



# Paths and Trails Strategy

2019



## Executive Summary

Paths and trails play an important role within the Baw Baw Shire, providing a means of access to community facilities, services, public transport and open space. The provision of paths and trails make communities more liveable, improve connections and make people healthier and physically active. Paths and trails enable safer passage for pedestrians, particularly those with limited mobility, including children and parents with prams. The existing paths and trails network comprises approximately 450km of Council maintained paths and trails within Baw Baw Shire.

The development of a paths and trails strategy is required to provide a plan on how Council will invest in the construction of paths and trails within the Shire. Baw Baw Shire uses the **Principal Pedestrian Network (PPN)** methodology developed by *Transport for Victoria* which provides a platform for strategic pedestrian network planning for local government. Council has categorised the PPN into primary and secondary networks. Primary networks provide access

to key destinations and points of interest. Secondary networks link to the primary network or to minor points of interest within the community. The PPN has been mapped for major townships and localities within Baw Baw Shire.

The need for footpaths is dependent upon the traffic and physical conditions on any street, road or other location and the nature of the pedestrian demand at that location. These conditions and the pedestrian demand can vary over time and consequently, a flexible methodology for assessing footpath requests is considered necessary.

The Paths and Trails Strategy includes a strategic tool for assessing and prioritising requests for footpaths (the Prioritisation Matrix) which takes into account all these factors. The needs of vulnerable road users such as children, elderly or disabled are also given priority. The Prioritisation Matrix will enable Council to evaluate and prioritise requests for the design and construction of footpaths as well as determine appropriate

pavement types for precincts within the Shire. The most highly ranked footpaths can then be considered for inclusion in the Long Term Infrastructure Plan.

The Strategy allows community requests for pathways to be considered at any time and prompt advice provided to those requesting footpaths. The priority of any path can also be easily re-evaluated if circumstances change. The listing of footpaths for construction is consequently prioritised and will be monitored based on the allocated budget each year and updated on an on-going basis as more projects are assessed for inclusion.

The total approximate cost to Council to construct all the missing footpaths within the PPN across the Shire (as per this Strategy) is estimated to be:

Primary Network – 30.6km at a cost of \$6.7M

Secondary Network – 21km at a cost of \$3.7M

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## Background

### Baw Baw Population

Baw Baw Shire is the largest peri-urban municipality in Victoria covering approximately 4,000 square kilometres and is home to many diverse industries.

Located approximately 100 kilometres east of the Melbourne CBD, or one hour's drive from Melbourne, the Shire is connected by the Princes Highway and V-Line rail services to Melbourne's CBD. The Shire is within commuting distance of the expanding metropolitan area and attracts new residents looking to take advantage of the available affordable housing while experiencing a rural township lifestyle.

Baw Shire has an estimated population of over 50,000 (as of December 2017) with an overall population growth of 13% between 2011 and 2016. Notably, the Princes Highway corridor is experiencing much higher population growth; Drouin, for example, grew by 27% in that same period.

Outside of metropolitan Melbourne, Baw Baw had the second highest annual population growth of 2.8% behind Surf Coast Shire. This is significantly higher than the state average of 1.8%. The *Victoria in Future 2016* report by the Department of Environment,

Land, Water and Planning (DELWP), placed Baw Baw Shire as the third fastest growing regional area in Victoria. The *Baw Baw Settlement Management Plan* projects that Baw Baw will have 71,683 residents by 2036.

Baw Baw Shire's Strategic Growth Corridor stretches along the Princes Highway taking in seven towns from Longwarry in the west to Trafalgar in the east, including the major growth centres of Drouin and Warragul.

Regional Victoria is in the midst of a population boom driven by unprecedented growth in greater Melbourne. Despite the number of people relocating to regional Victoria, with some regional Councils bracing for their populations to increase by half in just over a decade. Infrastructure and services are significantly under-resourced.

Along with other fast-growing regional areas such as Surf Coast, Bass Coast, Golden Plains, Macedon Ranges, Moorabool and Murrindindi, Baw Baw Shire faces a unique challenge in balancing the need to preserve farmland to support agricultural production and the need for developments to cater for the spike in population growth. Council must manage growth in a sustainable manner and keep up with the demand for infrastructure.



## Why is the Paths and Trails Strategy needed?

With a rapidly growing population, there is increasing demand and pressure on community infrastructure and services in Baw Baw Shire Council. While Council has been proactive in planning for population growth, the recent acceleration in growth has introduced a greater urgency for many projects to be undertaken in a shorter time frame. This has placed significant financial obligations on Council to meet the additional costs of bringing forward projects in the current rate-capped environment, and at a time when there is increasing pressure on Council to address the mounting infrastructure gap.

The Paths and Trails Strategy is an essential planning tool for Council to invest in the construction of paths and trails within the Shire. The Strategy will prioritise path and trail projects primarily for transport and connectivity to key destinations and public facilities.

### Objective of the Strategy

The objectives of the *Paths and Trails Strategy* are to:

- Promote and encourage walking as a sustainable and preferred mode of transport for short trips to work, shops, school and recreation
- Provide paths and trails that link key destinations and points of interest such as shops, educational institutions, recreational and health facilities, and public transport
- Improve the amenity, accessibility and safety of the footpath network for all users
- Strengthen existing pedestrian links creating a direct, connected network
- Assist in responding to residents' requests for the construction of new footpaths and high expectations for their delivery
- Establish criteria to guide the development of new footpaths for the primary and secondary pedestrian network
- Include a provision in the Long Term Infrastructure Plan to complete the development of the PPN in a financially sustainable manner

## What will this Paths and Trails Strategy address?

The Paths and Trails Strategy will address the following.

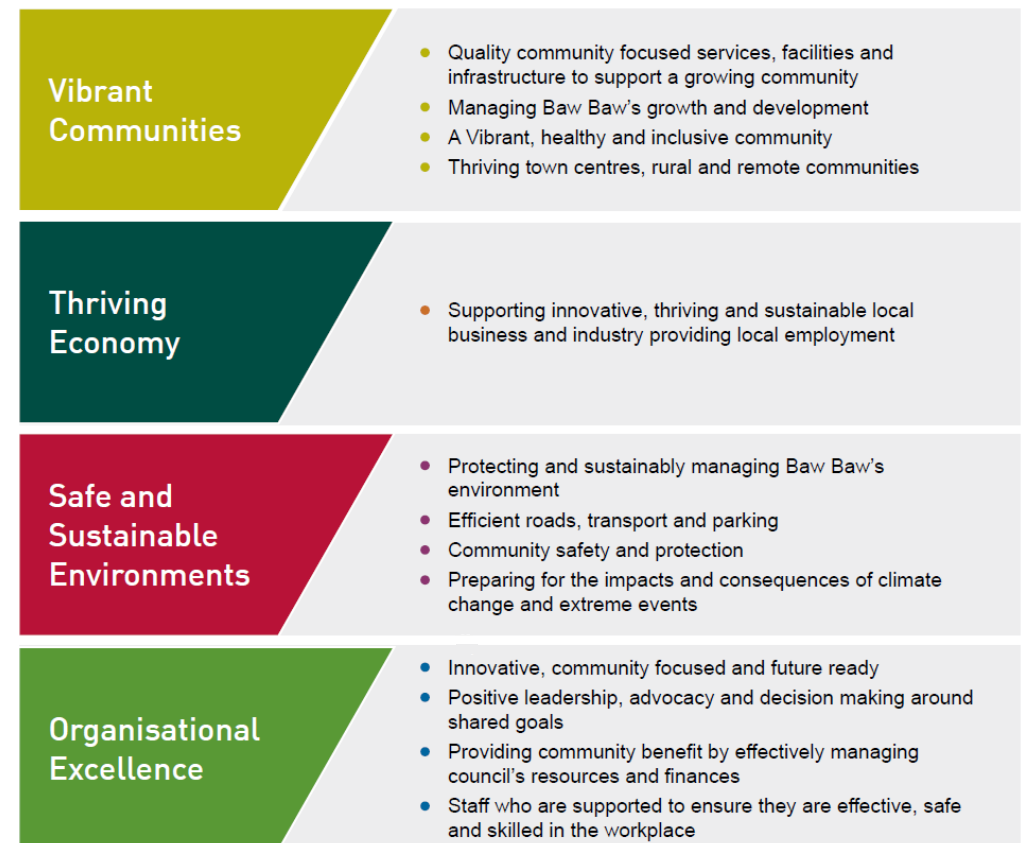
- The demand for connectivity for pedestrians and cyclists to key public points of interest in the Shire
- The growing demand for new paths and trails to connect to new developments and estates
- The demand for path and trail connections between townships and key localities
- The need for a prioritisation system for path and trail construction that is consistent, fair and transparent

### Council Plan

Council's vision is to foster happy, healthy people sharing prosperity and knowledge from living sustainably and in harmony with our rural identity, thriving villages, productive and inspiring landscapes.

The Council Plan 2017–2021 is founded on four objectives of vibrant communities, thriving economy, safe and sustainable environments and organisational excellence. While the Paths and Trails Strategy will help enhance the overall Council Plan's four objectives, it will figure predominantly in delivering on the 'Vibrant Communities' and 'Safe and Sustainable Environments' elements.

The strategy has identified a range of themes around path and trail connections. A major concern is the lack of connections in existing residential areas in addition to connections from new developments to key public facilities. The strategy has identified the locations of path and trail connection gaps and deficiencies. It will focus on prioritising projects in a fair and transparent manner across the Shire, via five annual programs as part of the Long Term Infrastructure Plan.



### The Existing Paths and Trails Network

The existing paths and trails network comprises approximately 450km of Council maintained paths and trails within Baw Baw Shire.

Information pertaining to paths and trails is stored in Council Asset Management System and the Geographical Information System (GIS). Council receives many requests for path and trail connections/improvements. Broad community feedback highlighted the following areas of focus:

- Inconsistent footpath networks and gaps in the network
- Pedestrians being forced to cross roads as footpaths were only on one side of the road
- Lack of DDA compliance
- Inadequate safe road crossing points and facilities
- Lack of footpaths in some areas

Pathway Material	Length (km)
Concrete Paths	382
Asphalt Paths	3.7
Gravel Paths	54.4
Brick/ Paver Paths	4.8
Other	1
<b>Total</b>	<b>450km</b>

### Identifying Priority Town Walking and Cycling Networks

Council's priority is to encourage cycling and walking *for short local trips* as opposed to vehicle use. This will have the benefits of improving health, reducing the need for additional car parking (including train station parking) and reducing road congestion. Evidence collected identified a strong need for more emphasis on walking and cycling infrastructure in towns, with infrastructure provision being cited as a barrier to more people walking and cycling.

Reasonable walking and cycling catchments vary depending on topography, terrain and amenity. For the purpose of setting priorities, the evidence recommends improvements to walking paths within one kilometre of key town centres and improvements to shared/cycle paths within two kilometres of key town centres.

The Paths and Trails Strategy will consider walking and cycling routes to town centres from new development areas to be considered regardless of the distance to the town centre. Development on the fringe of existing towns should contribute to regional walking and cycling links to offset the greater reliance on cars that fringe developments tend to produce and its flow-on effects such as increased traffic congestion and increased demand for parking.

### Promotion of Walking and Cycling in Baw Baw Shire

Council has been involved in the following initiatives to encourage walking. These include:

- Promoting recreational walking within the Shire by promoting the *Walking and Cycling Trail Maps* on Councils website
- Supporting the 'Drouin Tree Walks' created by the *Friends of Drouin Trees*
- Participation in Walk/Ride to Work Days
- Supporting the Walk to School days
- Supporting Ride to School days

Baw Baw Shire's two innovative projects 'Active by Design' and 'Two Towns Trail' won the 2009 Heart Foundation Local Government Awards, at both a national as well as state level.

The 'Active by Design' project invited developers to create a toolkit so that new housing developments incorporated accessible destinations and attractive environments. "Baw Baw's 'Active by Design' project is a strong example of how local government can influence active living through urban planning," said Heart Foundation (Victoria) Chief Executive Officer at the time.

The 'Two Towns Trail' is an 8km trail linking Drouin and Warragul and is a highly valued community asset. The trail was built to enable half of the Baw Baw population to walk or cycle between the two towns and was 20 years in the making. The project was funded by VicRoads, Council, the Department of Planning and Community Development (DPCD) and the Federal Government, with a total cost of \$1.8 million. Council worked further on beautification of the trail and gained an additional \$95K from the DPCD - *Creating Better Places* fund to make the trail an interesting, safe and visually appealing environment that encourages physical activity.





### Economic Development and Tourism

Research from Australia and overseas indicates significant economic and tourism benefits can be derived from a well planned and maintained paths and trail network. Benefits include increased expenditure in rural and regional areas, return visits and increased overnight stays by domestic and international tourists. Council can initiate investment and research into economically viable projects that will provide path and trail infrastructure for the local community but also provide an income stream for the Shire as part of this strategy and existing tourism strategies.

As per Council's Destination Action Plans (Walhalla, Noojee and Yarragon), paths and trails within Baw Baw Shire are a great attraction for tourists from outside the region. Walhalla and Noojee for example, appeal to many visitors and provide an important gateway to the Loch Valley, Aberfeldy, Mount Baw Baw and the widely renowned Australian Alpine Walking Track.

### Recreation

Council adopted the Recreation Strategy 2017–2027 in 2017 which highlighted that 65% of all survey respondents walk for recreation. Walking and cycling paths, tracks and trails were deemed to be the most popular places to recreate. The need for constructing new or upgraded walking and cycling paths was identified as one of the top five community priorities.

Studies at the national, state and local level have shown that participation in informal, unstructured recreation is greater than participation in organised sports.

The development of a Paths and Trails Strategy will address the high level of community demand demonstrated for walking/cycle paths and opportunities for better connectivity within towns and between towns.

### The Baw Baw Shire Council Integrated Transport Plan

The Baw Baw Shire Council Integrated Transport Plan 2011 (*which is a 10-year plan*) identified five key goals to implement:

1. Improve town and inter-town walking and cycling networks
2. Improve public transport services
3. Increase amenity, efficiency and safety of roads and parking
4. Plan mobility for an ageing population
5. Base land-use controls on sustainable transport outcome

This Paths and Trails Strategy assists Council in achieving Goal 1 *improve town and inter-town walking and cycling networks* of the Integrated Transport Plan. The tendency to walk for transport, physical activity and recreation is influenced by several variables, including the existence of well-maintained footpaths, shared paths, walking tracks and trails, street design, particularly connectivity; urban amenity; safety and the presence of local destinations within walking distance. In the Shire's transport system, walking and cycling play an important role and provide viable alternatives to motor vehicle usage, particularly when trips are less than 2km (or within a 20-minute walk).

### Smart Roads

*SmartRoads* is an approach used by VicRoads that manages competing interests for limited space and time in the road network by giving priority use of the road to transport modes, both in different parts of the network and at different times of the day. *SmartRoads* provides a long term approach for operating Victoria's road network that makes it more efficient and safer, whilst supporting the development of activity centres and key destinations as places where people live and work.

The guiding principles of the *SmartRoads* plan for Victoria recognise the increasing role that buses, trucks and bicycles play in moving people and goods around the network. It also recognises that good access for pedestrians needs to be a key element of the transport system.

*SmartRoads* have identified locations and routes that are key walking and cycling routes. These routes have been considered and included in the identification of important routes for the development of this paths and trails strategy. These locations will be prioritised for the path and trail network and included as key strategic routes.

## How has the Paths and Trails Strategy been developed?

Paths and trails play a significant role within the Baw Baw Shire, providing a means of access to community facilities, services, public transport and open space.

To enable Council to plan where paths and trails should be built in the future, a proactive and strategic approach to the planning, design and construction of pathways in Baw Baw Shire is needed.

### The Principal Pedestrian Network (PPN)

Transport for Victoria created a Principal Pedestrian Network (PPNs) model which enables effective strategic network planning for pedestrians and cyclists in the broader context of transport and land use planning.

A PPN is a designated mapped network of routes which support walking trips in and around key destinations. The PPN methodology provides local government with a tool to develop a framework and evidence-based approach for the inclusion of pedestrian needs in transport and planning decisions by:

- Mapping pedestrian movements in their municipalities and identifying priority routes;
- Planning for and prioritising infrastructure improvements, to encourage and support more walking; and
- Working with the Victorian Government (e.g. Regional Roads Victoria, Transport for Victoria, etc.) to ensure pedestrians are appropriately prioritised in Victoria's transport planning and investment.

PPNs aim to identify routes within the built environment that are likely and have the potential to carry more pedestrians walking to key destinations and improve the quality of these routes to encourage more walking. The overarching objective of developing a PPN is to provide pedestrians with a higher level of service by making the shortest route also the highest quality route, and thereby encouraging walking trips.

The objective for Council is to extend pathways and fill gaps in the PPN by building key footpath links based on pedestrian desire lines. If a street is not shown to have a future footpath, in most situations there will be a nearby neighbouring street that will provide the footpath link for that part of the network. The Principal Pedestrian Network identifies a total of 52km of missing township pathways and 263km of missing inter-town connections across the Shire.



### Guiding Principles for the PPN

The following principles have been considered that drive the future direction of the provision of pathway facilities and infrastructure to ensure a strategic and consistent approach to the construction of new pathways in Baw Baw Shire.

- Recognise key destinations and points of interest that generate pedestrian activity and aim to service these with a path
- Construct paths on at least one side of the road for the primary and secondary network
- Bus routes to have additional connecting paths on both sides as required to ensure DDA compliance (assessed on a case by case basis)
- Arterial roads to have paths on both sides of the road to limit the need to cross the road multiple times, where topography and space allow (assessed on a case by case basis)
- Safe crossing points to be included as part of projects, as required

### Methodology for the development of the PPN

As part of the development of the PPN for Baw Baw Shire, the following methodology will be applied.

1. Review of existing strategies, plans and policies for previous work completed relating to pedestrian accessibility (including previous community consultation such as the Community Plans)
2. Identification of key destinations or points of interest within each township
3. The setting of a walkable distance from these key destinations (up to 2km)
4. Determination of a method to allow community requests to influence priorities whilst still delivering the principal pedestrian network
5. Identification and mapping of the key Principle Pedestrian Network which connects people to the key destinations within the relevant township (Primary and Secondary Network)
6. Community validation of the proposed primary and secondary path network



### Mapping the PPN for Baw Baw Shire

As part of the Strategy, the PPN was mapped for the following townships (*See Appendix 1*). The townships and key localities have been categorized based on the following:

- Population (per postcode)
- The number and location of public points of interest
- The size and shape of the urban sprawl
- The four categories will also correspond to the capital works programs where individual projects will compete for funding

<b>Major Towns</b>	Warragul	Drouin	Yarragon*	Trafalgar	Longwarry	Neerim South
<b>Minor Towns</b>	Thorpdale	Darnum	Willow Grove	Rawson	Buln Buln	
<b>Villages</b>	Jindivick**	Rokeby	Nilma	Neerim Junction	Nayook	Erica
<b>Tourist Towns</b>	Noojee	Walhalla				

*\*Although considered a key tourist town in the Baw Baw Shire Council Economic Development Strategy 2018–2021, Yarragon has been categorised as a major town here due to the size of its population, urban sprawl and residential development.*

*\*\*The population of Jindivick is higher than Rawson, but its urban sprawl is significantly less so has been categorised as a village.*

In mapping the PPN, there were several considerations in where the networks would be located. Not every path and trail will be located within road reserves; they may be located within parks and reserves as illustrated in the following example diagrams.

### Stage 1 – Strategic links via the existing road network

The PPN proposed for each locality has generally been based around the existing road network within the public road reserve. This is due to the available space for paths and trails and is generally pedestrians' preferred path of travel as it is the most direct route.

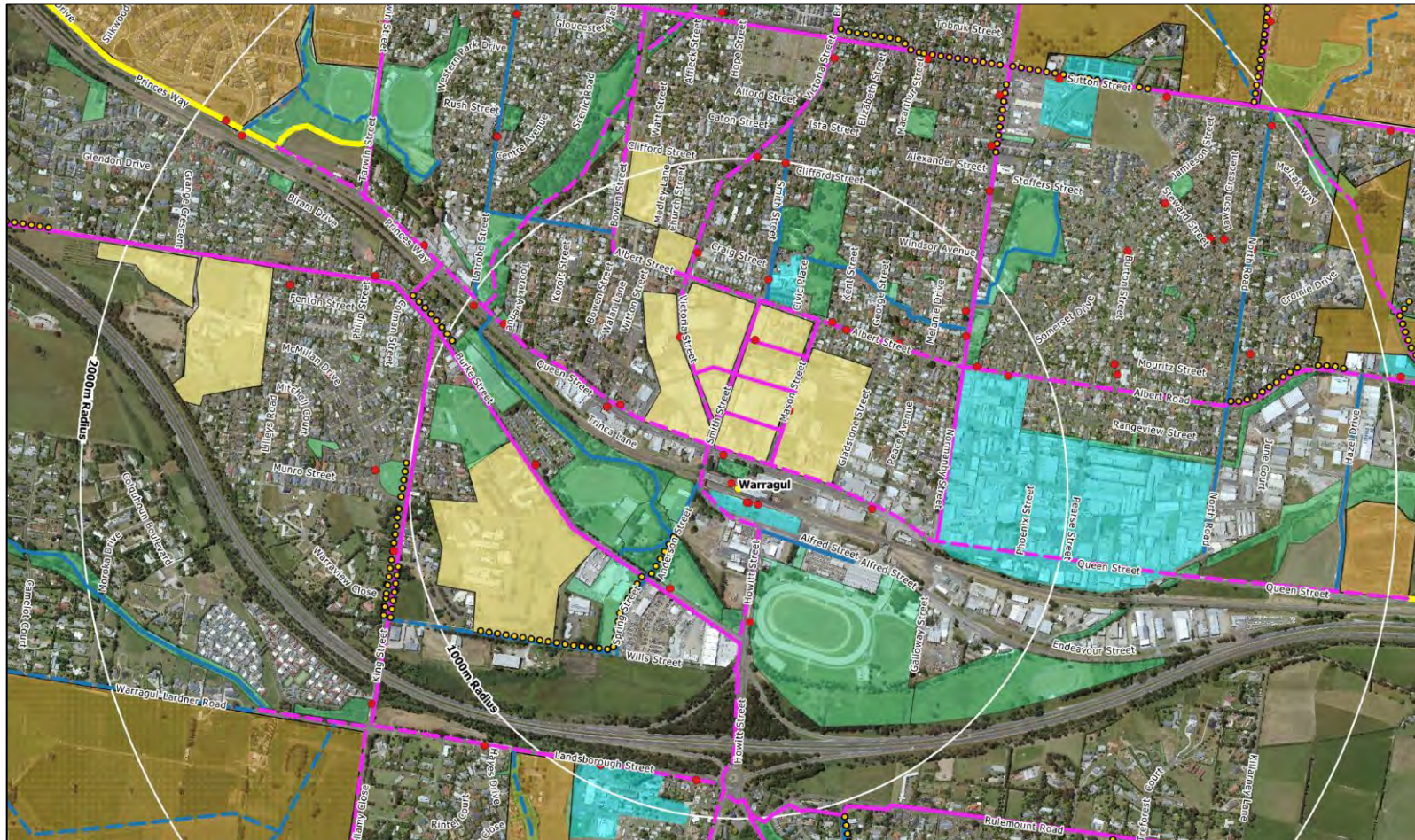


Diagram 1 – Stage 1: Example map of the PPN along the road network in the road reserve

Pink Lines – Primary Network Blue Lines – Secondary Network



### Stage 2 – Strategic links within Public Reserves and Parks

Pathway networks and linkages through public reserves and open spaces have been identified and mapped. There are many public parks, reserves and open spaces that have existing pathways that provide important links for pedestrians and form part of the primary and secondary networks.



Diagram 2 – Stage 2: Example map of the PPN in public reserves and open spaces

**Pink Lines** – Primary Network **Blue Lines** – Secondary Network

### Stage 3 – Inter-Township Strategic Links for PPN Analysis

Inter-town networks and linkages for tourism and recreation have been identified building upon the previous work completed by Council '*Bicycle and Walking Paths Development Plan 1998*'. This body of work was reviewed for the development of the Paths and Trails Strategy. Alignments shown in the diagrams are indicative only and subject to further detailed investigation and design.



Diagram 3 – Stage 3: Example map of the PPN Inter-Town Connections

**Yellow Lines** – Primary Priority Network

**Green Lines** – Secondary Priority Network

### A Paths and Trails Prioritisation System

Council's existing priority system, adopted in 2013/14, is based on the following criteria:

- Pedestrian Safety
  - Road carriageway width, sight distance, speed limit, daily traffic volume, parked vehicles restricting pedestrian access, alternative access and crash history
- Public Response
  - Requests/petitions, disabled and elderly access
- Social & Economic Factors
  - Surrounding land use, adjacent activity node, planned development, socio-economic status
- Alignment to Council Objectives, Major Strategies and Policies



Projects evaluated against the above criteria were prioritised with the top projects considered to be the most beneficial in terms of strategic importance and economic and social value. Under this framework, projects were often considered on a reactive, request-based approach. See **Appendix 2** for detail of the Paths and Trails Scoring Matrix Evaluation Criteria.

### Additions to the Footpath Prioritisation Tool (Matrix)

While it was acknowledged that the matrix provided a very thorough analysis of scoring pathway projects in a consistent manner throughout the Shire, the prioritisation tool matrix was reviewed during the FY 2018/19 and attributes have been added to the matrix to categorise and distinguish major towns, minor towns, villages and inter-town connections. A further attribute which highlights if requests from the community are located along a primary or secondary pathway network of the PPN has been added.

The missing gaps within the existing primary and secondary pathway networks have been identified and added to the prioritisation matrix to ensure a strategic and pro-active approach.



## Implementation of the Paths and Trails Strategy

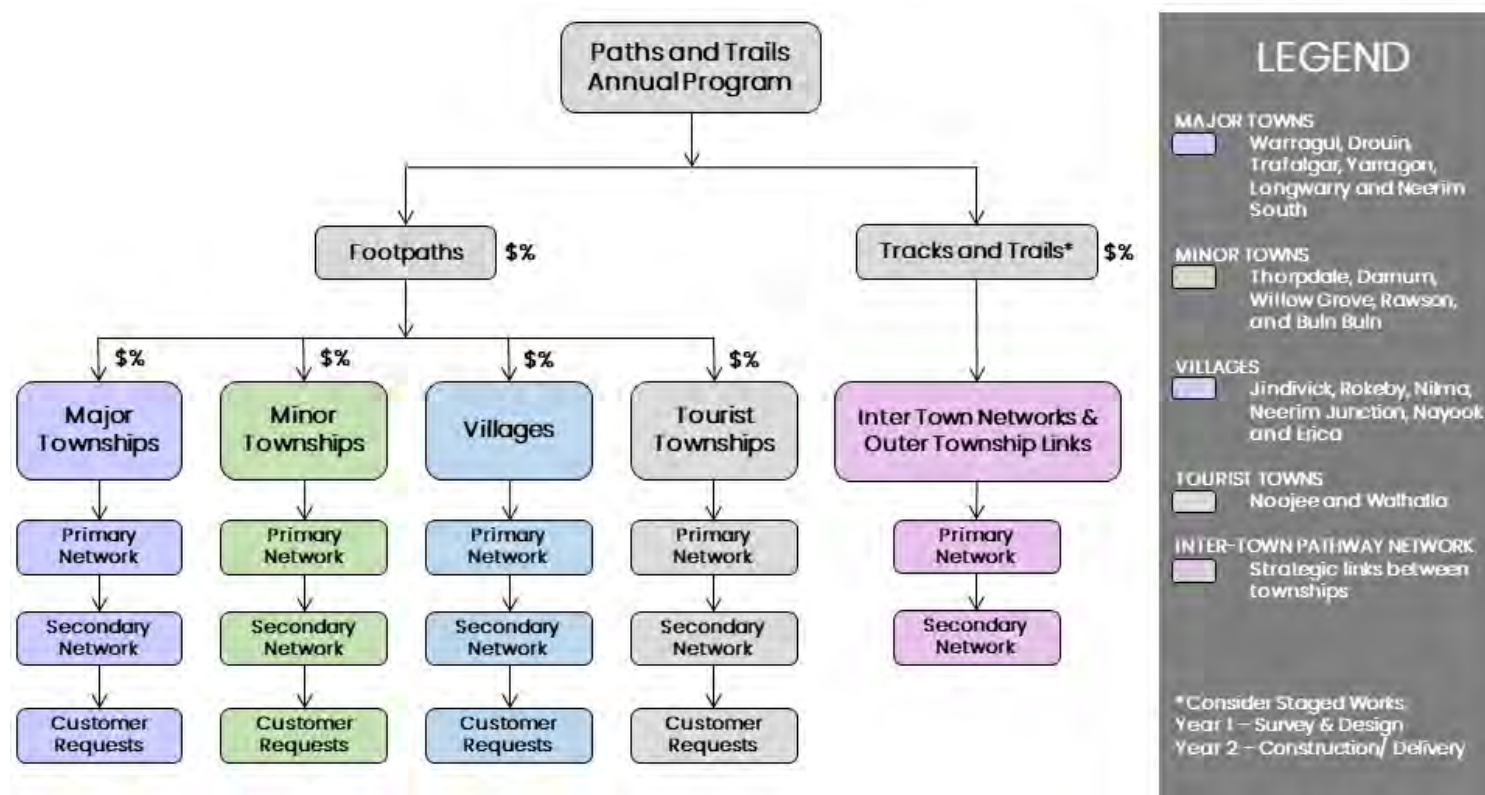
### The Long-Term Infrastructure Plan

Of the Principle Pedestrian Network, both primary and secondary networks, there is a total of 52km which require construction within townships, at an estimated cost of \$10.4M. The desired trail network across the Shire also consists of the following trails requiring construction:

- 67km of primary inter-town trail connections (\$14M)
- 196km of secondary inter-town trail connections (\$31.6M)

Having now identified the PPN, the Strategy will allow Council to better plan and prepare the annual budgets to prioritise key path and trail projects to include in the Long Term Infrastructure Plan. *Appendix 3* outlines the detail of the missing Paths and Trails within the PPN.

The diagram below demonstrates Council's process structure for the annual paths and trails program.



### Community Engagement

Whenever a construction project is planned, consideration needs to be taken to engage the community and ensure there is public support and awareness for the construction of a footpath/shared path and provide them with an opportunity to provide input into the decision-making process.

### Funding

Footpaths located within Council Road Reserves are generally constructed at Council's cost with the timing of works subject to available funding in the annual capital works program. Paths and trails that are part of the PPN can be considered for external funding applications and opportunities. The timing of works would be subject to available funds in the capital works budget and the timing of external grant funding opportunities.

In the future Council can consider the implication of *special charge schemes* where abutting property owners may be willing to contribute towards part of the cost of construction for projects that are not a high priority as determined by the paths and trails prioritisation tool and thereby raise the priority of the project within the matrix.

The construction of some pathways that address significant existing road safety problems or improve the pedestrian and cycling network and access can also be fully or partly funded by organisations such as the Transport Accident Commission, Regional Development Victoria, Transport for Victoria, VicRoads, Public Transport for Victoria, Regional Roads Victoria etc. Many recreation and passive use trails may be funded through economic development funding from State and Federal Government funding.



# Appendix 1 – PPN Methodology and Maps

As per the Methodology adopted by Council for the development of the Paths and Trails Strategy, the following activities were conducted:

## **Step 1: Review existing strategies, plans and policies for previous work completed relating to pedestrian accessibility**

To ensure that the PPN would balance previous work completed around paths and trails and to plan pedestrian to/from new developments (residential growth areas), a wide range of documents were reviewed. These documents included (but were not limited to) population growth and land use planning documents for regional as well as for specific localities. Land use planning documents referenced included precinct structure plans for both Warragul and Drouin, Yarragon 2030, Trafalgar 2030. More

specifically, the following documents were reviewed:

- The Council Plan 2017–2021 (adopted by Council in 2017)
- The Visit Baw Baw Destination Branding Strategy (adopted by Council in 2014)
- The Economic Development Strategy 2014–2018 (adopted by Council in 2014)
- Baw Baw Shire Recreation Strategy 2017–2027
- Baw Baw Shire Road Safety Strategy 2018–2022
- Improving the Pedestrian Environment in Six Towns of Baw Baw Shire
- Integrated Transport Plan (ITP) – 2011–2021
- Warragul and Drouin Precinct Structure Plans 2014
- Warragul and Drouin Development Contribution Plans 2014
- Drouin Town Centre Strategy 2010
- Warragul Town Centre Masterplan May 2011
- Walk Cycle Baw Baw 2014
- Bike it Baw Baw
- Transport for Victoria – Guidelines for developing Principal Pedestrian Networks (May 2015)
- Community Plans
- Reserve Master Plans
- Health and Well Being Strategy
- Victoria Walks *Safer Road Design for Older Pedestrians* – 2016
- Baw Baw Shire Council Settlement Plan
- Victorian Transport Plan
- Active by Design (2008)
- Infrastructure Design Manual (IDM)
- Civic Park Drouin Master Plan
- Civic Park Warragul Master Plan
- Baw Baw Shire Walking and Cycling Trail Maps
- Drouin Recreation Plan
- Public Health and Wellbeing Plan 2013–2017

## *Appendix 1 – PPN Methodology and Maps*

- Rural Recreation Reserve Master Plans Stage 2
- Rural Recreation Reserve Master Plans – Final report December 2014
- Warragul Outdoor Recreation Plan – review Report December 2014
- Trafalgar 2030
- Yarragon 2030
- Walhalla and Mountain Rivers Destination Plan 2018
- Noojee and Surrounds Destination Plan 2018
- Yarragon and Surrounds Destination Action Plan 2018
- Gippsland Regional Growth Plan 2014
- Baw Baw Shire Settlement Plan 2013

### **Step 2: Identify key destinations or points of interests within the township**

For each township, key destinations and pedestrian generating public amenities have been located and mapped. Primary destinations include shopping precincts, town centres and schools (primary and secondary schools). Secondary destinations include all other public amenities such as reserves and open space, other points of interest (such that would generate pedestrian activity).

The location of bus stops has also been mapped to determine the alignment of the PPN.

### **Step 3: Set walkable distance from these key destinations (up to 2km)**

The PPN network has been focused around a 2km radius of the town centres of the larger townships (however as required the radius is extended to the boundaries of townships to connect pedestrians from the urban fringes and new developments).

### **Step 4: Identify and map key Principal Pedestrian Network that connects people to the key destinations (Primary and Secondary)**

The primary and secondary networks were mapped in three stages – through road reserves, through reserves and open spaces, and inter-town connecting trails.

### **Step 5: Community validation of the proposed primary and secondary path network**

Once the PPN was mapped, the community was provided with an opportunity to provide feedback (**See Appendix 5**).

### **Step 6: Determine the method to allow community requests to influence primary path network priorities whilst focusing on delivering the PPN**

Whilst a priority system has been established, customer requests are a strong factor in prioritising path and trail projects because they provide evidence of its usage. No request is ever invalid.



# Major Towns





**Legend - Drouin**

Primary Network

PSP

Secondary Network

PSP

Town Gaps

Future Development

Reserves & Open Space

Schools & Shops

Point of Interest

Bus Stop

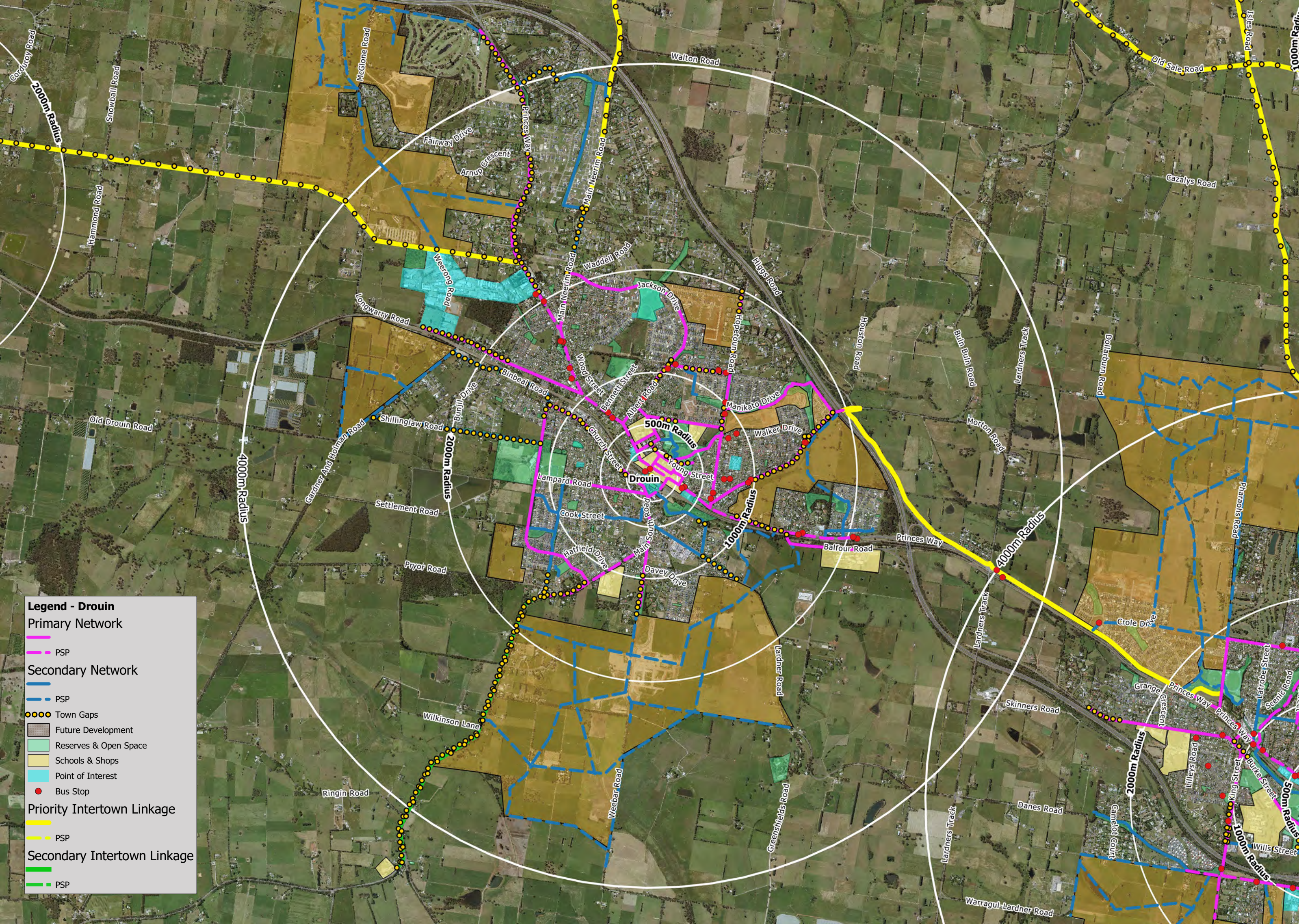
Priority Intertown Linkage

PSP

Secondary Intertown Linkage

PSP





**Legend - Drouin**

Primary Network

PSP

Secondary Network

PSP

Town Gaps

Future Development

Reserves & Open Space

Schools & Shops

Point of Interest

Bus Stop

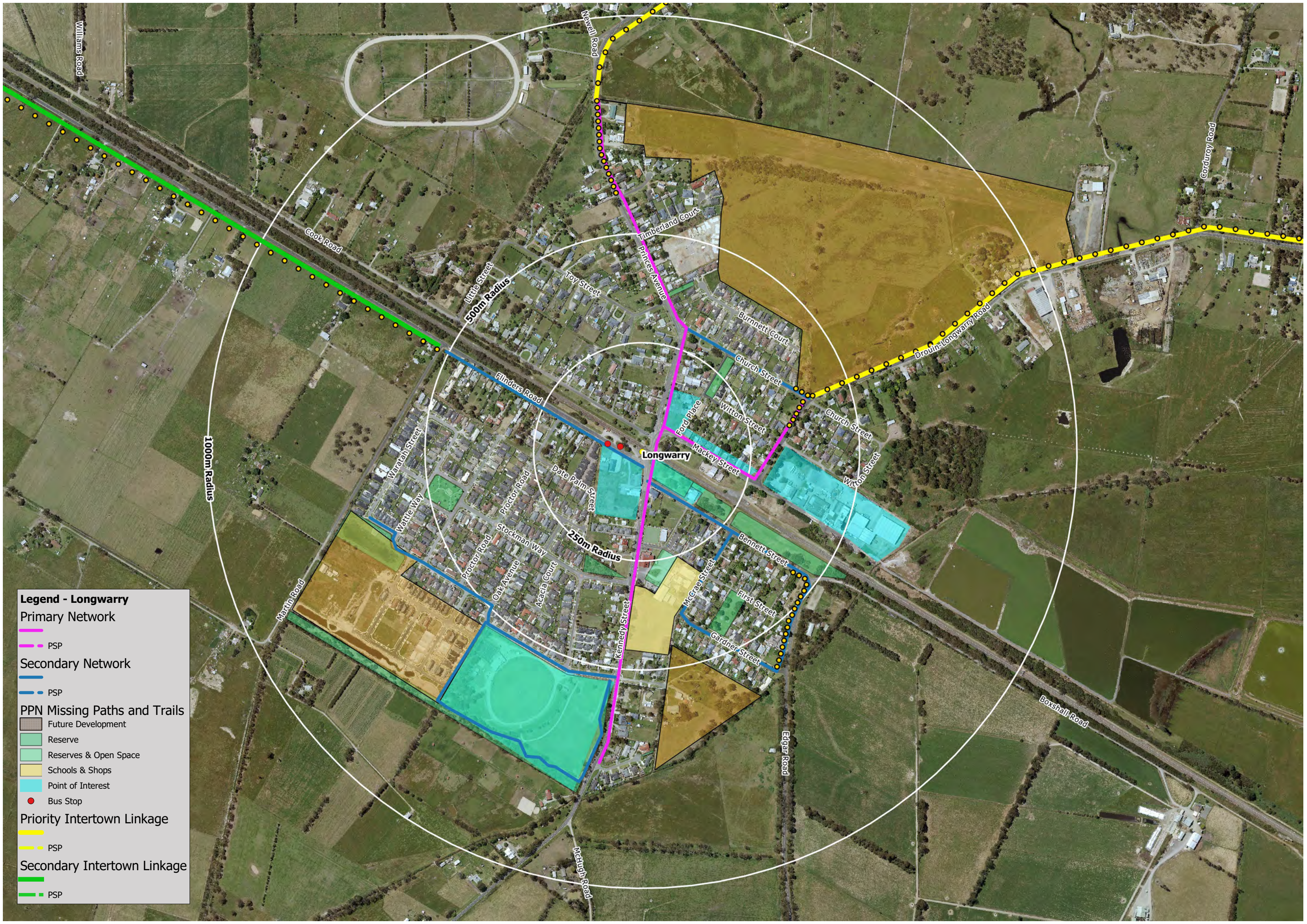
Priority Intertown Linkage

PSP

Secondary Intertown Linkage

PSP





**Legend - Longwarry**

Primary Network

PSP

Secondary Network

PSP

PPN Missing Paths and Trails

Future Development

Reserve

Reserves & Open Space

Schools & Shops

Point of Interest

Bus Stop

Priority Intertown Linkage

PSP

Secondary Intertown Linkage

PSP





Legend - Neerim South

**Primary Network**

PSP

**Secondary Network**

PSP

PPN Missing Paths and Trails

Future Development

Reserves & Open Space

Schools & Shops

Point of Interest

Bus Stop

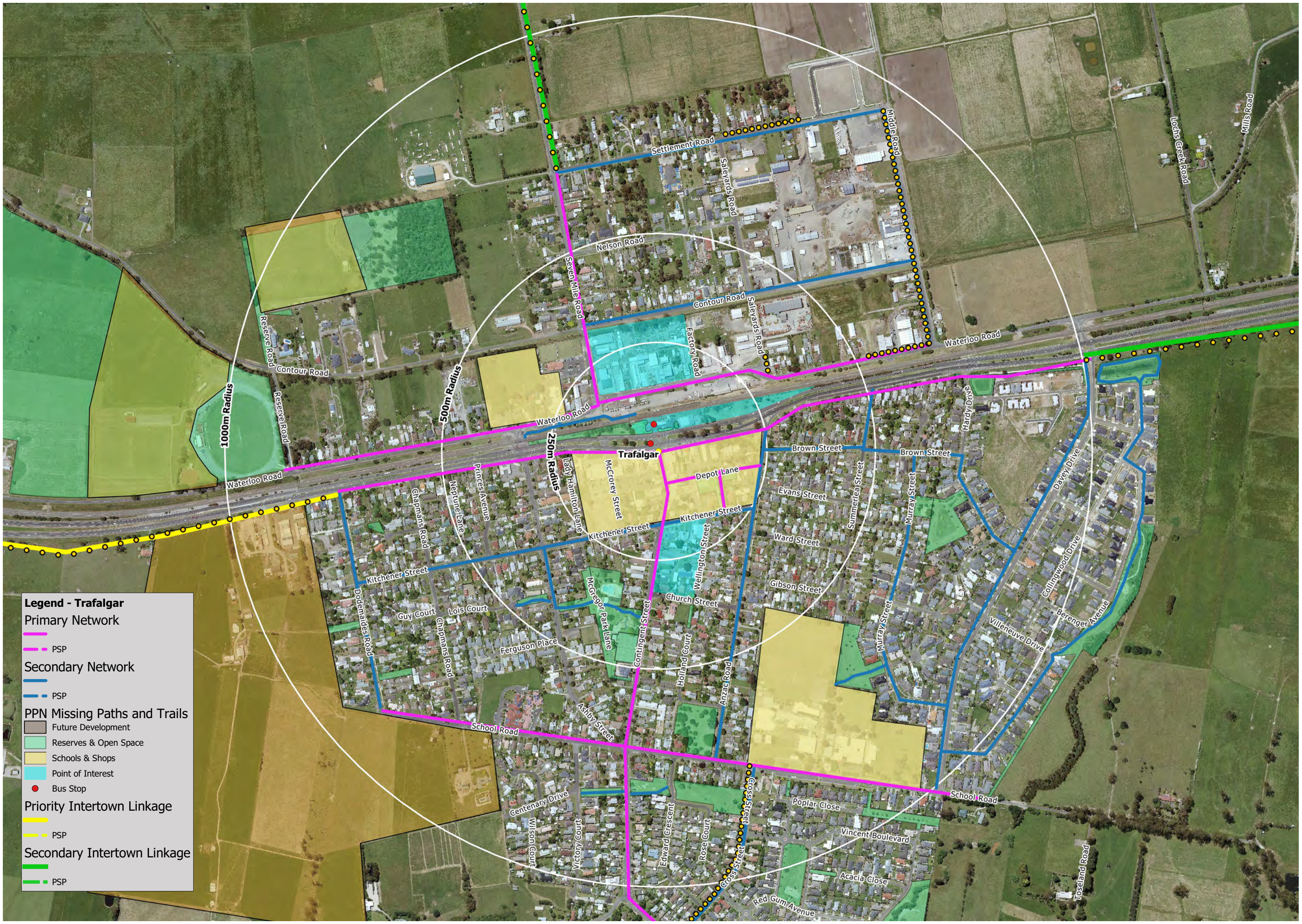
**Priority Intertown Linkage**

PSP

**Secondary Intertown Linkage**

PSP





**Legend - Trafalgar**

**Primary Network**

PSP

**Secondary Network**

PSP

**PPN Missing Paths and Trails**

Future Development

Reserves & Open Space

Schools & Shops

Point of Interest

Bus Stop

**Priority Intertown Linkage**

PSP

**Secondary Intertown Linkage**

PSP

Settlement Road

Saleyards Road

Middle Road

Nelson Road

Contour Road

Waterloo Road

Reserve Road

Contour Road

Reserve Road

1000m Radius

500m Radius

250m Radius

Waterloo Road

Tratfalgar

McCreary Street

Depot Lane

Brown Street

Evans Street

Kitchener Street

Ward Street

Gibson Street

Church Street

Wellington Street

Summerlea Street

Murray Street

Hardy Drive

Davey Drive

Collingwood Drive

Berenger Avenue

Villeneuve Drive

School Road

Poplar Close

Vincent Boulevard

Acacia Close

Red Gum Avenue

Gross Street

Centenary Drive

Wilson Court

Victory Court

Edward Crescent

Rose Court

McGregor Park Lane

Ferguson Place

Guy Court

Lois Court

Chapmans Road

Neptune Lane

Princes Avenue

Dodemaides Road

Kitchener Street

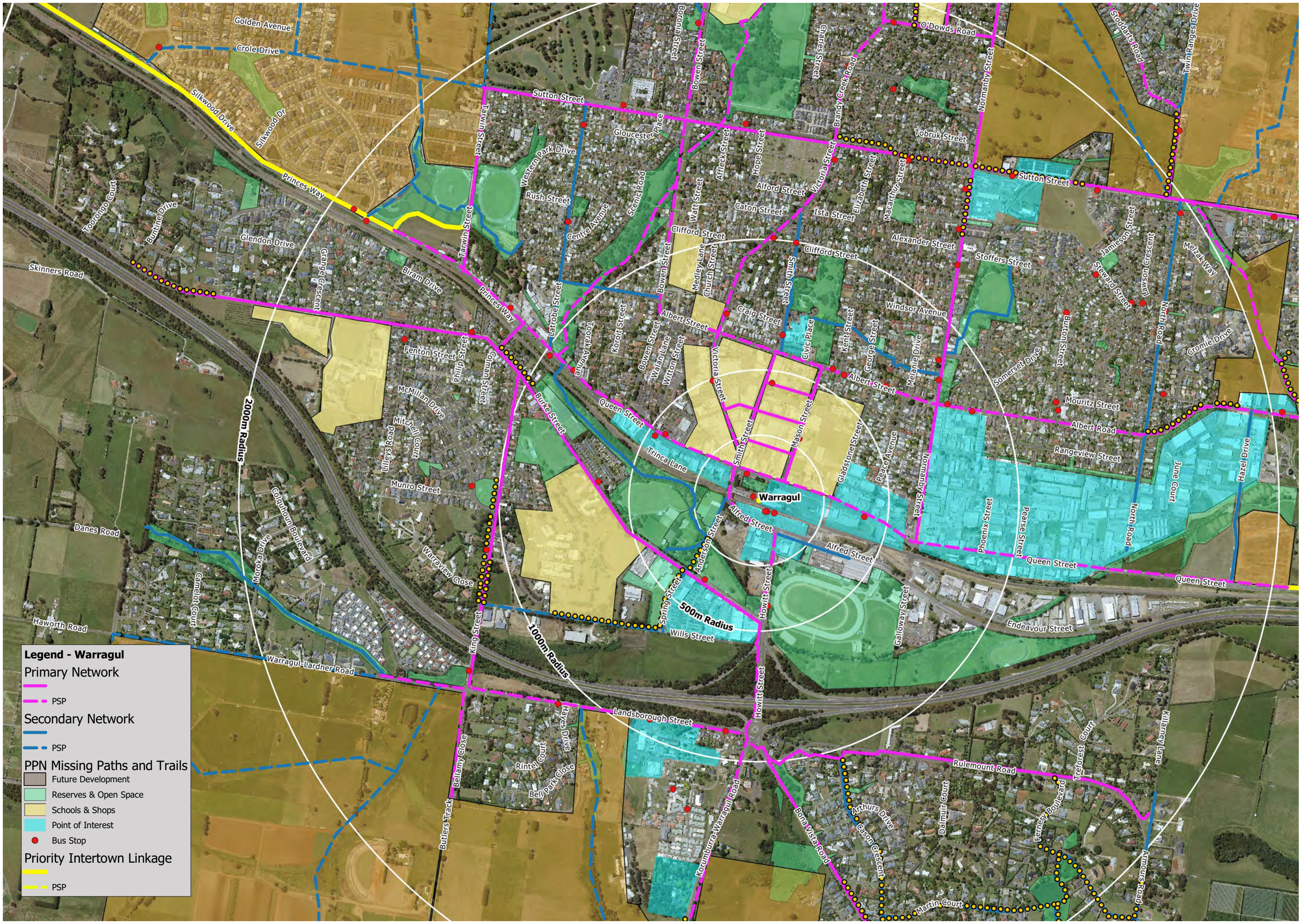
Chapmans Road

Lotus Creek Road

Mills Road

Toseland Road





**Legend - Warragul**

Primary Network

PSP

Secondary Network

PSP

PPN Missing Paths and Trails

Future Development

Reserves & Open Space

Schools & Shops

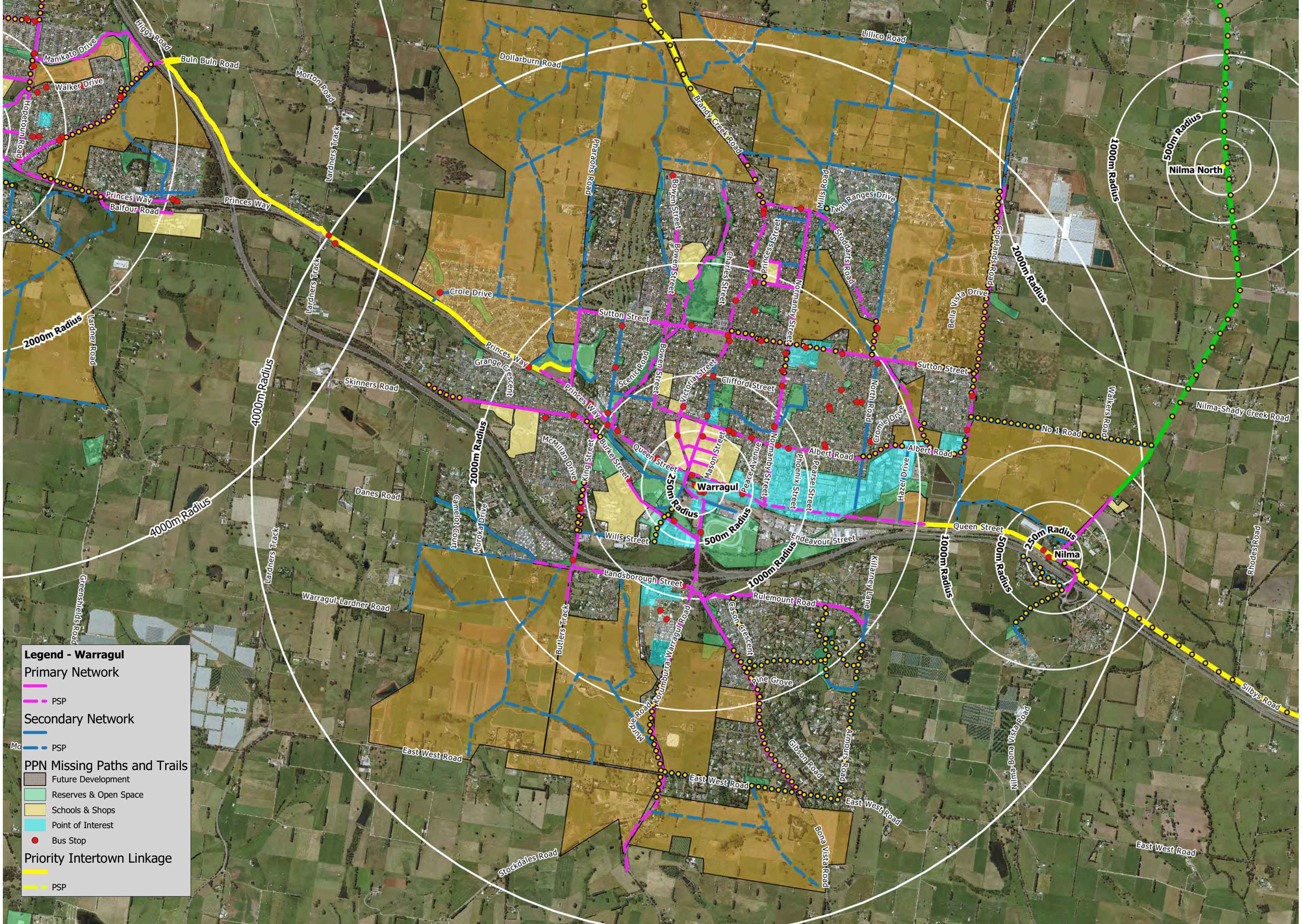
Point of Interest

Bus Stop

Priority Intertown Linkage

PSP





**Legend - Warragul**

Primary Network

PSP

Secondary Network

PSP

PPN Missing Paths and Trails

Future Development

Reserves & Open Space

Schools & Shops

Point of Interest

Bus Stop

Priority Intertown Linkage

PSP





**Legend - Yarragon**

Primary Network

PSP

Secondary Network

PSP

PPN Missing Paths and Trails

Future Development

Reserves & Open Space

Schools & Shops

Point of Interest

Bus Stop

Priority Intertown Linkage

PSP

Secondary Intertown Linkage

PSP





# Minor Towns



**Legend - Buln Buln**

**Primary Network**

PSP

**Secondary Network**

PSP

**PPN Missing Paths and Trails**

Future Development

Reserves & Open Space

Schools & Shops

Point of Interest

Bus Stop

**Priority Intertown Linkage**

PSP

**Secondary Intertown Linkage**

PSP











**Legend - Jindivick**

**Primary Network**

PSP

**Secondary Network**

PSP

**PPN Missing Paths and Trails**

Future Development

Reserves & Open Space

Schools & Shops

Point of Interest

Bus Stop

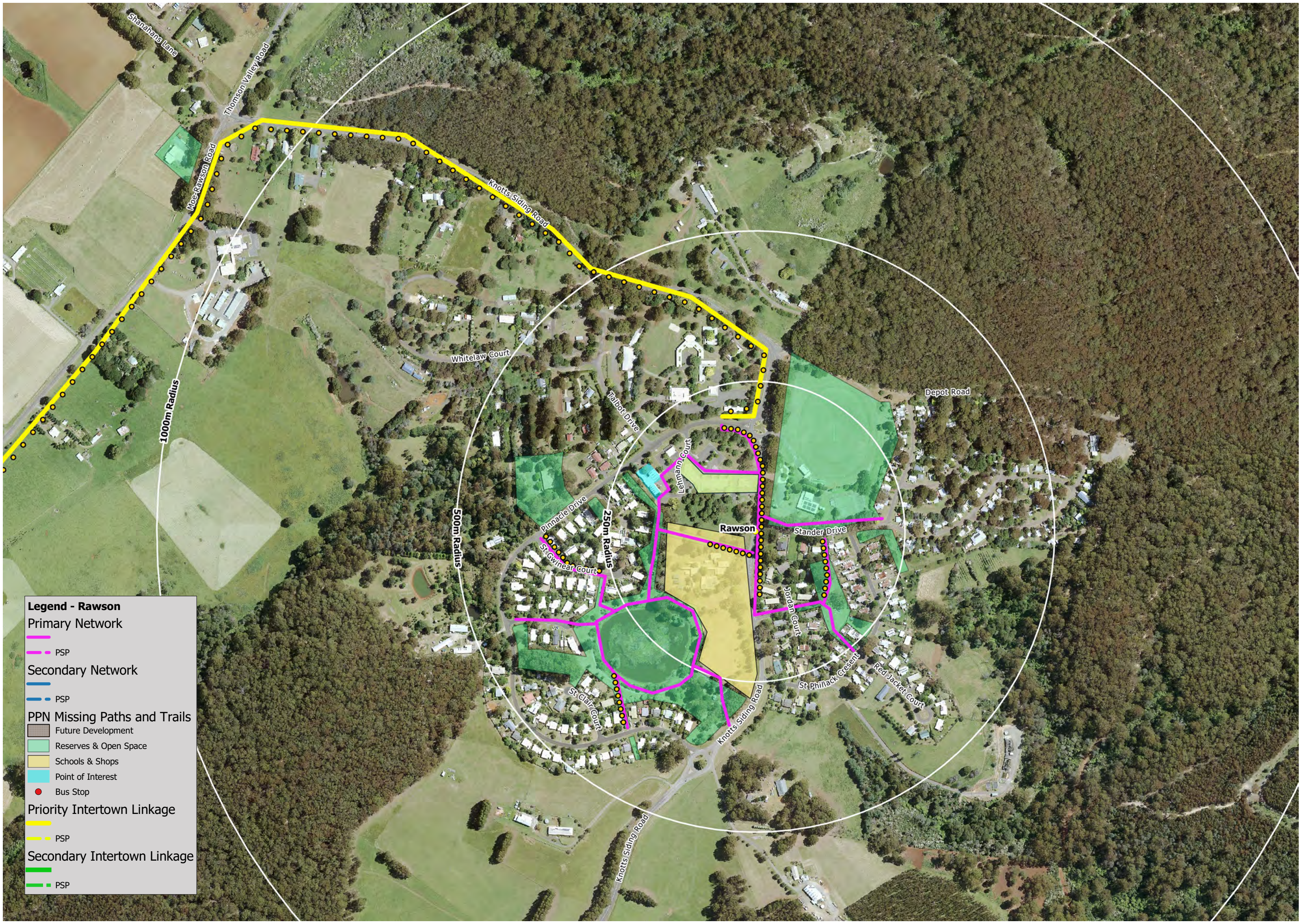
**Priority Intertown Linkage**

PSP

**Secondary Intertown Linkage**

PSP





**Legend - Rawson**

Primary Network

PSP

Secondary Network

PSP

PPN Missing Paths and Trails

Future Development

Reserves & Open Space

Schools & Shops

Point of Interest

Bus Stop

Priority Intertown Linkage

PSP

Secondary Intertown Linkage

PSP

1000m Radius

500m Radius

250m Radius

Moe-Rawson Road

Thomson Valley Road

Knotts Siding Road

Whitelaw Court

Talbot Drive

Pinnacle Drive

St Gvinear Court

Lehmann Court

Rawson

Stander Drive

Jordan Court

St Phillack Crescent

Red Jacket Court

Depot Road

St Clair Court

Knotts Siding Road

Knotts Siding Road





**Legend - Thorpdale**

**Primary Network**

— PSP

**Secondary Network**

— PSP

**PPN Missing Paths and Trails**

Future Development

Reserves & Open Space

Schools & Shops

Point of Interest

● Bus Stop

**Priority Intertown Linkage**

— PSP

**Secondary Intertown Linkage**

— PSP





**Legend - Willow Grove**

Primary Network

PSP

Secondary Network

PSP

PPN Missing Paths and Trails

Future Development

Reserves & Open Space

Schools & Shops

Point of Interest

Bus Stop

Priority Intertown Linkage

PSP

Secondary Intertown Linkage

PSP



**Villages**





**Legend - Erica**

**Primary Network**

— PSP

**Secondary Network**

— PSP

**PPN Missing Paths and Trails**

Future Development

Reserves & Open Space

Schools & Shops

Point of Interest

Bus Stop

**Priority Intertown Linkage**

— PSP

**Secondary Intertown Linkage**

— PSP





**Legend - Jindivick**

**Primary Network**

PSP

**Secondary Network**

PSP

**PPN Missing Paths and Trails**

Future Development

Reserves & Open Space

Schools & Shops

Point of Interest

Bus Stop

**Priority Intertown Linkage**

PSP

**Secondary Intertown Linkage**

PSP





**Legend - Nayook**

Primary Network

PSP

Secondary Network

PSP

PPN Missing Paths and Trails

Future Development

Reserves & Open Space

Schools & Shops

Point of Interest

Bus Stop

Priority Intertown Linkage

PSP

Secondary Intertown Linkage

PSP





**Legend - Neerim Junction**

Primary Network

PSP

Secondary Network

PSP

PPN Missing Paths and Trails

Future Development

Reserves & Open Space

Schools & Shops

Point of Interest

Bus Stop

Priority Intertown Linkage

PSP

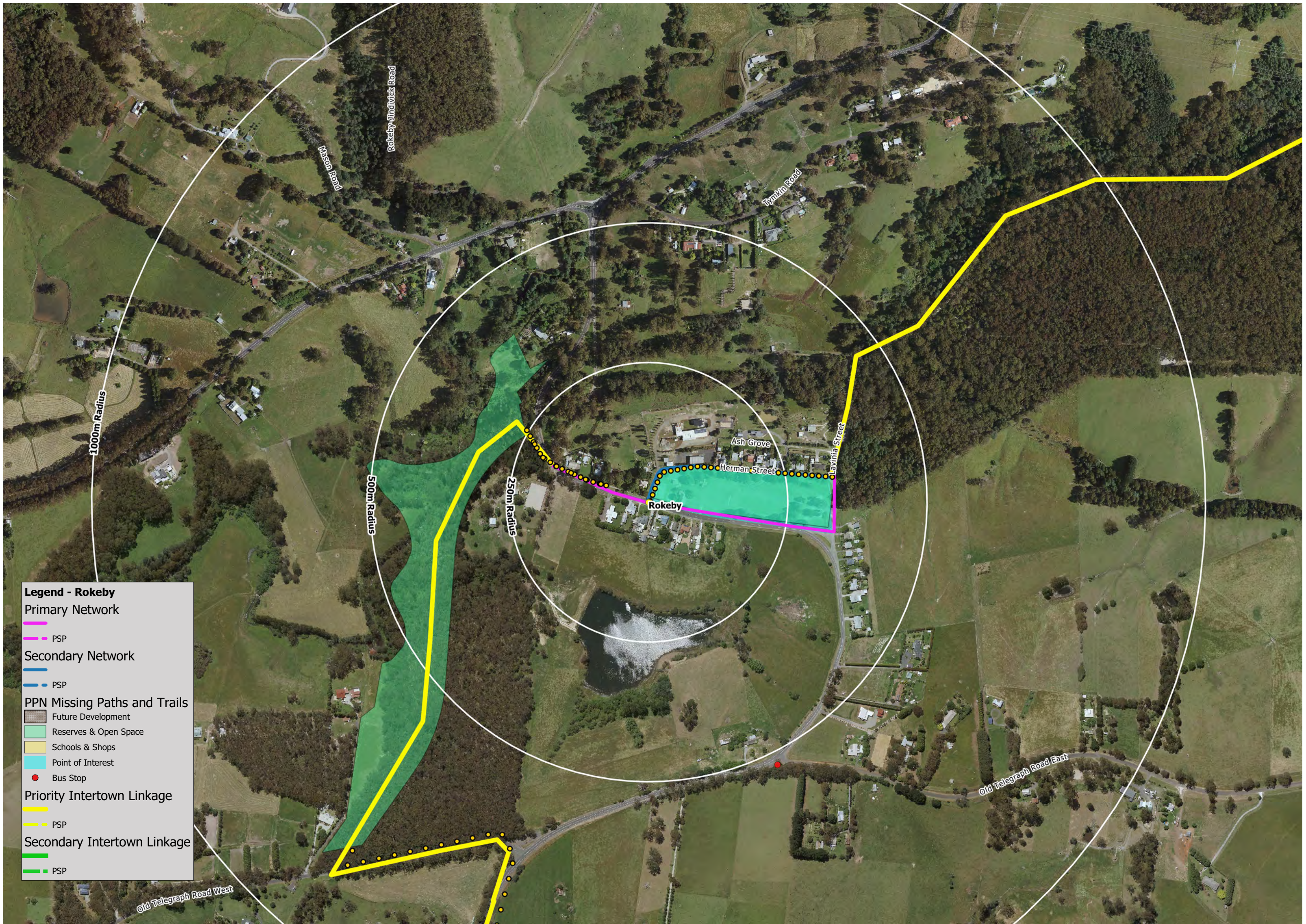
Secondary Intertown Linkage

PSP









**Legend - Rokeby**

**Primary Network**

PSP

**Secondary Network**

PSP

**PPN Missing Paths and Trails**

Future Development

Reserves & Open Space

Schools & Shops

Point of Interest

Bus Stop

**Priority Intertown Linkage**

PSP

**Secondary Intertown Linkage**

PSP



# **Tourist Towns**





**Legend - Noojee**

**Primary Network**

PSP

**Secondary Network**

PSP

**PPN Missing Paths and Trails**

Future Development

Reserves & Open Space

Schools & Shops

Point of Interest

Bus Stop

**Priority Intertown Linkage**

PSP

**Secondary Intertown Linkage**

PSP



Legend - Walhalla

Primary Network

PSP

Secondary Network

PSP

PPN Missing Paths and Trails

Future Development

Reserves & Open Space

Schools & Shops

Point of Interest

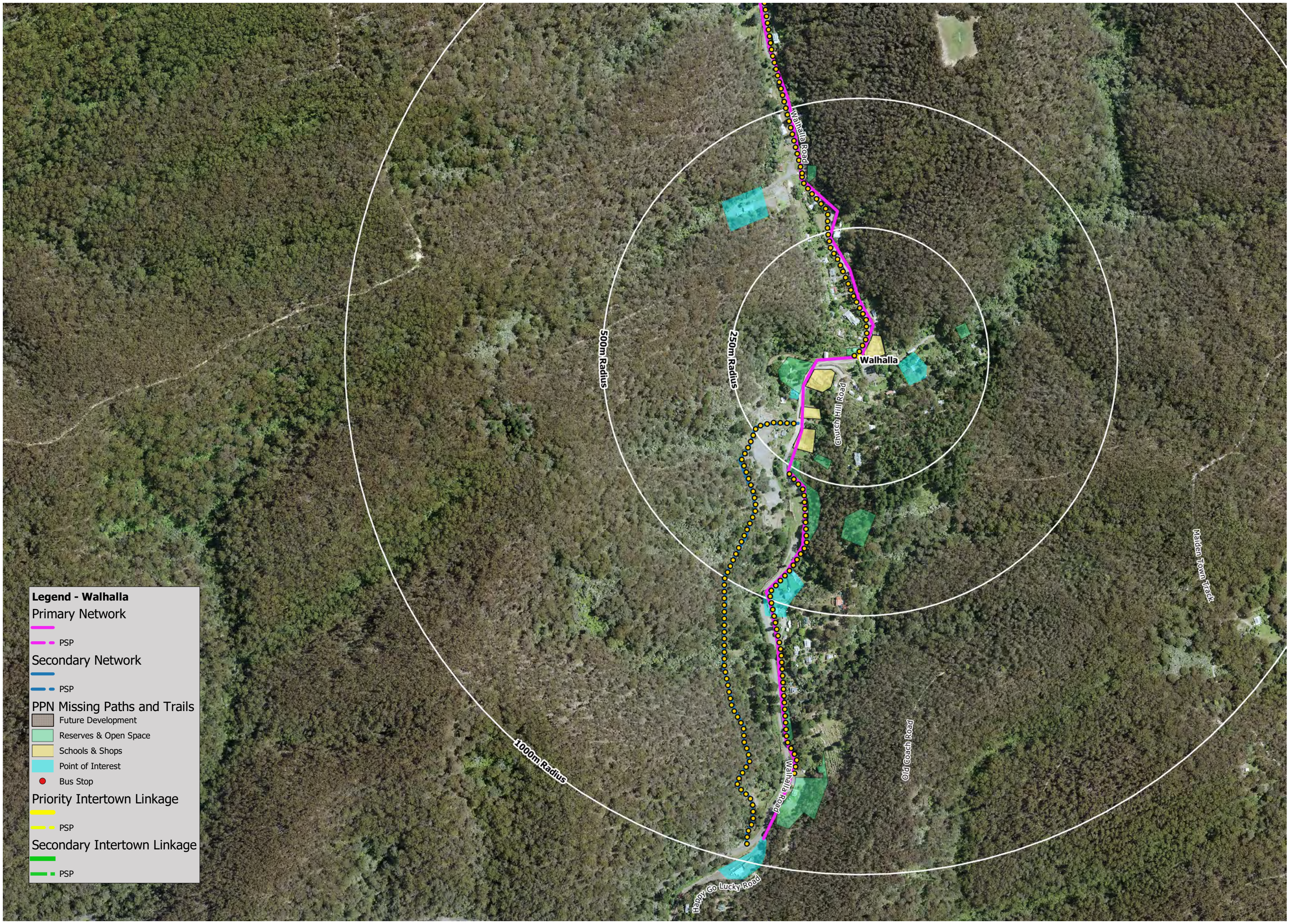
Bus Stop

Priority Intertown Linkage

PSP

Secondary Intertown Linkage

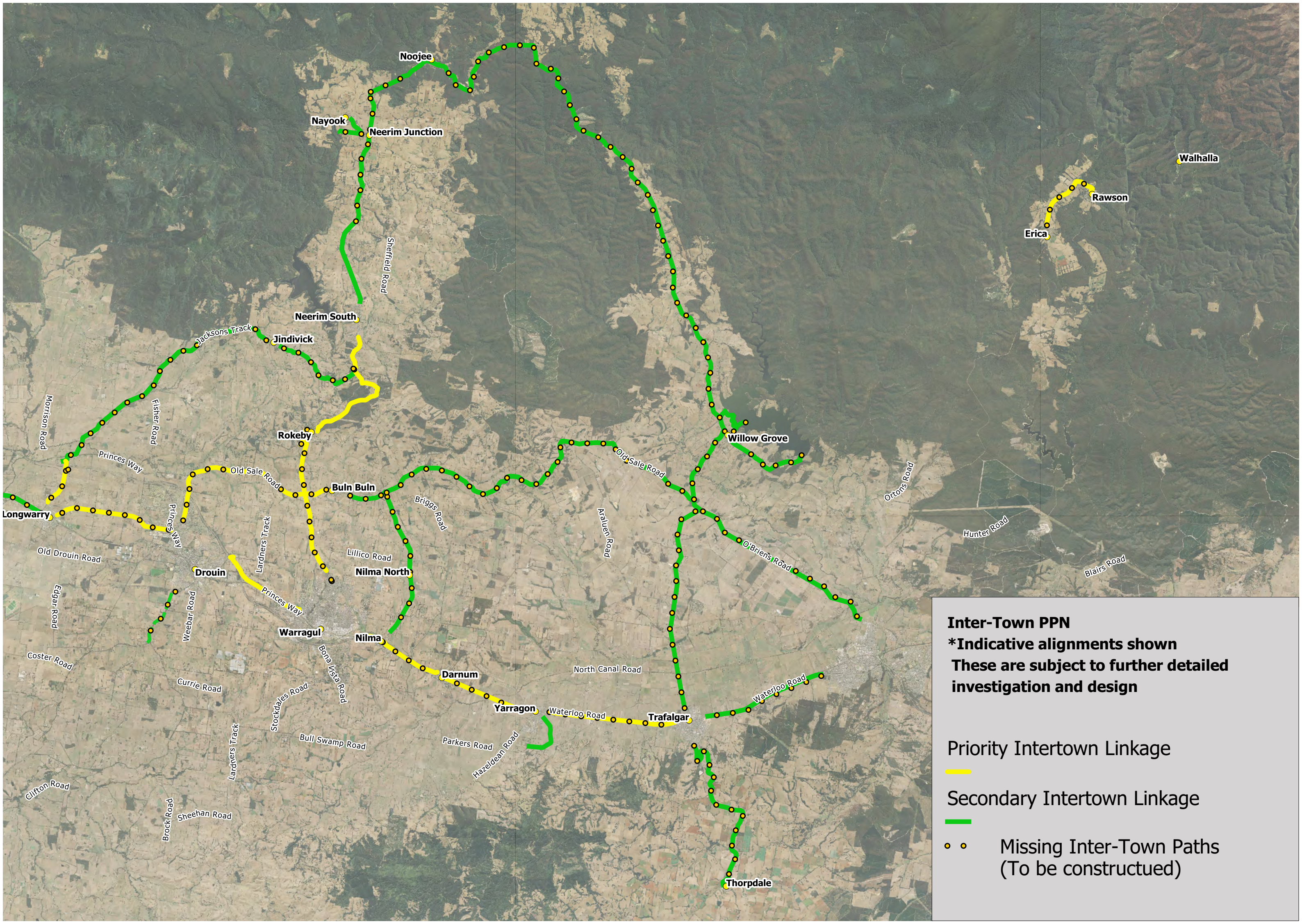
PSP





# **Inter –Town Connections**





**Inter-Town PPN**  
**\*Indicative alignments shown**  
**These are subject to further detailed investigation and design**

Priority Intertown Linkage

Secondary Intertown Linkage

Missing Inter-Town Paths  
(To be constructed)





## Appendix 2 – Paths and Trails Priority Matrix

### Scoring Criteria

Criterion	Justification	Scoring System Max Score	100
<b>Social Impact – Pedestrian Safety</b>			
<u>Road Carriageway Width</u>	Roads with multiple lanes or narrow roads are more hazardous to pedestrians. Those wishing to walk parallel to traffic on a narrow road are therefore closer to passing traffic while multi-lane roads can be unsafe to traverse.	Multi-lane roads	4
		Narrow < 6m	3
		Medium 6-6.9m	2
		Moderate 7m-7.9m	1
		Wide > 8m	0
<u>Sight Distance</u>	Visibility for pedestrians and drivers can be reduced due to road geometry. This can include crests in vertical alignment or sharp bends, intersections near footpaths etc	Severe Restrictions	5
		Serious Restrictions	3
		Moderate Restrictions	2
		Few Restrictions	1
		No Restrictions	0
<u>Speed Limit</u>	The risk to pedestrian safety increases with speed	80km/h or >	6
		60km/h - 70km/h	4
		50km/h	2
		40km/h	0
<u>Daily Traffic Volume</u>	Increases in traffic volume results in an increased likelihood of an accident as pedestrians forced to use road reserve or shoulder	>10000 vpd	10
		5001-9999 vpd	8
		3001-5000 vpd	6
		2001-3000 vpd	5
		1001-2000 vpd	4
		501-1000 vpd	2
		<500 vpd	0
<u>Parking Demand</u> <u>Infringing Access</u>	Only Parked Cars that would force pedestrians to use lane section of the road reserve.	High Evidence	3
		Frequent Evidence	2
		Occasional Evidence	1
		Minimal/No Evidence	0



## Appendix 2 – Paths and Trails Priority Matrix

Criterion	Justification	Scoring System	
<u>Alternative Access</u>	Is alternative access available off the road reserve and can be utilized by user group (i.e. Consider if a large majority of school children who lack road sense or elderly/disabled). Ignore access on other side of multi-lane road or roads with volumes > 10000 vpd or speed limit of 100km/h.	Concrete/Asphalt path on other side of road < 2500vpd	0
		Gravel Path on same or other side of road < 2500 vpd	1
		Concrete/Asphalt path on other side of road > 2500 vpd	2
		Both Nature Strip	4
		One Nature Strip	6
		None or limited	10
<u>Crash History</u>	Has there been any recorded pedestrian vs vehicle accidents recorded	Yes	10
		No	0
Social Impact – Public Response/ Demand			
<u>Requests &amp; Petitions</u>	Have CRM Requests / Recfind or petitions been received by council. The number of requests or signatures on a petition may be indicative of community support. CRM Requests weighted higher than petitions	Large Petition > 200 Signatures	4
		Medium Petition 100–199 Signatures	4
		Small Petition 40–99 Signatures	3
		Minor Petition <39 Signatures	2
		Letter with up to 10 Signatures	1
		Over 5 Requests	4
		4 Requests	3
		3 Requests	2
		2 Requests	1
		1 Request	0
<u>Disabled &amp; Elderly Access</u>	Is the path specifically required for those with a disability or elderly? Priority is given to allowing access for these user groups	Frequently utilised by many users	10
		Require use by a small number of users	5
		Not used by user groups	0



## Appendix 2 – Paths and Trails Priority Matrix

Criterion	Justification	Scoring System	
Environmental Impact			
<u>Vegetation Removal</u>	Will design require vegetation to be removed? Only score those which would detrimentally effect environment/amenity The type and quantity will determine the extent of scoring. Example of significant species; Strzelecki Gum	Significant Species	-5
		Extensive	-3
		Moderate	-2
		Low	-1
		None or limited	0
<u>Earthworks &amp; Terrain</u>	The type of terrain will influence construction costs. I.e. steep embankments or crossfalls will require retaining walls etc. Extensive earthworks will reduce cost-effective nature of footpath while reducing amenity	Extensive Earthworks/Cross fall	-3
		Significant Earthworks/Cross fall	-2
		Minor Earthworks/Cross fall	-1
		Negligible Earthworks/Cross fall	0
Social/Economic Impact			
<u>Surrounding Zone</u>	The density and type of zoning will influence the level of usage. Disregard criterion if nearby school or major community facility	Residential 1 Zoning	5
		Industrial Zoning	2
		Low-Density Residential	0
		Disregard As School Nearby	5
<u>Activity Node 1</u>	Will the path serve an adjacent or nearby facility that attracts pedestrians or caters for a significant number of them. Select the highest score applicable. If facility not listed pick node with similar pedestrian activity. Nearby facility deemed to be applicable if within 250m buffer zone of footpath length	Primary School	10
		Secondary School	8
		Shopping Centre / Railway Station	7
		Community Facility (high use i.e. parks rec trail)	6
		Large Office Complex or Tertiary Institute	5
		Community Hall, Senior Citizen, Scout Hall etc.	4
		Local Shops or Child Care Centre	3
		Local Medical Centre or Bus Stop	2
		No	0



## Appendix 2 – Paths and Trails Priority Matrix

Criterion	Justification	Scoring System	
<u>Activity Node 2</u>	Will the path serve a secondary facility or bus stop? Select the highest score applicable. If facility not listed pick node with similar pedestrian activity. Nearby facility deemed to be applicable if within 500m buffer zone of footpath length	Primary School	10
		Secondary School	8
		Shopping Centre / Railway Station	7
		Community Facility (high use i.e. parks rec trail)	6
		Large Office Complex or Tertiary Institute	5
		Community Hall, Senior Citizen, Scout Hall etc.	4
		Local Shops or Child Care Centre	3
		Local Medical Centre or Bus Stop	2
		No	0
		<u>Development Area</u>	Is there any future or current development which otherwise would cause increase pedestrian usage of the footpath. Do not include footpath sections otherwise planned for construction in new development. This includes subdivisions and major capital projects which would increase pedestrian usage
High Use Activity Node	3		
Moderate Use Activity Node	2		
Low Use Activity Node	1		
<u>Socio-Economic Status</u>	What is the status of the beneficial area? Are these people more inclined to use the path as a result of this? Use SEIFA Maps.	Very Low (1st Deciles)	6
		Low (2nd Deciles)	4
		Medium (3rd-6th Deciles)	2
		High (7th-10th Deciles)	0
Council Objectives, Major Strategies & Policies			
<u>Council Policies &amp; Strategies</u>	Does the project specifically align with the key components of the denoted strategies.*	Aligns with >4 documents	3
		Aligns with 3-4 listed documents	2
		Aligns with 1-2 listed documents	1
		No	0





# Appendix 3

## Existing Gaps

### The Primary Network

Assuming that the paths and trails program to be constructed in FY 2018/19 is delivered, the remaining principal pedestrian network for the primary network consists of the following:

- **30.6 km** of existing missing gaps within the primary network which need to be designed and constructed.
- The construction costs would cost approximately **\$6.7M**

In the current FY 2018/19, there are two inter-town connection projects that are being designed which were estimated to have a construction cost of approximately \$2M in total where external funding would need to be sought.

Please see the table below outlining missing pathways within the primary network for each program:



Appendix 3 – Existing Gaps

Table 1 – Primary Network					
Program	Townships	Km	Total Km	\$ Estimated Cost	Total \$ Estimated Cost
Major Towns	Warragul	5.90	18.5	\$1,400,000	\$4,471,000
	Drouin	9.15		\$2,345,000	
	Yarragon	1.20		\$192,000	
	Trafalgar	0.15		\$130,000	
	Longwarry	0.80		\$130,000	
	Neerim South	1.26		\$274,000	
Minor Towns	Thorpdale	1.17	6.8	\$248,000	\$1,240,400
	Darnum	2.43		\$504,000	
	Willow Grove	0.99		\$160,400	
	Rawson	0.77		\$101,000	
	Buln Buln	1.40		\$227,000	
Villages	Jindivick	0.66	3.3	\$94,000	\$525,000
	Rokeby	0.65		\$93,000	
	Nilma				
	Neerim Junction	0.62		\$120,000	
	Nayook	0.54		\$78,000	
	Erica	0.86		\$140,000	
Tourist Towns	Noojee	0.95	2.0	\$153,000	\$452,000
	Walhalla	1.09		\$299,000	
			30.6		\$6,688,400



### Appendix 3 – Existing Gaps

#### The Secondary Network

Assuming that the paths program to be designed or constructed in FY 2018/19 is delivered, the remaining principal pedestrian network for the secondary network consists of the following:

- **21 km** of existing missing gaps within the secondary network which need to be designed and constructed.
- The construction costs would cost approximately **\$3.7M**

Please see the table below outlining the missing pathways within the secondary network for each program:

Table 2 – Secondary Network – Missing Paths and Trails					
Program	Townships	Km	Total Km	\$ Estimated Cost	Total \$ Estimated Cost
Major Towns	Warragul	4.1	12.4	\$1,000,000	\$2,477,500
	Drouin	2.6		\$523,000	
	Yarragon	1.7		\$280,000	
	Trafalgar	3.3		\$543,000	
	Longwarry	0.38		\$61,500	
	Neerim South	0.32		\$70,000	
Minor Towns	Thorpdale	0.66	2.5	\$107,000	\$386,000
	Darnum	0.35		\$57,000	
	Willow Grove	0.45		\$55,000	
	Rawson	0		\$0	
	Buln Buln	1		\$167,000	
Villages	Jindivick	0	5.8	\$0	\$757,000
	Rokeby	0.37		\$53,000	
	Nilma	1.65		\$120,000	
	Neerim Junction	0		\$0	
	Nayook	1.9		\$422,000	
	Erica	1.9		\$162,000	
Tourist Towns	Noojee	0.17	0.4	\$28,000	\$118,000
	Walhalla	0.2		\$90,000	
			21.1		\$3,738,500



## The Inter-Town Trail Network

### Primary Priority Routes

Table 3 – Inter – Town Priority Network – Missing Paths and Trails					
Program	Townships	Km	Total Km	\$ Estimated Cost	Total \$ Estimated Cost
Inter Town Connections	Yarragon to Trafalgar	6.7	66.9	\$1,206,000	\$14,016,000
	Erica to Rawson	4.7		\$1,130,000	
	Brandy Creek to Buln Buln	4.6		\$830,000	
	Darnum to Yarragon	5		\$1,350,000	
	Warragul to Rokeby	7		\$1,272,000	
	Neerim South to Neerim North	4		\$720,000	
	Rokeby to Neerim South	10		\$1,460,000	
	Drouin to Drouin West	9		\$1,944,000	
	Nilma to Darnum	4.3		\$1,000,000	
	Drouin to Longwarry	8.1		\$2,600,000	
	Longwarry to Longwarry North	3.5		\$504,000	
Note: Costing is based on L/m for concrete/gravel. Additional costs for structures to be considered in detail design					



Secondary Priority Routes

Table 4 – Inter – Town Secondary Network – Missing Paths and Trails					
Program	Townships	Km	Total Km	\$ Estimated Cost	Total \$ Estimated Cost
Inter Town Connections	Trafalgar to Thorpdale	6.7	196.2	\$1,447,200	\$31,616,200
	Trafalgar to Moe	8		\$1,728,000	
	Trafalgar to Willow Grove	20		\$4,320,000	
	Willow Grove to Moe	19		\$4,104,000	
	Willow Grove to Fumina South	21		\$4,536,000	
	Willow Grove to Blue Rock Dam	10		\$2,160,000	
	Willow Grove to Buln Buln	30		\$4,320,000	
	Nilma to Buln Buln	10		\$1,440,000	
	Neerim South to Jindivick	7		\$1,000,000	
	Jindivick to Labertouche	18		\$2,600,000	
	Drouin to Drouin South Primary School	4		\$1,728,000	
	Fumina South to Noojee	30		\$432,000	
	Noojee to Neerim Junction	5		\$720,000	
	Neerim Junction to Neerim	6		865,000	
	Neerim Junction to Glen Nayook	1.5		\$216,000	
Note: Costing is based on L/m for concrete/gravel. Additional costs for structures to be considered in detail design					