

City of Ipswich

Active Transport Wayfinding Strategy

August 2018

This report was prepared for

Ipswich City Council
PO Box 191
IPSWICH QLD 4305
www.ipswich.qld.gov.au

By

Zwart Transport Planning Pty Ltd and Sustainable Transport Consultants Pty Ltd

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Introduction

The *City of Ipswich Transport Plan* (branded 'iGO') is Ipswich City Council's masterplan for Ipswich's transport future.

Implementation of this plan has seen to the development of the *iGO Active Transport Action Plan* (iGO ATAP) which provides guidance on the planning, delivery and promotion of quality facilities and programs for walking and cycling in Ipswich.

Ipswich City Council in association with key stakeholders has commenced the construction of a high quality active transport network to enable residents and visitors to walk and cycle for transport, fitness and recreation on a daily basis. In order to ensure maximum use and access to this network, a key action and signature project from iGO ATAP is the development of an *Active Transport Wayfinding Strategy and Design Manual* (this document). The purpose of the *Active Transport Wayfinding Strategy and Design Manual* is to provide consistent standards and high-quality navigation throughout the City for pedestrians and cyclists in order to build confidence in the active transport network and assist users with easily locating and accessing destinations and community facilities.

The Active Transport Wayfinding Strategy:

- sets out the strategic and contextual basis for implementing a consistent, coordinated and comprehensive directional signage system for walking and cycling routes within Ipswich
- details a framework for the implementation of wayfinding signage as part of the City of Ipswich Pedestrian and Cycle Network Plans (also referred to as Active Transport Network Plans)
- provides guidelines for identifying and assigning sign types to the network
- sets out a methodology from planning through to the installation of the signage system to meet multiple users' needs on a route by route basis
- recommends suitable technical guidelines based on recognised national and international standards.

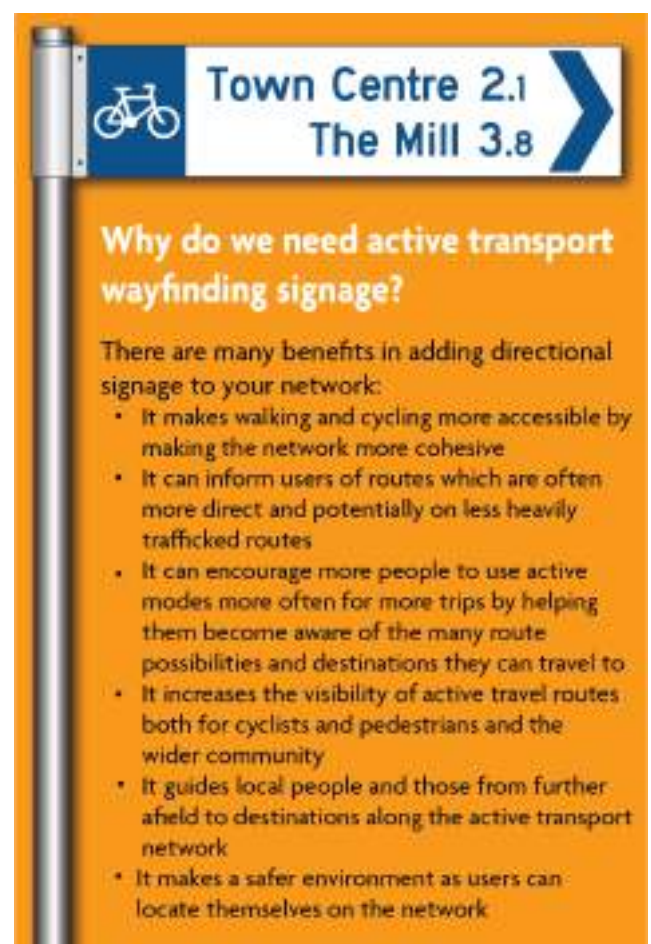
This Strategy should be read in conjunction with the *Active Transport Sign Design Manual* which provides details on the design, layout, manufacture and mounting of all signs used in the system.

The *Active Transport Wayfinding Strategy and Design Manual* have leveraged off best-practice strategic and guideline documentation, with the documents based on the proposed changes to the *Australian Standard AS17429* and new *Austrroads national signage and wayfinding guidelines* (published October

2015) which have been developed following an extensive literature review of national and international best practice.

This document is divided into the following sections:

- Introduction, objectives, existing situation and context
- Active transport signage and wayfinding framework
- Sign families and sign types
- Developing signage plans and installation



Source: Adapted from TMR, "Cycle Network Signage and Wayfinding Fact Sheet – Local Government and Transport and Main Roads reference", 2016

Objectives

The broad objective of the City of Ipswich's *Active Transport Wayfinding Strategy and Design Manual* is to provide a system of clear and consistent directions to public domain facilities to encourage and assist residents and visitors to walk and cycle more easily, comfortably and confidently in Ipswich and its surrounds.

The Strategy will achieve this by:

- Establishing a framework for the future development of wayfinding and signage for the Ipswich Cycle Network and in activity centres for pedestrians
- Formalising the planning and construction guidelines for directional signage based on recognised national and international standards, guidelines and best practice.
- Providing recommendations on the coordinated development of essential supporting information and infrastructure such as mapping, interpretation, wayfinding and navigation etc.

Existing situation

Council have implemented directional wayfinding signage on some of the existing bikeways in the City such as the Brassall and Goodna Creek Bikeways. There are also numerous information and site-interpretative signs located in and around the Ipswich City Centre and in some parks and natural areas. However, there is a lack of consistent and comprehensive signs to direct locals or visitors to popular destinations easily reached by bicycle or on foot. Most of the existing directional wayfinding signage is primarily directed at motorised road users, and may, in some instances, be of use to pedestrians and cyclists travelling on paths adjacent to the road system.

Key issues identified to date are:

- Community need for simple, clear, consistent and attractive signage and directional wayfinding on the active transport network. A community survey undertaken as part of the iGO ATAP found that 32% of non-cyclists and 17% of current pedestrians thought that signage/wayfinding on bicycle/walking routes would encourage them to cycle/walk more.
- Lack of continuity and cohesion of existing interpretive and directional signage.
- Lack of legibility in the existing and future cycle and pedestrian networks.
- Lack of strategy and design guidelines to enable Council to be consistent in their approach to active transport wayfinding signage.
- Lack of framework for co-ordination and funding of future projects.
- Opportunity to provide consistency with neighbouring local governments and State controlled elements of the active transport network.
- Opportunity to seek funding via the Department of Transport and Main Roads Cycle Network Local Government grants program for future wayfinding signage.
- Opportunity to provide guidance for directional wayfinding signage on the active transport network in new development areas.

Context

The *Active Transport Wayfinding Strategy* is supported by both State and Local Government policy and guided by national signage standards and guidelines.

National Context



State Context



Local Context



Local Sign Manuals



National Context

In 2015 Austroads produced the following updated guidance on bicycle directional signage and wayfinding systems:

- *AP-R493-15 Research Report – Bicycle Wayfinding Literature Review* (Austroads 2015) reviews best practice signage and wayfinding from Australian, New Zealand and international jurisdictions.
- *AP-R492-15 Research Report – Bicycle Wayfinding* (Austroads 2015) provides detailed recommendations for updating sign standards and guidelines including updates to AS1742.9 – Manual of Uniform Traffic Control Devices – Bicycle Facilities; Austroads Guide to Traffic Management Part 10; and AS1743 Road signs – Specifications. The report contains three technical appendices designed for early inclusion in the relevant Australian Standards and Austroads guideline documents.

These updated national guidelines for cycle network directional signage have been used as the base for preparation of the City of Ipswich's *Active Transport Sign Design Manual*. The Austroads

technical guidelines cover the planning, design and installation of the majority of signs and sign types required to sign the Ipswich network.

The Austroads guidelines supersede Queensland's previous directional signage guidelines, *TRUM Technical Note 1.36: Queensland Cycle Network Directional Signage Guidelines* (TMR, 2013).

State Context

There are a number of state policies that support active transport and the need to provide signage and wayfinding as follows:

- *Queensland Cycling Strategy 2017-2027* has a vision of more cycling, more often. To achieve this, the strategy has prioritised building connected cycle networks. To support the infrastructure, the strategy also proposes to provide up to date and consistent signage that helps people find their way while riding a bike.
- *Queensland Cycling Action Plan 2017-2019* documents the short term actions to achieve the Cycling Strategy. The action associated with signage and wayfinding in the document is to publish guidelines to support its provision.

- *SEQ Principal Cycle Network Plan 2016* identifies core strategic routes across SEQ focusing on connections to activity centres and employment nodes, universities and schools and regional recreational nodes. Wayfinding signage projects along these routes are eligible for 50/50 funding under the Department of Transport and Main Roads Cycle Network Local Government grants program.
- *Cycle Signage and Wayfinding Focal Point Map for Ipswich City Council 2016* was prepared by the Department of Transport and Main Roads, in consultation with Ipswich City Council to identify consistent focal points for wayfinding signage across SEQ on the Principal Cycle Network.

Local Context

Ipswich City Council has produced two documents that guide the delivery of walking and cycling infrastructure, as well as supporting infrastructure such as wayfinding signage:

- *iGO - The City of Ipswich Transport Plan (2016)* is Ipswich City Council's masterplan for a sustainable transport future. It outlines Council's aspirations to advance the city's transport network to a population of 435,000 people. One of the implementation areas in the plan is active transport and it identifies three policy focus areas:
 - Building quality active transport networks
 - Developing supportive active transport communities
 - Growing an active transport culture

Action AT5 in the plan is to “develop, advocate and implement a Wayfinding Strategy focussed around railway stations, other key public transport hubs and activity centres.”

- *iGO Active Transport Action Plan (2016)* - sits under iGO providing further details on how the City will reach its targets for modal change. The document provides actions under the three active transport policy focus areas identified in iGO, as well as identifying a vision and network hierarchy for walking and cycling in Ipswich and Cycle Network and Pedestrian Network Plans.
- Provision of wayfinding signage sits under the Developing Supportive Active Transport Communities policy focus area aiming to make the pedestrian and cycle network easier to use and more comfortable and convenient. Action AT5 in iGO is reinforced in the *iGO ATAP* and proposed as a signature project.

Local Signage Manuals

The *Active Transport Wayfinding Strategy and Design Manual* will complement Council's other signage manuals, including the latest versions of:

- Natural Areas Signage Manual
- Parks Signage Manual
- Indigenous Culture Signage Manual

Active transport signage and wayfinding framework

Principles of signage and wayfinding

Every signage location or intersection is subtly different with its own set of problems to resolve. To meet these changing circumstances it is essential to have a clear understanding of the key principles of effective signage.

Signs are compact pieces of information designed to transmit their messages very quickly. They are most effective if their messages are brief. This is essential when people travel at speed and the time for taking in a message and responding safely is limited.

Signs primarily communicate best through graphics and symbolism. Though much of the content of directional signs contains words, the letters which make up these words are in themselves complex graphical symbols. If the word content of a sign is lengthy or complex, it will require more time for the human brain to process the information resulting in possible errors of judgement and injury.

Even well-designed signs may fail to communicate if they are not placed so that they can be easily seen by path or trail users. Sign clutter, poor placement, insufficient colour contrast (particularly in low light situations) and complicated or wordy messages are all factors which can decrease the effectiveness of signage.

Signage guidelines are formulated to ensure good legibility. Important factors such as typeface (font), size, sign and lettering colour and sign layout are specified to ensure a consistently high legibility of signage.

Good signage brings cohesion to a walking and cycling network. Even if the provision of facilities is in its early development phase, a well-signed network of routes can provide people with the ability to more easily find their way around their area by foot or by bike. A comprehensive overview of the principles of signing (conspicuity, legibility, coherence and function) is summarised in Table 1.

Mapping

There are a number of good principles to be considered when preparing the maps for active transport signs. These are broadly noted below and more detailed information can be found in TMR's *Cycle Note B11: Producing bicycle network maps and cycling transport access guides*.

- Maps for active transport users should be specifically designed to help them with their particular navigational problems and to show the kinds of things they want to know.
- Important things must look important on the map. Information of lesser importance still needs to be readable, but only on closer inspection.
- Less is more. Good design tends towards simplicity. The best, most useable maps are often distinguished by what they do not show rather than what they do show.
- Always try to include as much useful information on a map as is possible without making the map difficult to read and use.
- Always aim to 'connect' with the end user of the map and cater to their particular needs.

Other aspects to consider in the map making process are the area covered by the map, scale of the map, cycling or walking information and how to show it, and the level of detail to show attractors. Further content details on maps for the Pedestrian Activity Centre wayfinding precincts can be found in Appendix G.

Table 1: Principles of active travel network signage

Principle	Elements	Discussion
Conspicuity	Siting	Signs should be sited so that pedestrians and cyclists have a clear view on approach and have time to respond. They should be mounted consistently along the route with adequate side clearance to sign supports.
	Mounting height	Signage should be mounted at a consistent height so as to be easily seen by all users. Signs should not be sited where they could be hit by vehicles or interfere with services (power, phone etc).
	Clutter-reduction	Visual clutter and sign proliferation should be avoided by grouping similar signage on the same support or combining information onto a single sign.
	Safe operation	Signage should be sited so as not to create a hazard to route users, or other road/path users.
	Sightlines	Signs should be sited with clear sightlines for route users.
Legibility	Clarity	Signs must be easily read by all users of the system.
	Typeface	Choice of typeface should be based on legibility. Using a mixture of upper and lower case letters increases legibility particularly in low light conditions.
	Symbols	A limited, easily recognisable and consistent palette of symbols and pictograms should be used throughout.
	Colour	Sign background and lettering colours should avoid combinations which are hard to read.
	Contrast	Maximum contrast between sign background colour and legend is desirable.
	Lettering size	A consistent lettering size for route signage should be used so that signs can be easily read by users travelling at the design speed of the route and in all lighting conditions.
	Brevity	Destinations should be designated by concise, easily understandable and unabbreviated terms. Words over 20 characters should be avoided. Use pictograms to indicate services and facilities.
	Lighting	Night time and low light operation of the route should always be considered in the design and siting of signage.
	Alignment	Route turnings and branching routes should always be accurately indicated by fingerboard type signs. Fingerboards should be fixed to prevent accidental or intentional rotation.
Coherence	Route hierarchy	Signage should reflect the type of route (i.e. its designation in the network route hierarchy – Principal Transport, Secondary Transport, Secondary Recreation and Local Transport Cycle Routes and Pedestrian Activity Centre Signs)
	Destinations	All listed destinations should be identified on the Network Focal Point Map and used consistently throughout.
	Distances	Distances are important to the users as a means of judging journey length, progress and arrival.
	Consistent information	Once a destination is stated it should be listed on each succeeding sign until it is reached (Rule of Continuity).
	Sign type	Sign type should indicate the importance of the route. Sign shape and type should relate to the location, ie plate type signs for advance warning and reassurance and fingerboard types for intersections.
	Image/branding	Route signs should be consistently designed to reflect a consistent image or branding for the route relating to either network hierarchy, municipal style, or specific route design/designation.
	Relationship to other signs	Network signage should take account of other road signage systems (eg route markers could be added to existing street signs to avoid unnecessary sign clutter).
Function	Decision points	All turnings of the route should be clearly signed. Advance direction signage should also be provided for network junctions. Reassurance direction signs also contribute to effective system redundancy.
	Consistency	Signage has to be sited consistently and in the most obvious and logical of places to meet user expectations.
	Wayfinding complexity	A signage system should operate consistently across the network to service a complexity of wayfinding needs.
	Orientation	Signage should reflect the particular orientation of the traveller.
	Human cognitive limitations	Human beings have limitations on the amount of information they can take in from the route environment in order to safely respond.
	Unambiguity	Destinations for one route should be displayed per fingerboard. Alternate or parallel routes use separate fingerboards.
	Redundancy	The sign system should be designed to permit safe and effective use even if individual signs are removed.
	Construction and installation	Signage should be durable, non-fading, and easy to erect and maintain. Simplified mounting systems compatible with existing systems will offer ease of maintenance and replacement to the sign system.

Source: AP-R493-15 Research Report – Bicycle Wayfinding Literature Review (Austroads 2015)

Active transport network route hierarchy

An active transport network is a system of interconnected routes which enable pedestrians and cyclists to easily travel within the City. Ipswich's active transport network (Cycle Network Plan and Pedestrian Network Plan) is shown in Appendix A and there are five types of active transport routes which are to be signed.

Principal transport and secondary transport bicycle routes

These routes provide connections to and between major regional destinations such as activity centres, public transport nodes, universities, schools, shopping or commercial centres, industrial areas and regional recreational facilities. Principal and secondary transport cycle routes are usually high-priority routes providing quick unhindered travel offering the most direct access with minimal delays.

Secondary recreation bicycle routes

Secondary recreation cycle routes in the Ipswich ATN are iconic recreational routes or routes that cater for sporting, training or touring longer distance cyclists. Examples of these routes are the Brisbane Valley Rail Trail and longer distance routes to Rosewood, Grandchester and Marburg.

Local transport bicycle routes

Provides connection to principal or secondary transport routes and serves as access to minor/local land use precincts or feeder routes from residential areas. These routes provide high quality connectivity to residential streets and local trip-generating facilities such as local shops, schools, community centres and libraries. Local routes provide direct access to facilities not located on principal and secondary routes.

Pedestrian activity centre signs

These are signs that are designed specifically for pedestrians and will be implemented primarily within an 800m radius of Ipswich's activity centres (refer Appendix B). The signs could also be implemented on Pedestrian Activity Streets, Pedestrian Transport Corridors and Pedestrian Access Streets, as per the iGO ATAP Pedestrian Network Plan, once pedestrian facilities and the pedestrian network is more developed.

Active transport focal point mapping

Focal Point Signage Practice is used for determining all key destination and decision points within an active transport network to ensure the accurate and consistent signing of the network. Focal Point Signage Practice is commonly used to determine all place names for the National Road Network and road networks in cities and towns. These focal point maps are maintained by road authorities for the National Road Network and by local councils for networks within cities and towns.

As active transport networks are locally or regionally based, active transport network focal point maps are usually more fine-grained and urban-oriented and use additional or different focal points to the national and city road-based networks.

Signing a single route is a relatively simple process of signing destination 'A' to destination 'B' and all sub destinations in between. Signing a network is a much more complicated process as the users must be able to logically navigate their way around the network using the signage destination information provided at the intersections of the routes.

A transport network functions more like a mesh or a web rather than a linear route. Pedestrians and cyclists may need to plan their journeys and take a number of routes to get to their destinations. The fineness of the network mesh is particularly important to network users as trip choice is often dependent on a range of factors such as slope/terrain, traffic density, route attractiveness, preferred travel speed and the quality of the available route infrastructure.

The focal point methodology is designed to ensure that navigation across a complicated network is possible and logical. A key aim of a network focal point map is to achieve rigid consistency in the use of destination names so that a coherent, logical and consistent system of signage can be developed to enable unambiguous wayfinding around the network. Only those destinations appearing on the focal point map will be used on network signage.

The most important information on the focal point map is the destination names. Routes may in time be changed (with minor adjustments in the field), as better route opportunities become available, but the destinations which appear on the network directional signs represent a closed system and may only be altered at great cost.

One of the most important underlying aspects of effective network directional signage is building trust in the transportation system. If directional signage allows pedestrians and cyclists to easily use the network to travel to a wide range of destinations, this helps build community trust in the system. Missing signs are like broken links in a chain. Signs with inconsistent or chaotic destination listings likewise degrade trust in the system.

Determination of cycle network focal points

The current version of the City of Ipswich Signage and Wayfinding Focal Point Map (see Appendix C) has been created using the iGO ATAP Cycle Network Plan and the *Cycle Signage and Wayfinding Focal Point Map for Ipswich City Council 2016* prepared by TMR in consultation with Council.

The initial selection of focal point destination names as shown on the current focal point map complies with the *AP-R492-15 Research Report – Bicycle Wayfinding* (Austroads 2015) and the focal point definitions outlined in Table 2 below. On routes where a focal point (as per Appendix C) is not immediately apparent, the designer should consult with Council’s Infrastructure Planning Branch to determine the destination names to be included on route direction signs.

Additionally, focal points are localities, not buildings such as shopping centres or pools etc. Naming these types of destinations is more appropriate on local route/destination signage.

Determination of local destinations

Local destinations and facilities can be located on a principal and secondary transport bicycle route or be accessible via a local transport bicycle route. Local destinations can include public transport facilities (train stations and bus interchanges, but not individual bus stops), community facilities (such as parks, swimming pools and libraries), emergency/ medical services (police station, hospital), shopping centres, cycling specific facilities (bicycle parking and bicycle maintenance facilities) and public toilets.

Furthermore, streets may be signed as a local destination. For example, if a street sign is not visible from a cycling route through a park, a sign may be installed to advise of the distance along a path to the nearest street.

Schools are generally not signed as local facilities as students and staff would be aware of the location of their school though they may be illustrated on cycle map signs to assist with user orientation. School path pavement wayfinding markings (as per the *Active Transport Sign Design Manual*) may be considered upon request to Council’s Infrastructure Planning Branch.

See Appendix D for further guidance on naming conventions for local destinations.

Determination of pedestrian activity centre destinations






Similar to the cycle network focal points, a hierarchy of destinations is required for pedestrian activity centre signs. These signs will vary depending on the scale and size of the activity centre. The hierarchy of focal points for pedestrians are:

- Level 1 - Major destinations relate to regional level or important destinations in the activity centre (major shopping area, regional park or citywide sports facility, hospital, train station etc.), These are similar to *focal points* on cycle network focal point maps;
- Level 2 - Sub-destinations relate to lower level destinations in the activity centre (library, local park or sporting facility, community hall, police station etc.). These are similar to the *sub-destination points* on cycle network focal point maps; and
- Level 3 - Facilities relate to services or facilities to support the user on their trip around the activity centre (information centres, toilets etc.).

Appendix E provides further information on pedestrian destinations for activity centres.

As these destinations will vary depending on the activity centre, pedestrian destination focal point maps for each activity centre in Ipswich have not been developed as part of this strategy. Overall the principles of consistency, accuracy and logic in the signing process is still required. As a result, identifying the destinations to be signed and their names is a key step in the methodology for signing for pedestrians in activity centres. An example of a pedestrian activity centre destination focal point map has also been provided in Appendix F

Table 2: Symbol definitions for cycle network focal point mapping

Destination type	Symbol*	Definition
Focal point		Major destinations (towns, regional centres and key suburbs) located on or near principal/secondary bicycle routes.
Terminal focal point		Major destinations (towns, regional centres and key suburbs) located at the ends of principal/secondary bicycle routes beyond junctions with other principal/secondary routes.
City/town centre		A city/town centre is the compact area where many routes converge and intersect at multiple junctions. The city/town centre is defined as an area (shown by a dashed boundary line) containing the multiple route junctions.
Sub destination		An important intermediate destination in between focal points usually on longer principal/secondary routes such as a district shopping centre, train station or university.
Local destination		Local destinations are accessible via local routes which usually branch or loop from principal/secondary routes. Local routes are identified to service important local community facilities and trip attractors such as local parks, swimming pools or local shops.

* Symbols used on focal point maps to denote destination type

Source: Adapted from *AP-R492-15 Research Report – Bicycle Wayfinding* (Austroads 2015)

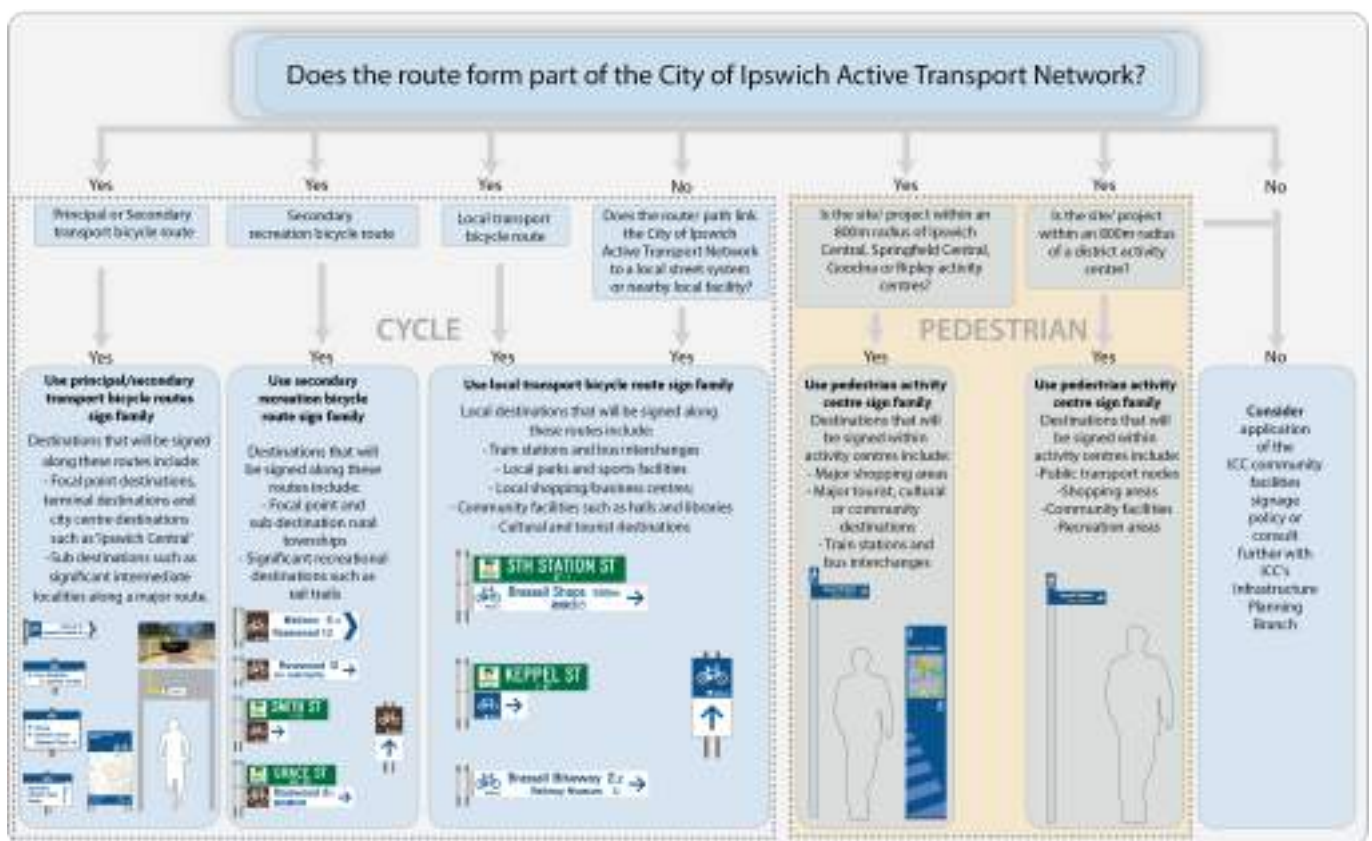
Sign families and sign types

This section introduces the signs used to mark routes within the Ipswich active transport network. Full information and technical details on sign design specifications, sign manufacture, mounting and maintenance is available in the City of Ipswich's *Active Transport Sign Design Manual*. The sign families used to mark the ATN routes utilise different sign types appropriate to each route type.

While all signs can effectively be used by either pedestrians or cyclists to assist with wayfinding, there are sign families which are more cycle focussed due to distances and speeds travelled across the network by cyclists and a sign family which is more pedestrian focussed which is to be applied in activity centres across the city.

Figure 1 summarises use of sign types by active transport route and activity centre hierarchy.

Figure 1: Sign Family Decision Tree

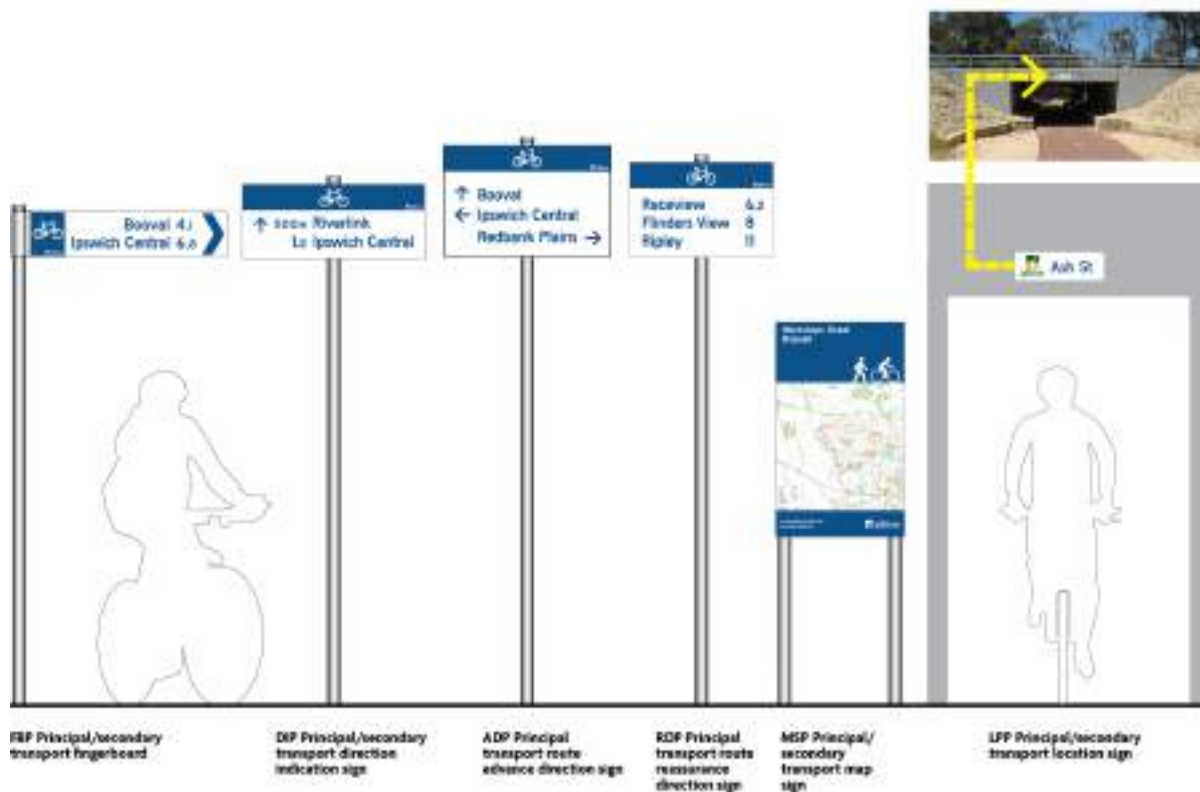


Principal transport and secondary transport bicycle route signs

The sign types (see Figure 2) used to mark principal and secondary transport bicycle routes are:

- Fingerboard** signs on principal/secondary transport cycle routes are the primary means of indicating route direction at network junctions. One or two focal points or a focal point and sub destination can be shown on this type of sign. Where routes overlap, separate fingerboards should be used for each route with the sign for the joining route mounted below the joined route's sign. Distance numerals are shown for destinations on fingerboards used at route junctions only.
 - Direction Indication** signs are used in place of fingerboards where that type of sign is difficult to mount due to insufficient clearance from traffic or inadequate sightlines. Direction Indication signs are also used between junctions with other routes to indicate a change of direction or provide reassurance in complicated urban street systems. Distance numerals are only shown on these signs when used at route junctions.
 - Advance Direction** signs are placed before a junction to indicate the route(s) being followed and the route choices available at the approaching junction. For brevity, Advance
- Direction** signs only display focal point destinations. Distances are never shown on Advance Direction signs.
 - Reassurance Direction** signs are located after intersections which have been signposted with fingerboards to reassure cyclists that they are travelling towards their intended destination and to indicate the distances to those destinations. Focal point destinations and sub destinations with their distances should be shown as a list with the closest destination to the top of the list sorted by distance. Where routes overlap, destinations and sub destinations for all routes are listed, including any route Terminal Destinations (ends of routes).
 - Location** signs are used to mark cross streets on bridges, underpasses and overpasses.
 - Facilities/Services** signs are a fingerboard-type sign used to indicate facilities and services adjacent to a principal/secondary route (toilets, shops, services) and to indicate paths linking to the local street system for principal/secondary routes in parklands (refer Figure 4).
 - Map** signs are located at key network locations and show pedestrians and cyclists the many route options which may be available to them. Map signs can be located in an off-path viewing bay. Map signs are network 'Info Points'.

Figure 2: Ipswich Active Transport Network Principal transport and secondary transport bicycle route sign family – sign types



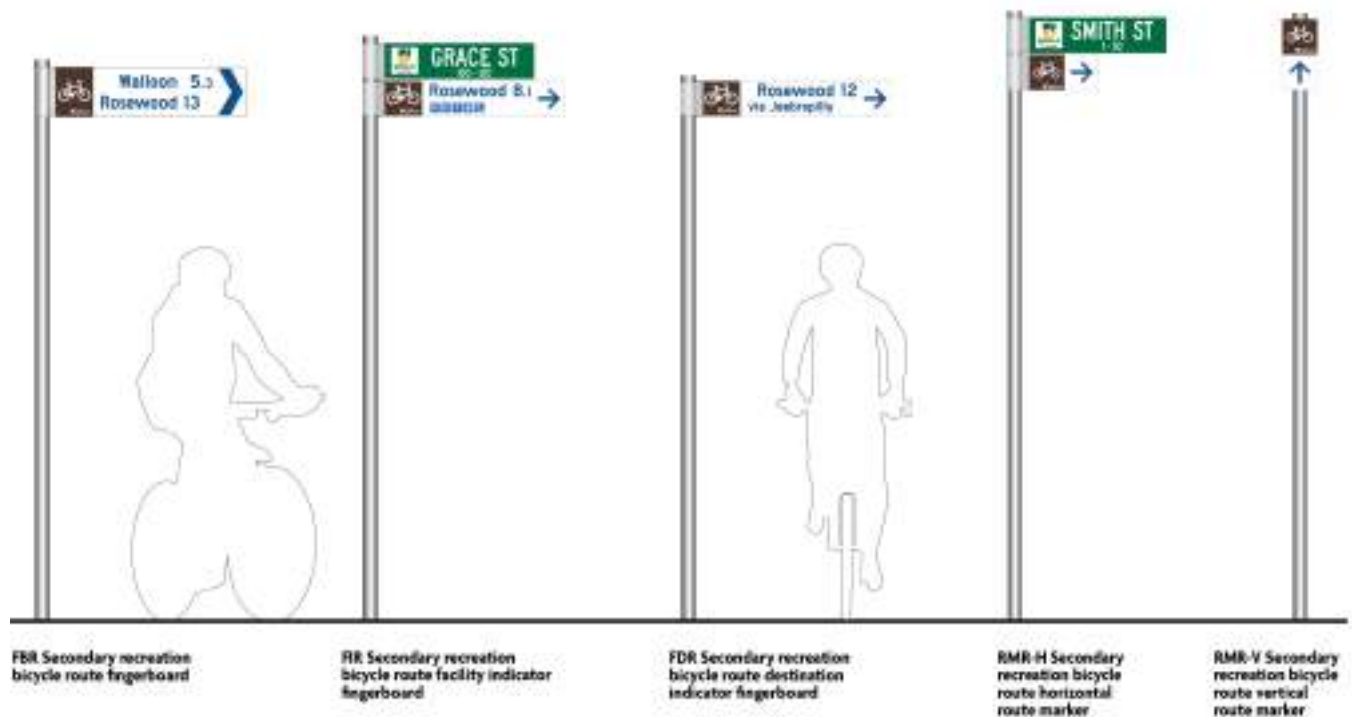
Secondary recreation bicycle route signs

These signs feature a distinctive dark brown patch to indicate touring/training and iconic recreation routes and may be subject to approval by the relevant national, state or local authority land owner when located within reserves. The sign types (see Figure 3) used on secondary recreation routes are:

- Fingerboards** are the main means of indicating travel direction at decision points and junctions on secondary recreational routes. Focal points for the route, plus any sub destinations, are shown on fingerboards along with distances. If advance or reassurance direction signage is required near an intersection to ensure adequate route wayfinding (due to complicated intersection alignments etc), route markers should be used instead.
- Location** signs are used to mark cross streets on bridges, underpasses and overpasses (refer Figure 2).

- Facilities Indicator** signs are a fingerboard-type sign used to indicate facilities and services adjacent to a secondary recreation route (toilets, shops, services).
- Facilities Destination Indicator** signs are a fingerboard-type sign used to indicate destinations relevant to the route with additional wayfinding information and a sub destination on the lower line of the sign.
- Route markers** are used as an aid to navigation at route turnings and to provide reassurance between junctions where these are some distance apart. Route markers, when used away from intersections, are placed at minimum intervals of 5km. Markers can also be used on routes as advance direction or reassurance signs to supplement intersection fingerboards.

Figure 3: Ipswich Active Transport Network Secondary recreational bicycle route sign family – sign types.



Local transport bicycle route signs

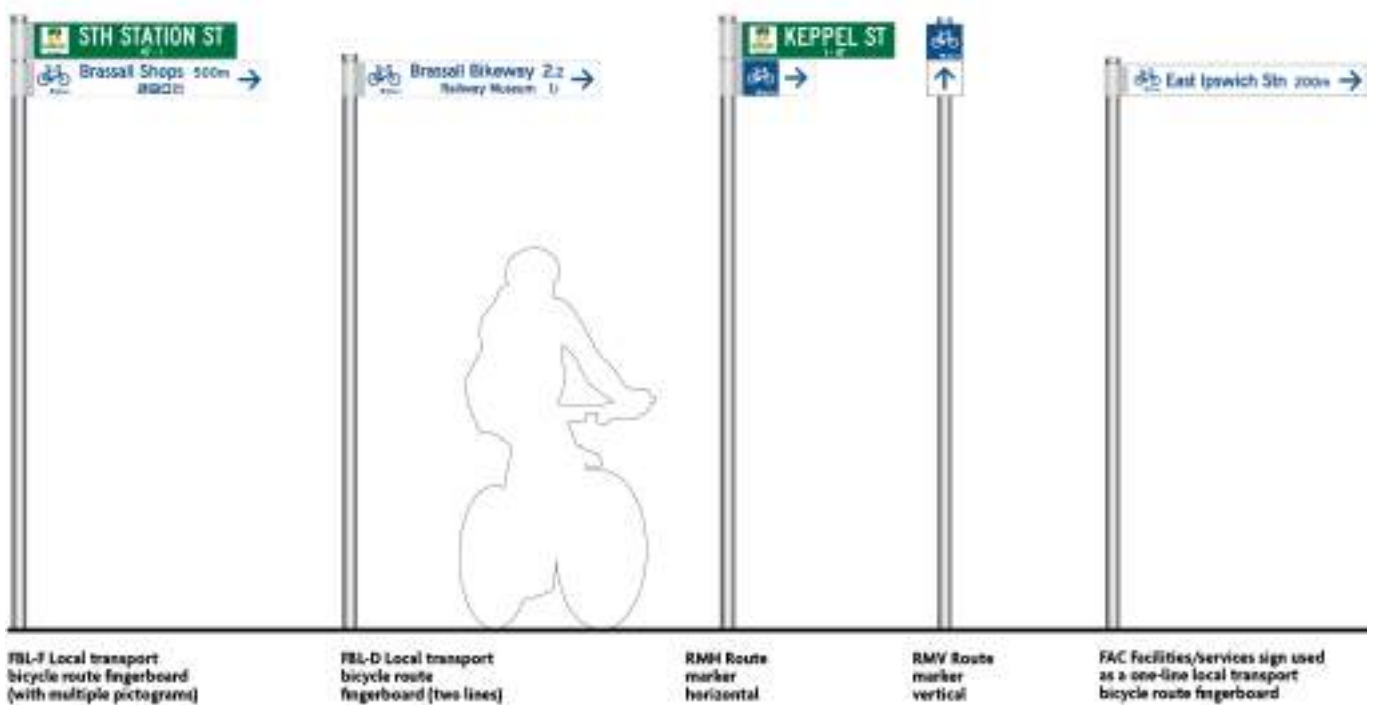
The sign types (see Figure 4) used on local transport bicycle routes, as well as on principal/secondary routes to locate nearby services, are:

- Fingerboards** on local transport routes are placed at each end of the local route, where it branches from a principal/secondary transport route and at its destination. Local route signage is closely related to local street name signage so local route signage should always, where possible, be sited below local street name signs. It may be necessary when signing local routes to install missing street signage to ensure completeness and easy navigation within the locality. Where a local route is short (maximum of three turnings from the principal/secondary transport route), the preferred method of marking the route is to install a fingerboard at each end of the route with all intermediate route turnings indicated by

Route Markers. On longer routes with many turnings, it may be useful to include additional fingerboards along the route for reassurance. Advance direction and reassurance signs are not used on local routes.

- Facilities/Services** signs are a fingerboard-type sign used to indicate facilities and services adjacent to a local route (toilets, shops, services) and to indicate paths linking to the local street system for local routes in parklands.
- Route markers** are used to supplement local route fingerboards and are mounted with street name signs to indicate a route turning.
- Location** signs are used to mark cross streets on bridges, underpasses and overpasses (refer Figure 2).

Figure 4: Ipswich Active Transport Network Local transport bicycle route sign family – sign types



Pedestrian activity centre signs

While the application of the cycle signs described previously across the ATN will also be of value to pedestrians, Council acknowledges the need to provide additional pedestrian focussed signage to key destinations within activity centres as these are pedestrian priority areas.

Though there is no current Australian standard for pedestrian directional and wayfinding signage, there are a number of highly regarded Australian and International best practice examples to provide guidance for signing these routes. A major trendsetter in pedestrian signage and wayfinding systems is the United Kingdom where the Legible Bristol and Legible London projects have set high standards for sign design and improved wayfinding in busy inner-urban settings. Since the Legible London project began in the mid-2000s a number of similar projects have been implemented in Australia, including Parramatta and Bendigo.

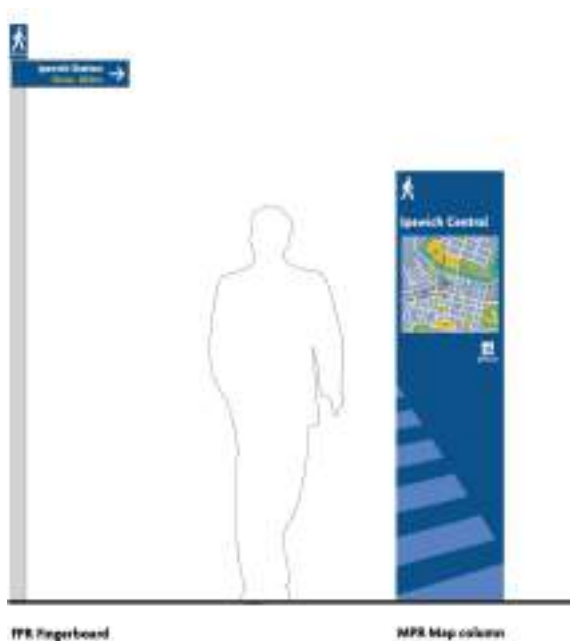
Given this, the *Active Transport Wayfinding Strategy and Design Manual* include a small family of pedestrian focussed signs, based on a review of a number of Australian pedestrian wayfinding signage examples, to be used in activity centres in the Ipswich Local Government Area. These sign designs are detailed further in the *Active Transport Sign Design Manual*.

The sign types (see Figure 5) designed for pedestrians are:

- **Fingerboards** are the main means of indicating destination direction at decision points or intersections. This sign type shows one destination with its distance and walking time. Where there are multiple destinations, separate fingerboards are used for each destination with the sign mounting stack order going from closest destination at the top to furthest destination at the bottom.
- **Map Columns** are essentially 'Info Points' which show pedestrians the nearby points of interest/ destinations from that location. A locality map showing a 10min walking catchment (approx. 800m) and showing key destinations, points of interest and public facilities will be provided on this map, complemented by a 'You Are Here' arrow. Map columns are only to be provided in Ipswich Central, Springfield Central, Goodna and Ripley activity centres and are to be located at key locations generally within an 800m walking radius from the centre of an activity centre. This is usually at the start of key walking routes into the Activity Centre (refer to ATN Map for guidance) and at other strategic locations such as activity centre gateways (e.g. railway stations, bus stations, pedestrian mall, tourist information centres etc.)

Pedestrian map guiding principles and a pedestrian column map example have been provided in Appendix G with further specifications in the *Active Transport Sign Design Manual*.

Figure 5: Pedestrian activity centre sign family – sign type



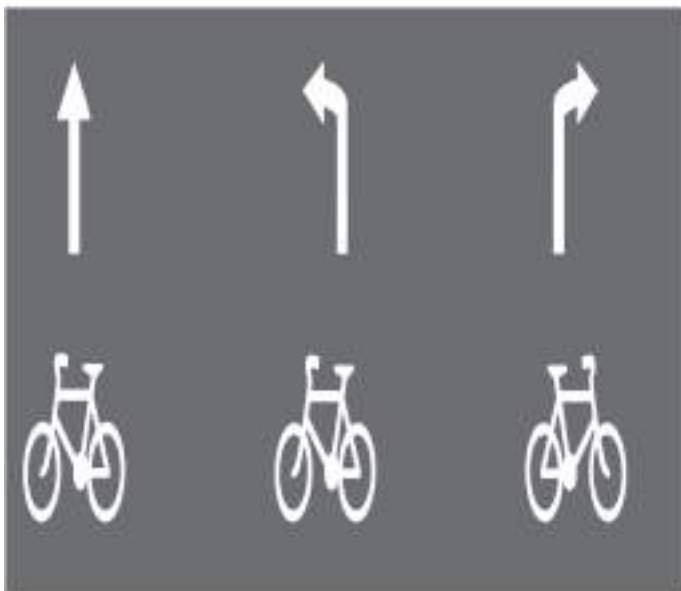
Pavement wayfinding markings

There are two key wayfinding pavement marking types that can be used across all of the above active transport network routes, except local transport routes (refer Figure 6):

- On-road pavement wayfinding markings** are for on road bicycle facilities only and aim to indicate direction of the route to aid in wayfinding for cyclists in complex situations. These are positioned in advance of a route turning.
- Off road path wayfinding markings** are a suite of pavement directional markers which indicate suggested walking routes to schools. These markings are only to be placed near schools, to complement Council walking programs/initiatives for schools and are subject to safety assessment and approval by Council's Infrastructure Planning Branch prior to application.

Figure 6: Pavement markings - wayfinding markings

On-road pavement wayfinding markings for bicycle routes only



On-road bicycle route pavement indicator (RPM-S shown)
To indicate straight ahead route travel direction

On-road bicycle route pavement indicator (RPM-L shown)
To indicate left turn ahead route travel direction

On-road bicycle route pavement indicator (RPM-R shown)
To indicate right turn ahead route travel direction

Off-road path pavement wayfinding markings



Path markers for recommended walking routes to school (subject to Council approval prior to application)
Examples shown for 5, 10 minute and untimed (passive) pavement markers

Pavement behaviour markings

Pavement marking types to assist in managing behaviour on the off road network across all of the above active transport network routes, except local transport bicycle routes and within pedestrian routes in activity centres (refer Figure 7) include:

- **Path behaviour pavement markings** are for off-road shared paths to aid good path behaviour and can be used on a situational basis where remedial action is considered necessary to ensure safe path operation. These markings are subject to safety assessment and approval by Council's Infrastructure Planning Branch prior to application.

Figure 7: Pavement Markings- Behaviour Markings



PBM Path behaviour marker



Sign planning

This Strategy establishes a directional signage and wayfinding system to sign the active transport network in the City of Ipswich. Adoption of the following framework is recommended to ensure a consistent, high standard implementation of signing across the network:

1. The Ipswich Active Transport Network (ATN), consisting of the Cycle Network Map and Pedestrian Network Map, is an integrated series of paths and on road bicycle facilities serving the needs of pedestrians and cyclists in the City. Routes which are part of this network are documented in Appendix A.
2. Directional signs are to be used on all cycle routes and in identified pedestrian wayfinding precincts (see Appendix B) on the Ipswich ATN, including those provided as part of greenfield developments, and will conform to the sign design and construction guidelines outlined in this Strategy and detailed in the *Active Transport Sign Design Manual*.
3. Destinations used on signs will conform with the current edition of the City of Ipswich Signage and Wayfinding Focal Point map (see Appendix C), the local transport bicycle route

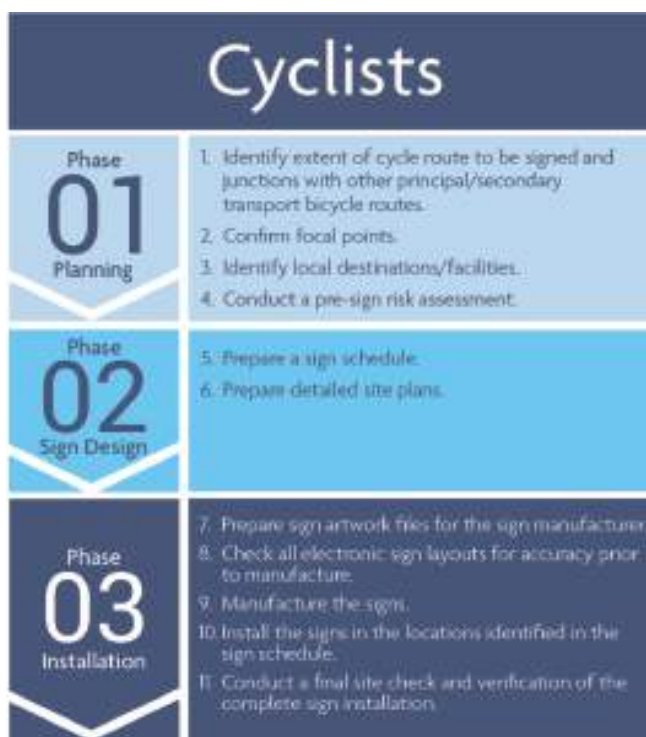
destinations/ facilities guideline (see Appendix D) and the pedestrian activity centre fingerboard destinations/ facilities guideline (see Appendix E). Examples of pedestrian activity centre decision points mapping and column maps provided in Appendix F and G respectively will also guide placement of signs and their content.

4. Sign asset managers will follow a common methodology for the planning, installation and maintenance of signs as set out in this Strategy to ensure consistent and effective service to the community. ICC's Infrastructure Planning Branch are to approve all signs before implementation.
5. Sign asset managers will utilise existing defect reporting and associated information to ensure the prompt replacement of any removed or damaged signs

Cycle Network Signing Methodology

The following methodology is recommended for all signing on the cycle network (refer Figure 8).

Figure 8: Planning a directional signage system for cyclists



Step 1: Identify extent of cycle route to be signed and junctions with other existing principal/secondary cycle routes

The purpose of this stage is to confirm the project extents and its interaction with other principal/secondary cycle routes.

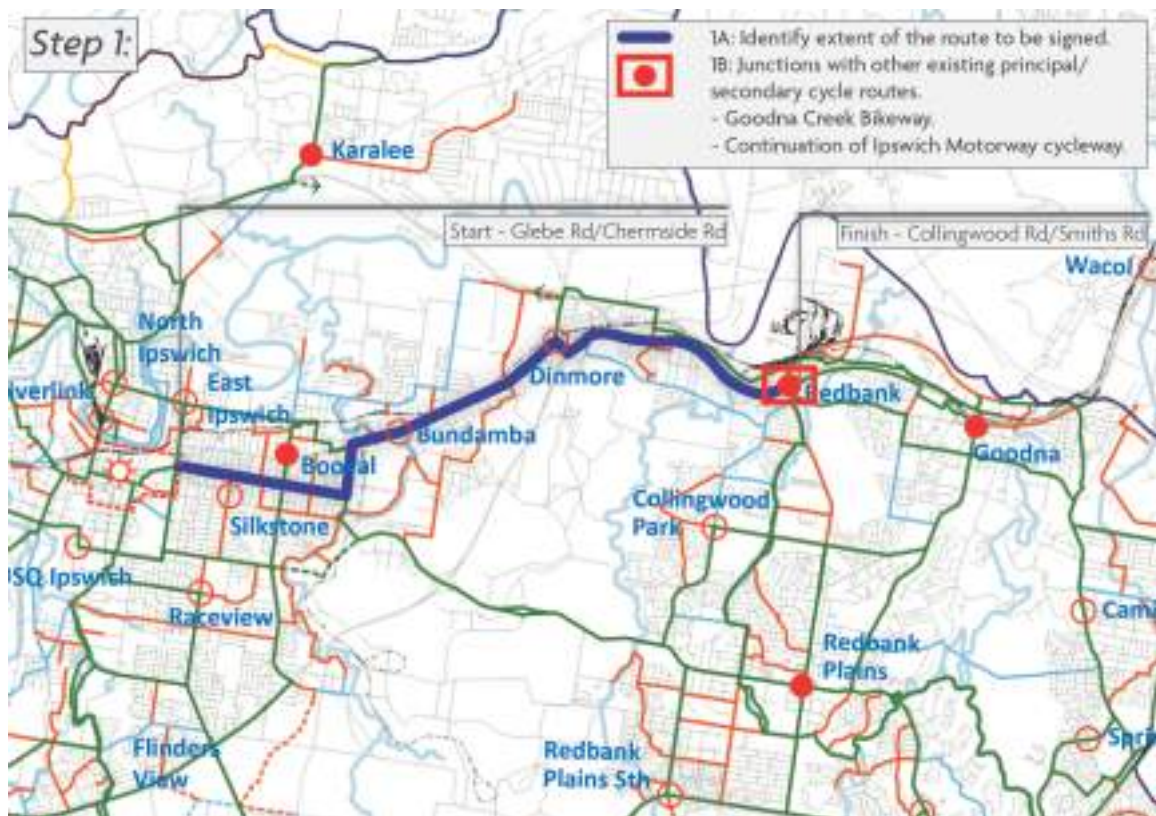
Signing a single route is relatively simple process of signing from point A to B, and all focal points in between. Signing a network is much more complex, as it functions as a web of routes rather a linear route. The purpose of this first step is to determine the correct route alignments to be signed, including start and end points and junctions with other cycle routes (or planned cycle routes).

The planning phase for signing cycle networks only concerns cycle routes and not facilities (e.g. shared paths, bicycle lanes etc). Instead, during sign installation the type and existence of cycling facilities are a key consideration because the precise siting of any directional signs will often be influenced by the facilities present.

The next part of this step is to identify all the existing interconnecting cycle routes and their destinations (the focal points). This planning is crucial, so that each route can be fully signed, not in isolation, but as part of the network. Route junctions are signed not only to indicate the destinations for the route being followed, but also to indicate the full range of destinations available at that location. For example, at a junction of two principal transport routes, the advance direction signs on each approach will list the next focal point for the route being followed, as well as the focal points accessible from the intersecting routes.

Figure 9 illustrates the tasks that would be undertaken for this step, utilising an example route to be signed between Ipswich Central and Redbank. The route interconnects with the existing Goodna Creek Bikeway and additional focal points may need to be signed at this location.

Figure 9: Step 1 Example – identifying extent of cycle route and junctions



Step 2: Confirm focal points

The focal point map is an essential planning tool used to define the destinations which appear on directional signs for the network. The key aim of the cycle network focal point map is to ensure rigid consistency across the network. Using ad hoc destinations on signs creates confusion and a lack of confidence in the wayfinding system. It is therefore essential that only those destinations appearing on the focal point map are used on cycle network signs.

A review of the City of Ipswich’s Signage and Wayfinding Focal Point Map (refer Appendix C) should be undertaken for the route to be signed. Locations to be used as focal points and the name used by each focal point is also to be confirmed. In some cases, small modifications to focal point locations may be required due to the route alignment. Any changes to focal points locations or names should be recorded and updated regularly on the master focal point map (Appendix C).

Figure 10 illustrates defining and confirming focal points for the example route to be signed between Ipswich Central and Redbank. The figure illustrates the focal points names required for each section of the bikeway and also identifies the need to decide if the Booval focal point is signed from this route as an

off-route focal point (refer Issues to consider when signing routes) or whether the location of the focal point is moved to the route being signed and the focal point map updated accordingly. It may also be appropriate to refer to the end destination of this route which is outside of Council boundaries (Brisbane City).

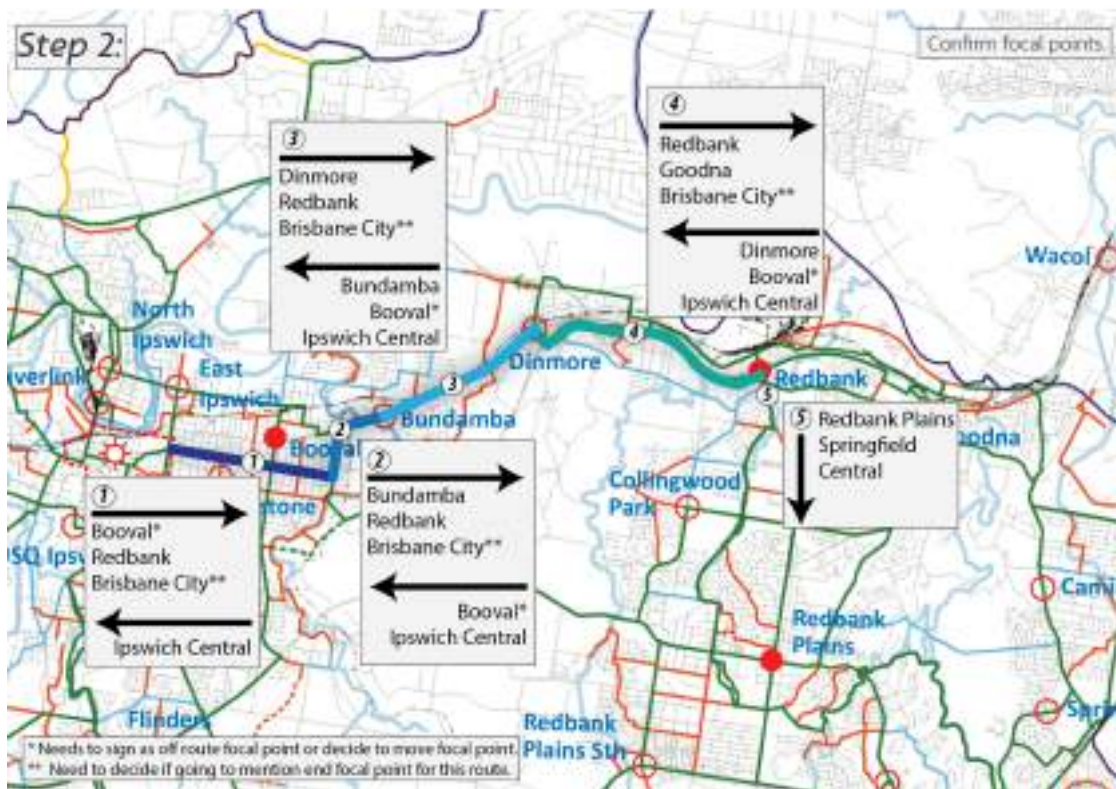
Document any route branding required on signs

At this stage of the process, any route branding required on signs can be identified. Currently the Ipswich ATN has not identified any route branding and therefore this step is not required. This step is therefore a place-marker for the future if/when Council decide to introduce route branding.

The application of route branding is an increasingly common way to improve promotional identity and greater user awareness. Branding usually involves adding conspicuous design elements such as branding logos and specialised support signage including route specific map panels and interpretive signage to give the route a distinctive and memorable appearance.

Further information on route branding can be found in *AP-R492-15 Research Report – Bicycle Wayfinding* (Austroads 2015) guidelines.

Figure 10: Step 2 Example – identify focal points



Step 3: Identify local destinations/ facilities

This step involves identifying local destinations or facilities such as local parks and shops along the cycle route to be signed, so appropriate reference can be made to these at appropriate locations and in a consistent manner. This process can also identify services or facilities such as police stations, toilets, bike parking which could be referred to on signs as pictograms. Refer to Appendix D for further guidance on Identifying local destinations/ facilities. These local facilities will need to be ground truthed, and others identified, during the site visit of the route to be signed (refer Step 4 and 5).

If a number of turns are required to access a local destination, local route signage should be continued along the entire length of the route. For example, a train station may be 1.5km off a principal transport route via a local transport route. If it is proposed to sign to this local destination from the route being signed then all decision points should be signed between the principal route and the local destination.

Figure 11 illustrates local destinations to be signed along the example route to be signed between Ipswich Central and Redbank.

Step 4: Conduct a pre-sign risk assessment

Prior to the installation of directional signs on a route it is recommended that a physical on-site risk assessment be made (see Table 3 example). This assessment will identify the cycle facilities to be used as part of the route and study the condition of these facilities to determine if it can be signed.

The condition of existing facilities on- and off-road, intersections/crossing points and any critical safety issues are to be noted. Where major high-risk deficiencies occur in the permanent infrastructure, remedial action is to be recommended and carried out prior to sign installation.

Recommendations for pre-sign risk-assessment procedures are provided in the Queensland Transport and Main Roads publication *A Guide to Signing Cycle Networks* (search title on the TMR website www.tmr.qld.gov.au).

The other tasks that can be undertaken as part of the pre-sign risk assessment include:

- Confirm local destinations – locations and other local destinations not already identified. The site visit can also identify any side streets that may need to be signed along the route. The need for signs to local side streets are more necessary along off road paths along creeks where existing street signs may not be visible.
- Confirm decision points along the route to be signed. These are in locations where users need to be directed to make a turn along the route or where the direction of the route is not obvious. Figure 11 illustrates potential decision points along the route to be signed.

Figure 11: Step 3 Example – identify local destinations



Table 3: Example of pre-sign risk-assessment issues and recommendations

Route	Route extent	Summary of issues to be resolved before sign installation	Recommended actions prior to sign installation
RA	MyTownA to MyTownB	XYZ Street closure not signed as a shared path. ABC Avenue (southern side between DEF Avenue and GHI Street not signed as a shared path. Narrow bridge across rail line near LMN Station. PQR Street contra-flow lane median needs a constructed gap to permit turn into XYZ Street.	Install shared path signs at the XYZ Street closure, ABC Avenue between GHI Street and DEF Avenue. Install guidance signs for cyclists to dismount on the narrow pedestrian bridge over the railway on LMN Road. Construct turning gap in PQR Street median at XYZ Street. Route signed as recommended in signage schedule.
RB	MyTownB to MyTownC	This route is currently rideable as described.	Route to be signed as recommended in signage schedule.

Step 5: Prepare a sign schedule

A sign schedule (see Figure 13 example and Appendix H) is the key product of this step and the reference document used to specify the content and location of all signs in a project. Details included in a sign schedule are:

- Content for all signs in the project (including destinations, distances and direction arrows etc). This should also include location and content of any map sign types.
- Sign type and reference number (refer Table 5 and the *Active Transport Sign Design Manual*).
- Travel direction to indicate the mounting orientation of the sign.
- Precise location of each sign. It is recommended that marked-up site photos, detailed site maps or diagrams be included with the sign schedule to ensure an accurate communication with the sign installer for each sign's particular siting requirements. Refer Step 6 for further details.
- Mounting details/requirements (e.g. new pole, existing poles, modifications to existing poles, type of mounting etc).

- New signs found necessary by the site assessment (e.g. missing regulatory signs, facility/services indicator signs, signs indicating connecting paths to the street system, additional signs at junctions for separate on- or off-road facilities and street name signs at junctions and route turnings).
- Redundant signs to be removed (e.g. old or contradictory wayfinding signage, incorrect regulatory signs).
- Additional works required to fully install the signs (e.g. minor tree pruning and branch removal where vegetation obscures signs when installed).

A site visit on bike is recommended in this step to identify suitable locations for signs, as well as existing relevant wayfinding signs. Signs are to be located at all decision points along the route (at a minimum) which is usually at route junctions/intersections.

Figure 1 on page 12 illustrated the sign family decision tree for each route type in the Active Transport Network. Table 4 details the sign families and the sign types within each family to be used to guide the choice on sign type within the sign schedule.

Figure 12: Key Rules for Consistent Signing

Key rules for consistent signing

- The only destination names used on directional signs are focal points, terminal focal points, city/town centres and sub destinations shown on the focal point map.
- Once a destination is listed on a sign, it continues to be listed on all signs along that route until the destination is reached.
- When a particular destination is reached, the next destination is listed in its place.
- Destinations closest to the sign are always listed to the top of the sign.
- Only destinations occurring on a route are listed on signs along that route. Advance direction signs are an exception to this rule as they show focal points for all routes passing through the junction.
- Focal point destinations take precedence over sub destinations where space is limited on signs. Sub destinations are usually only used on longer routes with intermediate centres which are important 'markers' for cyclists using the route.

Figure 13: Example Sign Schedule

Route Directional Signage Masterplan Schedule							Contractor Site Sur	
Site Ref	Junction description	Sign No	Sign type	Ref No	Travel direction	Sign lettering	Remarks	Site Inspection Photo No.
1a	Lower River Terrace and V1 Cycleway	E1	Reassurance direction board		S	South East Freeway Bikeway Park Rd 1.5km Stones Cnr 2.9km Griffith University 11.2km Klump Rd 12.0km	Located on pole on southern side of Lower River Terrace at entrance to bikeway. This sign no longer meets TMR standards - Remove sign and poles	R1.1.E1.jpg
		E2	Advance direction board		N	← City via South Bank Parklands Kangaroo Point Bikeway →	Located on pole on southern side of Lower River Terrace at entrance to bikeway (back to back with above sign). This sign no longer meets TMR standards - Remove sign and poles	R1.1.E2.jpg
		E3	Fingerboard	BCC DR1-1		Goodwill Bridge 500m → Victoria Bridge 1.7km	Located on pole on northern side of Lower River Terrace, north of bikeway	R1.1.E3-5.jpg
		E4	Fingerboard	BCC DR1-2		Thornton St Ferry 1.2km → Holman St Ferry 1.83km	Located on pole on northern side of Lower River Terrace, north of bikeway - same pole as above	R1.1.E3-5.jpg
		E5	Fingerboard	BCC DR1-3		V1 Veloway → O'Keefe St 1.95km	Located on pole on northern side of Lower River Terrace, north of bikeway - same pole as above	R1.1.E3-5.jpg
		1	Fingerboard with numbered principal route	G2-C04-2	S	(V1) Stones Corner 2.4 → Tarragindi 4.8	New pole located adjacent fence on southern side of Lower River Tce, west side of bikeway. Sign to face south along bikeway	R1.1.1-2.jpg
		2	Fingerboard with numbered principal route	G2-C04-2	N	(V1) South Bank 500m → Brisbane City 1	New pole located adjacent fence on southern side of Lower River Tce, west side of bikeway. Sign to face north across Lower River Tce	R1.1a.1-2.jpg
1b	V1 Cycleway, south of Lower River Terrace	3	Reassurance direction board	G4-C02	S	V1 Cycleway Stones Corner 2.3 Tarragindi 4.8 Griffith University 8.7 Upper Mt Gravatt 12 Eight Mile Plains 14	New pole located adjacent pathway on eastern side approx 60m south of Lower River Tce. Sign to face north for southbound users	R1.1b.3.jpg
2	Allen Street and V1 Cycleway	4	Fingerboard with numbered principal route	G2-C04-2	S	(V1) Stones Corner 2.1 → Tarragindi 4.5	Clamp new pole to top of existing fence/upright pole on east side of path opp Allan St to keep sign clear of path. Sign to face south	R1.2.4-6.jpg
		5	Fingerboard with numbered principal route	G2-C04-2	N	(V1) South Bank 800m → Brisbane City 1.3	Clamp new pole to top of existing fence/upright pole on east side of path opp Allan St to keep sign clear of path. Sign to face north	R1.2.4-6.jpg
		6	Local Fingerboard	G2-C06-1	W	Stanley St 100m →	Clamp new pole to top of existing fence/upright pole on east side of path opp Allan St to keep sign clear of path. Sign to face west Place local sign last	R1.2.4-6.jpg
3	Pathway Access to Trinity Lane and V1 Cycleway	E6	Direction board		E	To South East Freeway Bikeway	On path leading to Trinity Lane, west side of V1 Bikeway. Sign covered by vegetation. This sign no longer meets TMR standards - Remove sign and poles	R1.3.E6.jpg
		7	Fingerboard with numbered principal route	G2-C04-2	S	(V1) Stones Corner 1.8 → Tarragindi 4.3	Clamp new pole to top of existing fence/upright pole (last pole in fence) on east side of path opp Trinity Lane pathway to keep sign clear of path. Sign to face north	R1.3.7.4.jpg

Key to row colours used in the sign schedules

Colour	Explanation
	New sign as per instructions
	Existing sign to be removed
	Existing sign to be retained and remounted as per instructions
	Signs belonging to another route installed at junctions where routes overlap or cross. These duplicate rows are shown so all signs to be installed at a junction can be identified.
	Signs installed as part of another project but relevant to the route planned

Notes on the sign schedule

An example of an extract from a Sign Schedule is provided in Figure 13. It shows each sign as a separate row. Row colours (see table above) denote new signs, existing signs to remain in use or be removed. Existing signs showing inconsistent destinations are misleading and are recommended for replacement or removal in the schedule. These signs are shown in the schedule with a pink row colour. Retained and remounted signs are shown in green.

Each site to be signed is given a unique reference number (Column 1). All new signs are uniquely numbered – see Column 3. Existing signs to be retained or removed are given an identifying code letter.

The sign reference numbers in Column 5 refer to sign designs detailed in the City of Ipswich’s *Active Transport Sign Design Manual*. Dimensioning and construction details for each sign type can also be found in the *Active Transport Sign Design Manual*.

Signs sites are described in a consistent travel direction. Travel direction codes (Column 6) indicate the orientation of signs along each route: W = signs face or direct westbound path users; E = signs face or direct eastbound path users. Additional direction indication in brackets eg: E (N), denotes the actual path direction of the route at specific sites, in this example the eastbound route actually travels north at this location. Advance direction and direction indication signs always face the traveller, fingerboards point in the direction of travel.

Table 4: Sign families and sign types used for each route type in the City of Ipswich Active Transport Network

		ROUTE TYPES			
		CYCLISTS			
		Principal transport	Secondary transport	Secondary recreation	Local transport
		Main arterials of an urban cycle network providing connections to and between major regional destinations	Main routes supporting the principal transport bicycle route network	Iconic recreational routes and identified touring/training routes	Routes connecting principal and secondary transport bicycle routes to local destinations
SIGN TYPES	Fingerboard signs	YES ¹	YES ¹	YES ¹	At start and finish of routes and where needed
	Direction indication signs	In place of fingerboards where they can't be used.	In place of fingerboards where they can't be used.	NO ²	NO ²
	Advance direction signs	Only on high speed commuter routes	NO	NO	NO
	Reassurance signs	Only on lengthy routes after major junctions	NO	NO ²	NO ²
	Facility/destination signs	YES	YES	YES	YES
	Location signs	YES, at underpasses	YES, at underpasses	YES, at underpasses	YES, at underpasses
	Route markers	Use direction indication signs	Use direction indication signs	YES	YES
	Map signs/columns	YES ³	YES ³	YES ³	NO
	Street signs	YES ⁴	YES ⁴	YES ⁴	YES ⁴
	Pavement wayfinding markings	YES ⁵	YES ⁵	YES ⁵	NO
Pavement behaviour markings	YES ⁵	YES ⁵	YES ⁵	NO	

¹ At junctions with other routes and where routes change direction

² Use route markers instead

³ At key gateway/ high demand locations. For pedestrian map columns, in Ipswich Central, Springfield Central, Goodna and Ripley activity centres only

⁴ If none exist

⁵ As needed and subject to approval by ICC's Infrastructure Planning Branch

Issues to consider when preparing sign schedules

Sign layouts for route junctions

Signing route junctions can be complex as they are a key decision point for the user. It is important to portray information simply, and provide this information in a visible location. Figures 14, 15 and 16 from the *AP-R492-15 Research Report – Bicycle Wayfinding* (Austroads 2015) show recommended intersection sign layouts for different route types. These are provided to guide location and content of signs at these complex intersections

Figure 14: Typical intersection sign placement layout for local transport routes, branching from principal/secondary transport routes

Example taken AP-R492-15 Research Report – Bicycle Wayfinding (Austroads 2015)

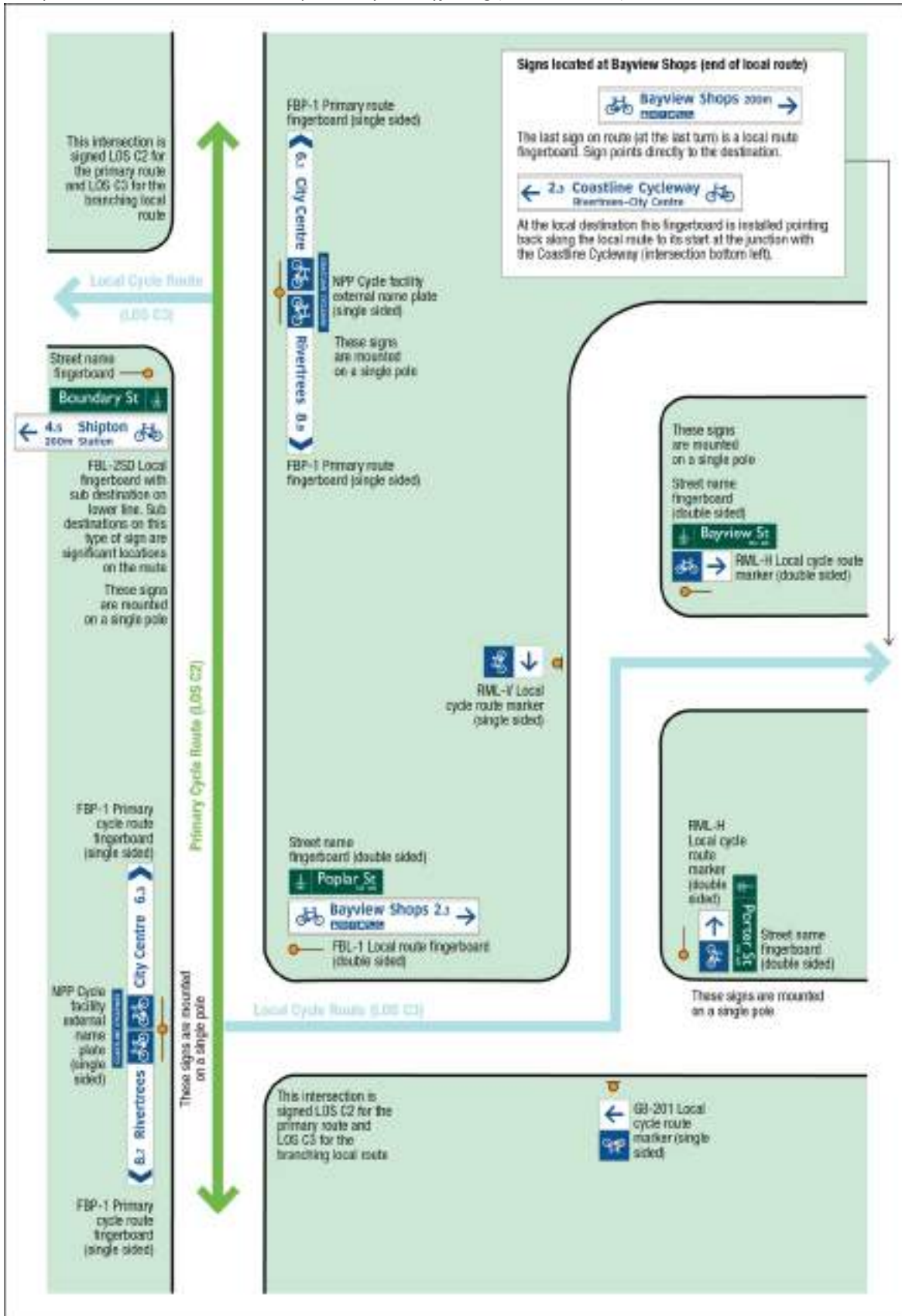


Figure 15: Typical intersection sign placement layout for secondary recreation bicycle route.

Example taken from AP-R492-15 Research Report – Bicycle Wayfinding (Austroads 2015)

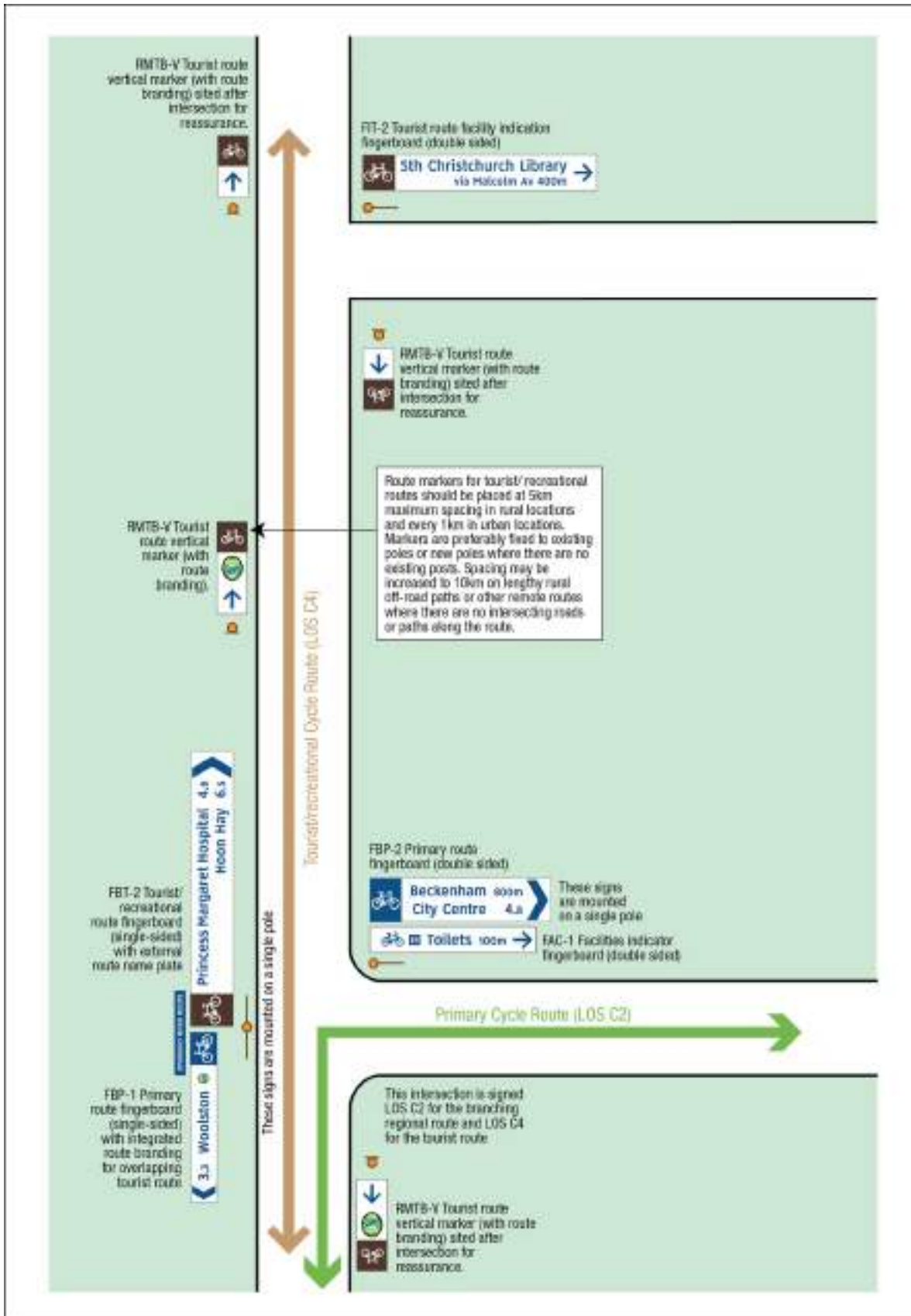
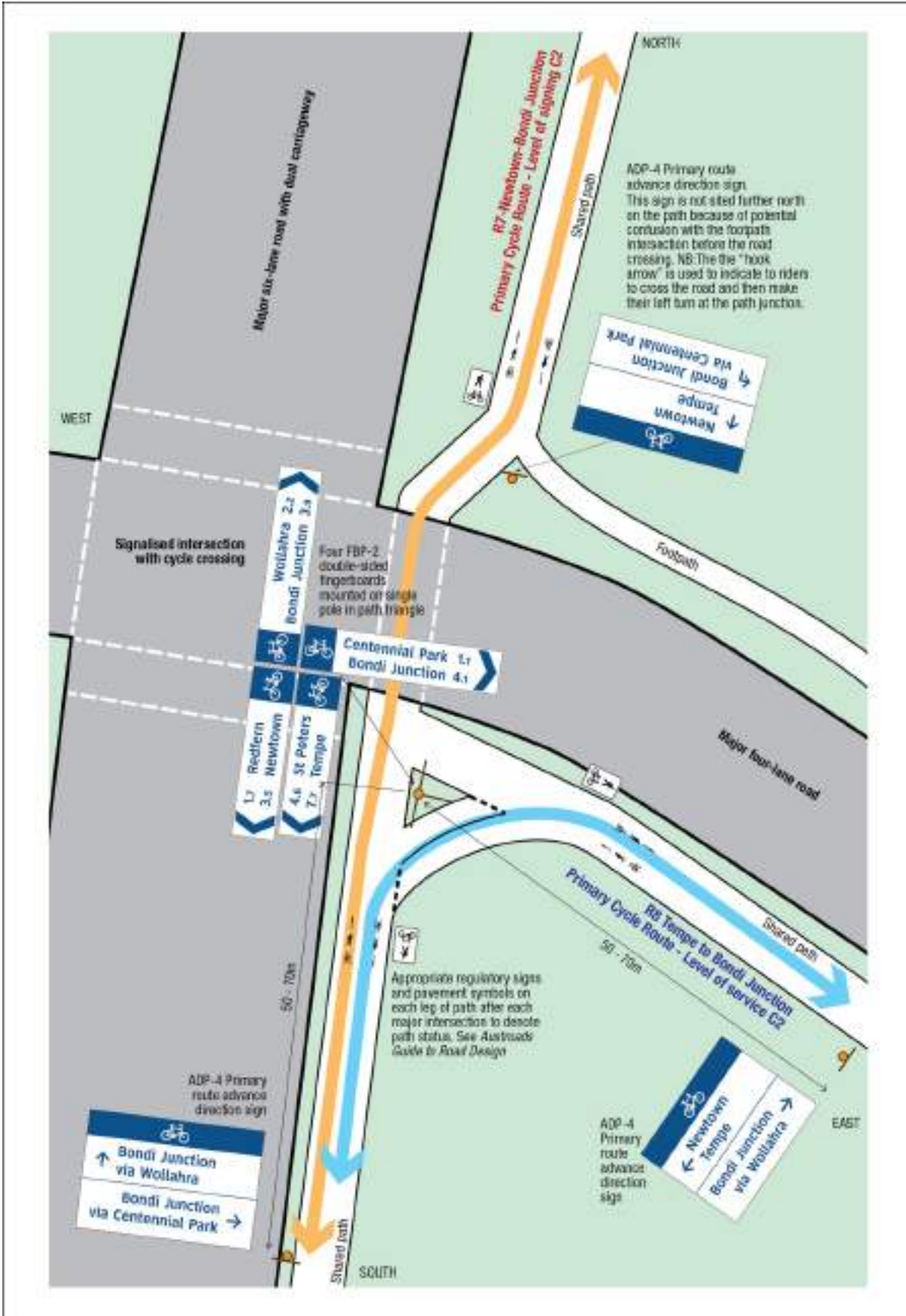


Figure 16: Typical intersection sign placement layout for primary/secondary transport routes.

Example taken from AP-R492-15 Research Report – Bicycle Wayfinding (Austroads 2015)



Focal points off-route

In some localities where the focal point is a well-known suburb which lacks a strong centre or where all the cycle routes in the area skirt the suburban activity centre, it is difficult to accurately measure to the focal point or determine where the focal point is reached along a route. There are two key issues in this example which should be dealt with separately (see Figure 17):

- **When is the focal point reached?** In theory, the suburban focal point is reached when the route crosses its suburban boundary. Practically, this should be the first cycle route junction within the suburb or some other point further along on the route leading to the suburb's centre.
- **Which point is the focal point measured to?** Distances that appear on signs are always measured for each route independent of other routes. Ideally the focal point should be measured to the suburb's activity centre. Where a route does not pass through the centre of a suburb, the measurement point is usually the closest junction providing route access to the centre. If there are no intersecting routes linking a peripheral route to the centre it is recommended that a local route be developed (or at least signed as an on-road route along residential streets) as shown in Figure 17.

Route measurement tables

An Excel spreadsheet (available as a separate file) has been developed to provide the distance information used on signs at route junctions. An example is provided in Appendix I.

Step 6: Prepare detailed site plans

Based on the Sign Schedules, detailed site plans are to be developed for routes to be signed. The aim of the site plan is to provide more information to aid the sign installation and avoid any confusion over the location of each sign. Detailed site plans include the following:

- Aerial photo map showing the exact location of each proposed sign at each site.
- Implementation instructions for each proposed sign at each site.
- Marked up street view photo further illustrating the location of each sign.

Figure 18 shows an example detailed site plan.

Figure 17: Example of a suburban focal point

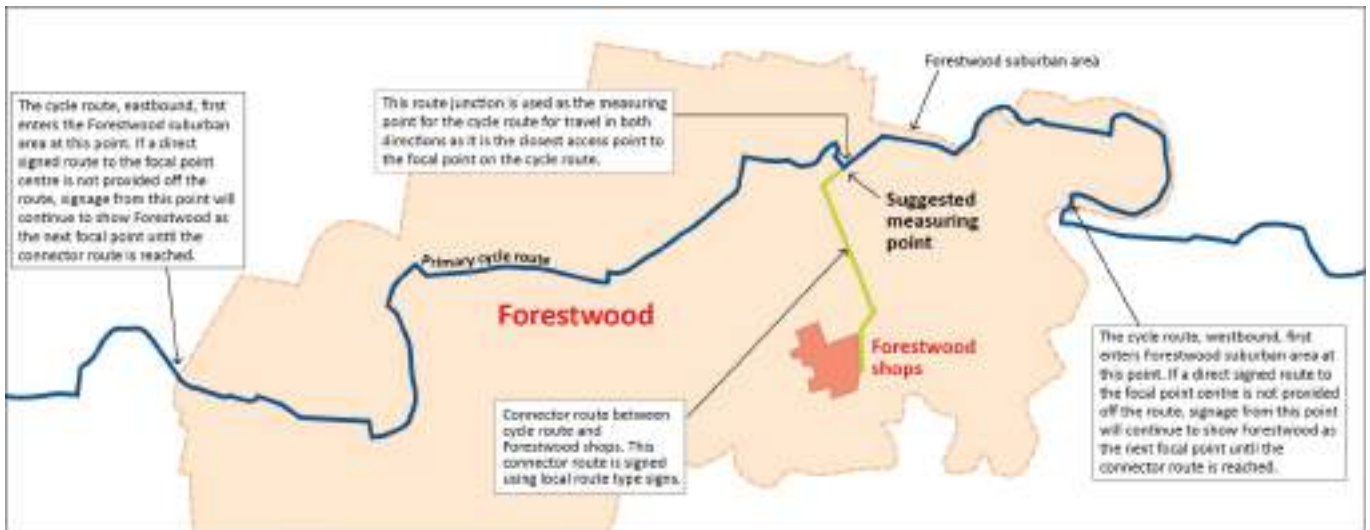


Figure 18: Example of a detailed Site Implementation Plan (Redbank Plains)



Steps 7-II: Sign specifications, installation and verification

The completed route sign schedules can now be used to manufacture the signs. Before this is done, it is recommended that the sign sites be 'ground truthed' against the schedule. This site inspection is necessary to correct any errors that may have occurred during the preparation of the schedules.

The finalised sign schedules are then sent to the sign maker along with sign dimensioning details (see *Active Transport Sign Design Manual*) so that electronic sign artwork can be prepared. This work is usually undertaken by the sign manufacturer 'in-house' or by an external graphic artist. A final check of the electronic artwork should be made to correct errors at that point.

Sign artwork is then used to fabricate the signs. The manufactured signs are installed according to the details provided in the sign schedules plus additional detailed siting instructions

(maps, diagrams and site photos) provided by the detailed site plans.

Following installation, sign content, location and orientation are checked on site by the sign planner. All signs need to point in the right direction and be easily visible to cyclists riding the route. Signs wrongly installed or containing inaccurate information are documented and supplied to the sign installer/maker for rectification.

Ongoing maintenance of the signs should also occur to ensure they continue to be visible to users. Council have an on-line reporting system (Mylpswich) where users can report sign maintenance and graffiti damage.

Technical specifications and guidelines on the design of individual signs, sign manufacture, and maintenance is provided in the *Active Transport Sign Design Manual*.

Pedestrian Activity Centre Signing Methodology

The following methodology is recommended for pedestrian signage in activity centres (refer Figure 19).

Figure 19: Planning a directional signage system for pedestrian activity centres



Step 1: Define pedestrian signage wayfinding precinct

The first step in the process involves defining the location for pedestrian activity centre wayfinding signs. At this stage, implementation only involves rolling out pedestrian wayfinding signage in higher order activity centres including principal regional, sub-regional and district activity centres, as defined on the Pedestrian Activity Centre Wayfinding Precinct Map in Appendix B. The wayfinding precinct is generally defined by a 10min walk radius from the centre of the activity centre (approx. 800m radius but may vary depending on the scale of the centre).

In the future, these wayfinding precincts could be extended to other activity centres and townships, train stations and along pedestrian transport corridors (refer Appendix A).

Step 2: Audit existing pedestrian signage in precinct

Walking trips tend to be shorter and more fine-grained compared to cycling trips. There is also usually some existing pedestrian wayfinding in centres, often historic and of inconsistent styles and quality. As a result, it is recommended that a physical walking audit of the centre that is proposed to be signed occur as the

next step in the signing process. The audit should aim to achieve the following:

- Document (photograph and identify location) and audit all existing active transport wayfinding signage in the activity centre;
- Undertake a high level physical risk assessment of the walking infrastructure in the activity centre. Critical safety issues and high risk deficiencies should be identified. If remedial action cannot be taken at these locations before signage implementation, then these locations may need to be avoided if possible; and
- Note destinations and facilities within the activity centre, including major entry points to these destinations, as well as associated desire lines.

Step 3: Identify destinations to be signed to

This step involves identifying and mapping out the destinations (e.g. hospitals), services (e.g. train stations) and facilities (e.g. toilets) which will appear on the activity centre's pedestrian wayfinding directional signs. These can be identified during the previous step's site audit and a desktop assessment. Appendix E

provides a guideline and hierarchy of recommended destinations/facilities to sign to and provides an example working Pedestrian Activity Centre Destination Map.

This step is important for the same reason as a cycle network focal point map - to enable consistent naming conventions, reduce the number of signs required/provided and enable a user to negotiate their way logically around the activity centre. It is therefore essential that only those destinations identified on the developed Pedestrian Activity Centre Destination Map are used on the pedestrian wayfinding directional signs.

Step 4: Identify pedestrian routes and decision points

The wayfinding signage for pedestrians will be based on destinations. There will be a number of routes which people can use to access the destinations and therefore the next step is to identify the most logical pedestrian routes to these destinations and then the decision points in the activity centre where pedestrian wayfinding directional signs should be placed.

To help identify logical pedestrian routes, start at key origin locations (e.g. rail station or pedestrian mall) and radiate out to the Level 1 destinations picking up the other destinations on the way. When preparing the sign schedule, signage back to these origins does not need to be provided for all destinations, as users are likely to be able to find their way back. It is recommended that only key outlying destinations be chosen to sign the return journey (e.g. in Ipswich Central this may be Queens Park, Ipswich Base Hospital, Top of Town, Riverheart Parklands and RiverLink).

Key examples of decision points include locations where people join the network (e.g. at rail or bus stations, car parks, outlying destinations), at destinations (considering linked journeys), intersections and open areas.

A map showing routes and decision points should be produced at the end of this step. An example Decision Point Map is provided in Appendix F

Step 5: Develop pedestrian map columns

If the pedestrian wayfinding project is located in a principal or sub-regional activity centre (e.g. Ipswich Central, Springfield Central, Goodna or Ripley) pedestrian map columns may also be incorporated into the sign planning. Map columns are typically located at major arrival points to the activity centre (e.g. rail station) as well as destinations where there may be a higher proportion of tourists or visitors (e.g. information centre, pedestrian mall, art gallery etc.).

After identifying locations for pedestrian map columns, the artwork for the map must also be prepared. Appendix G provides guidance on the required map scale and recommended map content and the *Active Transport Design Manual* provides detail on the required map design, layout and colour pallet.

Step 6: Prepare sign schedule covering the activity centre

A sign schedule (similar to the cycle network one - see Figure 13 example and Appendix H) is the key product of this step and the reference document used to specify the content and location of all signs in a project. Details included in a sign schedule are:

- Contents for all signs in the project (including destinations, distances, times, pictograms and direction arrows etc). This should also include Map column locations and content.
- Sign type and reference number (refer Table 5 and *Active Transport Sign Design Manual*).
- Travel direction to indicate the mounting orientation of the sign.
- Precise location of each sign. It is recommended that marked-up site photos, detailed site maps or diagrams be included with the sign schedule to ensure an accurate communication with the sign installer for each sign's particular siting requirements. Refer Step 8 for further details.
- Mounting details/requirements (e.g. new pole, existing poles, modifications to existing poles, type of mounting, stacking order etc).
- Redundant signs to be removed (e.g. old or contradictory wayfinding signage, incorrect regulatory signs).
- Additional works required to fully install the signs (e.g. minor tree pruning and branch removal where vegetation obscures signs when installed).

The Level 1 destinations should be the focus of the fingerboard signage provided, with signs located at key decision points defined in Step 4. Once a destination appears on a sign, it should continue to be signed at every subsequent decision point until the destination is reached. Level 2 and Level 3 destinations will only be signed at one decision point prior to the destination.

Another site visit on foot is recommended at this stage to identify suitable locations for signs. Fingerboard signs are to be located at all identified decision points. There is often competing demands for space on the footpath and reducing signage clutter is an issue to be considered when locating signs. It is important that signs are highly visible without creating a hazard, and that clear paths for pedestrians and people in wheelchairs are retained.

Figure 1 on page 12 illustrated the sign family decision tree for each route type in the Active Transport Network. Table 5 details the sign types within the pedestrian activity centre sign family to be used to guide the choice on sign type within the sign schedule.

Table 5: Sign types used for pedestrian activity centre signing

		PEDESTRIANS
		Activity centres
		Signed activity centre destinations within an 800m walking distance
SIGN TYPES	Fingerboards	YES ¹
	Map signs/columns	YES ²
	Street signs	YES ³
	Pavement wayfinding markings	School pavement markings near schools only ⁴

¹ At identified decision points

² At key gateway/high demand locations in Ipswich Central, Springfield Central, Goodna and Ripley activity centres only

³ If none exist

⁴ As needed and subject to approval by ICC's Infrastructure Planning Branch

Step 7: Prepare detailed site plans

Based on the Sign Schedules, detailed site plans can be developed for routes to be signed, similar to the cycle network detailed site plans. The aim of the detailed site plan is to provide more information to aid the sign installation and avoid any confusion over the location of each sign. Site plans include the following:

- Aerial photo map showing the exact location of each proposed sign at each site.
- Implementation instructions for each proposed sign at each site.
- Marked up street view photo further illustrating the location of each sign.

Steps 8-12: Sign specifications, installation and verification

The completed route sign schedules can now be used to manufacture the signs. Before this is done, it is recommended that the sign sites be 'ground truthed' against the schedule. This site inspection is necessary to correct any errors that may have occurred during the preparation of the schedules.

The finalised sign schedules are then sent to the sign maker along with sign dimensioning details (see *Active Transport Sign Design Manual*) so that electronic sign artwork can be prepared. This work is usually undertaken by the sign manufacturer 'in-house' or by an external graphic artist. A final check of the electronic artwork should be made to correct errors at that point.

Sign artwork is then used to fabricate the signs. The manufactured signs are installed according to the details provided in the sign schedules plus additional detailed siting instructions (maps, diagrams and site photos) provided by the detailed site plans.

Following installation, sign content, location and orientation are checked on site by the sign planner. All signs need to point in the right direction and be easily visible to pedestrians walking the route. Signs wrongly installed or containing inaccurate information are documented and supplied to the sign installer/maker for rectification.

Ongoing maintenance of the signs should also occur to ensure they continue to be visible to users. Council have an on-line reporting system (MyIpswich) where users can report sign maintenance and graffiti damage.

Technical specifications and guidelines on the design of individual signs, sign manufacture, and maintenance is provided in the *Active Transport Sign Design Manual*.

References

Australian Standard *AS1742.9* and referenced Standards

Australian Standard AS1742 Manual of Uniform Traffic Control Devices – Part 9: Bicycle Facilities. 2000. Standards Australia. Sydney NSW.

Australian Standard AS1743 Road Signs – Specifications. 2001. Standards Australia. Sydney NSW.

Australian Standard AS1744 Forms of letters and numerals for road signs (known as Standard alphabets for road signs): 2015. Standards Australia. Sydney NSW.

Australian Standard AS2700 Colour Standards for General Purposes. 2011. Standards Australia. Sydney NSW.

Austrroads project to develop new national cycle network sign guidelines

The project report, available on the Austrroads website consists of signage research and recommendations and three technical appendices for inclusion in the relevant ANZ Standards and Austrroads guidelines. These appendices are as follows:

Appendix A: Recommendation for *AS1742.9 – Bicycle Facilities*.

The contents of this appendix are recommended as a replacement for the current guidance on directional signs for cycling networks described in Section 5 of *Australian Standard AS1742 – Part 9: Bicycle Facilities*.

Appendix B: Recommendation for Austrroads Guide to Traffic Management – Part 10. The contents of this appendix are recommended for inclusion in Austrroads Guide to Traffic Management Part 10 – Traffic Control and Communication Devices.

Appendix C: Recommendations for AS1743 – Sign Specifications. The contents of this appendix are recommended for inclusion in Australian Standard AS1743 Road Signs – Specifications as Appendix C – Design and Layout of Cycle Network Directional Signs.

Other relevant Australian guidelines referred to as part of the Austrroads project research and this Strategy are listed below.

Australian Capital Territory

Municipal Infrastructure Standard – Part 5 Pedestrian and Cyclist Facilities Design. 2014. ACT Territory and Municipal Services Directorate. Canberra, ACT.

ACT Standard Drawings *ACTSD-0000 and ACTSD-0000 – WCN Directional Signage Designs and Specifications*. 2014. ACT Territory and Municipal Services Directorate. Canberra, ACT.

Planning for Cycling and Walking in the ACT. 2014. ACT Government. Canberra, ACT.

New South Wales

NSW Bicycle Guidelines. 2005. NSW Roads and Maritime Services. Sydney, NSW.

Bicycle Network Directional Signage Design Guidelines. 2010. City of Sydney. Sydney NSW.

Queensland

Traffic and Road Use Manual Section 1.36, Queensland Cycle Network Directional Signage Guidelines. 2009. Department of Transport and Main Roads. Brisbane, Queensland. Part of TRUM Volume 1

A Guide to Signing Cycle Networks. 2009. Department of Transport and Main Roads. Brisbane, Queensland.

Brisbane City Council Bicycle Signage Manual. 2014. Brisbane City Council. Brisbane, Queensland.

Western Australia

MRWA Technical Guideline – Bicycling directional Signs. 2014. Main Roads Western Australia. Perth, WA. Web-based guidelines.

Tasmania

Cycle Route Directional Signage Resource Manual. 2013. Department of State Growth. Hobart, Tasmania. Downloadable from: http://www.transport.tas.gov.au/passenger/cycling_and_walking/signage

City of Ipswich, Active Transport

Appendices

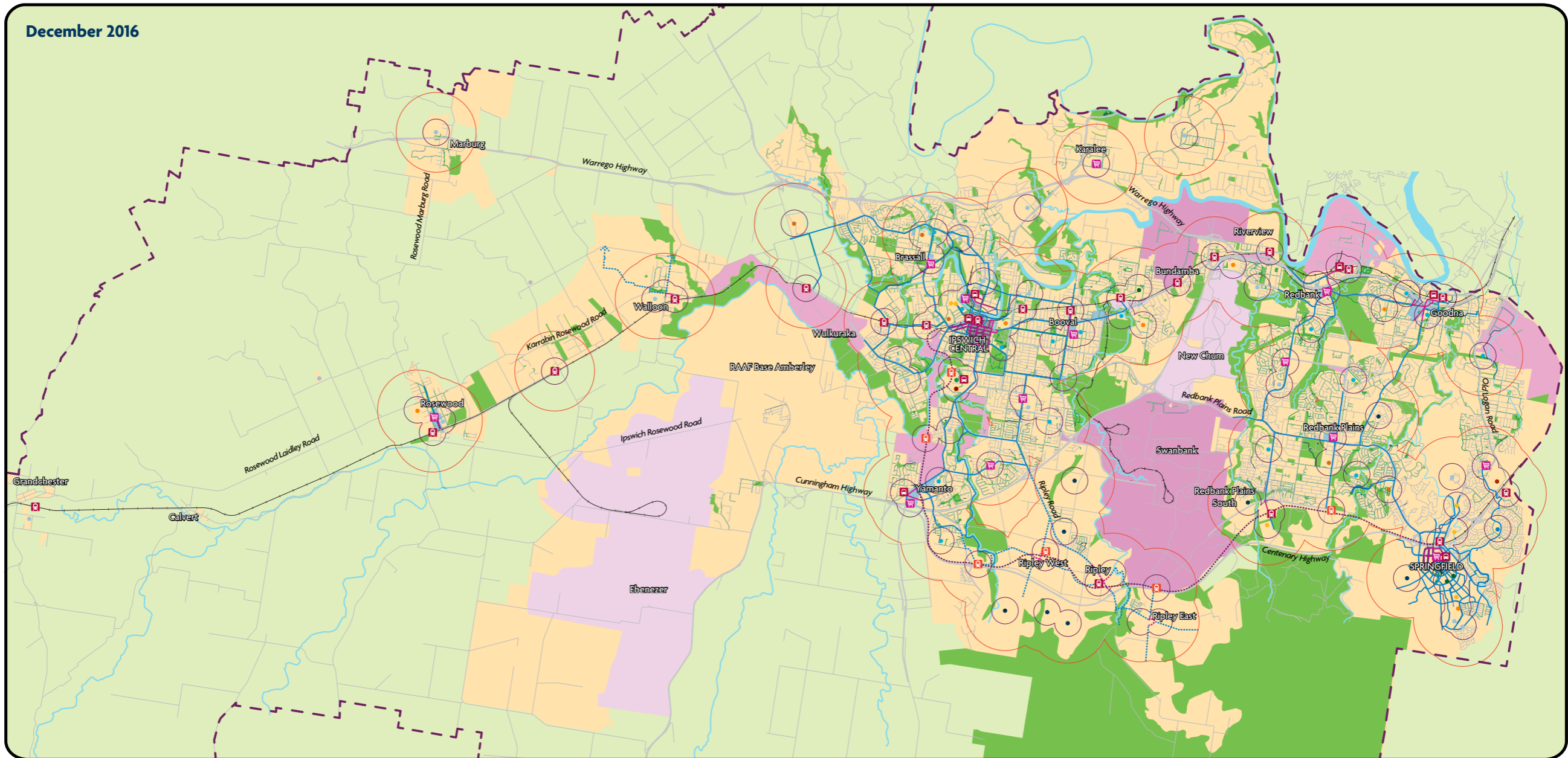
Appendix A – iGO Pedestrian and Cycle Network Maps



Moving Ipswich Forward

Pedestrian Network Map

December 2016



* All route alignments and configurations shown are subject to future investigation and corridor planning.

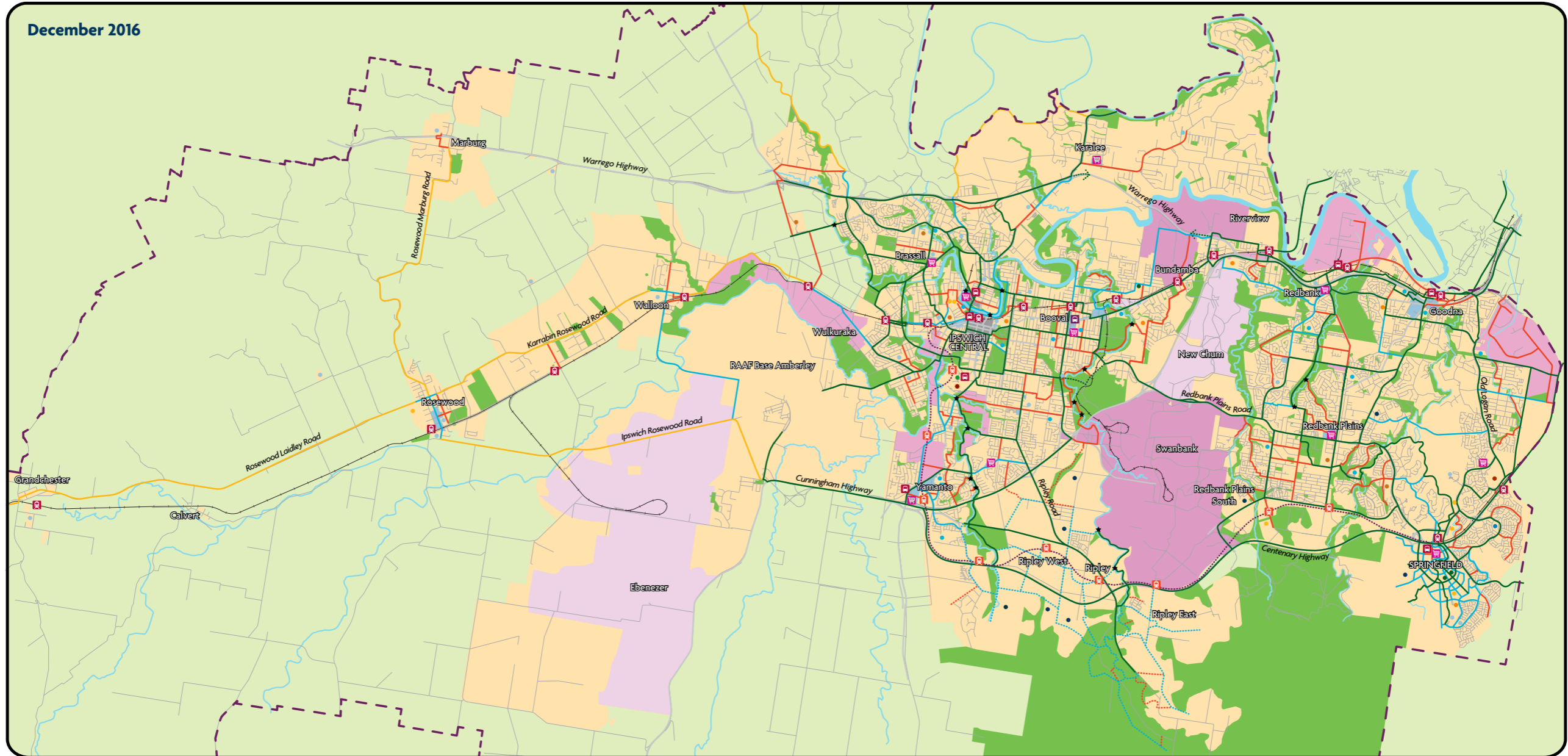
EXISTING				PEDESTRIAN LINKS*		PRIMARY SCHOOLS		SECONDARY/PREP-YEAR 12 SCHOOLS		FUTURE
Road	Train Station	CBD	Recreation/Conservation	Pedestrian Activity Street	Pedestrian Access Streets 400m Extents	34-500 students	153-500 students	Future School		
Rail	Bus Station	Business & Industry	Rural	Pedestrian Activity Street (indicative)	Pedestrian Access Streets 1200m Extents	501-1000 students	501-1000 students	Future Train Station		
Shared Footpath + 2.5m wide	Shopping Centre	Commercial	LGA Boundary	Pedestrian Transport Corridor		1001-1250 students	1001-1500 students	Ipswich to Springfield Future Public Transport Corridor		
Footpath - 2.5m wide	University/TAFE	Urban		Pedestrian Transport Corridor (indicative)			1501-1750 students	Future Business & Industry		



Moving Ipswich Forward

Cycle Network Map

December 2016



* All route alignments and configurations shown are subject to future investigation and corridor planning.

LEGEND

EXISTING

- Road
- Rail
- LGA Boundary
- Recreation/Conservation
- Rural
- CBD
- Business & Industry
- Commercial
- Urban
- Train Station
- Bus Station
- Shopping Centre
- University/TAFE

PRIMARY SCHOOLS

- 34-500 students
- 501-1000 students
- 1001-1250 students

SECONDARY/PREP-YEAR 12 SCHOOLS

- 153-500 students
- 501-1000 students
- 1001-1500 students
- 1501-1750 students

FUTURE

- Future School
- Proposed Bridge Crossing
- Future Train Station
- Ipswich to Springfield Future Public Transport Corridor
- Future Business & Industry

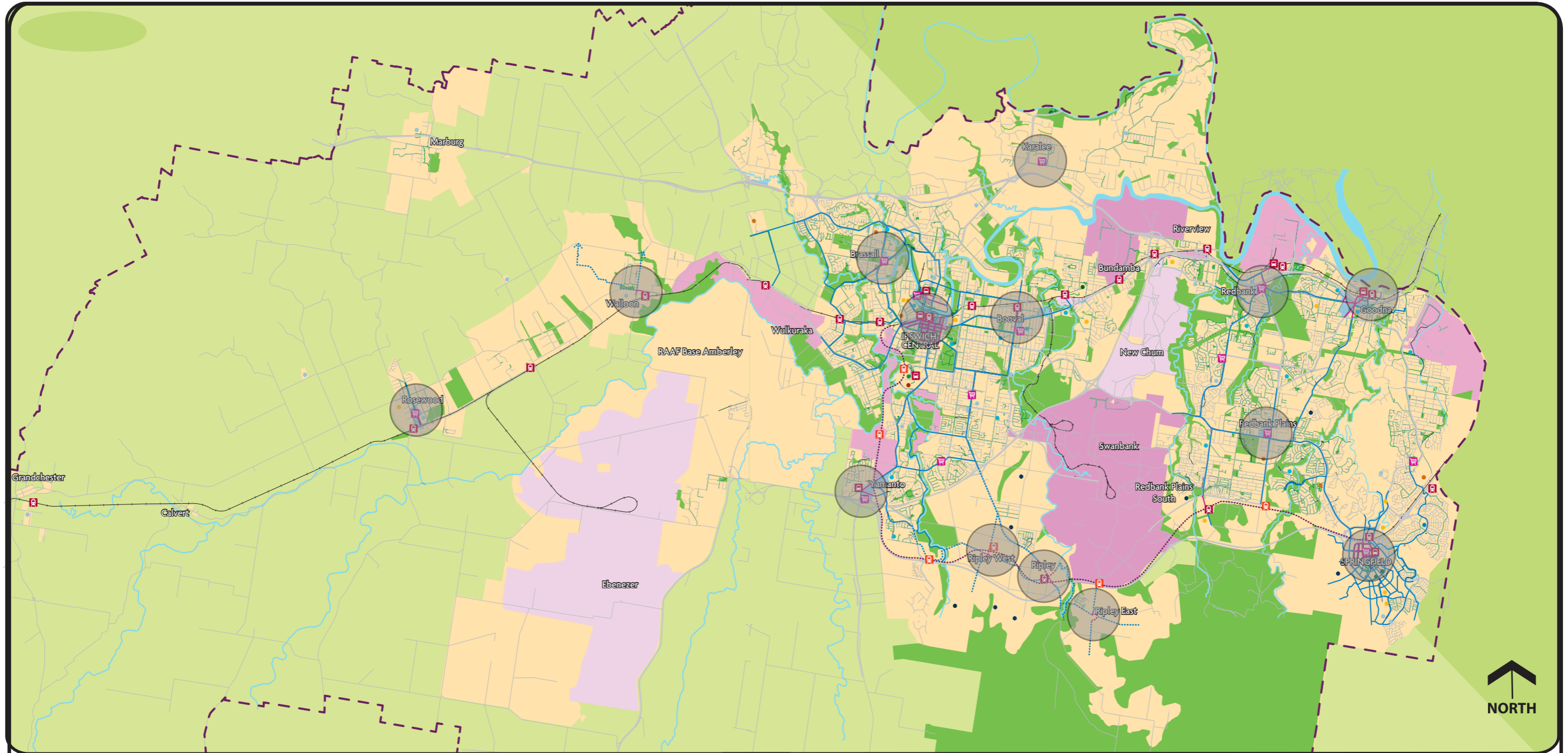
CYCLE LINKS*

- Principal Transport
- Principal Transport (future)
- Secondary Transport
- Secondary Transport (indicative)
- Secondary Recreation
- Local Transport
- Local Transport (indicative)

Appendix B – Ipswich Pedestrian Activity Centre Wayfinding Precincts

Ipswich Pedestrian Activity Centre Wayfinding Precincts Map

(Source of base map - iGO ATAP Pedestrian Network Plan, Dec 2016)



* All route alignments and configurations shown are subject to future investigation and corridor planning.

Internal document for City of Ipswich reference only. Refer to Active Transport Wayfinding Strategy for further information.

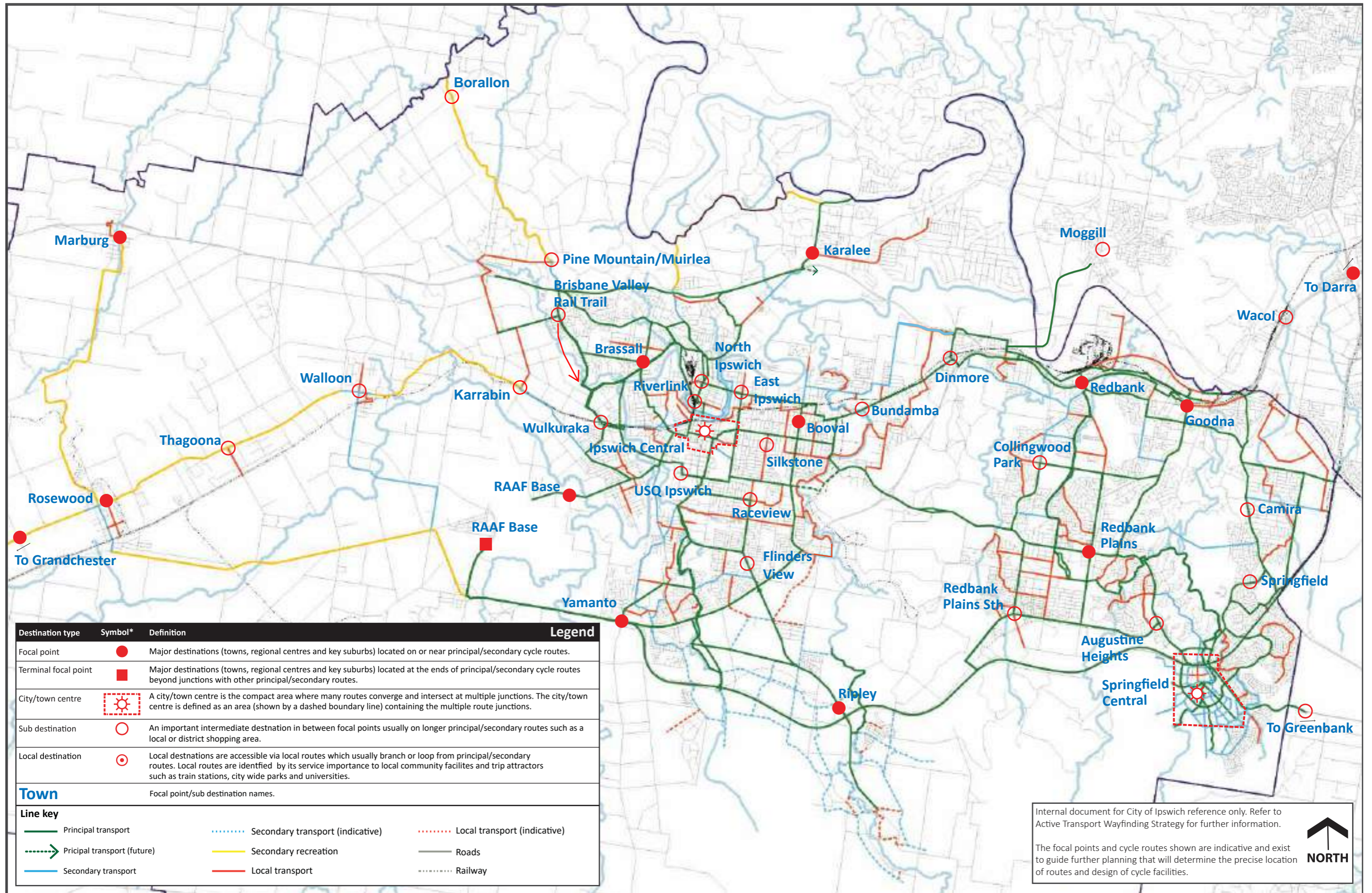
LEGEND

EXISTING		PEDESTRIAN LINKS*		PRIMARY SCHOOLS		SECONDARY/PREP-YEAR 12 SCHOOLS		FUTURE	
Road	Train Station	CBD	Pedestrian Activity Street	Pedestrian Access Streets 400m Extents	34-500 students	153-500 students	Future School		
Rail	Bus Station	Business & Industry	Pedestrian Activity Street (indicative)	Pedestrian Access Streets 1200m Extents	501-1000 students	501-1000 students	Future Train Station		
Shared Footpath + 2.5m wide	Shopping Centre	Commercial	Pedestrian Transport Corridor	Pedestrian Wayfinding Precincts (approx 800m precincts)	1001-1250 students	1001-1500 students	Ipswich to Springfield Future Public Transport Corridor		
Footpath - 2.5m wide	University/TAFE	Urban	Pedestrian Transport Corridor (indicative)			1501-1750 students	Future Business & Industry		
		Recreation/Conservation							
		Rural							
		LGA Boundary							

Appendix C – Ipswich Cycle Network Focal Point Map

City of Ipswich Cycle Signage and Wayfinding Focal Point Map

Map 1 - Cycle Network Map



Appendix D – Local Transport Cycle Route Destinations/ Facilities

The ICC Community Facility Name Signs Policy should also be referred to when identifying and naming destinations on active transport wayfinding signs.

Table D: Typical Local Cycle Destinations, including naming conventions

Types of local destinations	Naming convention	Further notes
Train Stations	As per Translink web site and include pictogram (e.g. Redbank Station and include pictogram)	Use in conjunction with PTR – Train Station pictogram as per the <i>Active Transport Sign Design Manual</i> . If other facilities present (e.g. bicycle parking, drinking water, public toilet, use corresponding pictogram on second line).
Bus Stations/interchanges	As per Translink web site (e.g. Redbank Bus Station and include pictogram)	Use in conjunction with PTB – Bus interchange pictogram
Local Shops	Suburb X Shops (e.g. Augustine Heights Shops)	It is inappropriate to refer to a commercial business, but a group of commercial establishments can be referred to
Community facilities (e.g. Town hall, civic centre, library, community centres)	Destination name without location* (e.g. Town Hall, Library, Pool)	Churches are generally accessed by people in their immediate area who are familiar with the area. As such, it is recommended that churches not be signed as a local cycle destination. However, they may be identified on a cycle map to assist with user orientation.
Hospital (if not a focal point or sub-destination)	Destination name without location* (e.g. Hospital)	Hospitals should have a casualty department before referring to them on the signs Medical centres will not typically be identified on the signage. Only hospitals with a casualty department are referred to on directional signs. Medical centres are not typically identified on directional signage
TAFE	TAFE*	
University (if not an identified focal point)	X Uni Or if a campus of USQ – USQ X Suburb	The Springfield University is within the boundary of the Springfield Central Town Centre and therefore needs to be identified on local signage within the town centre as USQ Springfield
Parks, Sporting and Open Space	Park Name (e.g. Collingwood Park, Ipswich Cycle Park)	
Streets	The local street to which a path connects to/from a principal/secondary transport cycle route can be provided on local transport signs	Do not include if the local street sign is visible from the path If the local street is visible from the path, the sign only needs to say "To X Street". If the local street is not visible from the path, the sign should include the distance and street name (e.g. "X Street 100m")
Schools	Not to be included on signs	Schools (including kindergartens, child care centres, pre-schools, primary and secondary schools) are usually accessed by people in the immediate area who are familiar

		with the area. As such, it is recommended that schools not be signed as a destination on any signs. However, they may be identified on a cycle map to assist with user orientation
Facilities such as toilets, information centres, police station, bike parking, bike maintenance or water fountain	Prefer a pictogram to be utilised	Refer to the <i>Active Transport Sign Design Manual</i> for a full list of potential pictograms

- * If there is more than one type of this destination that needs to be signed, then include the suburb or location name before the destination name or the destination's name if it is a non-commercial entity (e.g St Andrews Hospital or Ipswich Hospital)
- If there is an existing community facility sign already pointing to the above destinations, there is no need to provide another one unless it is incorrect. If it is incorrect, the sign should be removed and a community facility sign provided
- Avoid lengthy names

Appendix E – Pedestrian Activity Centre Fingerboard Destinations/Facilities

Table E1: Pedestrian Activity Centre Fingerboard Destinations and Definitions

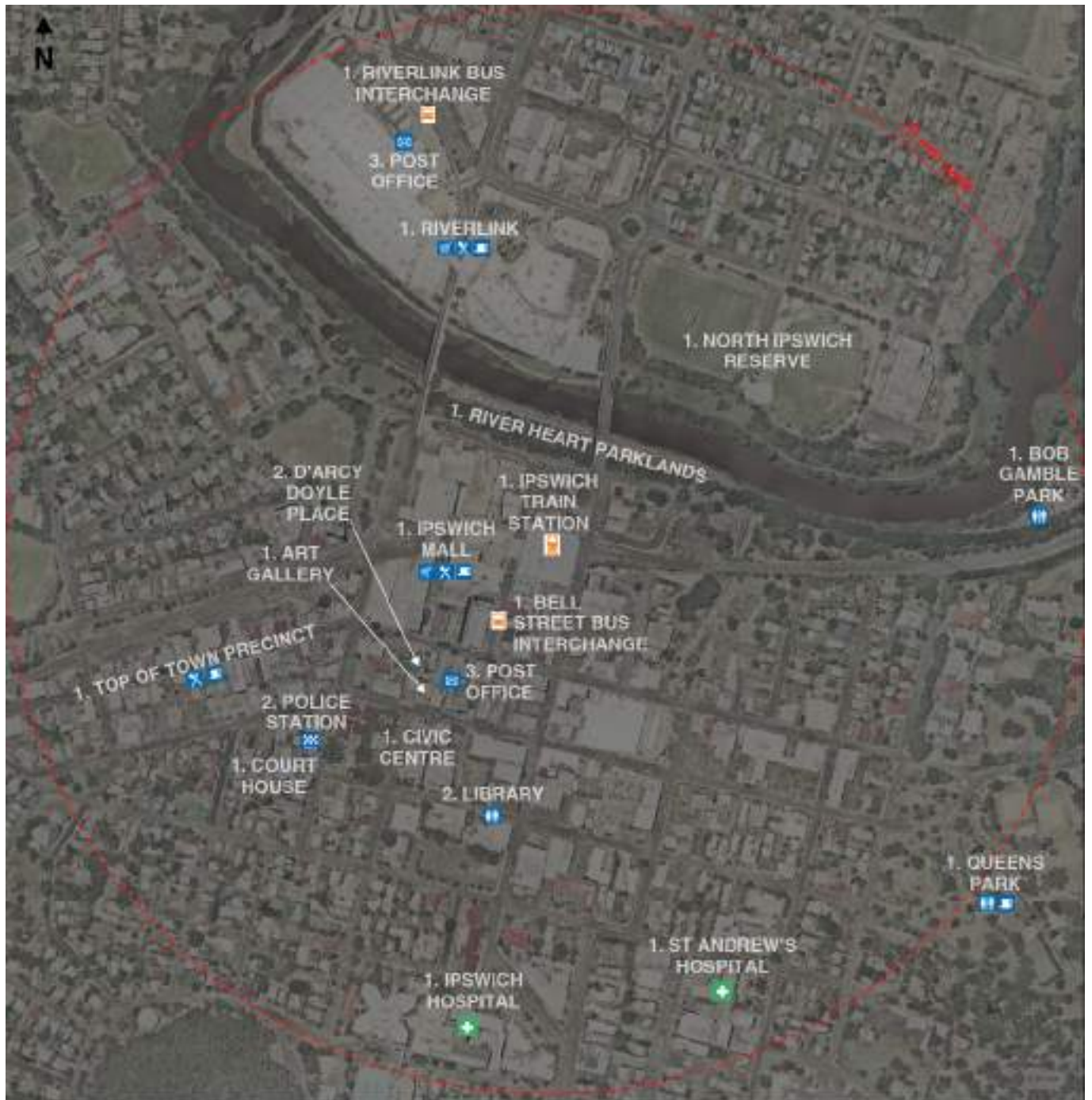
Destination Type	Definition	Examples
Level 1 – Major destinations	These are typically regional level or important destinations in the activity centre and are the main focus of the activity centre signage. Pictograms may be used on these signs in addition to words where appropriate.	<ul style="list-style-type: none"> Major shopping area Identified sub precincts (eg. Top of Town) Regional park or sports facilities Major tourist, cultural or community destination (e.g. town hall, museum, art gallery, civic centres, courthouse, civic centres, courthouse) Hospital Train Station or Bus Interchange Iconic Recreational Walking Paths (e.g. River Heart Parkland pathway)
Level 2 – Sub-destinations	These are lower level destinations in the activity centre and are typically only signed one decision point prior to the destination. Pictograms may be used on these signs in addition to words where appropriate.	<ul style="list-style-type: none"> Library Police Station Urban plazas Local parks and sporting facilities Community hall
Level 3 - Facilities	These are services or facilities to support the user on their trip around the activity centre and are typically only signed one decision point prior to the destination. These should be indicated with pictograms on signage.	<ul style="list-style-type: none"> Information centres Public toilets Post Office Public Telephone

Table E2: Guidance for Times on Pedestrian Wayfinding Fingerboards

Table E2 – Pedestrian walking times on signs

Distance	Walking time
100m	1min
200m	2min
300m	4min
400m	5min
500m	6min
600m	8min
700m	9min
800m	10min
900m	11min
1km	12min

Figure E: Example Pedestrian Activity Centre Destination Map



Appendix F – Pedestrian Activity Centre Decision Point Map

Figure F: Example Pedestrian Activity Centre Decision Point Map



Appendix G – Pedestrian Activity Centre Column Maps

The following provides some additional guidance on the production of maps on the Pedestrian Activity Centre column maps:

Overview Map - Scale

- Should aim to get most major destinations within the activity centre on the overall map
- A general guide for the map area is to show a 10 minute (800m walking catchment – 1.6km x 1.6km map scale) from the core of the activity centre. The walking catchment can be adjusted from the core slightly to include the most attractors. If the map area does not cover all major outlying destinations, it may be necessary to include arrows with “To X” on the edges of the map.
- To fit on the pedestrian map column, the map size is to be 450mm x 450mm

Column Map – Map details

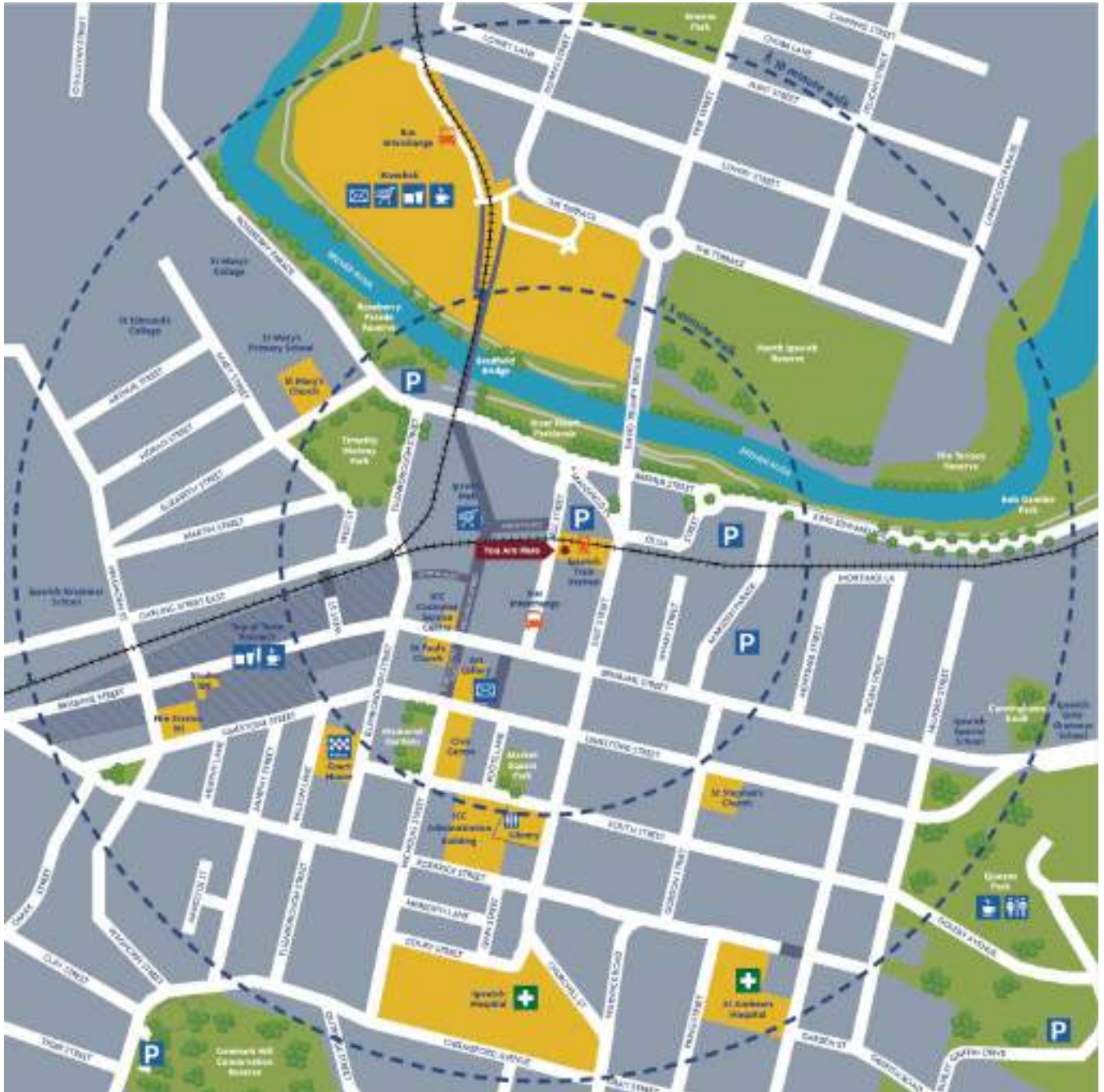
The following table provides recommendations on the content of the column map. It is noted that some destinations and information will differ from the list of destinations signed to on the pedestrian wayfinding directional signs. This is because additional information can be provided on the column map that may not be provided on the directional wayfinding signage (e.g. schools) and also enable the user to locate themselves within the network. An example pedestrian column map is provided over. More detail on the map (e.g. design/colour palette) is provided in the *Active Transport Sign Design Manual*.

Table G: Pedestrian Column Map Content

PRIMARY INFO	Examples
Pedestrian Areas	Streets showing footpaths Lanes and alleys accessible to pedestrians Shared paths not along a street Safe pedestrian crossings Routes through buildings (e.g. public arcades) Urban Plazas and Pedestrian Malls Underpass/overpasses/bridges for pedestrians Iconic recreational walking routes (e.g. Riverheart Parklands Pathway)
Building Footprints	Show major landmark building footprints and major destinations in yellow with a label displaying the name of the building/destination (e.g. town hall, Council customer service, Hospitals, Shopping centres and civic buildings such as art gallery, library and courthouse)
Public Transport	Rail Stations (use orange pictogram symbol*) and railway lines Major Bus Interchanges (use orange pictogram symbol*)
Public facilities	Information Centres (use blue pictogram symbol*) Public toilets, public off street car parks (use blue pictogram symbol*)
Parks and Open Space	Regional parks and sporting areas in green with name on map Local parks and sporting areas in green with name on map (option to not name these on maps if too cluttered) Schools (in yellow with name on map). These are provided to enable a user to locate themselves in the area but will not be shown as a fingerboard destination
YOU ARE HERE SYMBOL AND WORDS	This will vary depending on where the map is located and should be a brightly coloured arrow (facing the direction of travel) for visibility
Walking Catchments	Circle showing: 5min walking catchment and 10min walking catchment These should be located around the ‘You are Here’ symbol and in some locations may not be able to be shown in full

* refer to the *Active Transport Sign Design Manual* for pictogram symbols. It is noted that all pictograms in the manual are blue and this format should be utilised for Pedestrian Activity Centre directional signs. To enable the pedestrian column map to make public transport locations more visible, it is recommended that public transport pictograms be shown in orange on this map only. The *Translink Signage Manuals – Bus Network Infrastructure and Rail Stations* should be referred to for the colour details (Resene 'Trinidad' O61-167-048).

Figure G: Example Pedestrian Activity Centre Column Map



Appendix H – Example Sign Schedules

Schedule 1: V1 Cycleway – South Brisbane to Eight Mile Plains

Site Ref	Junction description	Sign No	Sign type	Ref No	Travel direction	Sign lettering	Remarks	
1a	Lower River Terrace and V1 Cycleway	E1	Reassurance direction sign		S	South East Freeway Bikeway Park Rd 1.5km Stones Cnr 2.9km Griffith University 11.2km Klump Rd 12.0km	Located on pole on southern side of Lower River Terrace at entrance to bikeway. Remove sign and poles	
		E2	Advance direction sign		N	← City via South Bank Parklands ----- Kangaroo Point Bikeway →	Located on pole on southern side of Lower River Terrace at entrance to bikeway (back to back with above sign). Remove sign and poles	
		E3	Fingerboard	BCC DR1-1			Goodwill Bridge 500m → Victoria Bridge 1.7km	Located on pole on northern side of Lower River Terrace, north of bikeway
		E4	Fingerboard	BCC DR1-2			Thornton St Ferry 1.2km → Holman St Ferry 1.83km	Located on pole on northern side of Lower River Terrace, north of bikeway - same pole as above
		E5	Fingerboard	BCC DR1-3			V1 Veloway → O'Keefe St 1.95km	Located on pole on northern side of Lower River Terrace, north of bikeway - same pole as above
-----		1	Fingerboard with numbered principal route	G2-C04-2	S	(V1) Stones Corner 2.4 → Tarragindi 4.8	New pole located adjacent fence on southern side of Lower River Tce, west side of bikeway. Sign to face south along bikeway	
		2	Fingerboard with numbered principal route	G2-C04-2	N	(V1) South Bank 500m → Brisbane City 1	New pole located adjacent fence on southern side of Lower River Tce, west side of bikeway. Sign to face north across Lower River Tce	
1b	V1 Cycleway, south of Lower River Terrace	3	Reassurance direction sign	G4-C02	S	V1 Cycleway Stones Corner 2.3 Tarragindi 4.8 Griffith University 8.7 Upper Mt Gravatt 12 Eight Mile Plains 14	New pole located adjacent pathway on eastern side approx 60m south of Lower River Tce. Sign to face north for southbound users	
		4	Fingerboard with numbered principal route	G2-C04-2	S	(V1) Stones Corner 2.1 → Tarragindi 4.5	Clamp new pole to top of existing fence/upright pole on east side of path opp Allan St to keep sign clear of path. Sign to face south	
		5	Fingerboard with numbered principal route	G2-C04-2	N	(V1) South Bank 800m → Brisbane City 1.3	Clamp new pole to top of existing fence/upright pole on east side of path opp Allan St to keep sign clear of path. Sign to face north	
-----	-----	6	Local Fingerboard	G2-C06-1	W	Stanley St 100m →	Clamp new pole to top of existing fence/upright pole on east side of path opp Allan St to keep sign clear of path. Sign to face west Place local sign last	
3	Pathway Access to Trinity Lane and V1 Cycleway	E6	Direction sign		E	To South East Freeway Bikeway	On path leading to Trinity Lane, west side of V1 Bikeway. Sign covered by vegetation	

Table : Key to row colours used in the sign schedules

Colour	Explanation
	New sign as per instructions
	Existing sign to be removed
	Existing sign to be retained and remounted as per instructions
	Signs belonging to another route installed at junctions where routes overlap or cross. These duplicate rows are shown so all signs to be installed at a junction can be identified.
	Signs installed as part of another project but relevant to the route planned

Schedule 2: Ipswich Central Pedestrian Wayfinding Signage Schedule Example



Sign no.	Junction description	Travel direction	Sign lettering
1a	Bell Street/Brisbane Street Intersection	N	Ipswich Train Station X min, X m River Heart Parklands X min, X m
1b	Bell Street/Brisbane Street Intersection	E	Queens Park X min, X m Ipswich Hospital X min, X m
1c	Bell Street/Brisbane Street Intersection	W	Top of Town X min, X m Court House X min, X m
2a	Brisbane Street/East Street Intersection	W	Ipswich Train Station X min, X m
2b	Brisbane Street/East Street Intersection	S	Queens Park X min, X m Ipswich Hospital X min, X m
3a	Brisbane Street/ D’Arcy Doyle Place Intersection	N	Ipswich Mall X min, X m Riverlink (via Bradfield Bridge) X min, X m
3b	Brisbane Street/ D’Arcy Doyle Place Intersection	E	Ipswich Train Station X min, X m Queens Park X min, X m
3c	Brisbane Street/ D’Arcy Doyle Place Intersection	S	Art Gallery (via D’Arcy Doyle Pl) X min, X m Court House X min, X m
3d	Brisbane Street/ D’Arcy Doyle Place Intersection	W	Top of Town X min, X m

Appendix I – Example Route Measurement Tables

V1 Cycle Route – South Brisbane to Eight Mile Plains

Location Description	Length metres	Northbound Total (to Bris City)	North bound FocalPt	To Eight Mile Plains	To Upper Mt Gravatt	To Griffith Uni	To Tarra- gindi	To Stones Corner	To South Bank	North bound SubDest	South bound Total	South bound FocalPt	To Tarra- gindi	To Griffith Uni	To Upper Mt Gravatt	To Eight Mile Plains	South bound SubDest
V1 Cycle Route - 15,540 South Brisbane to Eight Mile Plains																	
Brisbane City - Goodwill Bridge - QUT side		0.0	0.0							0.0	15.5	3.4	5.8	9.7	12.9	14.6	0.5
South Bank - Goodwill Bridge - Southbank side	480	0.5	0.5							0.5	15.1	2.9	5.3	9.2	12.4	14.1	2.9
Lower River Terrace and V1 Cycleway	510	1.0	1.0						0.5	0.5	14.6	2.4	4.8	8.7	11.9	13.6	2.4
V1 Cycleway, 60m south of Lower River Terrace	60	1.1	1.1						0.6	0.6	14.5	2.3	4.8	8.7	11.9	13.6	2.3
Allen Street and V1 Cycleway	230	1.3	1.3						0.8	0.8	14.3	2.1	4.5	8.4	11.6	13.3	2.1
Pathway Access to Trinity Lane and V1 Cycleway	260	1.5	1.5						1.1	1.1	14.0	1.8	4.3	8.2	11.4	13.1	1.8
Lockhart Street and V1 Cycleway	440	2.0	2.0						1.5	1.5	13.6	1.4	3.8	7.7	10.9	12.6	1.4
Ross Street and V1 Cycleway	80	2.1	2.1						1.6	1.6	13.5	1.3	3.8	7.7	10.8	12.5	1.3
Abingdon Street and V1 Cycleway	100	2.2	2.2						1.7	1.7	13.4	1.2	3.7	7.6	10.7	12.4	1.2
Park Road and V1 Cycleway	120	2.3	2.3						1.8	1.8	13.3	1.1	3.5	7.4	10.6	12.3	1.1
Morrissey Street and V1 Cycleway	250	2.5	2.5						2.1	2.1	13.0	0.8	3.3	7.2	10.4	12.1	0.8
Harrogate St/Bank Lane Ped-Cycle Overpass and V1 Cycleway	340	2.9	2.9						2.4	2.4	12.7	0.5	2.9	6.9	10.0	11.7	0.5
O'Keefe Street (west) and V1 Cycleway - where cycleway meets O'Keefe St	130	3.0	3.0						2.5	2.5	12.5	0.3	2.8	6.7	9.9	11.6	0.3
O'Keefe Street (west) and V1 Cycleway - at traffic signals	50	3.1	3.1						2.6	2.6	12.5	0.3	2.8	6.7	9.9	11.6	0.3
Stones Corner - O'Keefe Street (east) and V1 Cycleway	300	3.4	3.4						2.9	2.9	12.2	6.4	2.5	6.4	9.6	11.3	1.7