially a formalisation of the existing high pedestrian activity area.

SECONDARY DESTINATION ZONES

Short sections of secondary destination zones support for the primary destination zones, providing a transition from this higher activity zone to lower activity areas. These are:

- River Street, Short Street/ Wharf Street to Taloumbi Street, both sides.

This provides access to the primary destination zone at the southern end. A shared use path exists on the eastern side.

- River Street, primary destination zone to Howard Street, east side.

This provides access to the primary destination zone at the northern end. Activity on the western side is limited due to the lack of land uses and this side is not included as part of the secondary destination zone.

- John Street, River Street to Clyde Street, about halfway, south side.
- Argyle Street, River Street to Clyde Street, north side.
- Woodford Street, Alexander Street / Clarence Street to McIntyres Lane, east side. The section of Woodford Street designated as a secondary destination zone is quite long, both reflecting the actual school frontage and in recognition of the extra width required due to the topography – cyclists required additional width when travelling uphill.
- Clarence Street, Alexander Street east to end of school frontage, south side.
- 1. McIntyres Lane, Grafton Street to end of school frontage to the west, south side.
- Woombah Street, Maclean High School to Cameron Street, west side; and extension of the route to the Pedestrian Crossing.
- 2. Cameron St, School Crossing to Showgrounds, west side.

Given the location, and role as a connector between Maclean High School and the Showground, the route should be provided as an off-road shared use path rather than as a footpath with adjacent bicycle lane.

- School / TAFE frontage (east of Woombah Street), north side.

Townsend commercial area

- Jubilee Street, Schwonberg Street to Scullin Street, north side. 75m short of Schwonberg St (June 2015).

GENERAL ACCESS ROUTES

3. River Street, primary destination zone to Howard Street, west side. This area is subject to car parking and also features bus stops. It has therefore been designated as a secondary

- destination zone despite a lack of other land uses. There is potential for this to be located atop the levee wall.
- River Street, secondary destination zone to Bakers Lane, east side. This provides access to the destination zone and features an existing footpath.
 - Union Street, River Street to Salen Street, north side. This is designated as a major east-west route providing connection between the River Street destination zone, Wherrett Park shared use path, hospital, aged care facility and residential areas if continued through to Roderick Street.
 - Union Street, Salen Street to Roderick Street, north side.
4. Union Street, Wherrett Park shared use path to Salen Street, south side. This capitalises on the shared use path to provide additional access to the path, aged care facility and in the local area. Construction difficulties would be encountered between Woodford Street and Oban Street.
 5. Woodford Street, Union Street to Clarence Street, east side. This is the northern section of a route providing north-south connectivity through the central area of Maclean and is provided on the same side as the secondary destination zone servicing the school. Construction difficulties would be encountered between Union Street and John Street, due to the existing narrow road and close proximity of the retaining wall.
 - Woodford Street, McIntyres Lane to Wharf Street, east side. This is the southern section of a route providing north-south connectivity through the central area of Maclean
 6. John Street, secondary destination zone to McLachlan Street, south side. This provides a connection from the destination zone to the Wherrett Park shared use path. As this is paralleled by routes to the north and south, it does not continue to Woodford Street.
 7. Argyle Street, secondary destination zone to Woodford Street, north side. This provides a connection from the destination zone to the Wherrett Park shared use path and to the Woodford Street route.
 8. Clarence Street, secondary destination zone to Roderick Street, south side. This is a major east-west route connection.
 9. Alexander Street, Clarence Street to McLachlan Street, south side. Argyle Street / Woodford Street is considered a preferred route. Nonetheless, this route connects the Clarence Street general access route to the Alexander Street off-road path and services a few residences and is included in the network with acknowledgement of its low priority.
 - Short Street, Wharf Street to Stanley Street; and Alexander Street, Stanley Street to Alexander Street/ McLachlan Street, east side.
 10. Short Street, Wharf Street to Stanley Street, west side.
 11. McLachlan Street, Swimming Pool to Union Street, west side.
 12. McIntyres Lane, Alexander Lane to Grafton Street, south side.
 - Wharf Street, River Street to Woodford Street, both sides. These are part of a grid of facilities in this area.
 - Wharf Street, Woodford Street to Grafton Street, south side. This continues the route to Woodford Street further east.
 13. Taloumbi Street, River Street to Grafton Street, south side. This is part of a grid of facilities in this area.
 14. Church Street, River Street to Grafton Street, south side. This is part of a grid of facilities in this area. On-road shared bicycle / parking advisory treatments exist in this street.
 - River Street, secondary destination zone to Cameron Street, east side.
 15. Cameron Street, River Street to Grafton Street, north side. This route makes use of a service road (shown as a local access route) and connects with the footpath at the western end of Cameron Street, but still requires a connection to the shared path in Grafton Street.
 16. Grafton Street, Cameron Street to McIntyres Lane, west side. Grafton Street forms the eastern-most north-south route and provides connection to St Josephs Primary School. It has a strategic role in the grid network of facilities in this area. An off-road route exists from Cameron Street to Cameron Lane on the east side.

Townsend

17. Jubilee Street, Scullin Street to Koala Drive / Cypress Street, north side. This route provides connection to the main commercial area and provides a walking facility for the main residential area.
 - Diamond Street, Jubilee Street to Pine Avenue, north side.

LOCAL ACCESS ROUTES

- Pedestrian arcades, River Street to Centenary Drive. These are existing through-site links and would need to be functionally retained in any redevelopment of the commercial area.
18. Cut-through, McIntyres Lane/ Alexander Lane to Alexander Street. Despite limitations imposed by topography, this should be widened and upgraded to cater for shared use and linked to the general access route in Alexander Street/ Short Street.
 19. Salen Street, Clarence Street to McIntyres Lane. This is proposed to provide an additional link with strategic value in connecting the Grafton Street route to the northern part of Maclean, without requiring a detour. However, the topography is quite steep in this area and in itself limits likely use. This therefore has a very low priority.
 20. Woodford Street to Cameron Street. Woodford Street does not continue to Cameron Street. This link is proposed to facilitate this connection. As Woodford Street is very steep in this area, the link should travel east across the face of the slope, to with the footpath on Cameron Street.
 21. Cameron Street service road. This existing service road could be used to provide access adjacent to Cameron Street. A crossing point provided on Cameron Street at the western end of the service road would provide a safer crossing point than at Woodford Street (e.g. to access the MacFarlane Bridge), and also provides access to the Showgrounds.
 22. Cameron Street, McFarlane Bridge to opposite end of service road (showgrounds). This capitalises on the link provided at the service road to provide access across the Showgrounds frontage, and would be provided within the wide road reserves along both the McFarlane Bridge and Cameron Street frontages of the Showgrounds.
 23. Harwood Street, north of Cameron Street. Harwood Street (north) runs parallel to Cameron Street for a short distance. Provision of a cut-through would improve access to the shared use path and thus improve local permeability. This is a very local connection.
 24. Service roads, Wombah Street to Goodwood Street. From Maclean High School / TAFE, Harwood Street (south) provides access parallel to Cameron Street, as far as Ulmarra Street. From here, a number of service roads exist on the western side of Cameron Street. This route proposal is could link to a proposed route from Townsend once the Maclean interchange of the Pacific Highway Upgrade has been completed.

The McFarlane Bridge.

Given the low density of land uses on the western side of the bridge, usage levels do not support designation of this bridge as a general access route. It nonetheless remains as the only access to Woodford Island from Maclean. This is a hazardous location for pedestrians in particular, for whom joining the traffic stream is not appropriate (unlike cyclists). Similarly, children and inexperienced cyclists would find the McFarlane Bridge intimidating, despite recent safety improvements.

The methods to address this hazard will depend on cost and the design life of the bridge. As a wooden bridge, it is likely that cantilevering a path on one side of the bridge would be a significant exercise, especially as the bridge is some 600 metres long. It is noted that a major pipeline is provided on the northern side of the bridge; it is possible (though not likely) that the supports for this would also support a footpath or shared use path. A path hung beneath the bridge would have less clearance in the event of a flood, even if the bridge structure has sufficient capacity to carry the additional load.

Traffic management techniques to regulate traffic flow to enable pedestrians and cyclists to cross safely – such as installing signals to replace the current 'give way' provision and providing a phase for pedestrians and cyclists – would also have a high cost.

One suggestion is to provide another bridge upstream along the South Arm. By reducing the crossing distance, the cost of a bridge could be reduced, although additional abutments would be required at any location that does not use the current bridge abutments. On the basis of river width, the best location for a new bridge would be near Goodwood Road, where the water crossing distance is reduced to some 350 metres. However, this represents a detour distance that would be untenable for pedestrians from Maclean, while most cyclists would elect to continue using the existing bridge to avoid the detour. This location would therefore only be realistic if it were used to provide a new vehicle bridge, to enable the McFarlane Bridge to be closed to traffic and used for pedestrian and cyclist access only. While this would have obvious benefits for pedestrians and cyclists, the cost of a vehicular bridge would be far higher than that of a pedestrian / cyclist bridge and this option would be difficult to justify for the small volumes of traffic that currently use the McFarlane Bridge. However, this assessment changes if there were strategic reasons to provide a new bridge, e.g. the McFarlane Bridge were close to the end of its design life, or traffic volumes were high for the current traffic management on the bridge (where a vehicle has to stop and give way to an oncoming vehicle). Unfortunately, both design life and traffic volumes are unknown.

Overall, the most cost-effective solution is probably to build a new, separate footbridge for the use of pedestrians and cyclists. If not supporting motorised vehicles, this could be light-weight and relatively inexpensive (i.e. compared to vehicular bridges, but not in an absolute sense). In this case, care needs to be taken to enable cyclists to safely leave and join the two-directional flow of traffic, to access a new path / bridge provided (most likely) on one side only of the existing bridge.

Townsend - general

A number of routes are shown in Townsend. Currently, Townsend has a poor level of connectivity between streets. The local access routes are mainly indicative of the route needs to be provided as Townsend develops, to create a connected and permeable network. These are:

25. Edinburgh Drive, Scullen Street to Koala Drive
26. Jubilee Street, Paperbark Drive to Re Road
27. Koala Drive to Re Road, at northern extent of Koala Drive

Townsend - strategic

The following local access routes provide more strategic access:

- Diamond Street to Jubilee Street cut-through. This is proposed to provide a short-cut to the main general access route in Townsend. In so doing, it also moves the crossing point of Jubilee Street away from the acute Diamond Street / Jubilee Street intersection, which is not conducive to crossing.
- Diamond Street, Cypress Street to Pine Street, north side. This is a local link that enables Pine Street residents to use Cypress Street, and hence access the main general access route, without backtracking from Diamond Street to Ironbark Drive.

Recreational / Off-road routes

28. Wherrett Park shared use path. This is a locally important facility, but could be improved. An improved facility would also cater for general access in the area. Improvements are:
 - General route widening, and installation of street furniture adjacent to the route
 - Linkage to the playground and skate park in Wherrett Park, and across the open area to the hospital, would add utility to the route

- A small section near the hospital is over-shaded and should be improved to increase perceptions of personal security

29. River Street levee, primary destination zone to Bakers Lane.

Various arguments have been made about the use of the levee bank as a route for pedestrians and cyclists. Probably the most relevant point is that the desire line along the levee bank points to current use by pedestrians. The designation of this as a route in the network formalises its current use and applies management to it.

Providing a recreational path as part of the network also reduces the likely use of a close, parallel footpath, at least until the point that the recreational path becomes a major attraction in itself. This could enable more flexible use of space when considering a close, parallel footpath, such as a narrower footpath than would otherwise be the case or shared use with bicycles.

The width of the top of the levee bank varies, reaching as much as 2.5 metres; a path of 1.5 to 1.8 metres in width is considered feasible. This would not support shared use – the path would be for pedestrian access only.

The path bank does not have to be provided as a sealed route – indeed, as it is reported that the levee bank needs to be 'topped up' from time to time, a low cost surface would be preferred. Nonetheless, the surface should be firm and level. Access points should also be provided along the path, such as near bus stops and to service stretches of parking, and at either end. There is an opportunity for the path to be widened at its southern end to support seating, etc.

The greatest design issue is the slope on either side of the levee bank, and the risk management issues associated with this. To some extent, providing a narrow path that does not occupy the entire width of the levee bank reduces the risk of a fall, particularly if the path is at a slightly lower level than the edges of the bank – although drainage may then become an issue. Other actions to mitigate risk include prohibiting cycle access and formalising access to the top of the levee bank (e.g. steps, ramp at ends), with hand railing. High fencing on either side along the path would be visually obtrusive and thus undesirable. A low post and rail type of fence, and/or building up/ mounding either side of the path, would prevent users from falling off the path in the event that they trip or stumble.

ILUKA

The town of Iluka has good potential as a cycle friendly town, with good coastal views and flat topography.

A network has been designated in recognition of the limited infrastructure that currently exists and the need for Council to prioritise new works. The designated network should be regarded as a first step towards further asset construction.

PRIMARY DESTINATION ZONES

- Commercial Area
- Charles Street between Owen/Denne, both sides of the street.
- Southern corner of the intersection of Young/Charles Street.
- Western corner of the intersection of Spencer/Young Street.
- Queen Street between Crown & Iluka Streets, following the waterfront.

SECONDARY DESTINATION ZONES

- Attractor/Generator near primary destination zone
- Marandowie Drive north of Melville Street
- Micalo Street (SE side) between Duke/Elizabeth Streets.
- Owen Street between Duke/Spencer Streets
- Young/Queen Streets bounded by Charles/Owen Streets.
- Spencer Street at Iluka Bowls Club.
- Crown Street at Sedgers Reef Hotel.
- Eastern corner Crown/Charles Street intersection.

School near primary destination zone

- Spencer & Charles between Micalo/Young Streets.

ALL ROUTES

- Iluka Road north of Duke Street. This segment is an extension of the exiting on-road cycleway from Woody Head Campground.
- Duke Street from Owen Street to Micalo Street. Links Iluka Road/Owen Street with existing on road pathway. Also represent a segment in the alternate path proposed to council and endorsed at a public meeting as the alternate route from Duke Street to Marandowie Drive.
- 1. Marandowie Drive from Hickey Street to Loxton Avenue. Identified during consultation period as a possible location for pathway construction. May now be considered extraneous due to the CVC proposed route around this area.
- Marandowie Drive from Loxton Avenue to Melville Street. Identified through consultation and links up with the CVC proposed route. Visual amenity is good due to proximity to foreshore however width of road reserve may present constructability issues.
- Marandowie Drive from Melville Street to caravan park
- 2. Marandowie Drive north (to Johnson's Lane) from Caravan park
- Spenser Street from Owen Street to Young Street
- Young Street from Spenser Street to Charles Street
- 3. Owen Street from Charles Street to Queen Street. Identified through consultation with Access Committee; enable good access to existing waterfront pathway.
- 4. Owen Street from Spenser Street to Charles Street
- 5. Charles Street from Denne Street to Vere Street. Existing asset identified through consultation and inspection as requiring reconstruction.

6. Charles Street from Vere Street to Crown Street. Existing asset identified through consultation and inspection as requiring reconstruction.
7. Charles Street from Young Street to Micalo Street. Existing asset identified through consultation and inspection as requiring reconstruction.
8. Spenser Street from Young Street to Micalo Street. Represents the rear boundary to the school; identified through consultation.
9. Spenser Street from Micalo Street to Riverview Street. Potential for construction difficulties exist in this segment. See Figure 7.
10. Spenser Street from Riverview Street to boatramp
11. Denne Street from Charles Street to Spenser Street
12. Crown Street from Charles Street to Queen Street
13. Queen Street from Crown Street to Iluka Street
14. Queen Street from Iluka Street to beach carpark
15. Denne Street from Charles Street to Queen Street
16. Spenser Street from Owen Street to Denne Street
17. Micalo Street from Duke Street to Elizabeth Street

WOOMBAH

Woombah village has very limited existing pedestrian attractors/generators consisting primarily of caravan parks, general store and a coffee shop. There are no schools in the Woombah village.

Some new and aged footpath assets exist with the older assets requiring reconstruction in some instances.

PRIMARY DESTINATION ZONES

Commercial Area

- Iluka Road between North/Ibis (caravan park/general store)
- Western corner of the intersection of Iluka Road/Wharf Street (coffee shop).
- A concrete 2 metre wide path has been constructed along Iluka Road between Ibis Close and West Street which services the Bimbimbi Caravan Park and General Store

SECONDARY DESTINATION ZONES

Park/Sportsground

- The public reserve at the corner of West Street and Middle Street is identified as a secondary destination zone.

There are no facilities for parking of bicycles identified in the Woombah area.

ALL ROUTES

- Iluka Road from West Street to Wharf Street. Links two existing pathways.
 1. Iluka Road from Ibis Close to Islandview Road
 2. Iluka Road from Islandview Road to Ridgewood Crescent
 3. Iluka Road from Ridgewood Crescent to Fat Duck Road
 4. West Street from Iluka Road to North Street
 5. West Street from North Street to Forest Way
 6. Wharf Street from Iluka Road to Adams Street
 7. Wharf Street from Adams Street to River Street
 8. Iluka Road from Short Street to Loftus Street
 9. Iluka Road east from Loftus Street
- Iluka Road from Wharf Street to Short Street. Existing asset identified through consultation and inspection as requiring reconstruction. See Figure 10 and Figure 11.

ULMARRA

Ulmarra has some existing footpaths in varying states of repair and widths. These existing assets are located;

- River Street between Lynhaven/Belmore Street
- Coldstream Street between River St/Hospital Ln
- Belmore Street
- Pacific Highway from Coldstream Street to just north of the school.

The Pacific Highway separates the main street shopping area from the school and residential areas. This separation presents a number of potential challenges to safely enable passage across the highway and will require co-ordination/input with RTA as this is a state road.

Currently there is only a pedestrian crossing across the Pacific Highway at the school, this is manned by a safety officer during school drop off/pick up times.

Consultation with the Grafton Access Committee identified the need for kerb ramps to be constructed in all new and exiting footpaths. This need was identified predominantly but not exclusively in the areas of River Street and Coldstream Street.

PRIMARY DESTINATION ZONES

- Coldstream Street between River St/Pacific Highway (shops)
- Lynhaven Crescent (Aged care facility)
- Pacific Highway at Ulmarra Public School

SECONDARY DESTINATION ZONES

- River Street north of Coldstream Street (Hotel/pool/park/NSW Police/palliative care)
- Coldstream Road east of Small Street (Pacific Highway) (park/sportsground)

ALL ROUTES

- Lynhaven Crescent
 1. Small Street (Pacific Highway) from Coldstream Street to Hospital Lane – North side
 2. Small Street (Pacific Highway) from Hospital Lane to Belmore Street – North side
- Coldstream Street from Small Street (Pacific Highway) to Goodgers Lane – Both sides
 3. Coldstream Street from Goodgers Lane to Hospital Lane – North side
 4. Coldstream Street from Hospital Lane to sports ground
 5. Small Street (Pacific Highway western side) north of school
 6. River Street from Lynhaven Crescent to Coldstream Street. Existing asset requires reconstruction.

LAWRENCE

The village of Lawrence has no constructed footpaths or cycle ways despite road reserves, for the most part, of a width more than adequate to accommodate off road concrete paths.

The area in the vicinity of the intersection of Rutland and High Streets has been identified through consultation and site visit as an area of concern for pedestrians due to the potential for conflict with vehicles due to the embankments on both sides of the road in close proximity to travel lanes.

PRIMARY DESTINATION ZONES

- Eastern corner Cook/High Street intersection (Lawrence Public School)
- Corner Richmond/Bridge Streets intersection (General Store/park)

SECONDARY DESTINATION ZONES

- Bridge Street (tavern)
- Rutland Street at Post Office / Police Station
- Richmond Street at nursery

ALL ROUTES

1. Bridge Street from Rutland Street to Tavern
2. Richmond Street from Bridge Street to Rutland Street
3. Richmond Street from Rutland Street to Eton Street
4. Richmond Street from Eton Street to Cook Street
5. Cook Street from Richmond Street to Neill Street
6. Cook Street from Neill Street to High Street
7. Cook Street from High Street to Fairfax Street
8. Cook Street from Fairfax Street to Conway Street
9. Havelock Street from Bligh Street to Conway Street
10. Havelock Street from Merton Street to Bligh Street
11. Merton Street from Rutland Street to Havelock Street
12. Rutland Street from High Street to Farnell Street
13. Rutland Street from Farnell Street to Merton Street
14. Rutland Street from Richmond Street to High Street
15. High Street from Swamp Street to Rutland Street. Construction difficulties will be encountered due to nature of embankments on either side of road leading to intersection with Rutland Street
16. High Street from Swamp Street to Ward Street
17. High Street from Ward Street to Cook Street
18. Richmond Street from Raleigh Street to Cook Street
19. Richmond Street from Raleigh Street to Anne Street
20. Richmond Street from Anne Street to High Street
21. Richmond Street from High Street to Pandana Close
22. March Street from Richmond Street to sports ground
23. March Street at sports ground
24. Havelock Street-Exmouth Street-Kings Creek Road

PERFORMANCE STANDARD

The route hierarchy, in conjunction with the volume of pedestrians / cyclists, determines the standard that the footpath / cycleway will be constructed to.

The performance standards developed for Clarence Valley Council are provided in the following table. As none of the townships in the council area currently use traffic signals these have not been included in the performance criteria.

In these standards, the term CAPT refers to a Continuous Accessible Path of Travel.

The performance criteria specify setbacks, which should be constructed as unpaved shoulders graded to form a firm, level surface. These provide clearance to property lines, traffic and potential obstacles, to help ensure that the effective width is maintained for pedestrians; and can also be suitable for cyclists to pass pedestrians.

These design concepts do not include concepts for crossing facilities, such as kerb ramps. These should be provided in accordance with the relevant Australian Standards, guidelines and legislation, and RTA standards and guidelines.

Table 1 – Performance Standards

	Primary destination zone	Secondary destination zone	General route
Footpath requirements		Shared use path if no on-street treatment	
Location	Both sides	On side with activity	None in cul-de-sac <50m long and servicing <10 residential allotments; both sides if traffic volumes above 3000vpd; one side otherwise
Desirable general width of CAPT	3.0m	2.5m for shared use, 2.0m otherwise	1.8m within 250m of primary pedestrian zone (take to nearest intersection); otherwise 1.5m if on one side, 1.2m if on both sides
Minimum width, for short distances (can provide passing bays)	1.8m	2.0m for shared use, 2.0m otherwise	1.2m
Maximum length of minimum width	8.0m	8.0m	n/a
Minimum distance between repeated sections of minimum width	8.0m	8.0m	n/a
Minimum width at squeeze points	1.5m	1.2m	0.9m
Maximum length of squeeze point	2.0m	2.0m	1.0m

Minimum setback of route from kerb (to allow for street furniture)	0.6m	0.6m	0.6m
Minimum setback of route from building line	0.0m	0.6m	0.3m
Directional tactile ground surface indicators	Where distance of paved surface between property line and crossing exceeds 3.0m; may also be required for way finding		
Timeframes for compliance contained in DDA(transport)	31-Dec-07 for 25% of infrastructure	31-Dec-07 for 25% of infrastructure	31-Dec-12
Consider additional connections to:	Bus stops, through car parking areas, through road closures, across creek lines, across bridges		
On road bicycle treatment			
Shared with/separated from traffic	Low speed shared, or separated	Low speed shared, or separated	If traffic vols exceed 3000vpd then low speed shared/separated/advisory; shared otherwise
Acceptable traffic speed environment (with support of RTA for speed zones)	30-40 kph	30-40kph in peak pedestrian periods; 40-50kph otherwise	30-60kph depending on road; acceptability of 60-80kph depends on location
Exclusive bike lanes			
Desirable width	1.5m	1.5m	1.5m for speeds up to 60kph
Acceptable width	1.2m-2.5m	1.2m-2.5m	1.2m for speeds up to 50kph; to 2.5m for speeds up to 80kph
Squeeze points	1.0m	1.0m	1.0m for speeds up to 60kph
Shared bike/car/parking lanes (includes traffic lane)			
Desirable width	4.2m		
Acceptable width	3.7-4.5m		

Advisory treatments *

Desirable width

3.7m

Acceptable width

3.0m where parking demand is high; 3.3m otherwise

**These are treatments to indicate or advise road users of the potential presence of cyclists and of the locations where cyclists may be expected to ride on the road. They consist of pavement markings and otherwise only warning and guide signs, and as such have no regulatory function." (GTEP, Part 14, 1999, p.30).

There are generally four types of these:

- (1). The advisory treatment with edge line will be generally preferred on roads with a higher traffic volume, with a minimum width of 3.3m, but width up to a bicycle / car park lane (3.7m) is preferred.
- (2). A bicycle shoulder lane is adopted where there is space of 3.4m. This is preferred if the speed environment is less than or equal to 50kph. (See RTA NSW Bicycle Guidelines, 2004, Section 5.1.2.)

- (3). An advisory treatment with logo where car parking demand is high has a minimum width of 3m, but width up to advisory treatment with edge line is preferred.
- (4). An advisory treatment with logo where car parking demand is low has a width of 3.7m, including the travel lane. This is essentially a wide kerbside lane.

Shared use paths			
General use	Undesirable	Desirable	Separated path preferred to bypass squeeze points
Desirable width	n/a	2.5m	n/a
Acceptable width	n/a	2.0m – 2.5m	n/a
Width at squeeze points	n/a	2.0m	n/a
Crossing requirements			
Types	Refuge, wombat where zebra or wombat warranted and on the continuously accessible route	Refuge, zebra where warranted	Refuge, zebra where warranted
Location	At 100m-150m intervals	To service main entries; at route linkages	At 150m-200m intervals
Width at intersection and crossing points	2.0m-3.0m	1.5m-2.4m	1.5m-2.4m
Footpaths continued as same material over driveways	Yes and no new driveways permitted	Yes and no new driveways permitted	Yes within 250m of primary destination zone; maximum driveway crossfall 1:40 otherwise
Path crossing of side street	Continuous paths	Generally n/a; otherwise as for secondary route	Continuous footpaths or kerb extensions desirable
Street furniture (locate outside the path of travel)			
Weather protection	Building verandas, canopies, street trees	Building verandas, street trees	Street trees; can use build outs to provide
Street trees	At 6m, 9m, 12m or 15m spacings depending on local environment, or to suit existing plantings; use build outs or in parking lane where required		
Other landscaping	Species that grow into large shrubs should not be planted as these will impede sight distance; low vegetation (grasses etc) or tall trees are preferred		
Lighting (supplemental to street lights; light paths from back of street lighting where appropriate)	Along paths to achieve standards; spill light from feature lighting may be desirable	Along paths to achieve standards	At intersections
Weather protection at stops	Bus shelter or building verandas	Bus shelter or building verandas	Bus shelter
Seating (general)	Require public access to outside dining; midway	At high use bus stops (additional to shelters); at the	Midway between bus stops; at the entry to parks and reserves and other

		between bus stop otherwise; and at high use bus stops (additional to shelters)	entry to parks and reserves	high amenity locations
Additional seating (desirable)	§	Within 125m of aged care, aged housing, disability or medical services: at 60m intervals		
	§	Between 125m and 500m of aged care, aged housing, disability or medical services: at 120m intervals		
	§	As otherwise determined to be appropriate		
Bicycle parking	§	As per Austroads Pt14		
	§	Cages or lockers at commuter and employment nodes		
	§	Free standing rails in clusters of 3 to 5 at destinations		
	§	Rails located on street poles can be used for more widespread parking provision, along streets where freestanding rails cannot easily be provided outside the path of travel		

Signage (poles should be located with at least 0.3m clearance to the route)

Directional (either standard street sign format, or larger route-specific signage)	Signage of the continuously accessible route	§	Signage to major land uses (commercial area, parks) and major tourist destinations at intersections between secondary routes
Regulatory/behavioural	High pedestrian activity signage at start of zones	§	Shared path signage and end shared path signage at ends of path
		§	Shared path signs repeated at 500m intervals (max)

PRIORITISATION OF WORKS

To prioritise works effectively, scores are allocated against different assessment criteria. Network linkages with the higher scores are assigned a higher priority.

To ensure the networks are developed in a logical and cost effective manner, requests for paths and other works forming the routes need to be evaluated and prioritised. The priority system used involves the allocation of scores to different criteria to arrive at a total score. Project assessed using this system can be ordered by score to produce a priority listing of routes to be constructed, and works for these then detailed and costed.

Table 2 – Route Priority Criteria

Category	Criteria	Performance Conditions	Score
Land Use	Number of attractors/generators	More than 5 locations	10
		3-5 locations	8
		1-2 locations	5
		0 locations	0
	Land use types	School / Hospital / Aged Care Facility	10
		Commercial/retail	8
		Sporting Fields / Recreational Facility	5
		Residential	5
		Other	0
	Proximity to generators/attractors	<250m	10
		>250m-500m	8
		>500m-1000m	5
		>1000m	0
	Future development with attractors/generators	High	5
Medium		3	
Low		1	
Traffic impact	Road Hierarchy	State road	15
		Regional road	10
		Local road	8
		Special use	5
		Other	0
Safety	Identified hazardous area (from consultation)	High	10
		Medium	8
		Low	5
		None	0

	Identified pedestrian crashes (reported to Police or local knowledge) as a 3 year average	>3 crashes reported/year	15
		3 crashes/year	10
		2 crashes/year	8
		1 crash/year	5
		0 crashes/year	0
Facility benefits	Demonstrated path	High usage	10
		Medium usage	8
		Low usage	5
		Not demonstrated	0
Continuity of routes	Addition to existing facility	Link up footpath	10
		Extension of footpath	8
		Add to devices	5
		Other	0
Priority	Pedestrian route hierarchy	High	5
		Medium	3
		Low	1

An assessment of the proposed pedestrian routes has been made against the priority criteria and is shown for each town, in Tables 4 to 11.

This assessment is presented by town and by route hierarchy with ID numbers as per the listing of routes in Section 5.

The value ranges against which assessments of degree of priority (“very high”, “high” etc) have been made are presented in Table 3. The range for towns varies reflecting a different township structure (distribution of land uses, status of roads in the hierarchy, etc). Overall the ranges have been selected with the aim that building the same priority of infrastructure in each town would produce similar levels of walkability in each town, in terms of access to shops and services, safety, etc.

Table 3 – Priority Ratings

Priority	Score
Very high	55+
High	41-54
Medium	26-40
Low	25-

□ Table 4 - Action priorities, by town and route type (Grafton)

				Land Use				Traffic Impact	Safety		Facility Benefits	Continuity of Routes	Priority		
				Number of Attractors / Generators	Land Use Types	Proximity to Attractor / Generator	Future Development	Road Hierarchy	Identified Hazardous Area	Identified Pedestrian Crashes	Demonstrated Path	Addition to Existing Facility	Pedestrian Route Hierarchy	Score	Priority
ID	Street	Street Portion	Side												
Secondary Destination Zones															
1	Mary Street	Bacon Street to Oliver Street	Partial east	8	10	10	5	8	0	0	8	10	3	62	Very High
2	Oliver Street	Mary Street to Turf Street	south	8	10	10	5	8	0	0	8	8	3	60	Very High
3	Alice Street	Oliver Street to Fry Street	east	8	10	10	5	8	0	0	5	0	1	47	High
4	Hoof Street	Cassia Street to Cranworth Street	Partial north	8	10	10	5	8	0	0	8	8	3	60	Very High
5	Cranworth Street	Hoof Street to North Street	east	8	10	10	5	8	0	0	8	8	3	60	Very High
6	Cassia Street	North Street to Hoof Street	Partial west	8	10	10	5	8	0	0	5	8	1	55	Very High

				General Access Routes											
ID	Street	Street Portion	Side	Number of Attractors / Generators	Land Use Types	Proximity to Attractor / Generator	Future Development	Road Hierarchy	Identified Hazardous Area	Identified Pedestrian Crashes	Demonstrated Path	Addition to Existing Facility	Pedestrian Route Hierarchy	Score	Priority
7	Howe Street	North Street to Fry Street	east												
8	Cranworth Street	North Street to Oliver Street	west	5	5	5	0	8	0	0	10	5	5	43	High
9	Turf Street	Hoof Street to Oliver Street	west					8	0	0	10	5	5	49	High
10	Mary Street	Crown Street to Arthur Street	east	8	10	10	0	8	0	0	8	10	3	57	Very High
11	Queen Street	Crown Street to North Street	west	8	10	8	3	8	0	0	10	5	5	57	Very High
12	Queen Street	Crown Street to Arthur Street	east	8	10	8	3	8	0	0	10	0	5	52	High

13	Prince Street	Arthur Street to Fry Street	west	8	5	8	0	10	0	0	0	0	0	31	Medium
14	Duke Street	Oliver Street to Pound Street	both	8	8	8	3	8	0	0	5	5	1	46	High
15	Duke Street	Victoria Street to the Clarence River	both	8	10	10	5	8	0	0	10	8	5	64	Very High
16	Villiers Street	Bacon Street to Arthur Street	east	8	10	10	0	8	0	0	8	5	3	52	High
17	Clarence Street	Pound Street to Fitzroy Street	west	8	10	10	0	8	0	0	8	10	3	47	High
18	Kent Street	Dobie Street to Pound Street	east	5	5	5	0	8	0	0	5	0	1	29	Medium
19	Pound Street	Turf Street to Garden Street	south	8	8	8	0	8	0	0	10	8	5	55	Very High
20	Bacon Street	Turf Street to Garden Street	north	8	10	10	3	8	0	0	10	5	5	59	Very High
21	Bacon Street	Clarence Street to Kent Street	south	8	8	8	3	8	0	0	5	8	1	49	High
22	Oliver Street	Cranworth Street to Turf Street	north	5	5	8	0	8	0	0	10	5	5	46	High
23	Oliver Street	Turf Street to Mary Street	south	8	10	8	5	8	0	0	10	8	5	62	Very High
24	Oliver Street	Duke Street to Villiers Street	south	8	5	8	3	8	0	0	8	5	3	48	High
25	Oliver Street	Villiers Street to Kent Street	south	5	5	5	0	8	0	0	5	0	1	29	Medium
26	Fry Street	Howe Street to Cranworth Street	south	5	5	3	0	8	0	0	5	0	1	27	Medium
27	Dobie Street	Turf Street to Bowtell Street	south	8	5	5	0	8	0	0	8	5	3	42	High
28	Dobie Street	Prince Street to Kent Street	either	8	5	5	0	8	0	0	10	5	5	46	High
29	Powell Street	Howe Street to Cranworth Street	south	5	5	3	0	8	0	0	5	0	1	27	Medium
30	Powell Street	Cranworth Street to Alice Street	south	5	5	3	0	8	0	0	10	0	5	36	Medium
31	Hoof Street	Cassia Street to Turf Street	north	8	10	10	5	8	0	0	10	8	5	64	Very High
32	Arthur Street	Queen Street to Prince Street	north	8	10	10	3	8	0	0	8	0	3	50	High

33	Crown Street	Mary Street to Morrison Street	Partial south	8	10	10	3	8	0	0	8	8	3	58	Very High
34	Tweed Street	east from Howe Street		5	5	1	0	8	0	0	5	0	1	25	Low
35	Maud Street	to Oliver Street		5	5	1	0	8	0	0	5	0	1	25	Low
36	Alice Street / through Westward Park	Oliver Street to Bacon Street		8	5	8	3	8	0	0	5	10	1	48	High
37	Crown Street	Alice Street to Mary Street		8	5	8	3	8	0	0	5	0	1	38	Medium
38	Mary Street	Arthur Street through Gordon Wingfield Park		8	10	8	5	8	0	0	8	0	3	50	High
39	Powell Street	Bowtell Avenue to Queen Street		5	5	3	0	8	0	0	8	0	3	32	Medium
40	Fry Street	Prince Street to Villiers Street		5	3	5	0	8	0	0	10	5	3	41	High

□ Table 5 - Action priorities, by town and route type (South Grafton)

				Land Use				Traffic Impact	Safety		Facility Benefits	Continuity of Routes	Priority		
				Number of Attractors / Generators	Land Use Types	Proximity to Attractor / Generator	Future Development	Road Hierarchy	Identified Hazardous Area	Identified Pedestrian Crashes	Demonstrated Path	Addition to Existing Facility	Pedestrian Route Hierarchy	Score	Priority
ID	Street	Street Portion	Side												
Secondary Destination Zones															
1	Hyde Street	School frontage to Bent Street	south	8	10	10	0	8	0	0	8	5	3	52	High
2	Tyson Street	Bent Street to Armidale Street	north	8	10	10	0	8	0	0	8	10	3	57	Very High
3	Armidale Street	Cambridge Street to Norrie Street	east	8	10	5	0	15	0	0	8	0	3	49	High
4	Access to McAuley Catholic College via Pacific Hwy	Iolanthe Street to Hennessy Drive	south	5	10	5	0	15	0	0	8	5	3	51	High
5	Access to Cathedral High School	Centenary Drive	north	5	10	8	0	10	0	0	8	5	3	49	High

				General Access Routes											
ID	Street	Street Portion	Side	Number of Attractors / Generators	Land Use Types	Proximity to Attractor / Generator	Future Development	Road Hierarchy	Identified Hazardous Area	Identified Pedestrian Crashes	Demonstrated Path	Addition to Existing Facility	Pedestrian Route Hierarchy	Score	Priority
6	Riverside Drive	Grafton Bridge path to Through Street	west												
7	Bent Street	Tyson Street to Fairway Drive	west	5	10	8	3	8	0	0	5	0	1	40	Medium
8	Armidale Street	Ryan Street to Vere Street	west	0	5	5	5	10	0	0	5	0	1	31	Medium
9	Armidale Street	George Street to	west	0	5	5	5	10	0	0	5	0	1	31	Medium

		Tyson Street													
10	Vere Street	Kelly Street to Armidale Street	south	0	5	5	3	8	0	0	8	10	3	42	High
11	Cambridge Street	Bent Street to Skinner Street	north	8	10	10	3	8	0	0	10	0	5	54	High
12	Tyson Street	Skinner Street to School	north	8	10	10	0	8	0	0	10	10	5	61	Very High
13	Radburn Development Paths	Between Tallowood Street and Bush Drive		5	5	10	0	8	0	0	5	5	1	44	High
14	Centenary Drive	Ed Ogilvie Drive to School	east	5	10	8	3	10	0	0	5	0	1	42	High
15	Fernance Road	Centenary Drive to South Grafton (via Tyson Street)	either	0	0	0	3	8	0	0	5	0	1	17	Low
16	Bent St	Peppermint Place cut-through to the crossing from Hyde Street	west	5	10	5	0	8	0	0	10	10	5	53	High
17	Armidale Road	Tyson Street to Ellen Street	west	0	5	8	0	10	0	0	5	0	1	29	Medium
18	Tyson Street	Hawthorn Street to Mackay Street	north	0	5	8	0	8	0	0	0	0	0	21	Low
19	Railway Station access	Crisp Avenue to shared use path (Grafton Bridge)		8	8	10	5	5	0	0	10	10	5	61	Very High
20	Waterfront path	Riverside Drive to Skinner Street		8	8	10	5	5	0	0	8	0	3	47	High
21	Waterfront path (Through Street)	Skinner Street to Cowan Street	north	8	8	8	3	5	0	0	8	0	3	43	High
22	Skinner Street	Bob Liddiard Park to Tallowood Street east		5	5	5	5	5	0	0	8	8	3	44	High
23	Alipou Creek	Fernance Road to Pacific Highway	either	0	3	8	5	5	0	0	5	0	1	27	Medium

Table 6 - Action priorities, by town and route type (Yamba)

				Land Use				Traffic Impact	Safety		Facility Benefits	Continuity of Routes	Priority		
				Number of Attractors / Generators	Land Use Types	Proximity to Attractor / Generator	Future Development	Road Hierarchy	Identified Hazardous Area	Identified Pedestrian Crashes	Demonstrated Path	Addition to Existing Facility	Pedestrian Route Hierarchy	Score	Priority
ID	Street	Street Portion	Side												
Secondary Destination Zones															
1	Carrs Road	School frontage (to Miles Lane)	east	5	10	10	5	8	0	0	10	8	5	61	Very High
General Access Routes															
2	Harbour Street	Primary destination zone to Clarence Street	north	5	3	10	5	8	0	0	8	10	3	52	High
3	Church Street	River Street to Clarence Street	north	5	3	5	5	8	0	0	5	0	1	32	Medium
4	River Street	Harbour Street to Wooli Street	east	5	3	10	5	8	0	0	8	0	3	42	High
5	River Street	Beachside Way to Pacific Parade	west	8	5	10	5	8	0	0	8	8	3	55	Very High
6	Pacific Parade / Clarence Street	Point Street to River Street	North-west	5	5	8	3	8	0	0	8	0	3	40	Medium
7	Wooli Street/ Yamba Road	River Street to off road/ recreational and local access routes, to Angourie Road, and on to retirement village west of Treelands Drive		10	8	10	5	10	0	0	10	5	5	63	Very High
8	Gumnut Road / The Link / The Mainbrace	Shores Drive to Witonga Drive	south	5	5	10	0	8	0	0	10	0	5	43	High

9	Orion Drive			5	10	10	5	8	0	0	8	0	3	49	High
10	Miles Lane			5	10	10	5	8	0	0	5	0	1	44	High
11	Phoenix Close	To Favourite Avenue		0	5	0	5	8	0	0	5	0	1	24	Low
12	Church Street	Between River Street and Yamba Street		5	3	10	3	8	0	0	5	0	1	35	Medium
13	Nautilus Place	to Beachside Way		0	5	0	0	8	0	0	5	0	1	19	Low
14	Pippi Beach access			5	3	10	0	8	0	0	10	5	5	46	High
15	Deering Street route	from Susan Street, Yamba Road, Freeburn Road and along Mulgi Street		0	5	0	5	8	0	0	10	8	5	41	High
16	Oyster Channel/ Newport Island foreshore			5	5	10	5	8	0	0	5	0	1	39	Medium

Table 7 - Action priorities, by town and route type (Maclean)

				Land Use				Traffic Impact	Safety		Facility Benefits	Continuity of Routes	Priority		
				Number of Attractors / Generators	Land Use Types	Proximity to Attractor / Generator	Future Development	Road Hierarchy	Identified Hazardous Area	Identified Pedestrian Crashes	Demonstrated Path	Addition to Existing Facility	Pedestrian Route Hierarchy	Score	Priority
ID	Street	Street Portion	Side												
Secondary Destination Zones															
1	McIntyres Lane	Grafton Street to end of school frontage to the west	south	5	10	10	3	8	0	0	5	0	1	42	High
2	Cameron Street	Wombah Street to Showgrounds	south	8	15	10	3	8	0	0	10	8	5	67	Very High
General Access Routes															
3	River Street	primary destination zone to Howard Street	west	5	5	10	3	8	0	0	8	8	3	50	High
4	Union Street	Salen Street to Roderick Street	north	5	10	10	3	8	0	0	8	8	3	55	Very High
5	Union Street	Wherrett Park shared use path to Salen Street	south	5	5	8	3	8	0	0	8	8	3	48	High
6	Woodford Street	Union Street to Clarence Street	east	5	5	8	3	8	0	0	5	0	1	35	Medium
7	John Street	secondary destination zone to McLachlan Street	south	5	5	10	3	8	0	0	5	5	1	42	High
8	Argyle Street	secondary destination zone to Woodford Street	north	5	5	10	3	8	0	0	8	5	3	47	High
9	Clarence Street	secondary destination zone to Roderick Street	south	5	3	5	3	8	0	0	8	5	3	40	Medium

10	Alexander Street	Clarence Street to McLachlan Street	south	5	10	10	0	8	0	0	8	8	3	52	High
11	Short Street	Wharf Street to Stanley Street	west	5	10	10	3	8	0	0	5	8	1	50	High
12	McLachlan Street	Swimming Pool to Union Street	west	5	10	10	3	8	0	0	10	0	5	51	High
13	McIntyres Lane	Alexander Lane to Oban Street	south	5	10	10	3	8	0	0	8	0	3	47	High
14	Taloumbi Street	River Street to Grafton Street	south	5	5	3	3	8	0	0	10	0	5	39	Medium
15	Church Street	River Street to Grafton Street	south	5	5	3	3	8	0	0	8	0	3	35	Medium
16	Grafton Street	Cameron Street to McIntyres Lane	west	5	10	5	3	8	0	0	8	0	3	42	High
17	Jubilee Street	Scullin Street to Koala Drive	north	5	8	5	3	8	0	0	10	0	5	44	High
18	Cut-through	McIntyres Lane to Alexander Street		5	8	8	3	0	0	0	8	0	3	35	Medium
19	Salen Street	Clarence Street to McIntyres Lane		0	0	5	0	0	0	0	5	0	1	11	Low
20	Cut-through	Woodford Street to Cameron Street		5	3	3	3	0	0	0	8	5	3	30	Medium
21	Cameron Street	Cameron Street to opposite end of service road	east	0	3	3	3	5	0	0	8	10	3	35	Medium
22	Cameron Street / Lawrence Road	Showground Entrance to McFarlane Bridge	west	5	3	3	3	8	0	0	8	5	3	38	Medium
23	Harwood Street	north of Cameron Street		5	3	5	3	8	0	0	5	0	1	30	Medium
24	Service roads	Wombah Street to Goodwood Street		5	8	8	3	5	0	0	5	0	1	35	Medium
25	Edinburgh Drive	Scullen Street to Koala Drive	east	5	5	8	3	8	0	0	8	0	3	40	Medium
26	Jubilee Street	Paperbark Drive to Re Road		0	0	3	3	8	0	0	8	0	3	25	Low
27	Koala Drive to Re Road	northern extent of Koala Drive		0	5	3	3	8	0	0	5	0	1	25	Low
28	Scullen Street	Jubilee Street to Edinburgh Drive		5	10	8	3	8	0	0	8	0	3	45	High

29	Wherrett Park	shared use path		5	3	10	0	5	0	0	8	5	3	39	Medium
30	River Street levee	primary destination zone to Bakers Lane		8	8	5	0	5	0	0	10	0	5	41	High

Table 8 - Action priorities, by town and route type (Iluka)

			Land Use				Traffic Impact	Safety		Facility Benefits	Continuity of Routes	Priority		
			Number of Attractors / Generators	Land Use Types	Proximity to Attractor / Generator	Future Development	Road Hierarchy	Identified Hazardous Area	Identified Pedestrian Crashes	Demonstrated Path	Addition to Existing Facility	Pedestrian Route Hierarchy	Score	Priority
ID	Street	Street Portion												
Primary Destination Zones														
8	Spenser Street	Young Street to Micalo Street	8	10	10	1	8	5	0	5	8	3	57	Very High
13	Queen Street	Crown Street to Iluka Street	8	8	10	1	8	5	0	8	0	5	53	High

Secondary Destination Zones														
ID	Street	Street Portion												
2	Marandowie Drive	Anchorage Caravan Park to Johnson Street	5	8	10	1	8	0	0	5	0	3	40	Medium
12	Crown Street	Queen Street to Charles Street	8	8	10	1	8	5	0	5	8	3	56	Very High
16	Spenser Street	Owen Street to Denne Street	5	8	10	1	8	8	0	8	0	3	51	High
17	Micalo Street	Duke Street to Elizabeth Street	5	5	8	1	8	5	0	5	0	3	40	Medium

General Access Routes														
ID	Street	Street Portion												
1	Marandowie Drive	Hickey Street to Loxton Avenue	0	8	8	1	8	0	0	8	0	3	36	Medium
3	Owen Street	Queen Street to Charles Street	0	8	10	1	8	0	0	5	0	0	32	Medium
4	Owen Street	Charles Street to Spenser Street	10	8	10	1	8	0	0	8	0	5	50	High
5	Charles Street	Denne Street to Vere Street	10	8	10	1	8	0	5	8	0	3	53	High

6	Charles Street	Vere Street to Crown Street	0	8	10	1	8	0	0	8	0	3	38	Medium
7	Charles Street	Micalo Street to Young Street	8	10	10	1	8	0	0	8	0	3	47	High
9	Spenser Street	Micalo Street to Riverview Street	0	10	10	1	8	5	0	5	0	1	40	Medium
10	Spenser Street	Riverview Street to boat ramp	0	10	10	1	8	5	0	0	0	1	35	Medium
11	Denne Street	Charles Street to Spenser Street	10	8	10	1	8	5	0	0	0	1	43	High
14	Queen Street	Iluka Street to beach car park	8	8	10	1	8	5	0	5	0	1	46	High
15	Denne Street	Queen Street to Charles Street	10	8	10	1	8	5	0	5	10	1	58	Very High

Table 9 - Action priorities, by town and route type (Woombah)

			Land Use				Traffic Impact	Safety		Facility Benefits	Continuity of Routes	Priority		
			Number of Attractors / Generators	Land Use Types	Proximity to Attractor / Generator	Future Development	Road Hierarchy	Identified Hazardous Area	Identified Pedestrian Crashes	Demonstrated Path	Addition to Existing Facility	Pedestrian Route Hierarchy	Score	Priority
ID	Street	Street Portion												
Primary Destination Zones														
6	Wharf Street	Iluka Road to Adams Street	5	8	10	1	8	0	0	8	8	5	53	High
Secondary Destination Zones														
4	West Street	Iluka Road to North Street	5	5	10	1	8	0	0	10	8	1	48	High
General Access Routes														
1	Iluka Road	Ibis Close to Island View Road	0	8	8	1	10	0	0	8	8	1	44	High
2	Iluka Road	Island View Road to Ridgewood Drive	0	8	5	1	10	0	0	8	0	1	33	Medium
3	Iluka Road	Ridgewood Drive to Fat Duck Road	0	5	0	1	10	0	0	5	0	1	22	Low
5	West Street	North Street to Forest Way	0	5	8	1	8	0	0	10	0	1	33	Medium
7	Wharf Street	Adams Street to River Street	0	8	10	1	8	0	0	8	0	1	36	Medium
8	Iluka Road	Short Street to Loftus Street	0	5	8	1	10	0	0	8	8	1	41	High

9	Iluka Road	Loftus Street heading east	0	5	5	1	10	0	0	8	0	1	30	Medium
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Table 10 - Action priorities, by town and route type (Ulmarra)

ID	Street	Street Portion	Land Use				Traffic Impact	Safety		Facility Benefits	Continuity of Routes	Priority	Score	Priority
			Number of Attractors / Generators	Land Use Types	Proximity to Attractor / Generator	Future Development	Road Hierarchy	Identified Hazardous Area	Identified Pedestrian Crashes	Demonstrated Path	Addition to Existing Facility	Pedestrian Route Hierarchy		
Secondary Destination Zone														
3	Coldstream Road	Goodgers Lane to Hospital Lane	5	5	8	1	8	0	0	5	8	1	41	High
4	Coldstream Road	Hospital Lane to sports ground	5	5	10	1	8	0	0	5	8	1	43	High
6	River Street	Lynhaven Crescent to Coldstream Street	10	5	10	1	8	0	0	5	10	3	52	High

General Access Routes														
ID	Street	Street Portion	Number of Attractors / Generators	Land Use Types	Proximity to Attractor / Generator	Future Development	Traffic Impact	Identified Hazardous Area	Identified Pedestrian Crashes	Facility Benefits	Continuity of Routes	Priority	Score	Priority
1	Pacific Highway	Coldstream Road to Hospital Lane	5	5	10	1	15	0	0	5	10	3	54	High
2	Pacific Highway	Hospital Lane to Belmore Street	0	5	10	1	15	0	0	5	10	3	49	High
5	Pacific Highway	North of school western side of highway	0	5	10	1	15	0	0	5	8	3	47	High

Table 11 - Action priorities, by town and route type (Lawrence)

			Land Use				Traffic Impact	Safety		Facility Benefits	Continuity of Routes	Priority		
			Number of Attractors / Generators	Land Use Types	Proximity to Attractor / Generator	Future Development	Road Hierarchy	Identified Hazardous Area	Identified Pedestrian Crashes	Demonstrated Path	Addition to Existing Facility	Pedestrian Route Hierarchy	Score	Priority
ID	Street	Street Portion												
Primary Destination Zone														
2	Richmond Street	Bridge Street to Rutland Street	5	5	10	1	8	0	0	5	0	5	39	Medium
6	Cook Street	Neill Street to High Street	5	10	10	1	8	0	0	5	0	3	42	High
7	Cook Street	High Street to Fairfax Street	5	10	10	1	8	0	0	5	0	5	44	High
17	High Street	Cook Street to Ward Street	5	10	10	1	8	0	0	5	0	5	44	High
1	Bridge Street	Rutland Street to Lawrence Tavern	5	5	10	1	8	0	0	5	0	5	39	Medium
Secondary Destination Zone														
3	Richmond Street	Rutland Street to Eton Street	0	5	10	1	8	5	0	0	0	3	32	Medium
23	March Street	At sports ground	5	0	10	1	8	0	0	0	0	3	27	Medium
22	March Street	Richmond Street to sports ground	5	5	8	1	8	0	0	0	0	0	27	Medium
14	Rutland Street	Richmond Street to High Street	5	5	10	1	8	10	0	5	0	3	47	High

General Access Routes

ID	Street	Street Portion													
5	Cook Street	Richmond Street to Neill Street	0	5	10	1	8	0	0	5	0	3	32	Medium	
8	Cook Street	Fairfax Street to Conway Street	5	10	10	1	8	0	0	5	0	3	42	High	
15	High Street	Swamp Street to Rutland Street	0	5	10	1	8	10	0	5	0	1	40	Medium	
16	High Street	Swamp Street to Ward Street	5	10	10	1	8	0	0	5	0	5	44	High	
12	Rutland Street	High Street to Farnell Street	5	5	10	1	8	10	0	5	0	1	45	High	
13	Rutland Street	Farnell Street to Merton Street	0	5	5	1	8	0	0	5	0	1	25	Low	
10	Havelock Street	Bligh Street to Merton Street	0	5	0	1	8	0	0	5	0	1	20	Low	
9	Havelock Street	Conway Street to Bligh Street	0	8	8	1	8	0	0	5	0	1	31	Medium	
18	Richmond Street	Cook Street to Raleigh Street	0	5	8	1	8	0	0	0	0	1	23	Low	
19	Richmond Street	Raleigh Street to Anne Street	0	5	5	1	8	0	0	0	0	1	20	Low	
20	Richmond Street	Anne Street to High Street	0	5	8	1	8	0	0	5	0	1	28	Medium	
21	Richmond Street	High Street to Pandana Close	0	5	0	1	8	0	0	5	0	1	20	Low	
4	Richmond Street	Cook Street to Eton Street	0	5	8	1	8	0	5	0	0	1	28	Medium	
11	Merton Street	Havelock Street to Rutland Street	0	8	0	1	8	0	0	5	0	1	23	Low	
24	Havelock Street / Exmouth Street / Kings Creek Road	From Merton Street east	0	5	0	1	8	0	0	0	0	1	15	Low	



Footpath/Shared use - Grafton

Legend

Existing Path

Existing Footpath / Shared Use Path

Primary Destination Zone

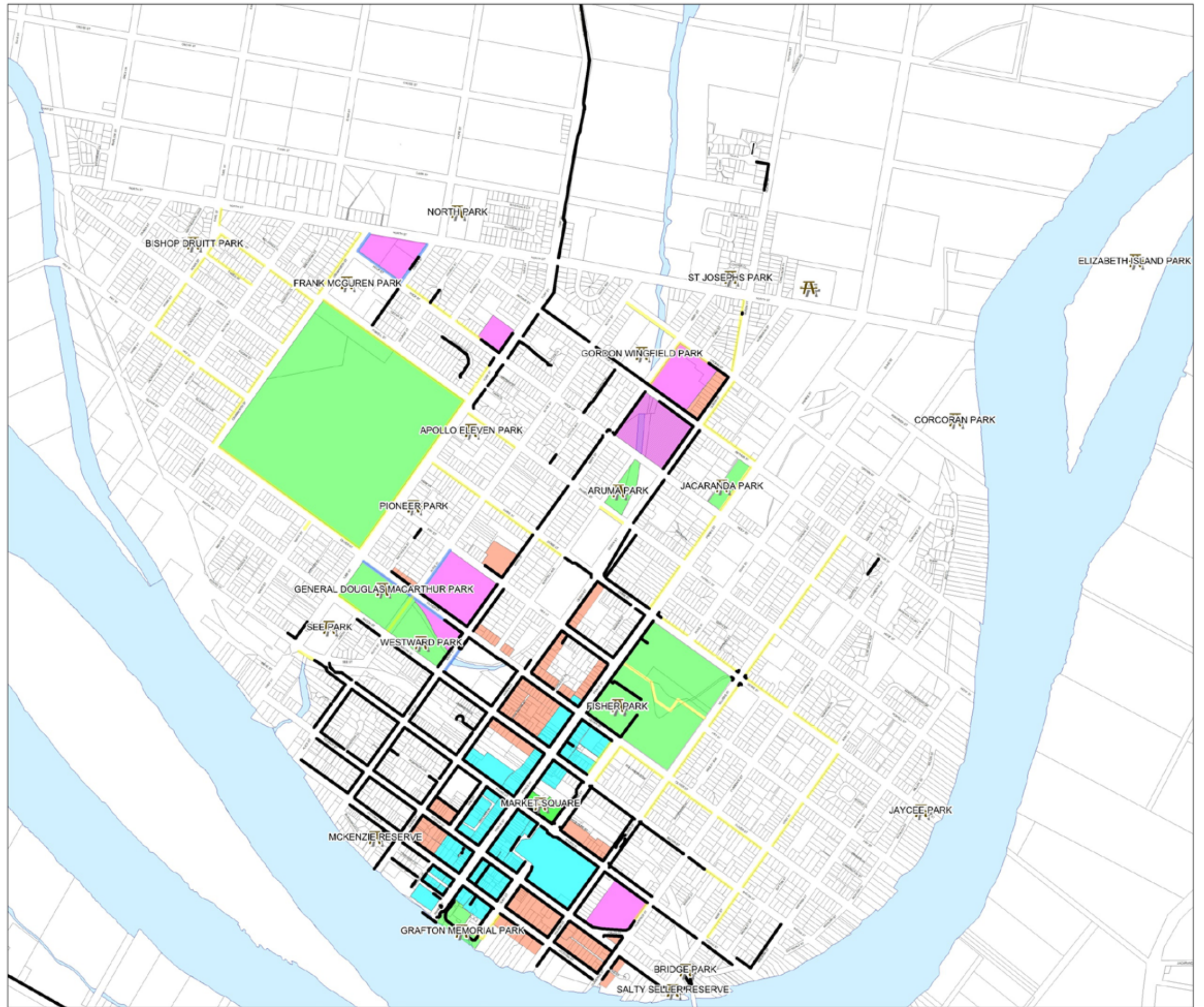
- Footpath required (inside Primary Zone)
- CBD
- Park / Garden

Secondary Destination Zone

- Footpath required (to General Zone)
- Footpath required (inside Secondary Zone)
- Beach
- Park / Recreation / Sporting
- Commercial Area
- School / Hospital / Aged Care Facility etc
- Sporting - Special use
- Jail

General Destination Zone

- Footpath required
- Park / Recreation



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0 250 500 Metres

Projection: GDA 1994
MGA Zone 56

Scale: 1:14,000 @ A3 Landscape



Legend

Existing Path

— Existing Footpath / Shared Use Path

Primary Destination Zone

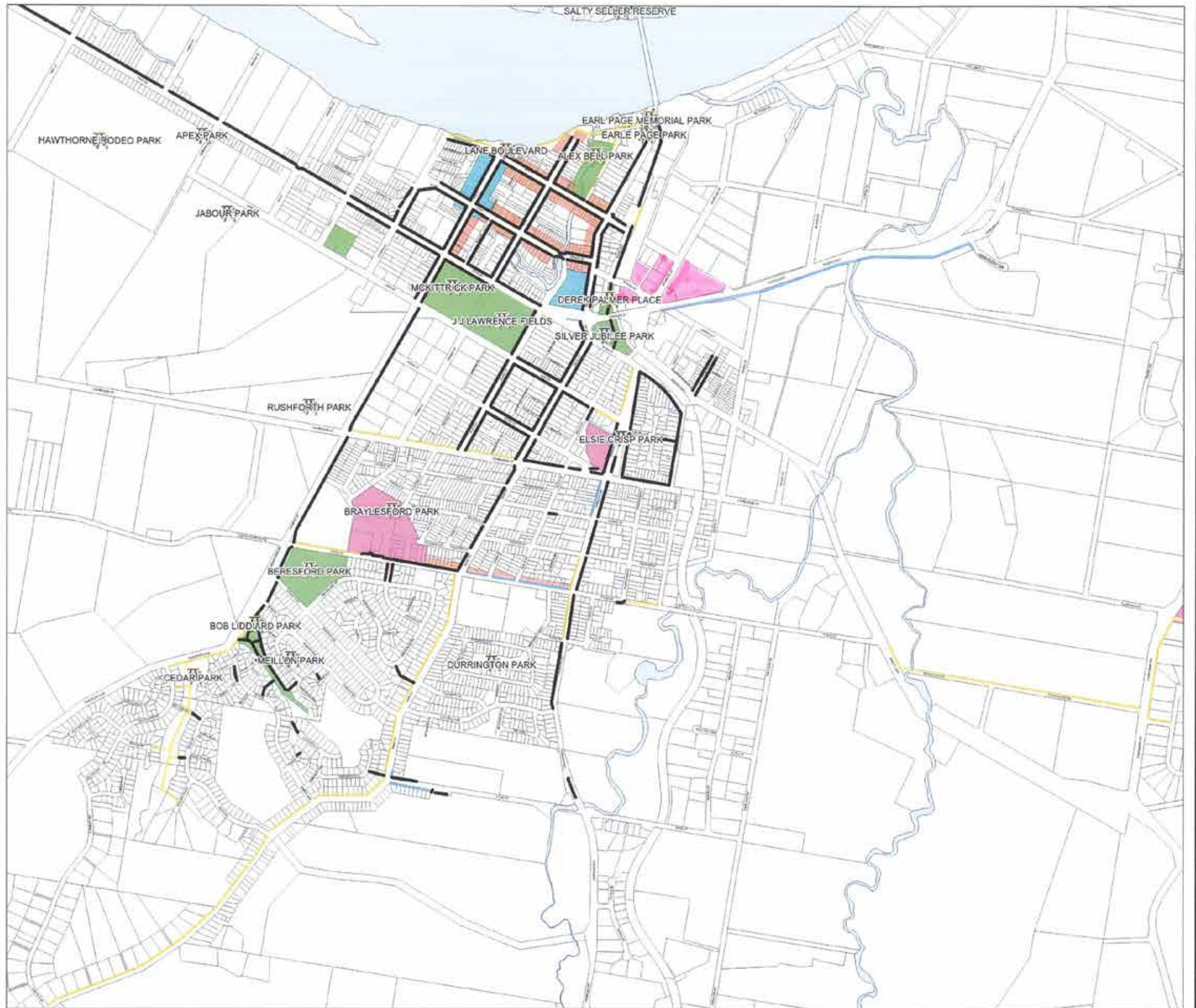
- Footpath required (inside Primary Zone)
- CBD
- Park / Garden

Secondary Destination Zone

- Footpath required (to General Zone)
- Footpath required (inside Secondary Zone)
- Beach
- Park / Recreation / Sporting
- Commercial Area
- School / Hospital / Aged Care Facility etc
- Sporting - Special use
- Jail

General Destination Zone

- Footpath required
- Park / Recreation



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 0 250 500Metres
 Scale: 1:15,000 @ A3 Landscape
 Projection: GDA 1994 MGA Zone 50



Footpath/Shared use - Yamba

Legend

Existing Path

Existing Footpath / Shared Use Path

Primary Destination Zone

- Footpath required (inside Primary Zone)
- CBD
- Park / Garden

Secondary Destination Zone

- Footpath required (to General Zone)
- Footpath required (inside Secondary Zone)
- Beach
- Park / Recreation / Sporting
- Commercial Area
- School / Hospital / Aged Care Facility etc
- Sporting - Special use
- Jail

General Destination Zone

- Footpath required
- Park / Recreation

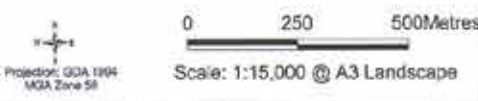


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Legend

Existing Path

— Existing Footpath / Shared Use Path

Primary Destination Zone

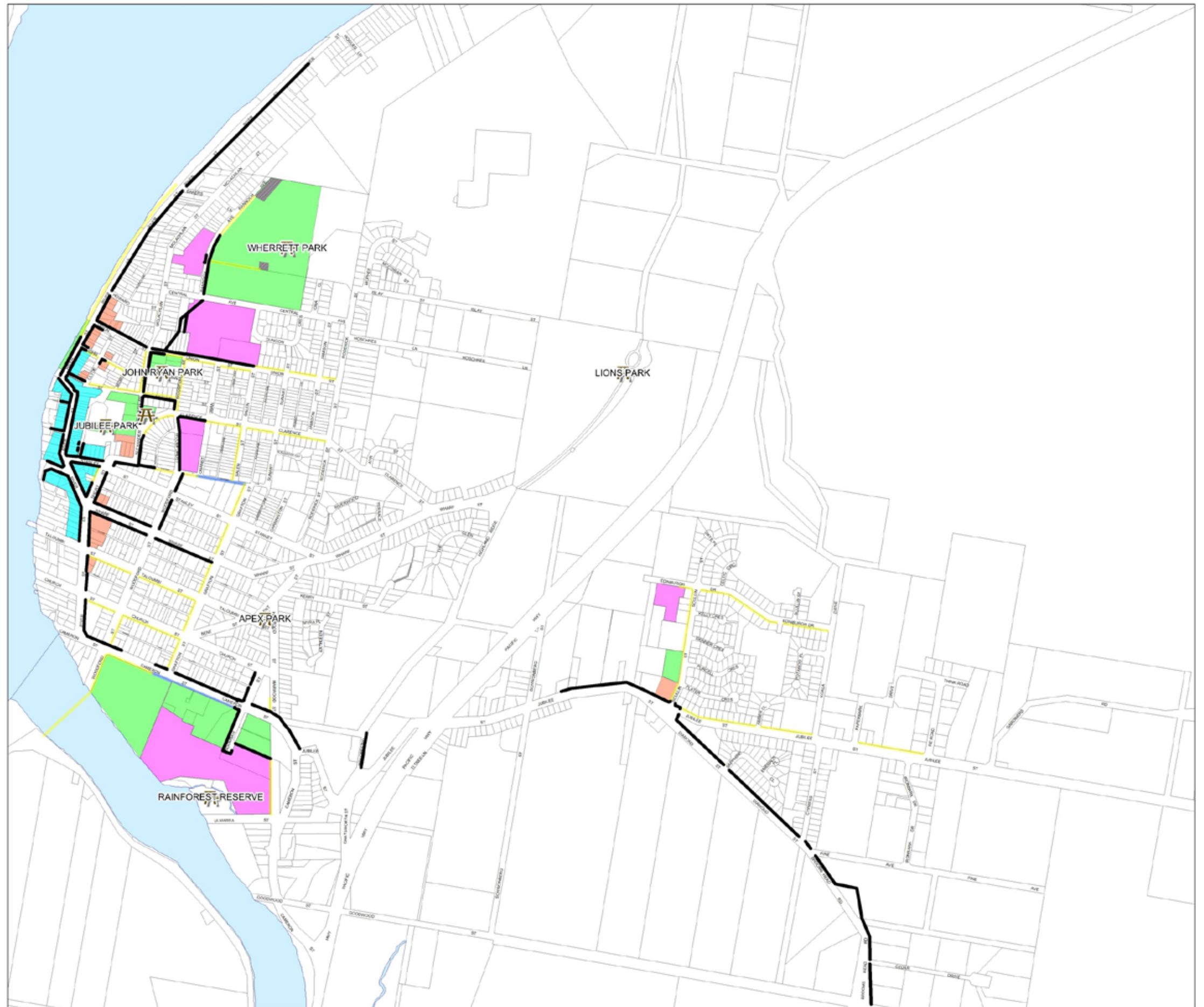
-  Footpath required (inside Primary Zone)
-  CBD
-  Park / Garden

Secondary Destination Zone

-  Footpath required (to General Zone)
-  Footpath required (inside Secondary Zone)
-  Beach
-  Park / Recreation / Sporting
-  Commercial Area
-  School / Hospital / Aged Care Facility etc
-  Sporting - Special use
-  Jail

General Destination Zone


-  Footpath required
-  Park / Recreation



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 0 200 400Metres
 Scale: 1:12,000 @ A3 Landscape
 Projection: GDA 1994 MGA Zone 56

Legend

Existing Path

— Existing Footpath / Shared Use Path

Primary Destination Zone

— Footpath required (inside Primary Zone)

— CBD

— Park / Garden

Secondary Destination Zone

— Footpath required (to General Zone)

— Footpath required (inside Secondary Zone)

— Beach

— Park / Recreation / Sporting

— Commercial Area

— School / Hospital / Aged Care Facility etc

— Sporting - Special use

— Jail

General Destination Zone

— Footpath required

— Park / Recreation



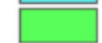


Legend

Existing Path

— Existing Footpath / Shared Use Path

Primary Destination Zone

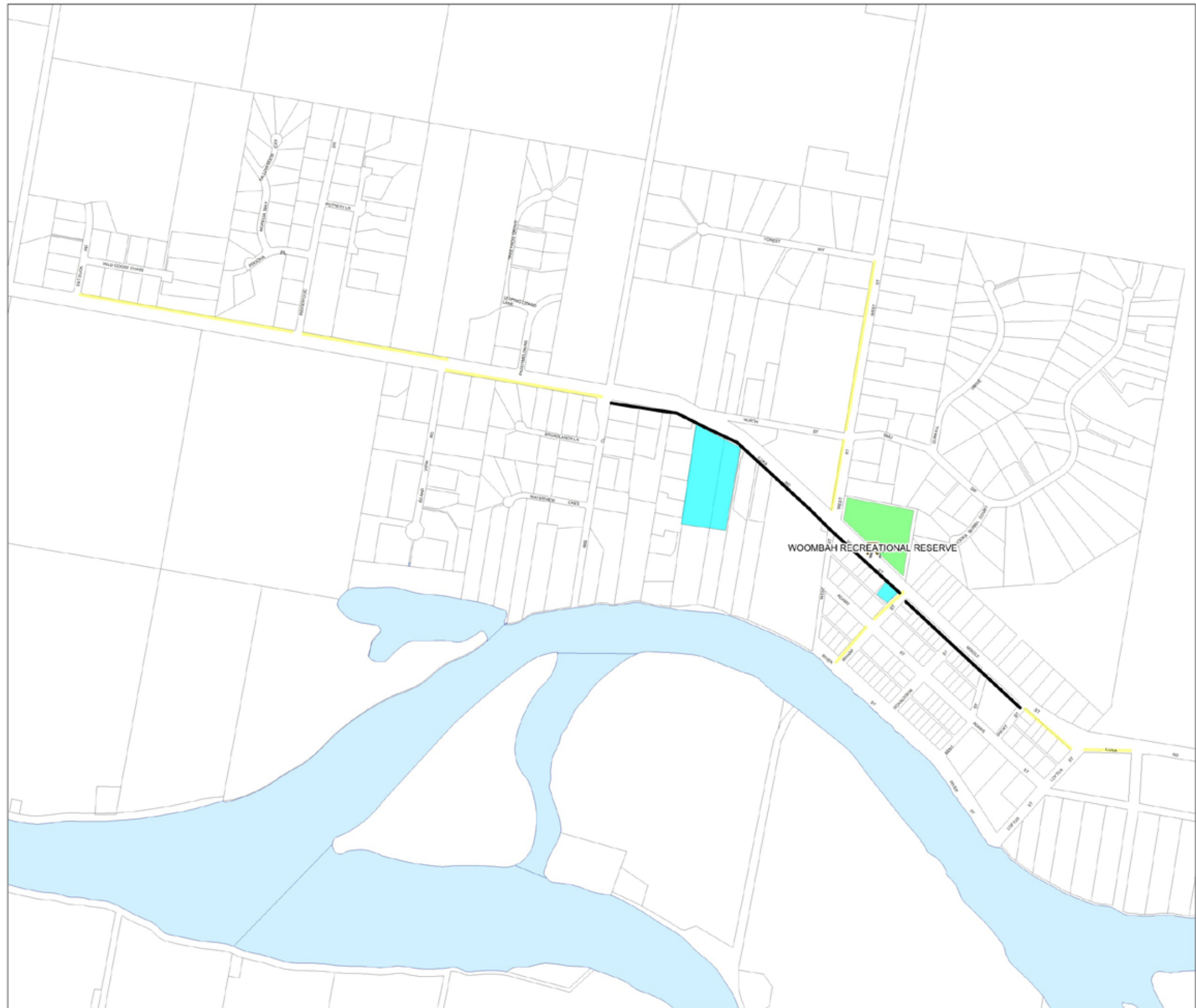
-  Footpath required (inside Primary Zone)
-  CBD
-  Park / Garden

Secondary Destination Zone

-  Footpath required (to General Zone)
-  Footpath required (inside Secondary Zone)
-  Beach
-  Park / Recreation / Sporting
-  Commercial Area
-  School / Hospital / Aged Care Facility etc
-  Sporting - Special use
-  Jail

General Destination Zone

-  Footpath required
-  Park / Recreation



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0 150 300Metres




Projection: GDA 1994
 MGA Zone 56
 Scale: 1:10,000 @ A3 Landscape

Legend

Existing Path

— Existing Footpath / Shared Use Path

Primary Destination Zone

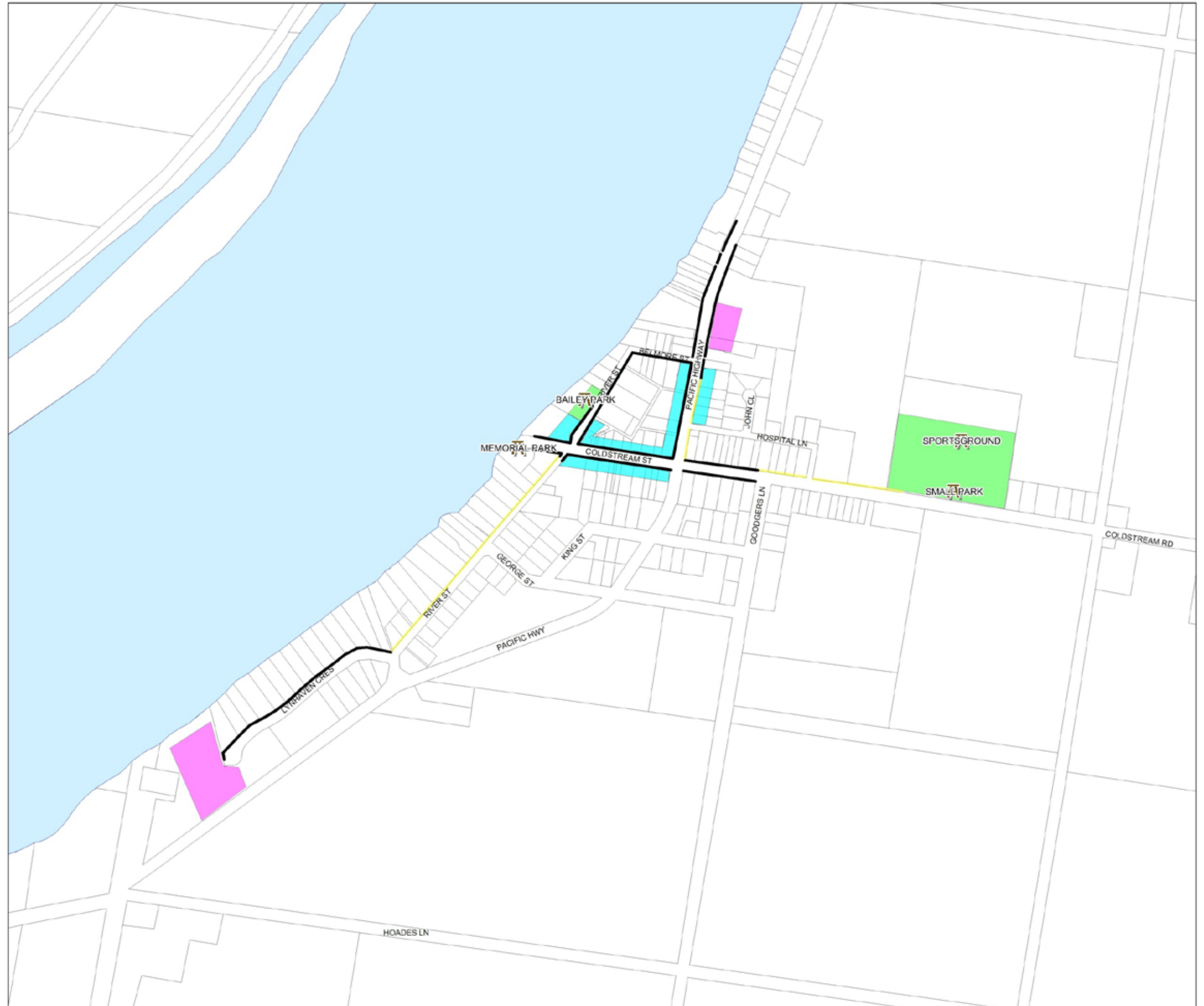
-  Footpath required (inside Primary Zone)
-  CBD
-  Park / Garden

Secondary Destination Zone

-  Footpath required (to General Zone)
-  Footpath required (inside Secondary Zone)
-  Beach
-  Park / Recreation / Sporting
-  Commercial Area
-  School / Hospital / Aged Care Facility etc
-  Sporting - Special use
-  Jail


General Destination Zone

-  Footpath required
-  Park / Recreation



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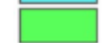
 0 100 200Metres
 Projection: GDA 1994 MGA Zone 56 Scale: 1:6,000 @ A3 Landscape

Legend

Existing Path

— Existing Footpath / Shared Use Path

Primary Destination Zone

-  Footpath required (inside Primary Zone)
-  CBD
-  Park / Garden

Secondary Destination Zone

-  Footpath required (to General Zone)
-  Footpath required (inside Secondary Zone)
-  Beach
-  Park / Recreation / Sporting
-  Commercial Area
-  School / Hospital / Aged Care Facility etc
-  Sporting - Special use
-  Jail

General Destination Zone


-  Footpath required
-  Park / Recreation



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 0 200 400Metres
 Scale: 1:12,000 @ A3 Landscape
 Projection: GDA 1994 MGA Zone 56