

Bicycle Plan 2017 Summary



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1 INTRODUCTION

1.1 VISION AND OBJECTIVES

Our vision is:

"Connected Communities, Valuing Nature and Creating our Future Together"

One of the key aspects of the vision story is for the City to be "easily accessible to and from Perth City, and around the City" – this Bicycle Plan supports this vision by setting out a clear way forward for investment in the active transport network.

The goals of this Bicycle Plan are:

- > To improve the safety of the cycling environment by providing better cycling paths, shared paths, and road treatments, after considering crash history and community feedback on cycling safety.
- > To provide more paths and road spaces that are suited to the design needs of cyclists, and accommodate the different types of cycling users such as shared path users, commuters, recreational cyclists, and competitive cyclists. This includes consideration of shorter and longer travel distances, path geometry, travel routes, convenience, and connectivity.
- > To increase the use of public transport, by providing more cycling options for people to use public transport, providing better end of trip facilities, and improving connections to the cycling network.
- > To improve cycling access to the Forrestfield Train Station and the use of the public transport system associated with the train station.
- > To promote and educate in cycling, and thus improve cycling participation for the flow-on effects such as improvements in health and social values, economic development and tourism.
- > To provide the research and strategy that will enable planning for cycling works and applying for funding for cycling infrastructure and programs.

1.2 POLICY CONTEXT

The Bicycle Plan was formulated to support and integrate with the objectives of national, state and local government policies.

2 THE BENEFITS OF CYCLING



Cycling can be undertaken for commuting, recreational and casual purposes, and has been acknowledged to provide benefits to the individual and the wider community including:

- > **Social Benefits** such as encouraging regular exercise and social interactions, increasing mobility for those unable to drive and increasing safety for all road users.
- > **Personal Economic Benefits** such as decreasing the cost of transport, lessening the need for multiple family cars and reducing personal health care costs.
- > **Commercial Economic Benefits** such as happier, healthier and more productive staff, reducing pressure on parking facilities and new potential customers.
- > **Environmental Benefits** such as improvements to air quality, reductions in greenhouse gas emissions and increasing green spaces as a result of fewer car trips.

3 COMMUNITY CONSULTATION

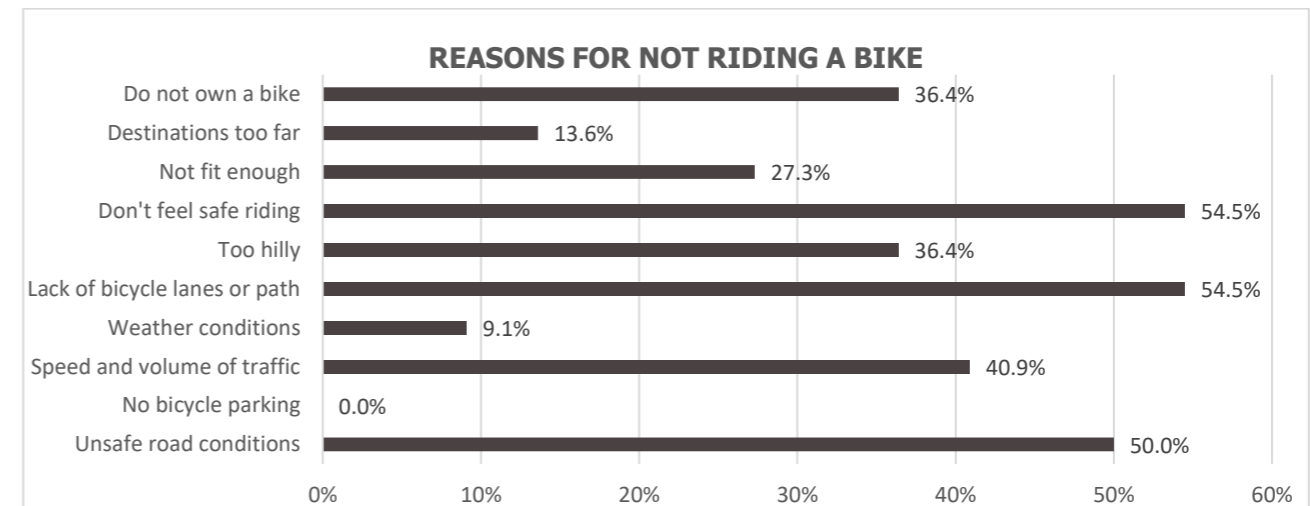
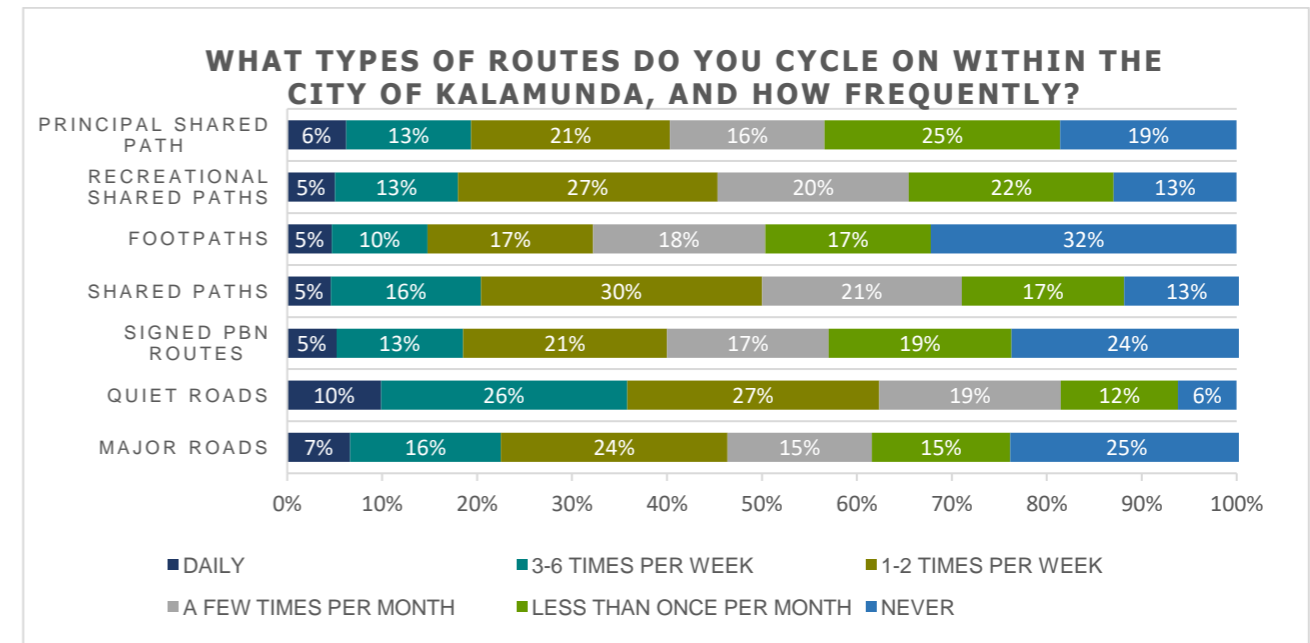
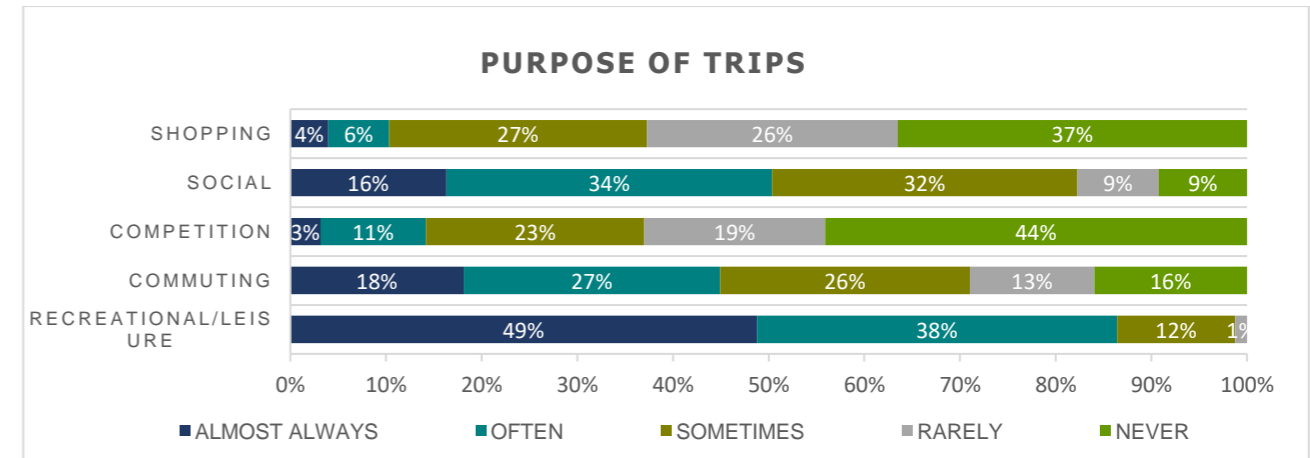
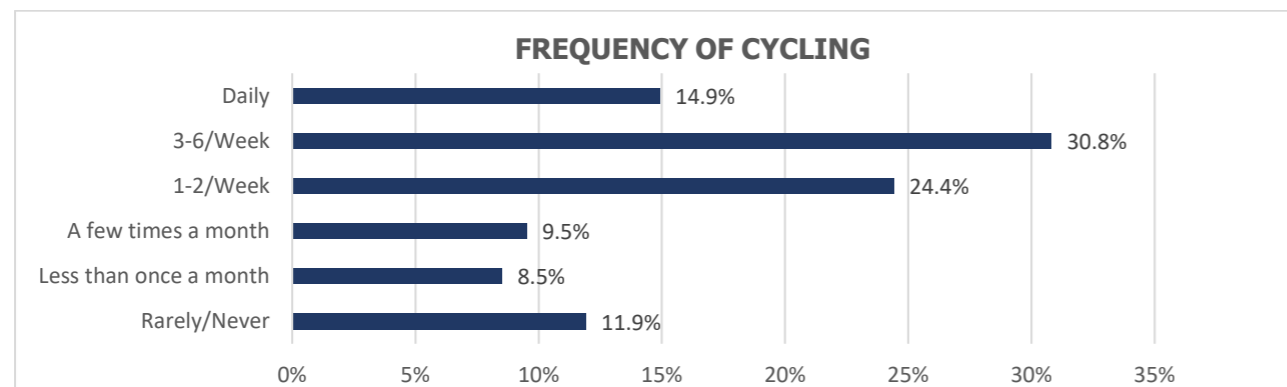
Community consultation was a critical component of developing this Bicycle Plan. Community Consultation was undertaken to guide the Bicycle Plan so that it could meet the needs of existing cyclists and encourage a greater uptake of cycling.

An open public consultation process was undertaken during March and April 2017. This process consisted of a survey questionnaire, which was available both in hard copy and on the City of Kalamunda’s website. Over 200 responses were received, 64% of which were from residents of the Hills portion of the City. Over 20% of the responses were from non-residents of the City, indicating strong interest from cyclists who visit the City from other parts of Perth.

The survey results show that quiet roads are the most used route type in the City, with 63% of respondents riding through them at least 1-2 times a week. Shared paths are the second most used cycling infrastructure in the City. The number of respondents using Principal Shared Paths (PSP) at least weekly was 40%. Note that within the City only a short section of PSP currently exists, between Tonkin Highway and Berkshire Road. This indicates that there is a demand for additional high quality infrastructure within the City.

For the respondents of the survey, weekends were the most popular time to ride. Forty percent claimed to ‘almost always’ ride through the City on the weekends. Sixty percent of respondents stated that they stopped within the City during their ride to buy food and/or drinks. The majority of respondents stop at shops and cafes around the Kalamunda Town Centre. For people who did not stop, better and safer bike parking was an improvement they would most like to see around the City, especially at the Kalamunda Town Centre.

Respondents who rarely cycle were asked to nominate the main reasons for not currently riding. The main reasons respondents listed for not riding a bike were “don’t feel safe riding”, “unsafe road conditions”, “speed and volume of traffic” and “lack of bicycle lanes or path.” These results indicate a definite need for the City to invest in dedicated on-road cycling facilities to create a safer cycling environment.



4 ENCOURAGEMENT AND EDUCATION

Constructing new infrastructure is crucial to the promotion of cycling in the City of Kalamunda. It is also important to encourage the use of new infrastructure with education programs that encourage behaviour change.

4.1 Behaviour Change Approach

There are many ways to encourage behaviour change and the methods proposed for the City of Kalamunda are:

- > Raise awareness of cycling by including information regarding cycling related activities on the City's website, newsletter and social media;
- > Ensure that tools and resources, for example route maps, road rules, safety, and cycling etiquette are easily accessible, either electronically or in print form;
- > Provide cycling education courses and conduct educational rides to encourage inexperienced riders to ride more often;
- > Ensure that the infrastructure and supporting facilities are well maintained, safe, legible and convenient so that the new rider has a positive initial experience;
- > Provide positive reinforcement for existing bike riders to encourage them to keep riding, for example by participating in the Super Tuesday annual bike count event and Bike Week.

4.2 Bicycle Library

One of the major reasons that residents do not cycle is that they do not own a bicycle. Purchasing a bicycle is a significant investment for many people and one which is unlikely to be made without some confidence that it will be frequently used.

To overcome this barrier, a "Bicycle Library" scheme can be introduced, where residents are permitted to borrow the bicycles for a few hours at no cost, with longer ride attracting a small fee. Non-residents with suitable identification are also able to use the scheme.

This scheme has been successfully implemented in the City of Vincent, with bicycles booked out most weekends and many weekdays. The cargo bike allows households without a car to do shopping that would otherwise be difficult on a regular bicycle.

The City should investigate the feasibility of a Bicycle Library scheme, based at the Kalamunda, Forrestfield and High Wycombe libraries. The scheme could be started with the opening of sections of Secondary Routes and Local Routes, for example the Hills Spine and the Foothills Spine. The scheme could also be tied to the opening of Forrestfield Station as a way to encourage residents to ride to the station.

4.3 Targeted Education Program

Driver education, when targeted properly, can be an effective tool in encouraging better road user behaviour. It is recommended that the City collaborate with the Eastern Metropolitan Regional Council, WestCycle, Main Roads Western Australia, and the Road Safety Commission to implement a Driver and Cyclist Education Program.

4.4 Schools Program

School aged children are a critical component for sustainable transport as they are the next generation of cyclists. The early exposure of children to cycling as an enjoyable way to spend their leisure time and to get to/from school has been proven to contribute significantly to children continuing to cycle into adulthood.

The opportunities for encouraging school aged children to ride bicycles include:

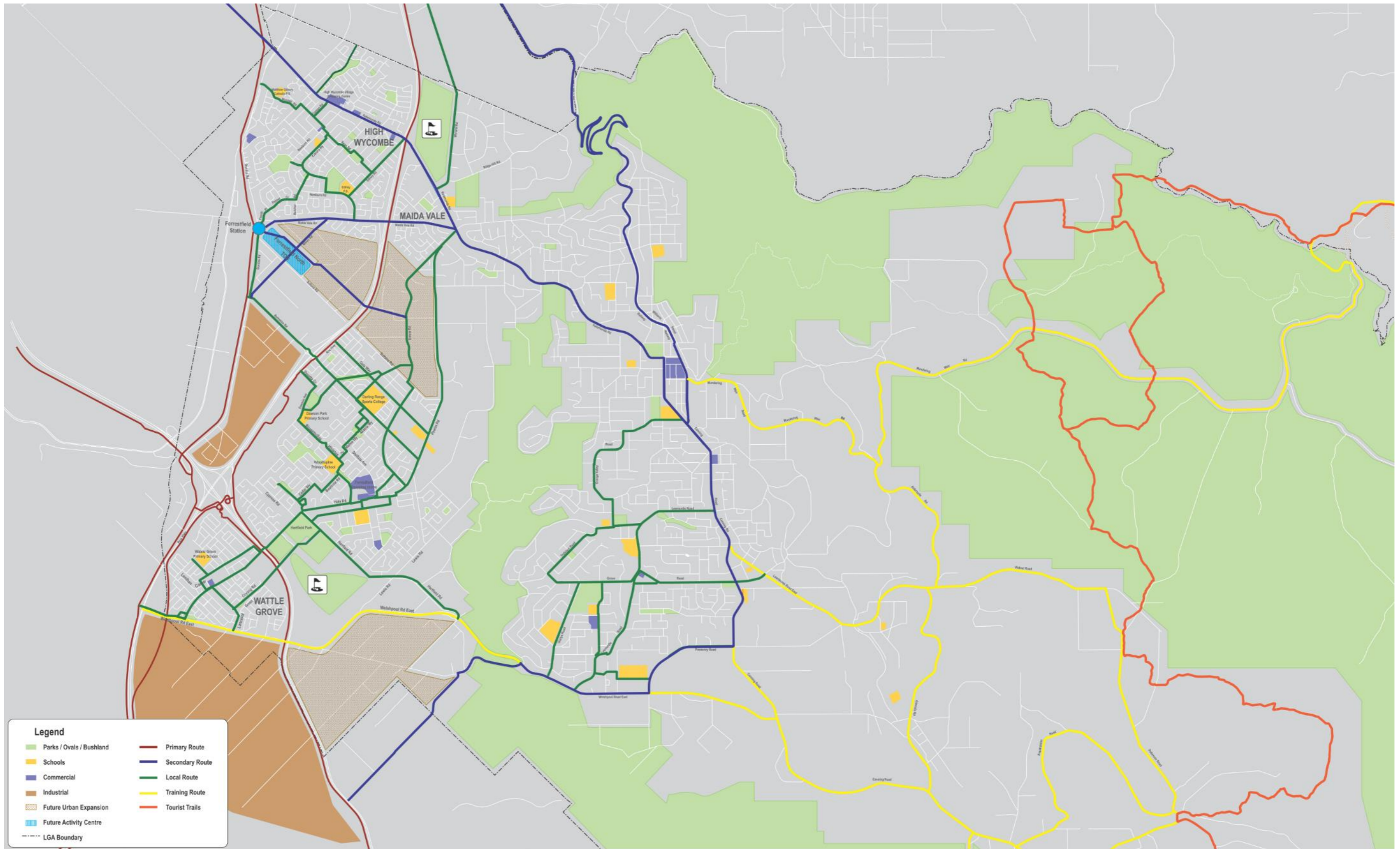
- > Cycling to and from school as the majority of children live within five kilometres of their school which is a comfortable cycling distance;
- > Receiving cycling lessons at school, covering the basics of riding a bicycle and safety on and around the roads;
- > Participating in organised cycling sports, either at school or on weekends, ranging from simple leisurely rides to road riding and mountain biking, and
- > Participating in the 'Your Move' Program (yourmove.org.au), where schools can earn points by sharing stories regarding active transport. Points can be redeemed for items and services such as bicycle racks and bicycle education sessions.

The City, in conjunction with State Government agencies and community groups, could undertake programs to encourage school students to take up cycling. These initiatives should be continued at least once every two years, with different schemes targeting different age groups. A key focus should be children in the range of ten to fourteen years old, who are reaching the age where they may want to cycle to school and are permitted by their parents (or accompanied by their parents).

A separate school program to target kindergarten and primary school students (in the five to nine year old range) can also be provided. The goal is to instil a good travel behaviour early in the student's life, with the hope that they would continue through to adulthood.



ULTIMATE CYCLING NETWORK



CITY OF KALAMUNDA - ULTIMATE CYCLING NETWORK (ROUTE HIERARCHY)

5 ULTIMATE CYCLING NETWORK

The Ultimate Cycling Network has been developed in alignment with the Route Hierarchy used by the Department of Transport as part of its *Transport Plan @ 3.5 Million Cycling Network*:

- > **Primary Routes** are the high quality regional routes such as the existing and proposed Principal Shared Paths (PSPs) along Roe Highway, Tonkin Highway and railway corridors, which are also the backbone of the cycling network in Perth Metropolitan Area. These paths provide high-quality direct cycling connections completely separated from road traffic.
- > **Secondary Routes** provide safe and direction connections between Primary Routes and major trip generators such as shopping centres, industrial areas or major health, education, sporting and civic facilities.
- > **Local Routes** provide safe cycling conditions in local (predominantly residential) areas, collecting cycling traffic from local roads within suburbs and distribute it to the primary and secondary networks.
- > **Training Routes** provide training or sports cyclists with designated routes in which to undertake long distance rides in on-road environments. These are normally located on rural or semi-rural roads but can also include the major access roads to these areas where these roads do not form part of Primary, Secondary or Local Routes.

5.1 PRIMARY ROUTES

Roe Highway

The Roe Highway PSP currently extends 21 kilometres from the Kwinana Freeway and terminates at Berkshire Road, with grade separation at intersecting roads. It is understood that the Roe Highway / Kalamunda Road intersection will have grade separation in the near future. This project presents an important opportunity for the completion of further sections of the Roe Highway PSP. It is recommended that the City of Kalamunda advocate and work with the State Government to ensure that the PSP extension is included as part of the grade separation including:

- > Grade-separation of the PSP under Kalamunda Road,
- > Extension of the PSP from Berkshire Road to Kalamunda Road, including an underpass at Maida Vale Road, and
- > Extension of the PSP north from Kalamunda Road to the Brinsmead Road area, subject to a suitable connection being available to Midland Road.

Freight Railway/Dundas Road Corridor

The main freight railway runs north-south along the western edge of the City, parallel to Abernethy and Dundas Roads and passing the new Forrestfield Station. The area surrounding the Forrestfield Station is being planned as a Transit Oriented Development (TOD), with medium to high density residential and mixed use developments. There will be a significant increase in the residential population near Dundas Road and therefore it is critical that there is a safe, convenient cycling link to the Tonkin Highway PSP and the major employment centres at Welshpool, Kewdale and the Airport.

Given the significance of this link, the recommended improvement for this route is a PSP which would eventually link Midland and Forrestfield.

As part of the State Government's METRONET plan, a passenger railway line is identified as linking the new Forrestfield Station with the Thornlie spur and a future extension to Cockburn Central. The timing of this project is not known, however it is desirable that plans for a PSP along this rail corridor be included in any planning and design.

Tonkin Highway

The Tonkin Highway PSP will be a significant connection for the southern edge of the City, connecting Wattle Grove with the wider network and the significant employment areas in Maddington and Gosnells. The priorities for extension are as follows:

1. PSP along the southern side of Tonkin Highway from Roe Highway to Hale Road (parallel to Hardey East Road),
2. PSP along the southern side of Tonkin Highway connecting to the Coyong Road and Maamba Road shared paths in Wattle Grove,
3. Connection across Tonkin Highway between Coyong Road and Maamba Road and Hartfield Park,
4. Extension of PSP from Hale Road to Welshpool Road East, and
5. Extension of PSP from Welshpool Road East to Kelvin Road and beyond.

TONKIN HIGHWAY PRIMARY ROUTE



5.2 SECONDARY ROUTES

Hills Spine (Midland – Kalamunda - Lesmurdie)

The key component of the cycling network for the hills portion of the City of Kalamunda is a north-south spine linking Midland, Kalamunda and Lesmurdie. The route includes the following elements:

- > Two-way bicycle access via Zig Zag Scenic Drive. Several options were investigated, and Option A is the preferred option for Zig Zag Scenic Drive as it provides the best outcomes in terms of safety and is relatively simple to implement compared to other options,
- > Safe Active Street treatment between the top of Zig Zag Scenic Drive and Hill Street,
- > Upgrade of the Kalamunda Railway Heritage Trail to a high quality shared path from Hill Street to Elizabeth Street,
- > Multiple options for the link through Kalamunda Town Centre between Elizabeth Street and the southern end of Railway Road,
- > Protected cycle lanes along Railway Road from Mead Street to Canning Road,
- > Buffered cycle lanes along Canning Road from Railway Road to Pomeroy Road, and
- > Existing shared path on Pomeroy Road to connect to Lesmurdie State High School.

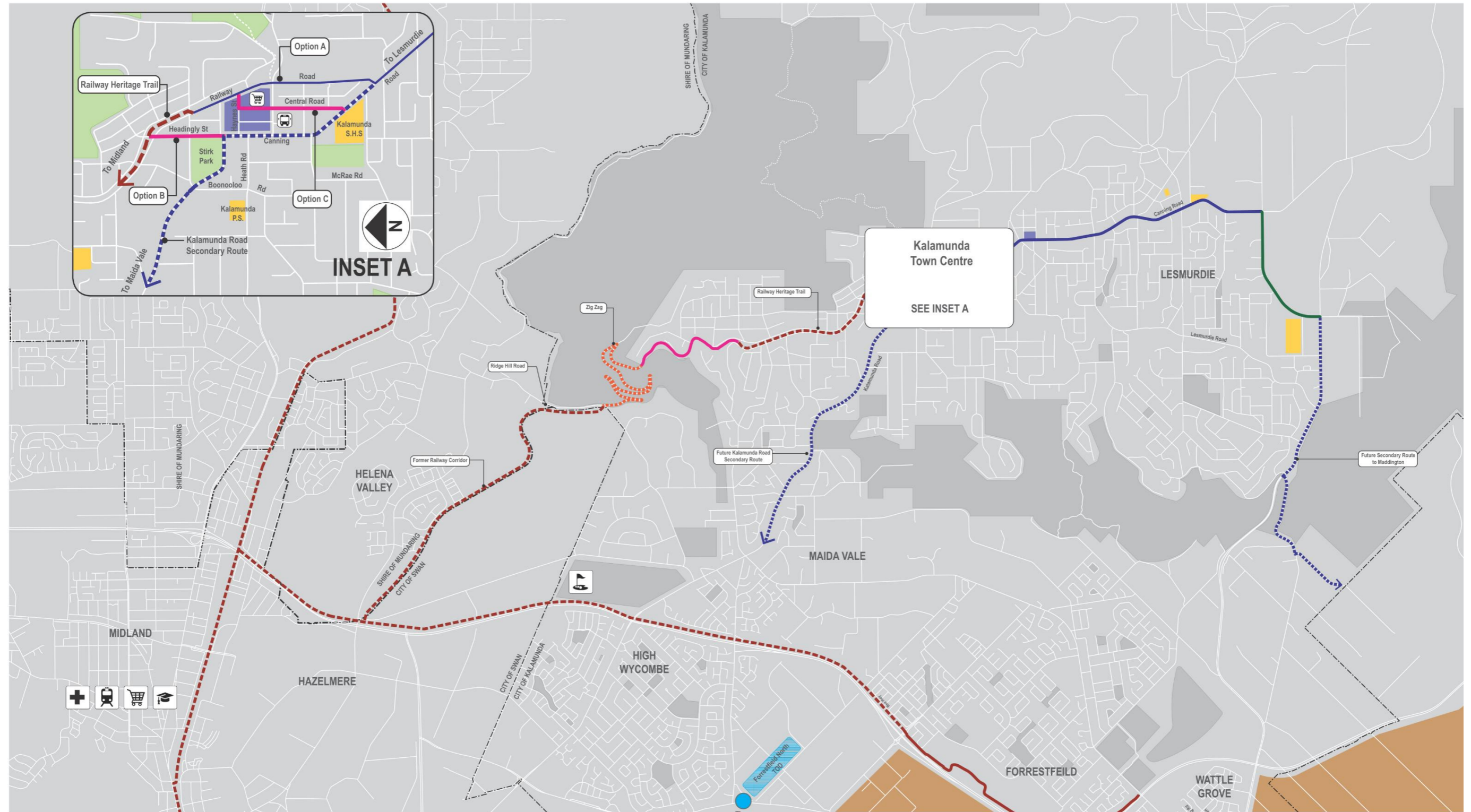
ZIG ZAG SCENIC DRIVE TREATMENT OPTIONS

	Treatment Option	Order of Cost
A	Close Zig Zag Scenic Drive to motorised traffic and permit two-way pedestrian and cyclist traffic	Low
B	Permit two-way cycling traffic on existing pavement with one-way uphill motorised traffic	Low
C	Widen carriageway to permit one-way uphill traffic flow and two-way cycling in a 'Safe Active Street' type environment	High
D	Widen carriageway to permit one-way downhill traffic flow and two-way cycling in a 'Safe Active Street' type environment	High
E	Timed closure – night-time access for motorised traffic (e.g. from 5PM to 10PM)	Medium
F	Timed closure – weekday access for motorised traffic	Medium

It is noted that separate, detailed community engagement will be necessary to review the Zig Zag Scenic Drive treatment options



HILLS SPINE SECONDARY ROUTE



Kalamunda Road

Kalamunda Road, along with Maida Vale Road, forms a Secondary Route between Kalamunda Town Centre and Forrestfield Station and the development of the station presents a significant opportunity for encouraging commuter cycling in the hills.

The recommended strategy for the Kalamunda Road Secondary Route is outlined below:

- > Implement 2.0 metre wide buffered bicycle lanes from Canning Road to Hawtin Road generally using the existing carriageway with minor widening where required,
- > Install 1.5 metre wide sealed shoulders between Hawtin Road and Roe Highway,
- > Maintain the existing sealed shoulders between Roe Highway and Fernan Road, and include 1.5 metre wide sealed shoulders in the future upgrade between Fernan Road and Abernethy Road, and
- > Maintain a continuous 2.5 metre wide shared path between Hawtin Road and Abernethy Road.

Buffered bicycle lanes have a painted buffer strip and are recommended so that the large cycling groups can make use of these lanes while riding two-abreast and/or overtaking.

KALAMUNDA SECONDARY ROUTE



Forrestfield Station Connections

The Forrestfield Station Transit Oriented Development (TOD) presents a significant opportunity to encourage greater uptake of cycling in the foothills area. The area surrounding the station is a largely undeveloped or lightly developed area, with few cycling facilities. There is a significant opportunity to provide high-quality cycling facilities from the beginning, encouraging new residents to adopt sustainable travel behaviours from the start rather than trying to change behaviours later.

The routes proposed to serve the Forrestfield Station are:

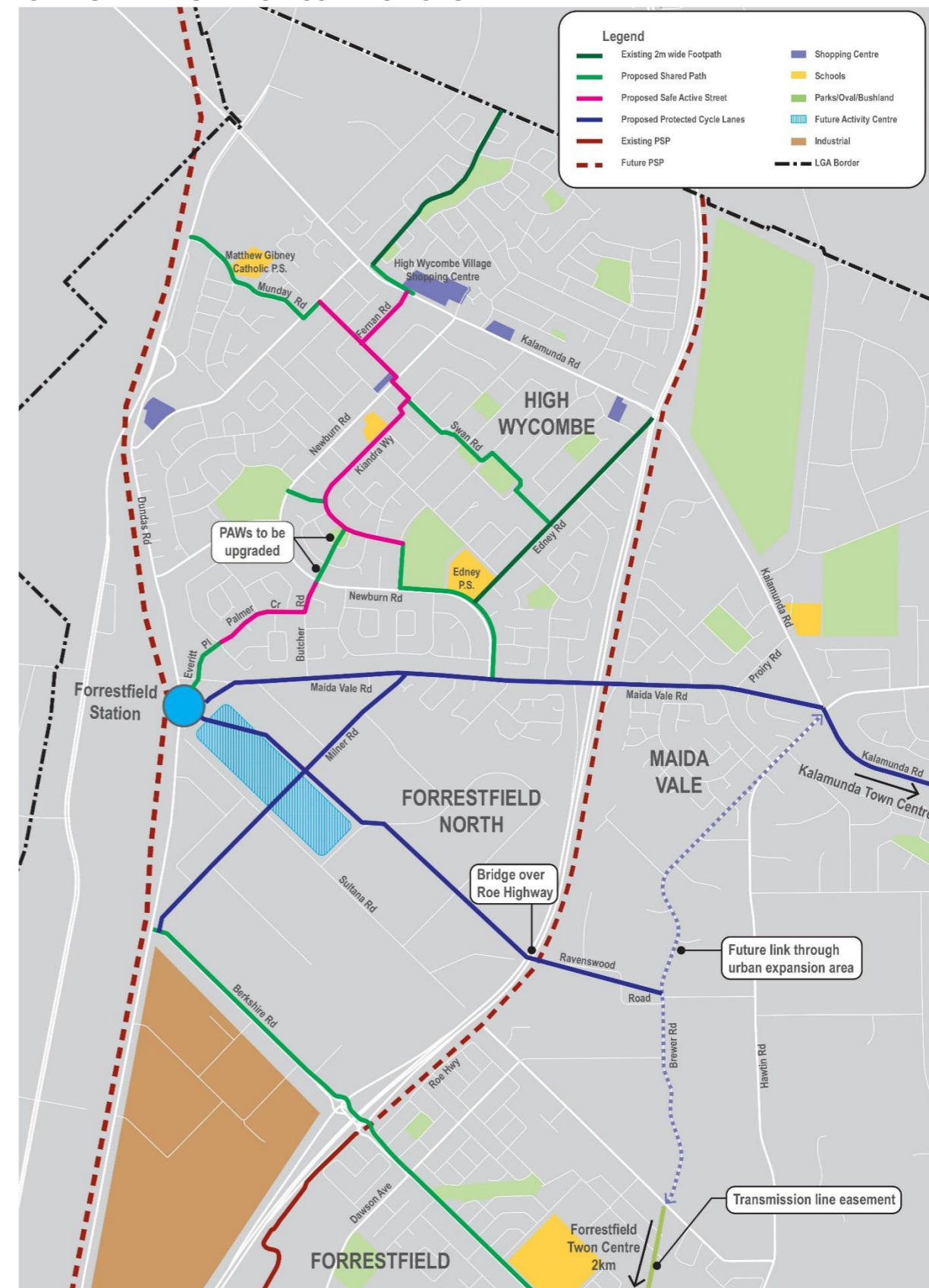
- > **Maida Vale Road Secondary Route** – the primary connection from the areas east of Roe Highway to the train station, and the strategic connection to Kalamunda and the hills part of the City.
- > **New Forrestfield Station TOD Connector Road Secondary Route** – Connecting Forrestfield Station through Forrestfield North and over Roe Highway (indicatively via a bridge) to Maida Vale
- > **High Wycombe Local Route** – connection to the nearest existing residential area to the station.
- > **Berkshire Road Local Route** – a short-term connection to Forrestfield residential area pending completion of the Sultana Road bridge over Roe Highway.

Lesmurdie to Maddington

In the future (beyond the life of this Bicycle Plan), the Hills Spine Secondary Route can be further developed to connect to Maddington, via Welshpool Road East, Crystal Brook Road and Kelvin Road. This would provide an entry to the hills area from the southern part of the metropolitan area and facilitate commuting to the growing employment centres in Maddington and Gosnells.

In the meantime, any upgrades to these roads should provide for the future Secondary Route, for example through the provision of sealed shoulders on Kelvin Road.

FORRESTFIELD STATION CONNECTIONS



5.3 LOCAL ROUTES

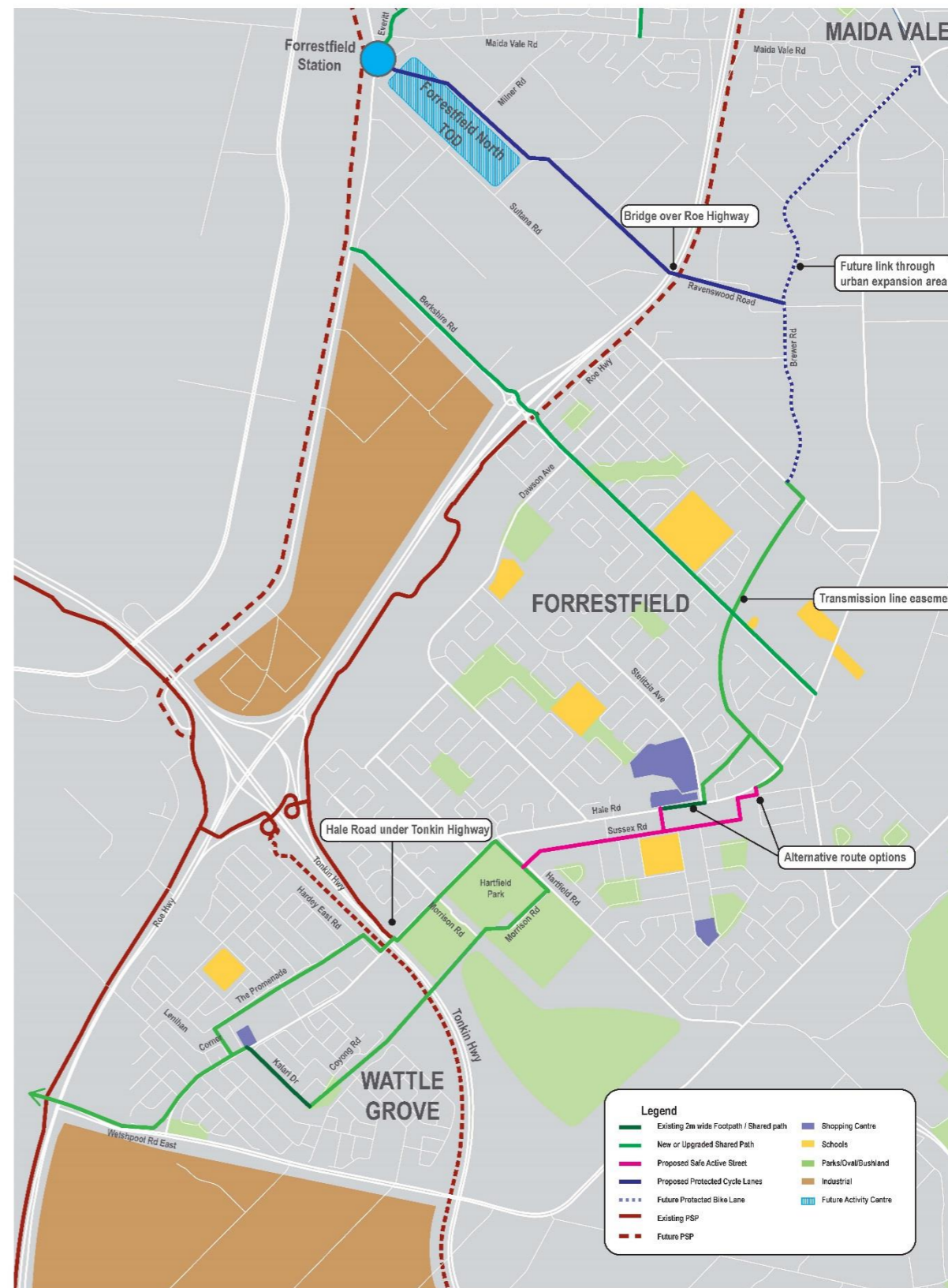
Foothills Spine

This route has been developed to serve local demand through the suburbs of Wattle Grove and Forrestfield, as well as commuters from these suburbs accessing the wider cycling network. A future extension through the Maida Vale South urban expansion area is also proposed to provide a continuous link through to Maida Vale and the Kalamunda Road Secondary Route.

The overall route concept is shown the following figure. The key elements of the route are:

- > A new shared path along the northern side of Welshpool Road East from Roe Highway to Hale Road;
- > An upgrade to the existing shared path along Hale Road;
- > Two cycling routes, west and east, through Wattle Grove;
 - The western route consists of a shared path parallel to The Promenade, serving Wattle Grove Primary School, then rejoining Hale Road at Tonkin Highway;
 - The eastern route utilises the existing shared path through public open space parallel to Kalari Drive and Coyong Road, then continues via a new crossing of Tonkin Highway into Hartfield Park;
 - Both routes combine at the intersection of Hartfield Road and Sussex Road.
- > A Safe Active Street through Sussex Road;
- > A shared path along the transmission line easement from Hale Road to Sultana Road East. Two route options are proposed to link the Sussex Road Safe Active Street to this shared path;
 - Option 1 to continue the Sussex Road Safe Active Street to Coburg Street and Holmes Road to near Mallow Way, where the route would transition into a shared path and cross Hale Road into the transmission line easement;
 - Option 2 to continue the Safe Active Street through Hanover Road, then run along a shared path along Hale Road to Strelitzia Avenue. At Strelitzia Avenue the existing signalised intersection would facilitate crossing Hale Road, and the route would run as a shared path from Strelitzia Avenue along Woodlupine Brook to the transmission line easement; and
- > North of Sultana Road East, the route will continue along Brewer Road until Kalamunda Road. At Ravenswood Road, the route branches into the future Forrestfield Station TOD Connector Road.

FOOTHILLS SPINE WATTLE GROVE TO FORRESTFIELD



High Wycombe Local Route

The High Wycombe Local Route has been developed to link Forrestfield Station with its closest residential catchment, as well as serve the three primary schools located in the suburb. With the focus on school students and local commuters travelling short distances to the train station, the selected infrastructure types reflect low-speed mixed traffic cycling environments and/or path-based links. Cyclists that are more confident may elect to use the existing sealed shoulders on Newburn Road in preference to the Safe Active Streets.

The highest priority section of this route is from Forrestfield Station to Kiandra Way, as this would serve the station's main residential catchment from opening day. Given its importance to the station, the City should seek State Government funding support for this first stage of the route.



HIGH WYCOMBE LOCAL ROUTE



Lesmurdie Local Routes

The hilly terrain and irregular road network in the Lesmurdie area makes it difficult to identify and develop high-quality cycling links. The number of schools in this area justify the provision of shared paths to facilitate students riding to school and the more important of these links have been identified as Local Routes:

> Lesmurdie Road

This is the main north-south spine through Lesmurdie, serving Lesmurdie Senior High School, St Brigid's College and Falls Roads Primary School. There is a continuous shared path from Canning Road to Rootes Road but only narrow footpaths continuing to Welshpool Road East. In the medium to long term at least one of these paths will need widening to a shared path standard to provide a function connection to Welshpool Road East.

> Kalamunda – Falls Road – Lesmurdie

This route follows Cothelstone Road, Betti Road, Orange Valley Road, Burma Road, Trafalgar Road, part of Grove Road and Gladys Road, connecting the western residential areas of Kalamunda and Lesmurdie with schools and shops.

> Grove Road

This east-west link connects the Gladys Road, Lesmurdie Road and Canning Road routes as well as serving three schools.

Forrestfield to Lesmurdie Local Route

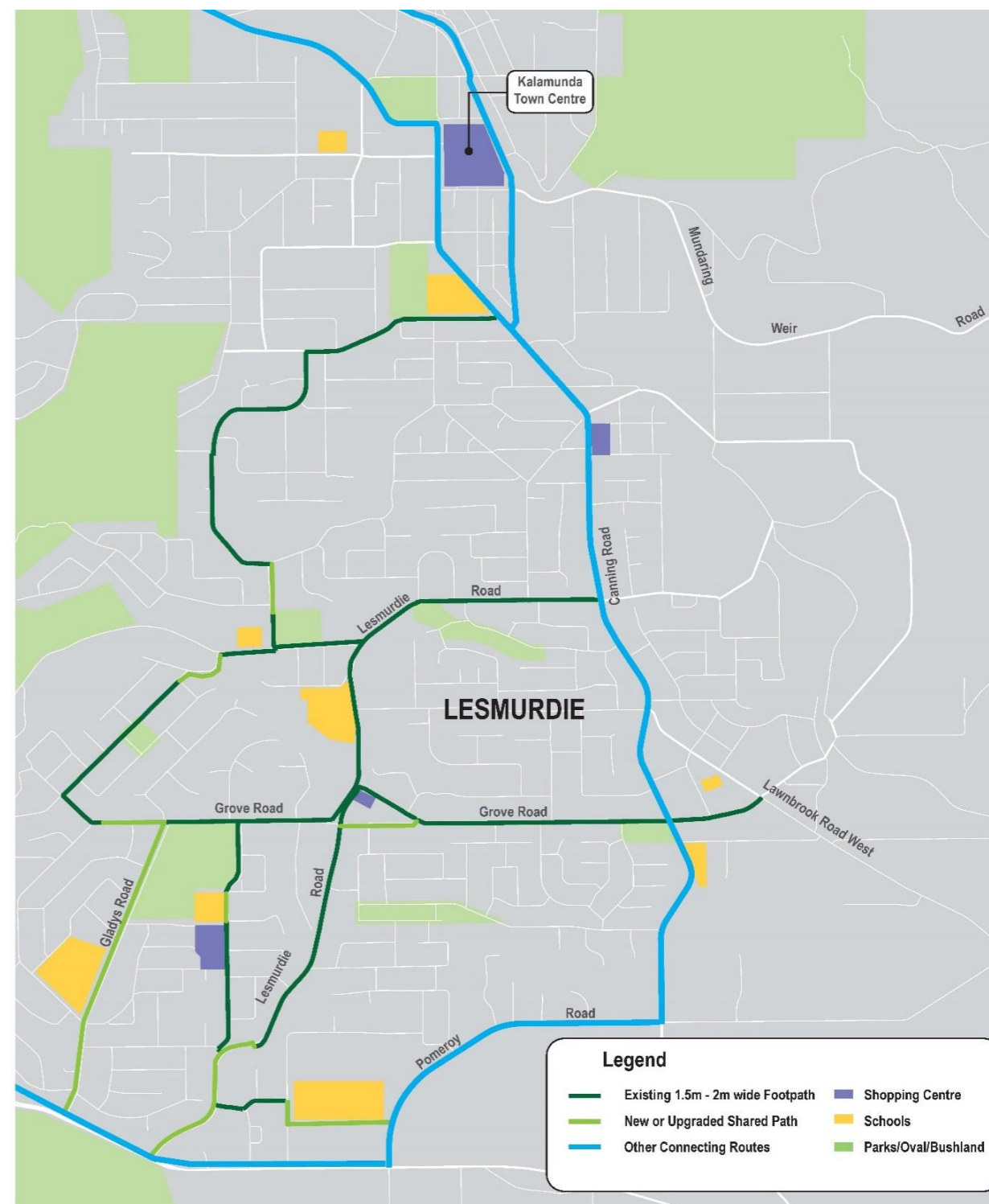
Following an extensive review of route options up and down the escarpment, a future Local Route has been nominated from Forrestfield to Lesmurdie via Hartfield Road and Welshpool Road East. This route is intended to provide a local commuter and utility cyclist connection between the hills and the foothills, as well as connecting to the wider cycling network via the Tonkin Highway PSP.

Indicatively, the route would consist of:

- > A high-quality shared path along the southern verge of Hartfield Road from Morrison Road to Lewis Road;
- > Improvements to the on-road environment along Hartfield Road from Lewis Road to Welshpool Road East with the potential for a shared path in the long term; and
- > A shared path along the northern side of Welshpool Road East, from Hartfield Road to Lesmurdie Road. This section will be a long term project involving significant earthworks component.

A number of existing walking and management trails within Mundy Regional Park were reviewed as possible alternatives to constructing a shared path on Welshpool Road East. Each trail that was reviewed was constrained by very steep grades, however it was noted that could be the potential to develop a 'zig zag' type alignment to ease the grades. It is recommended that the City consult with the Department of Biodiversity, Conservation and Attractions to understand their stance towards providing a shared path type facility through the park.

LESMURDIE LOCAL ROUTES



5.4 SAFE ACTIVE STREETS

Safe Active Streets are cycle routes on quiet local streets, where speeds have been reduced to 30 km/h to allow people in cars and on bikes to share the street safely. With lower traffic speeds, streets are also much safer for pedestrians and children, and additional tree planting and landscaping make them more attractive places to walk or ride.

Along the routes, bicycle symbols and surface colours are used to mark out Safe Active Streets and suggest where bicycles should ride. Various measures may be used to slow traffic, discourage through-travel by cars and improve bike flow, including:

- > Single lane slow points, where approaching vehicles must give way to any car or bike already at or passing through the slow point, such as the City has in Agincourt Drive,
- > Raised platforms at intersections, and
- > Narrowing carriageway widths by introducing on-street parking and garden beds.

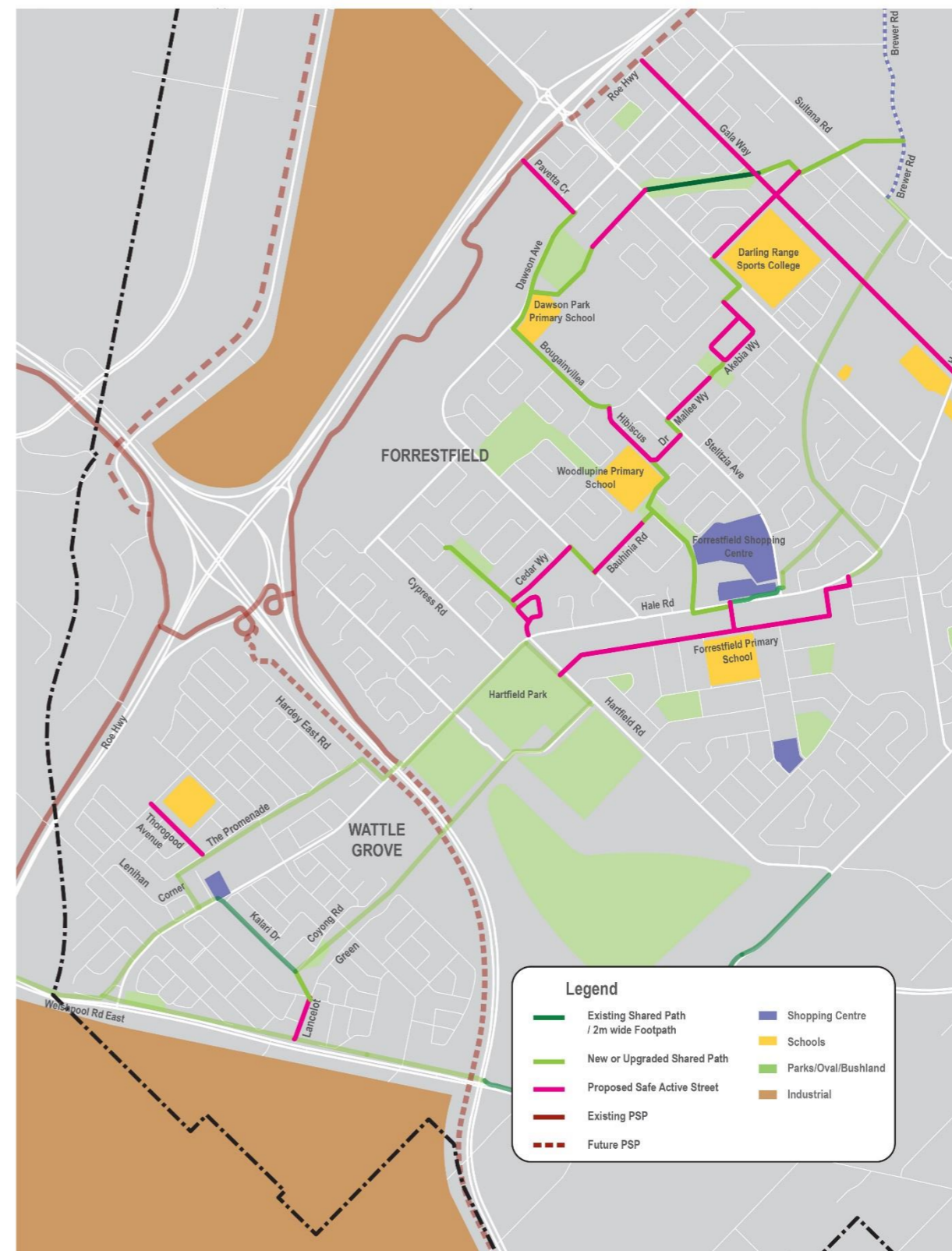
Forrestfield Safe Active Streets

- > **Sussex Road** forms part of the Wattle Grove to Forrestfield (Foothills Spine) Local Route.
- > **Hibiscus Drive and Pavetta Crescent** form part of a connection from Forrestfield Town Centre to the Roe Highway PSP near Berkshire Road, utilising existing Public Open Space corridors and an existing shared path on Dawson Avenue.
- > **Peach Tree Way, Cedar Way and Bauhinia Road** form a connection from Hartfield Park and Cypress Road through to Woodlupine Primary School.
- > **Hibiscus Drive, Mallee Way and Akebia Way** form a connection between Woodlupine Primary School and Berkshire Road, utilising the existing school crossing on Strelitzia Avenue.
- > **Ilex Way** as part of continuous route between Dawson Park Primary School and Brewer Road. The Safe Active Street would link to shared paths through Public Open Space at each end of Ilex Way.
- > **Gala Way**, once completed, would form a continuous link for the residential area between Sultana and Berkshire Roads that stretch from Roe Highway to Hawtin Road. The Safe Active Street can link into the transmission line as well as the future Roe Highway PSP extension.

Wattle Grove Safe Active Streets

- > **Thorogood Avenue** would form a key active transport corridor accessing Wattle Grove Primary School, linking into the extensive existing and proposed shared path networks through the open space corridors. Combined with these shared paths, parents would be able to ride with their children to the school from most parts of Wattle Grove with minimal interaction with traffic.
- > **Lancelot Green** would form a link between the main Public Open Space corridor and the future signalised intersection of Welshpool Road East / Coldwell Road.

FORRESTFIELD AND WATTLE GROVE SAFE ACTIVE STREETS



Kalamunda Safe Active Streets

Opportunities for Safe Active Streets in the hills are limited due to the hilly terrain and impermeable road network. Potential Safe Active Streets locations include:

- > **Williams Street / Lascelles Parade** – this section from Hill Street to the top of the Zig Zag Scenic Drive forms part of the Midland – Kalamunda – Lesmurdie Secondary Route.
- > **Headingly Street** – a potential route option for the Midland – Kalamunda – Lesmurdie Secondary Route, connecting the Railway Heritage Trail to the proposed Canning Road protected bicycle lanes.
- > **Central Road / Central Mall** – a potential route option for the Midland – Kalamunda – Lesmurdie Secondary Route, providing a link between the Railway Heritage Trail, Kalamunda State High School, and Canning Road corridor. Careful design would be required for the section through the mall.
- > **Lindsay Street / Boonooloo Road / McRae Road** – this north-south link would connect the Midland – Kalamunda – Lesmurdie Secondary Route with Kalamunda Primary School and Kalamunda State High School, linking to the residential area west of the town centre. A preliminary review of this route indicates that the grades may be too steep, however further investigation is warranted.

KALAMUNDA SAFE ACTIVE STREETS



5.5 OTHER SHARED PATHS

In addition to the nominated Secondary Routes, Local Routes and Safe Active Streets there are many other missing links in the City's shared path network. While these missing links may not form part of major continuous cycling routes they can be the difference between encouraging a parent to ride to school with their child or taking up cycling as part of a more active lifestyle.

A review of missing links within the City has been undertaken and the sections listed below have been identified for future shared path funding.

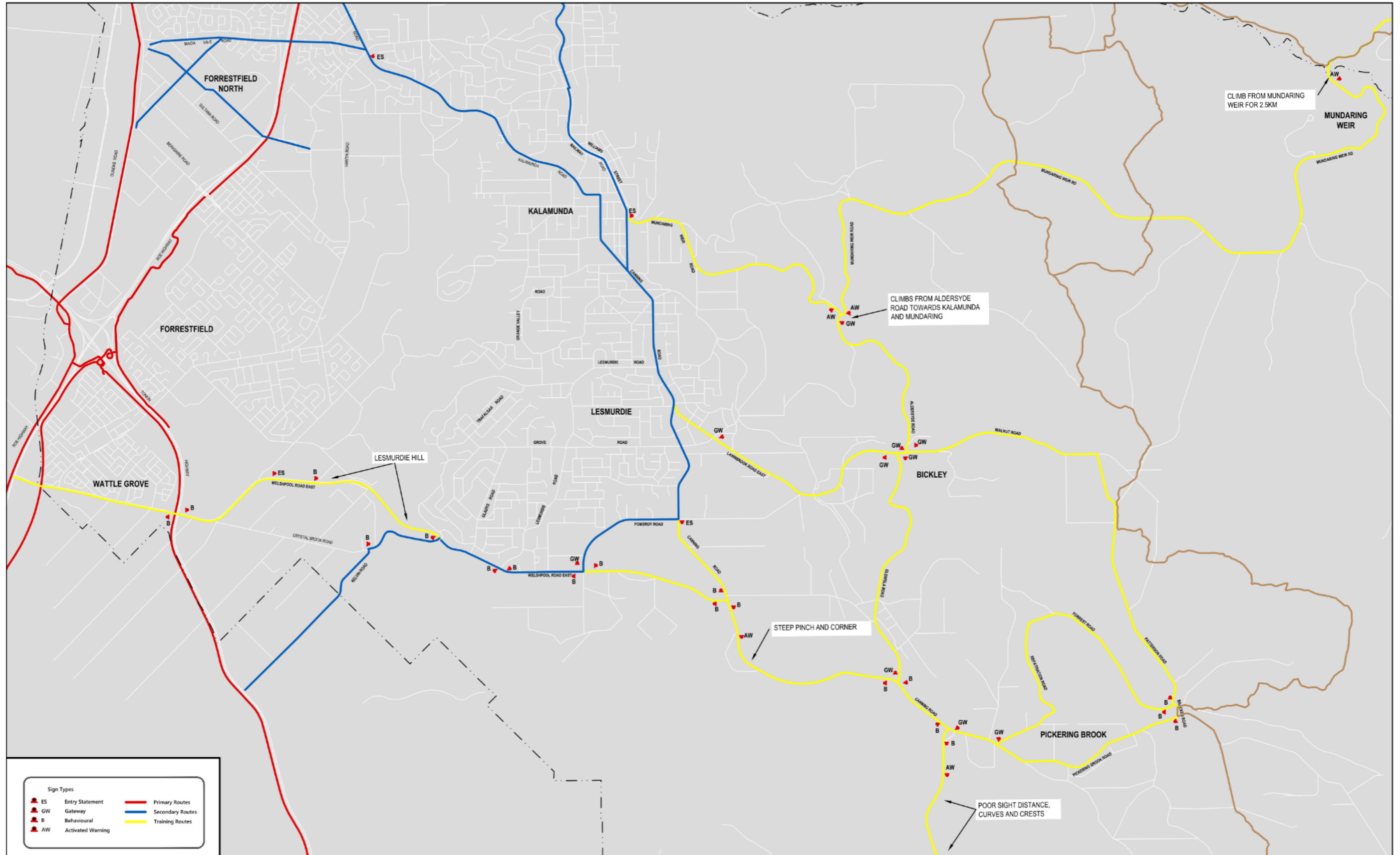
Suburb	Street	From	To
Bickley	First Ave	Nairn Rd	Lawnbrook Rd E
Gooseberry Hill	Ledger Rd	Huntley St	Aboyne Rd
Kalamunda	Burma Rd	Connor Rd	Orange Valley Rd
Lesmurdie	Albert Rd	Reid Rd	Arthur Rd
Lesmurdie	Gladys Rd	Welshpool Rd E	Grove Rd
Lesmurdie	Grove Rd	George Rd	Chislehurst Rd
Lesmurdie	Lesmurdie Rd	Welshpool Rd E	Rootes Rd
Lesmurdie	Reid Rd	Albert Rd	Pomeroy Rd
Lesmurdie	Sanderson Rd	Wiloughby Rd	Gilroy Rd
Lesmurdie	Trafalgar Road - Kimbarlee Way	Waterloo Cres	Falls Road

5.6 TRAINING ROUTES

The recommended strategy for the training routes is to manage the conflicts between cyclists and motorised traffic, mainly through signage and other behavioural strategies, while also implementing some infrastructure improvements. The projects provide benefits to both cyclists and other road users: Drivers will be able to more easily overtake in a safe manner, reducing delays and frustrations and correspondingly improving safety for riders.

- > **Welshpool Road East** – Install additional signage to warn drivers of cyclists, improve the safety at Lesmurdie Road intersection, widening of the road in selected sections from Lesmurdie Road to Canning Road to allow drivers overtake cyclists along this section.
- > **Canning Road (south of Pomeroy Road)** – in the long term Canning Road should be widened to provide 2m wide sealed shoulders. In the short to medium term targeted widening at selected sections is recommended to reduce conflict between cyclist and drivers. A Road Safety Audit should be undertaken to inform identify the level of risk, assist the City to seek external funding and identify targeted staged improvements.
- > **Mundaring Weir Road** – recondition of road pavement edges to allow cyclist to keep as far left as possible and identify sections where widening can be achieved. A Road Safety Audit should be undertaken to inform identify the level of risk, assist the City to seek external funding and identify targeted staged improvements.
- > **Signage and Behavioural Strategies** – develop a signage strategy that focuses on informing road users to expect to see cyclists, particularly on the popular training routes, and encourage safe and courteous behaviour from all road users.

PRELIMINARY TRAINING ROUTE SIGNAGE AND BEHAVIOURAL STRATEGY



6 ACTION PLAN

Category	No.	Action
Infrastructure	1	Upgrade and expand cycling network as per the Schedule of Works.
Maintenance	2	Regularly maintain roads and path to ensure facilities are in A good condition.
	3	Regularly prune vegetation to ensure that facilities are accessible.
Advocacy	4	Advocate for funding of major projects from the State Government (for example Forrestfield Airport Link, Principal Shared Paths).
	5	Participate in the planning and design of major projects (such as the Roe Highway Principal Shared Path) and ensure connections to the local neighbourhoods are included in the scope.
	6	Assign resource time to implement advocacy actions.
Behaviour Change and Awareness	7	Raise awareness of cycling by including information regarding cycling related activities through the City of Kalamunda's media.
	8	Make cycling related information such as route maps, road rules, safety, and cycling etiquette easily accessible.
	9	Communicate new cycling infrastructure concepts (such as Safe Active Streets) to the community.
	10	Promote the completion of new cycling infrastructure or routes through community and cycling events.
	11	Provide cycling education courses and lead rides to encourage inexperienced cyclists to cycle more often.
	12	Participate in the Super Tuesday annual bike count event and Bike Week to promote cycling and positive reinforcement to existing cyclists.
	13	Investigate the feasibility of a bicycle library scheme, possibly located at libraries at Kalamunda, Forrestfield, and High Wycombe.
	14	Provide driver education for City staff to encourage better road use behaviour, including sharing the road with cyclists.
	15	Collaborate with the Eastern Metropolitan Regional Council, WestCycle, Main Roads WA and the Road Safety Commission to implement a Driver and Cyclist Education Program.
	16	Assign resource time (for example a Sustainable Travel Officer) to implement the Behaviour Change and Awareness actions.
School Programs	17	Conduct programs, such as cycling lessons and sport events, at schools within the City to encourage cycling uptake.
	18	Encourage schools to participate in the 'Your Move' program provided by the Department of Transport (yourmove.org.au).
Cycling Tourism	19	Commission a detailed investigation into the opportunities and benefits of promoting cycling tourism in the City and develop an Action Plan.
	20	Establish a funding stream to assist businesses in becoming 'Bicycle Friendly Businesses' for example by part-funding additional bicycle parking.
End of trip facilities	21	Conduct an audit of existing end of trip facilities to identify and create/update an inventory and map of end of trip facilities within the City. Provide an updated inventory to the Department of Transport for inclusion in the Comprehensive Bike Maps.
	22	Provide suitable end of trip facilities in public places such as parks and libraries that are managed by the City.
	23	Update the Local Planning Scheme to include requirements for end of trip facilities for new developments and create a new bicycle parking policy.

7 SCHEDULE OF WORKS

HIGH PRIORITY (0 - 5 YEARS)

Item	Route	Description	Start	End	Cost Estimate
80a	Roe Highway	PSP Completion Part of Roe Highway/Kalamunda Road Upgrade	Berkshire Road	Kalamunda Road	\$2,260,000
81a	Tonkin Highway	PSP Extension on the Southern Side (including link to Hartfield Park)	Roe Highway	Welshpool Road East	\$1,430,000
82a	Freight Railway / Dundas Road	Dundas Road PSP	Tonkin Highway	Forrestfield Station	\$2,580,000
82b	Freight Railway / Dundas Road	Dundas Road PSP	Forrestfield Station	Wittenoom Road	\$730,000
1a	Hills Spine	Zig Zag Option A	Ridge Hill Road	Ocean View Parade	\$35,000
1d	Hills Spine	Kalamunda Town Centre Section Options Study	Canning Road	Elizabeth Street	\$50,000
2c	Kalamunda Road	Sealed Shoulder	Fernan Road	Abernethy Road	\$560,000
3d	Forrestfield Station Connection	Milner Road Protected Cycle Lanes	Maida Vale Road	Dundas Road	\$620,000
20a	Foothills Spine	Welshpool Road East Shared Path (including to connection from Puddy lane to Hale Road)	Roe Highway (City Boundary)	Puddy Lane	\$130,000
20b	Foothills Spine	Puddy Lane Shared Path	Welshpool Road East Shared Path	Hale Road	\$170,000
20c	Foothills Spine	Hale Road Shared Path Extension	Extensa Road	Puddy Lane	\$50,000
20d	Foothills Spine	Hale Road Existing Shared Path Upgrade (Western Side)	Extensa Road	Lenihan Corner	\$320,000
21d	High Wycombe Local Route	Public Access Way Upgrades (through McLarty Way, and Walker Crescent)	Kiandra Way	Newburn Road	\$95,000
21e	High Wycombe Local Route	Butcher Road & Palmer Crescent Safe Active Street	Newburn Road	Palmer Crescent	\$390,000
21f	High Wycombe Local Route	Everitt Place Shared Path	Palmer Crescent	Maida Vale Road	\$85,000
22a	Berkshire & Dundas Road	Berkshire Road (West of Roe Highway) Shared Path Upgrade	Roe Highway	Dundas Road	\$460,000
22c	Berkshire & Dundas Road	Dundas Road Shared Path	Berkshire Road	Forrestfield Station	\$360,000
44	Forrestfield (Gala Way)	Gala Way Safe Active Street	Fruit Tree Crescent	Hawtin Road	\$50,000
61a	Canning Road	Road Safety Audit	-	-	\$25,000
61b	Canning Road	Targeted Shoulder Widening Stage 1	Pickering Brook Road	City Boundary	\$450,000
63	Welshpool Road East	Lesmurdie Road Intersection Safety Improvement	-	-	\$40,000
64a	Mundaring Weir Road	Road Safety Audit	-	-	\$15,000
64b	Mundaring Weir Road	Targeted Shoulder Widening Stage 1	Railway Road	City Boundary	\$450,000
65	City of Kalamunda	Safe Passing Law Review	-	-	\$10,000
		TOTAL COST ESTIMATE (0-5 Years)			\$11,365,000
		CITY FUNDED			\$2,710,000

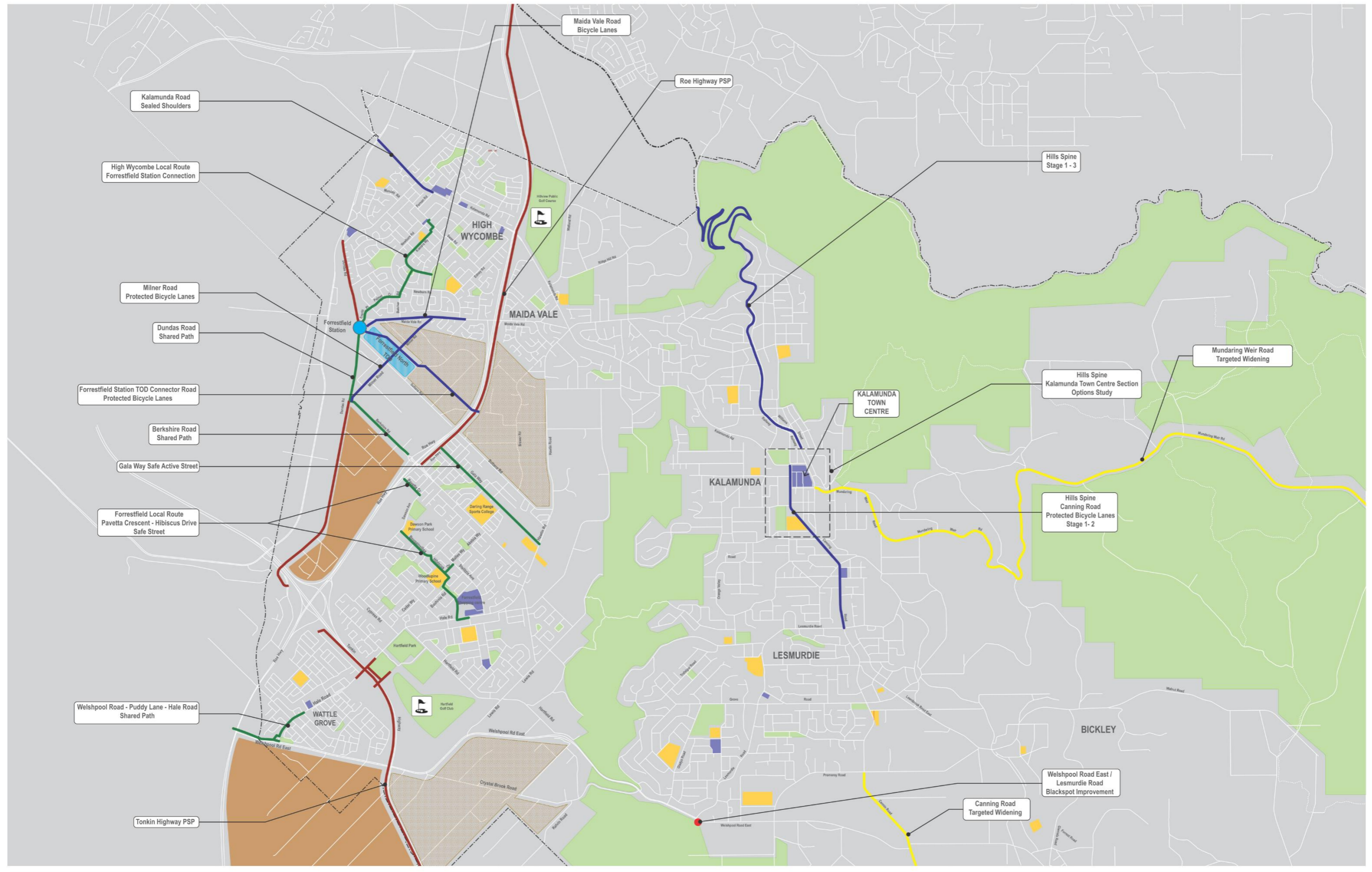
MODERATE PRIORITY (5 – 10 YEARS)

Item	Route	Description	Start	End	Cost Estimate
80b	Roe Highway	Roe Highway PSP Completion	Kalamunda Road	Brinsmead Road	\$660,000
81b	Tonkin Highway	PSP Completion	Welshpool Road East	Kelvin Road	\$1,310,000
1b	Hills Spine	Lascelles Parade / William Street Safe Active Street	Zig Zag Scenic Drive	Hill Street	\$640,000
1c	Hills Spine	Kalamunda Railway Heritage Trail Sealed Path	Hill Street	Elizabeth Street	\$300,000
1e	Hills Spine	Canning Road Buffered Bike Lanes Stage 1	Kalamunda Road	Railway Road	\$760,000
1f	Hills Spine	Canning Road Buffered Bike Lanes Stage 2	Railway Road	Lesmurdie Road	\$1,200,000
3a	Forrestfield Station Connection	Maida Vale Road Protected Cycle Lanes Stage 1	Forrestfield Station	Priory Road	\$1,090,000
3b	Forrestfield Station Connection	Forrestfield Station TOD Connector Road Protected Cycle Lanes Stage 1	Forrestfield Station	Roe Highway	\$1,460,000
21c	High Wycombe Local Route	Kiandra Way Safe Active Street	Western Avenue	Norling Road	\$660,000
41a	Forrestfield (Hibiscus Drive)	Hale Road Shared Path	Hannover Street	Hibiscus Drive	\$430,000
41b	Forrestfield (Hibiscus Drive)	Hibiscus Drive SAS	Bougainvillea Avenue	Strelitzia Avenue	\$330,000
41c	Forrestfield (Hibiscus Drive)	Bougainvillea Avenue Shared Path	Hibiscus Drive	Dawson Avenue	\$240,000
41e	Forrestfield (Hibiscus Drive)	Pavetta Crescent SAS	Dawson Avenue	Roe Highway	\$200,000
61c	Canning Road	Targeted Shoulder Widening Stage 2	Pomeroy Road	Pickering Brook Road	\$500,000
64c	Mundaring Weir Road	Targeted Shoulder Widening Stage 2	Railway Road	City Boundary	\$500,000
		TOTAL COST ESTIMATE (5-10 Years)			\$10,280,000
		CITY FUNDED			\$2,620,000

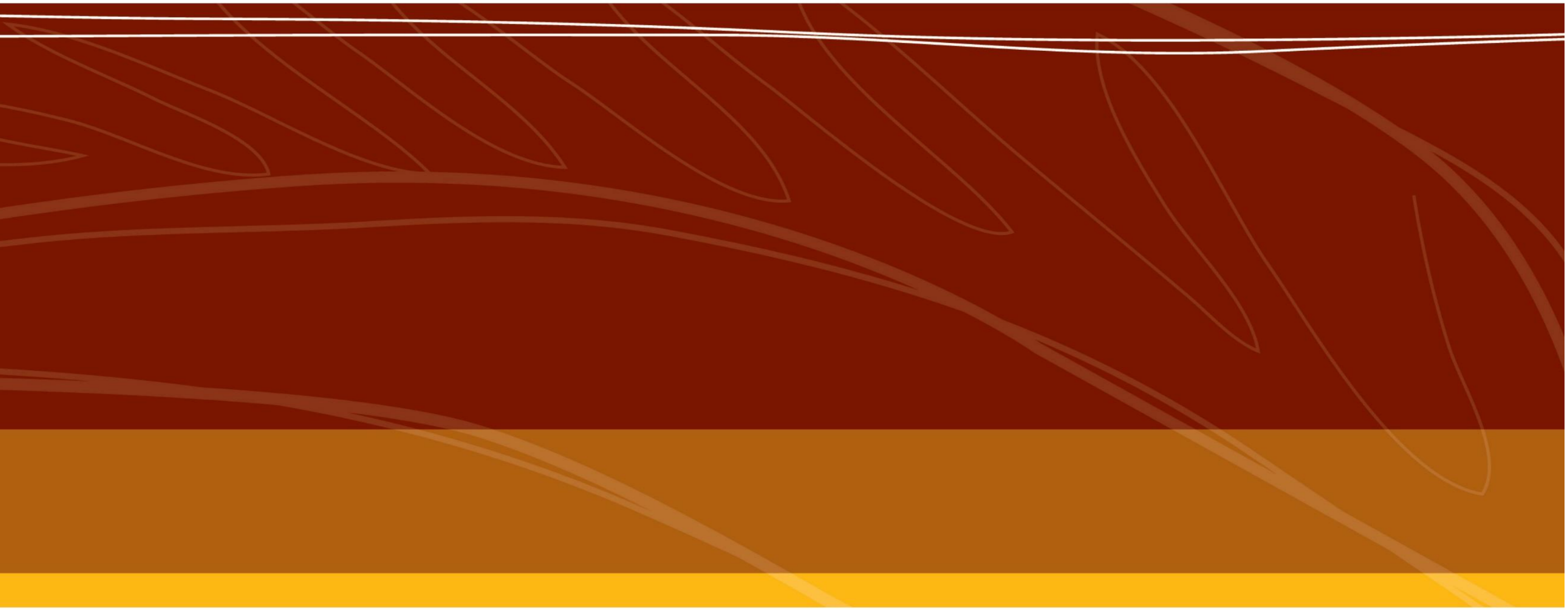
REMAINING PROJECTS BEYOND 10 YEARS

TOTAL COST ESTIMATE	\$ 27,795,000
CITY FUNDED	\$ 19,213,000

THE LOCATION OF 0-10 YEAR INFRASTRUCTURE



CITY OF KALAMUNDA - BICYCLE PLAN
PRIORITY PROJECTS



**city of
kalamunda**