LAKE MACQUARIE CITY

WALKING, CYCLING AND BETTER STREETS STRATEGY 2031

FROM THE MAYOR

Walking and cycling around our city is incredibly popular, but most of us do it for recreation and exercise. But, what if we had even more, safer and easier options to commute, so that instead of jumping in the car to go to work or to do the shopping, we could walk or cycle to where we need to go?

This is the vision of Council's Walking, Cycling and Better Streets Strategy. Its challenge is to address the need for better, safer infrastructure for walking, cycling and links to public transport across Lake Macquarie.

Our city continues to grow and we expect at least 30,000 new residents to call Lake Macquarie home in the next 15 years. Our nine economic centres located around the lake will be the focus of our growth in the coming years, placing more need for walking, cycling and public transport infrastructure to help manage transport congestion.

Through this strategy we see our city as a place where walking and cycling is easy, safe and appealing for everyone. A city home to inviting urban spaces that are conveniently connected by roads and paths that accommodate multi modes of transport, not just vehicles. And a place where walking and cycling becomes a part of our life, which makes us feel better and gets us to where we are going.

We are incredibly lucky to live in a city unlike any other with our natural landscape and active community at the heart of what makes our lifestyle so fantastic. Let's continue to work together as a community as we adapt to change and help make Lake Macquarie an even better place to live, work, play and commute.

Lake Macquarie Mayor
Cr Kay Fraser

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OUR VISION

Walking, assisted mobility, cycling and other forms of active transport are easy and appealing for everyone. Streets enhance our walking and cycling experiences, and foster connections with each other and places. Improvements for pedestrians and cyclists also benefit the safety and well-being of those in vehicles.

We enjoy walking connections that are easy, leafy and appealing, and that safely take us to local shops, schools, workplaces, parks, playgrounds and public transport.

Cycling is low-stress, with family-safe streets and provisions for faster, more confident cyclists, and our City is known for iconic links that connect us with our unique landscapes.

WALKING, CYCLING AND ACCESSIBILITY ARE CORE TO OUR COMMUNITY VALUES

This strategy reflects the community's values developed through comprehensive community engagement for the City's Community Strategic Plan.

With community representatives from Council's Active Transport Advisory Group, we looked at how walking, cycling and accessibility relate to the community's values, what they can tell us about how we can improve, and the outcomes we want to see for our City.

What is at the heart of improving walking and cycling?

- Well-being and the right to get home safely
- Connections with each other and shared experiences of places
- Creating choices for people of all ages and abilities

How can we do it?

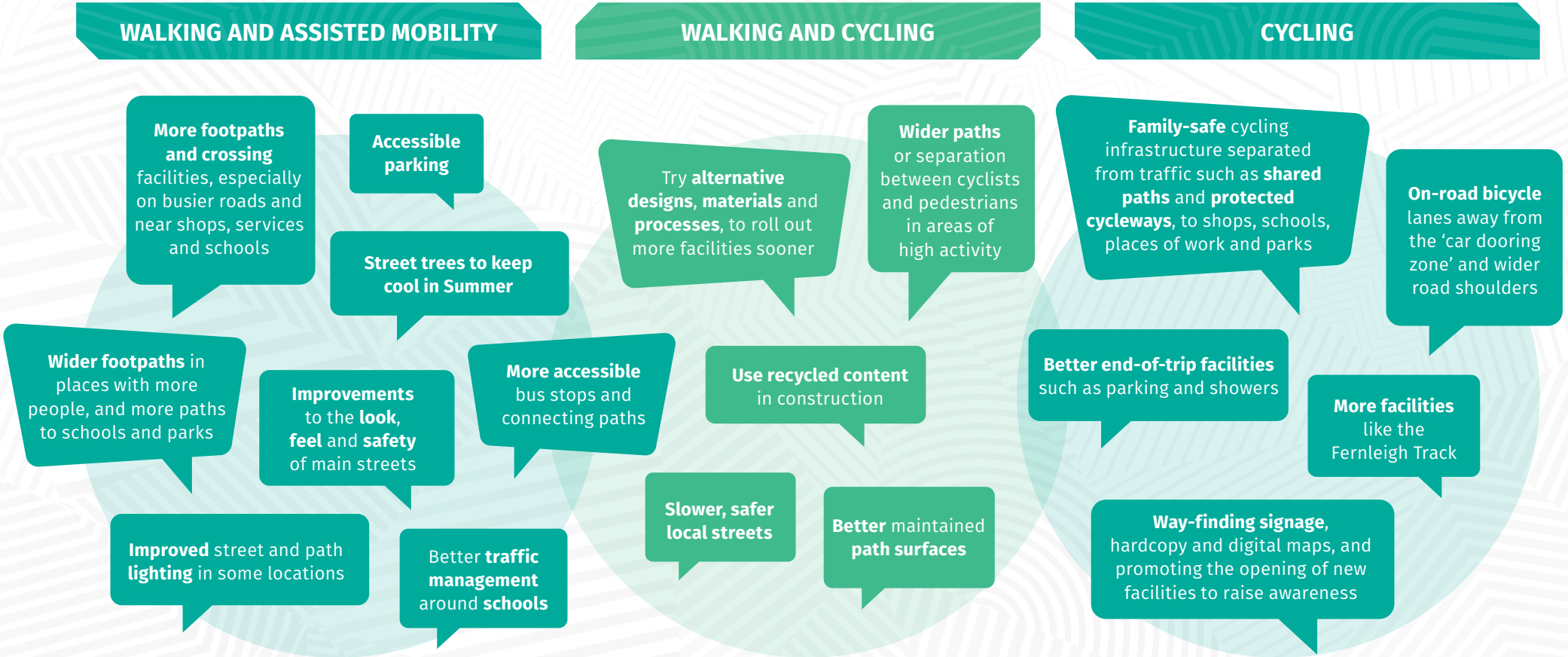
- Creative processes, new technologies and ways of thinking
- Shared decision-making

What do we want to see for our city?

- Effective transport systems that provide choice to conveniently move people, goods and services
- A diverse economy which is resilient and adaptable to change, making the best use of the unique advantages of our location and lifestyle
- A great lifestyle through safe, active social opportunities
- The natural environment is protected and enhanced; our existing urban centres are the focus of our growth, maintaining their unique characteristics

WHAT OUR COMMUNITY WANTS TO SEE

In preparing this strategy, we have drawn on community feedback provided through a wide range of projects, surveys and other channels. We also heard from important stakeholder groups including Council's Active Transport Advisory Group, Ageing and Disability Panel and Youth Advisory Council.



LAKE MAC WALKS

In 2016 and 2017, we spent a lot of time talking with the community about walking and how to make accessible, appealing streets. The aim of our Lake Mac Walks project was to hear from you about where people walk and what barriers prevent them from walking.

Most people identified the need for more footpaths and for improved traffic management for safety.

We asked the community to identify important linkages for future walking opportunities. We received over 550 submissions, spoke to schools and students, and many people attended free 'walkshops' with transport and walking experts.

As a result, Council adopted the Walk21 charter (walk21.com) to create healthy and sustainable communities where people choose to walk.

We have drawn upon this feedback to inform the development of this strategy, including which destinations are more important for walking.

CYCLING PARTICIPATION SURVEY

In 2018 and 2019, Lake Macquarie participated in the annual National Cycling Participation Survey, a standardised survey undertaken throughout Australia to measure participation and attitudes towards cycling.

The survey sample consisted of 530 households in Lake Macquarie containing 1114 individuals in 2018 and 475 households containing 995 individuals in 2019.

Those who had ridden in Lake Macquarie at least once in the past 12 months were asked questions about how cycling could be improved. The most supported actions were:

- more off-road paths and cycleways
- better connections between bike paths and schools, parks/swimming pools and shops
- more on-road bicycle lanes.

ACTIVE TRANSPORT ADVISORY GROUP

Since 2017, a group of dedicated volunteer community members, Councillors, representatives from the Heart Foundation and Newcastle Cycleways Movement and Council staff have met around once a month to guide the development of this strategy and provide user experience into pedestrian and cycling improvement projects. The group established a clear charter, recognising the need to take a strategic 'whole of city' approach for the greatest benefit.

More bike paths and footpaths, separate bike paths, mow the lawns and put a separate path for pedestrians and bikes like other councils do...

Conditions have gotten worse because of traffic...

Need more cycleways off the main roads, this would be better for riders and drivers...

The shared path around the Lake is wonderful. Every addition is cherished and used. We just need to keep it going!

HOW ELSE WE HAVE HEARD FROM YOU

CITY VISION AND VALUES ENGAGEMENT

The need to improve road infrastructure, public transport, walking and cycling was the most common issue raised across 1800 submissions and comments, and a phone survey of a further 1003 people, in developing the City's vision statement and values for the Community Strategic Plan 2017-2027.

COMMUNITY SATISFACTION SURVEY

This survey is conducted every two years and provides us with a picture of which Council services are most important to the community and how well we are delivering these services. The community consistently rates satisfaction with footpaths, public transport, road and traffic safety and cycleways as low or requiring improvement.

PARKING STRATEGY

The location and availability of parking has a significant impact on walking and cycling. In preparing the City's Parking Strategy, we received over 600 survey responses and 800 comments and submissions identifying parking issues and suggestions. Over 70 per cent of responses raised issues relating to walking and cycling.

STREETS AS SHARED SPACES

In 2020, the NSW Government sought public feedback on how streets might be adjusted to better accommodate walking and cycling, in response to COVID-19 and in the longer term. Lake Macquarie residents pointed to the need for more walking and cycling infrastructure.

CHILDREN AND FAMILIES STRATEGY

In 2020, we asked what the community wanted to see to make the city more family friendly. Around one in four people asked for better walking and cycling infrastructure, including separated facilities from cars, wider footpaths for prams and families, paths connecting to parks and playgrounds and better path maintenance.

AGEING AND DISABILITY PANEL AND THE DISABILITY INCLUSION ACTION PLAN

In 2016, around 300 people participated in an engagement program to identify ways to make the City more inclusive and accessible. Indirect and inaccessible public transport services emerged as a key theme. A workshop with Council's Ageing and Disability Panel to inform this strategy and available feedback from the 2020 update of the Disability Inclusion Action Plan reinforce this theme.

AGEING POPULATION PLAN

Feedback collected from over 380 visits to Council's website, 2648 people on social media and 77 submissions on the Ageing Population Plan found 48 per cent of people would like more or improved footpaths, shared pathways and walking tracks.

YOUTH ADVISORY COMMITTEE AND THE YOUTH STRATEGY

In preparing the City's Youth Strategy, we had over 1000 engagements on social media. Access to frequent, convenient, low-cost and safe transport options emerged as a key theme for the City's youth. In 2020, we held two workshops with the Lake Macquarie Youth Advisory Council on walking, cycling and public transport, which reinforced this theme.

SUSTAINABLE NEIGHBOURHOOD GROUPS

Sustainable Neighbourhood Groups engage residents to deliver community projects and provide input to a diverse range of local plans and policies. Each group establishes its own challenges and priorities for their location. Walking and cycling is a consistent, clear priority.

SCHOOLS ENGAGEMENT

We survey schools on sustainability matters, including walking and cycling, and engage schools regularly through our traffic management and road safety investigations. Parking, traffic management, safe crossing points and access to footpaths are recurring themes.

CUSTOMER SERVICE REQUESTS

Council processes over 100 service requests a month related to traffic and transport matters, including requests for pedestrian and cycling improvements. This does not include requests for maintenance.

PLANNING FOR PLACES – CENTRES, PARKS, COMMUNITY FACILITIES AND TRANSPORT ACCESS

Council has many planning projects and capital works on the go at any time for specific locations. When we ask for feedback, this information is recorded and distributed to relevant departments. Walking, cycling and bus stop access are recurring themes.

TOWARDS MORE WALKING, CYCLING AND BETTER STREETS FOR ALL

Our overarching goals and principles will guide how we will plan and deliver better experiences.

They reflect community aspirations, and a host of local, regional, state and national policies, plus new guidance on road safety and planning for streets, walking and cycling.

These policies in turn reflect the many benefits of improved pedestrian and cycling infrastructure for everyone, including:

- allowing people to move around the city safely and improving independence of children, seniors and people with disability
- helping address physical inactivity and associated health problems
- reducing car trips, resulting in less cars on the road, improved travel times for those who must drive, improved air quality and less greenhouse gas emissions
- reducing urban heat, helping manage stormwater and enhancing biodiversity with street trees and vegetation
- encouraging people to dwell and spend at local businesses through more accessible and appealing streets.

GOALS

MORE PEOPLE WALK AND CYCLE

More residents and workers actively choose to walk and cycle for transport, convenience and health, and easily and comfortably connect to public transport.

Work toward exceeding the NSW Government's target for 17 per cent of all trips in the Greater Newcastle metropolitan area to be made by walking or cycling and 7.5 per cent by public transport, by the year 2056.

SAFER STREETS

Work towards zero deaths and injuries on our roads, in line with State and National goals.

SUCCESSFUL PLACES

Pedestrian and cycling infrastructure links our economic and local centres, supporting local business and economic growth.

STREETS FOR ALL

Urban streets are designed to be accessible for the elderly, children, and people with disability, and are equitable and appealing to all.

GUIDING PRINCIPLES

IMPROVE WALKING AND CYCLING APPEAL

Improve the appeal of walking and cycling by addressing desired user experiences and designing facilities people love.

SHARE DECISION-MAKING

Involve people, harness local knowledge, learn from one another, share and co-define challenges and solutions.

BE INNOVATIVE

Embrace new ways of delivering better walking and cycling experiences, sooner, guided by this strategy and the latest available guidance.

BE RESPONSIVE

Our City is constantly changing. How we plan and deliver better walking and cycling will be targeted yet agile, enabling us to respond to new funding, partnership opportunities and other events.

United Nations Sustainable Development Goals

NSW Road Space Allocation, Walking and Cycling in Transport Projects, Better Placed and Greener Places Policies

NSW Road Safety Plan and 2056 target

Greater Newcastle Metropolitan Plan 2036

Greater Newcastle Future Transport Plan and 2056 target

Legislation and guidance

For example, *Roads Act 1993*, *Disability Standards for Accessible Public Transport 2002*, Australia's Physical Activity and Sedentary Behaviour Guidelines, NSW Movement and Place Framework

Community Strategic Plan
Local Strategic Planning Statement

Sustainability Policy and Environmental Sustainability Strategy

Walking, Cycling and Better Streets Strategy 2031

Area planning
Road safety technical investigations
Development Contribution Plans

Infrastructure delivered by private development

Capital works program

Development Control Plan

Four year Delivery Program

Annual Operational Plan

Cities Power Partnership pledge
Walk 21 Charter

Related:

Disability Inclusion Action Plan

Children and Families Strategy

Housing Strategy

Ageing Population Plan

Parking Strategy

Destination Management Plan

Parks and Play Strategy

Urban Greening Strategy

Lake Activation Strategy

Energy Resilience Plan

Asset Management Strategy

Community Land Plan of Management

THE CHALLENGE AND OPPORTUNITY

Many of our streets were constructed at a time when footpaths and cycleways were not required. Over time, expectations have changed and national standards updated to improve the safety and comfort for all road users.

The City's footpath, shared path and street network continues to expand as more people call Lake Macquarie home. In recent years, around 3.5km of new footpath and 1.6km of shared path has been constructed each year in established areas.

A further 7.5km of footpath and 1.5km of shared path has been constructed as part of new neighbourhood developments on average each year. At the same time, the City's road network also continues to grow. With clever planning, new development brings opportunities to help fund more infrastructure for both the incoming and existing population.

The average walking trip in Lake Macquarie is 12.7 minutes (NSW Household Travel Survey). With good infrastructure, short trips taken by residents to the shops, cafes, and places of education and work can be easily made by walking, cycling, assisted mobility and public transport. With pleasant, leafy and safe streets, walking and cycling can become people's preferred choice.

CITY INFRASTRUCTURE SNAPSHOT 2020

1450km
1250km urban roads
200km rural roads

470km
Footpath
(street network)

105km
Traffic separated
cycling facilities

Almost all trips start and end with walking.

Everyone is a pedestrian at some point.

Almost 1 in 4 residents live within a 10-minute walk of an economic or local centre.

People tell us they will ride more if we build family-safe, separated cycling infrastructure.

1 in 4 residents over 15 years of age say they may consider cycling for transport on occasion if there were better infrastructure - currently 2 per cent do.
(Local Cycling Participation Survey)

17 pedestrians were killed and 177 pedestrians and cyclists suffered serious, moderate or minor injuries in Lake Macquarie between 2014-19.
(NSW Centre for Road Safety 2014-19)

City population

204,914
2020

245,000 - 335,000
2050

Every day, Lake Macquarie residents collectively make over 700,000 trips.
Around 11 per cent of all trips are by walking and cycling.
Almost one in four trips to economic centres and schools are by walking, cycling or assisted mobility.

WHY DO WE TRAVEL?

26.5% social/recreation

18.7% shopping

9.8% personal business

16% drop off or pick up a passenger

13.9% commuter

7.3% work related

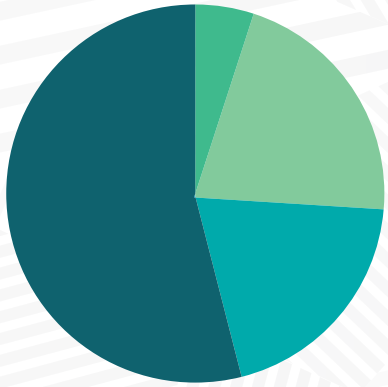
6.9% education/childcare

1.5% other

HOW FAR DO WE TRAVEL?

Over half of the trips made by Greater Newcastle's residents are short journeys under 5km.

Trips by distance on an average day



54% 5km or less

5% 35km+

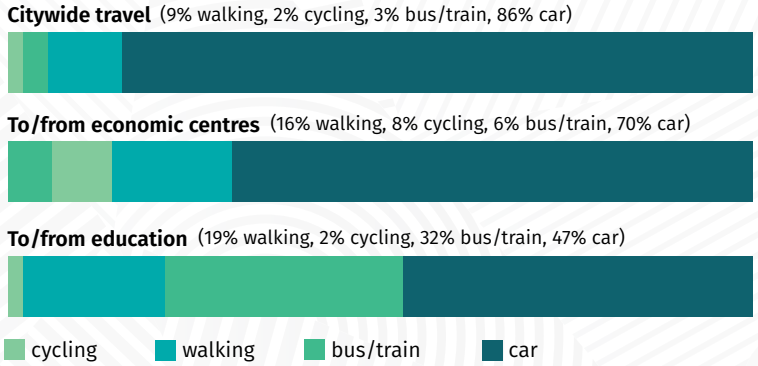
21% 10-35km

20% 5-10km

Source: Greater Newcastle Future Transport Plan

Current walking and cycling to Lake Macquarie's major urban centres - percentage of trips reported

Source: Parking Strategy 2018, Lake Macquarie Transport Study 2018



OUR FOCUS AREAS

10 YEAR STRATEGIC OUTLOOK

This strategy helps us plan, prioritise and deliver better pedestrian and cycling experiences. It does not list specific projects, but sets out what we hope to deliver over time.

Six focus areas will help us target high-benefit projects around the City, which we will work towards delivering over the next 10 years and beyond. Each focus area guides us in identifying priority projects. We will also apply general program adjustment principles.

FOUR-YEAR PROJECTS OUTLOOK

We will identify infrastructure priorities in our four year Delivery Program and annual Operational Plans. These are publicly exhibited for comment before being adopted by Council. When adopted, resources are committed and the community knows what Council is investigating, designing or building each year.

In each Delivery Program, we will distribute funds across our focus areas. This process will be guided by this strategy, community preferences, available funding (including grants and development contributions) and private development activity.

SUPPORTING ACTIONS

For each focus area we have identified supporting actions that speak to multiple themes:

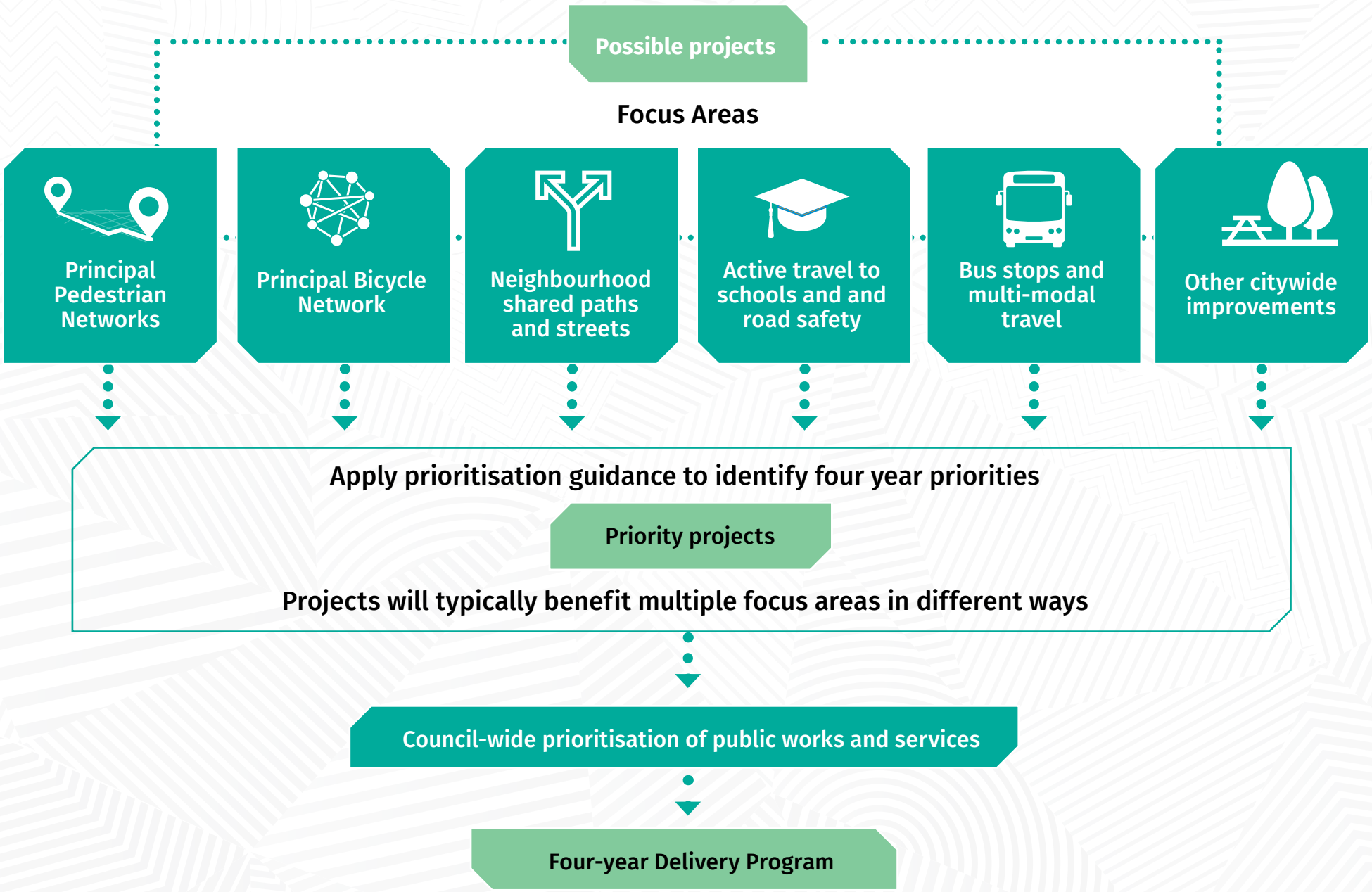
- deliver new infrastructure and enhance accessibility, safety and appeal
- help people find their way (way-finding and online information)
- monitor and communicate progress
- encourage walking, cycling and public transport, and share decision-making
- align local planning policy and development controls
- innovate and accelerate delivery.

Supporting actions will guide the delivery of new infrastructure and help address community desires for more and better infrastructure, sooner. Some actions will be dependent on available funding.

Public infrastructure delivered as part of private development and by NSW Government projects will complement Council's capital works program, across all focus areas.

GENERAL PROGRAM ADJUSTMENT PRINCIPLES

- Fast-track investigation and design of projects with available development contributions
- Fast-track projects that better align with grant funding programs
- Fast-track or hold projects to achieve economies of scale where projects align within five years (over five years we may proceed with projects that do not impact future projects)
- Fast-track or hold projects that align with NSW Government projects and likely private development within 5-10 years based on available data
- Aim for a mix of projects in terms of scale and stage (investigation, design, construction) – to help avoid workflow peaks and troughs across the organisation


Possible projects
Focus Areas
Principal Pedestrian Networks
Principal Bicycle Network
Neighbourhood shared paths and streets
Active travel to schools and and road safety
Bus stops and multi-modal travel
Other citywide improvements
Apply prioritisation guidance to identify four year priorities
Priority projects
Projects will typically benefit multiple focus areas in different ways
Council-wide prioritisation of public works and services
Four-year Delivery Program

#1: PRINCIPAL PEDESTRIAN NETWORKS

Principal Pedestrian Networks have been defined for the City's nine larger economic centres and many smaller local centres, where most people live, visit, work and play.

These areas typically include older neighbourhoods, many built at a time when streets did not require footpaths. Being closer to shops, services, schools, workplaces, community facilities and train stations, these areas include streets and routes frequently used by pedestrians.

People will generally walk or use assisted mobility for 10-15 minutes to access local shops and services, depending on their age, health, the walking environment and the weather. Principal Pedestrian Networks are based on walking distances of 10 minutes to the edges of local centres and 15 minutes to economic centres.

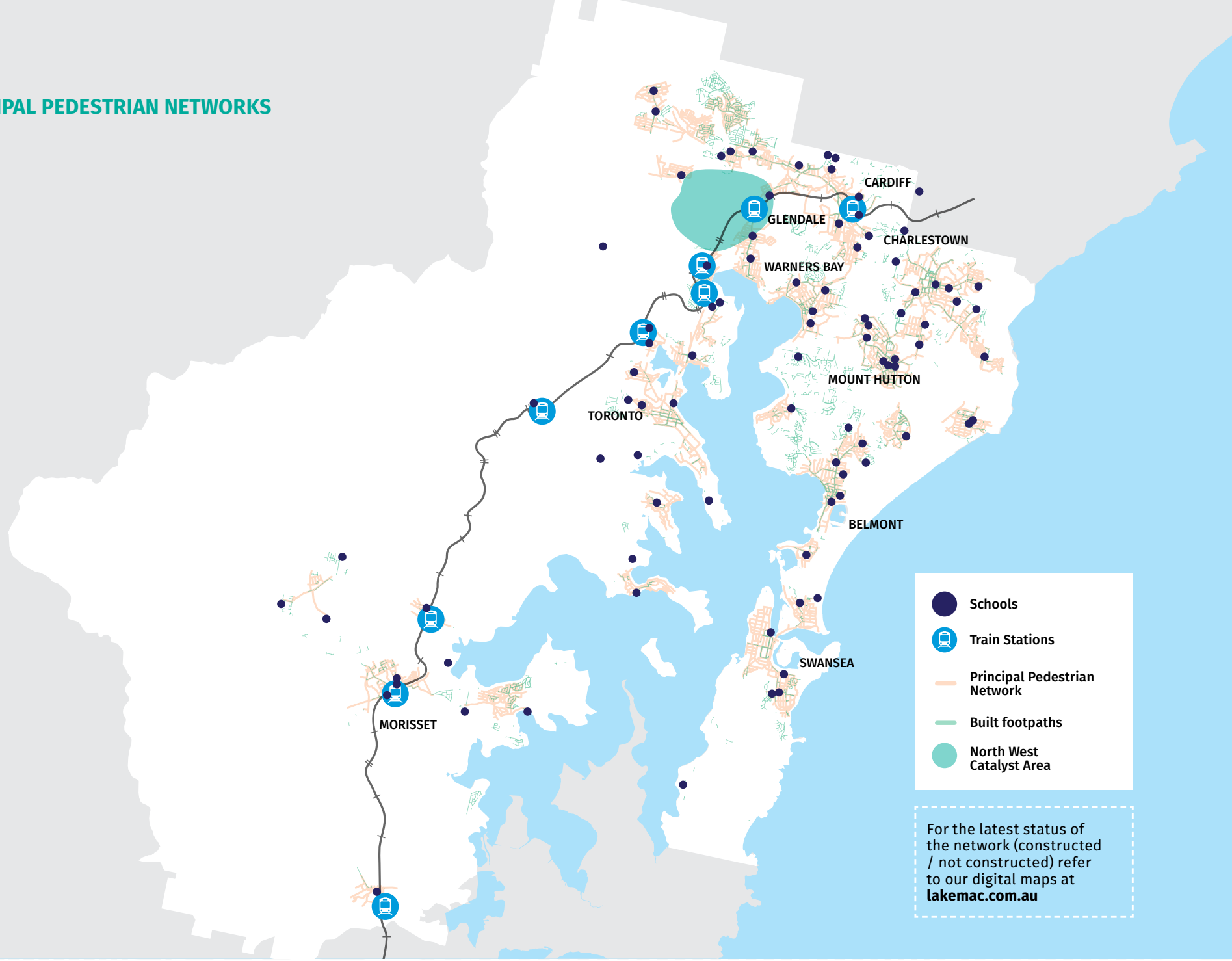
In some cases, Principal Pedestrian Networks may extend to include routes to important destinations slightly beyond 10-15 minute walking distances.

Principal Pedestrian Networks generally do not include no-through streets, as pedestrian and traffic volumes are much lower. The exception is where a no-through street connects to a trip generating destination such as a school, club, train station, etc., or the land is zoned for medium density housing.

KEY DESIGN PREFERENCES

- Direct and convenient
- Highly legible, easy to follow
- Pedestrians have right of way priority where safe and possible
- Feels safe, benefits from passive surveillance
- Leafy and shaded
- Meets disability accessibility standards

MAP 1: PRINCIPAL PEDESTRIAN NETWORKS



IDENTIFYING PRIORITIES

We will target missing link footpaths and priority crossing facilities based on:

- centres that have less complete footpath networks but more people living within the 10 or 15 minute Principal Pedestrian Network
- more popular walking routes (see over page)
- streets with higher traffic speeds and volumes
- extent of existing paths
- crossing facilities without connecting paths
- NSW crash history data and information on verge safety
- alignment with other larger capital works
- distance to secondary destinations outside of a centre's core.

Secondary destinations include housing or premises for seniors or people with disability, schools, clubs, community facilities and holiday parks, parks and playgrounds, bus stops, train stations, beaches, scenic shared pathways and commercial and employment areas other than urban centres.

We will target projects in both economic centres and local centres. Comparing larger economic and smaller local centres is difficult due to their difference in size. Council has adopted the strategy of growing and activating our local centres to provide jobs and services closer to where people live.

For local centres, we will target centres with diverse services more likely to attract walking activity. Important services include supermarkets/grocers, medical centres/pharmacies, cafés/take-aways, clubs/pubs, post-offices, libraries and community centres.

We will fast-track 40kmh or less high pedestrian activity areas where extensive traffic management infrastructure is not required, in line with NSW Government directions.

We will also build footpaths outside of Principal Pedestrian Networks—see *Other City-wide improvements and support.*

ACTIONS

Ongoing
Develop and refine a digital mapping tool to assist with identifying popular routes and priority footpath and crossing facilities, based on our prioritisation criteria identified with Council's Active Transport Advisory Group
Review and seek community feedback on popular routes when preparing/revising area specific plans
Investigate/review 40kmh or less 'high pedestrian activity areas' for streets servicing commercial areas
1-5 years
Review and align local development controls and guidelines with updated local planning guidance for streets and footpaths*
Embed Safe System road safety assessments in road-related infrastructure projects and provide staff training in the Safe System approach*
Provide up to date online information about current capital works projects and publish fact sheets on how Council prioritises pedestrian improvements
5-10 years
Implement pedestrian way-finding signage in economic centres
**See Planning for People, Movement and Places*

POPULAR WALKING ROUTES TO ECONOMIC AND LOCAL CENTRES

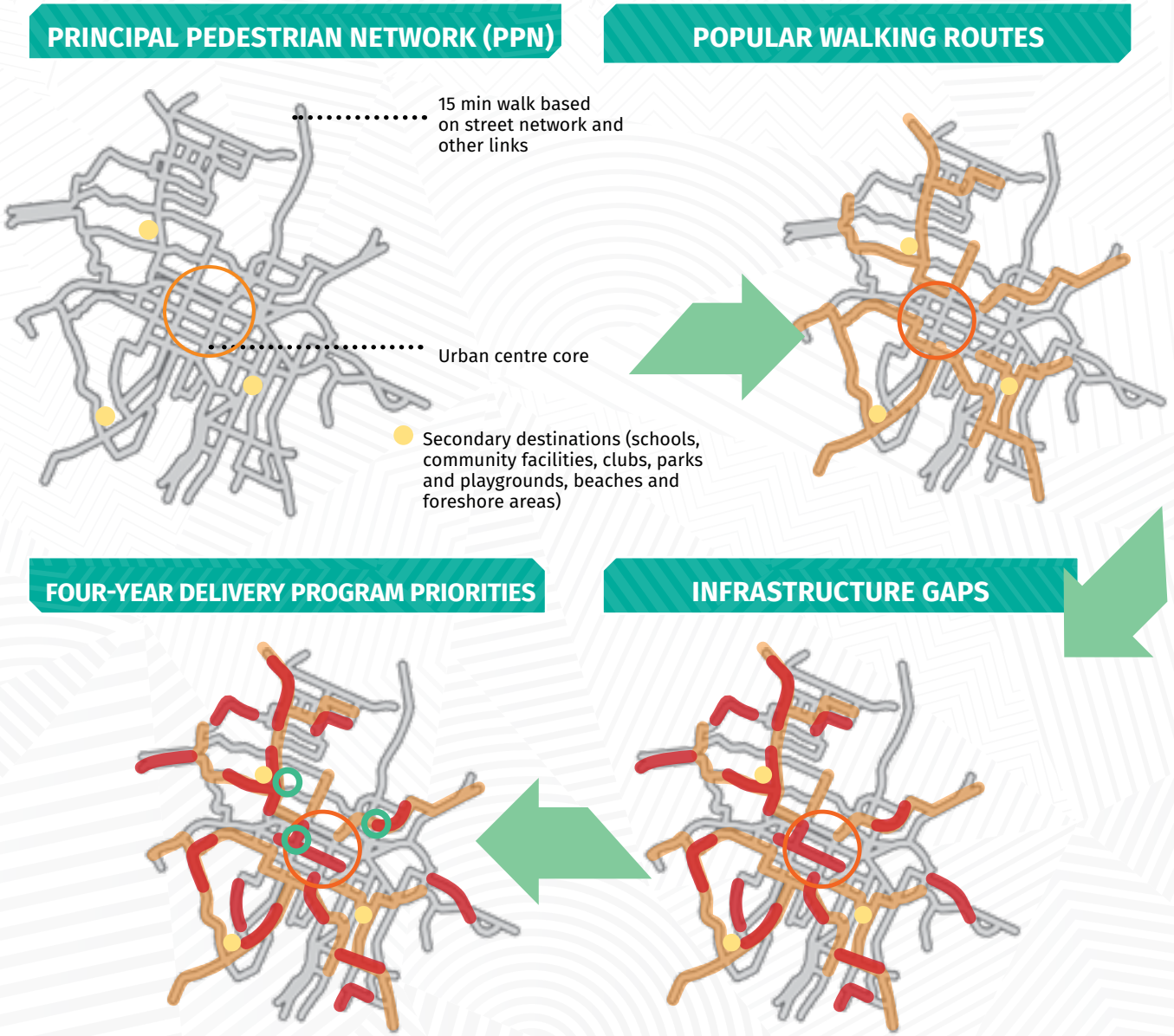
Popular walking routes are direct routes used more often (or used more often if made more appealing) to get to a centre and other nearby destinations. If a street or thoroughfare is identified to be more popular than surrounding links, this will elevate the street as a priority for pedestrian improvements.

Popular routes may change over time with urban development, the opening and closing of commercial premises, new community facilities or changes to road conditions.

URBAN CENTRE CORES

Council has adopted Streetscape Master Plans and Technical Guidelines to provide more detailed guidance on public domain and safety improvements on main streets and certain adjoining streets within the inner cores of economic and local centres.

These guide the capital works program and the delivery of public infrastructure by private developers.



#2: THE PRINCIPAL BICYCLE NETWORK

The Greater Newcastle Future Transport Plan 2056 proposes regional cycling routes for the metropolitan area, based on past collaboration between Lower Hunter councils and the community-led CycleSafe Network proposal for Newcastle and northern Lake Macquarie.

Based on community feedback and planning for future growth, our strategy expands on these to propose a 254km Principal Bicycle Network (PBN) for Lake Macquarie. This will connect key destinations including shopping and employment areas, schools and other places of education, and major parks and scenic attractions. In 2021, 85km of the network has been established. A further 9km is under investigation and 2km under construction. An additional 33km is expected to be delivered through private development and NSW Government State Road upgrades.

Our strategy proposes regional routes (such as the Coastline Cycleway from Swansea to Newcastle, including the Fernleigh Track) and sub-regional routes (such as Swansea to Caves Beach). Sub-regional routes service large, sometimes isolated residential areas or key regional destinations, such as major beaches or the Lake Macquarie Museum of Art and Culture.

KEY DESIGN PREFERENCES

- Low-stress, family-safe (infrastructure that separates people from traffic, or shared streets with low traffic speeds and volumes)
- On-road provisions for faster more confident cyclists
- Direct and convenient
- Highly legible, easy to follow
- Continuous treatments and smooth surfaces
- Right of way priority where safe and possible
- Feels safe, benefits from passive surveillance
- Leafy and shaded
- Design respects location, environment and heritage
- Meets accessibility standards where paths are also catering to non-bicycle users

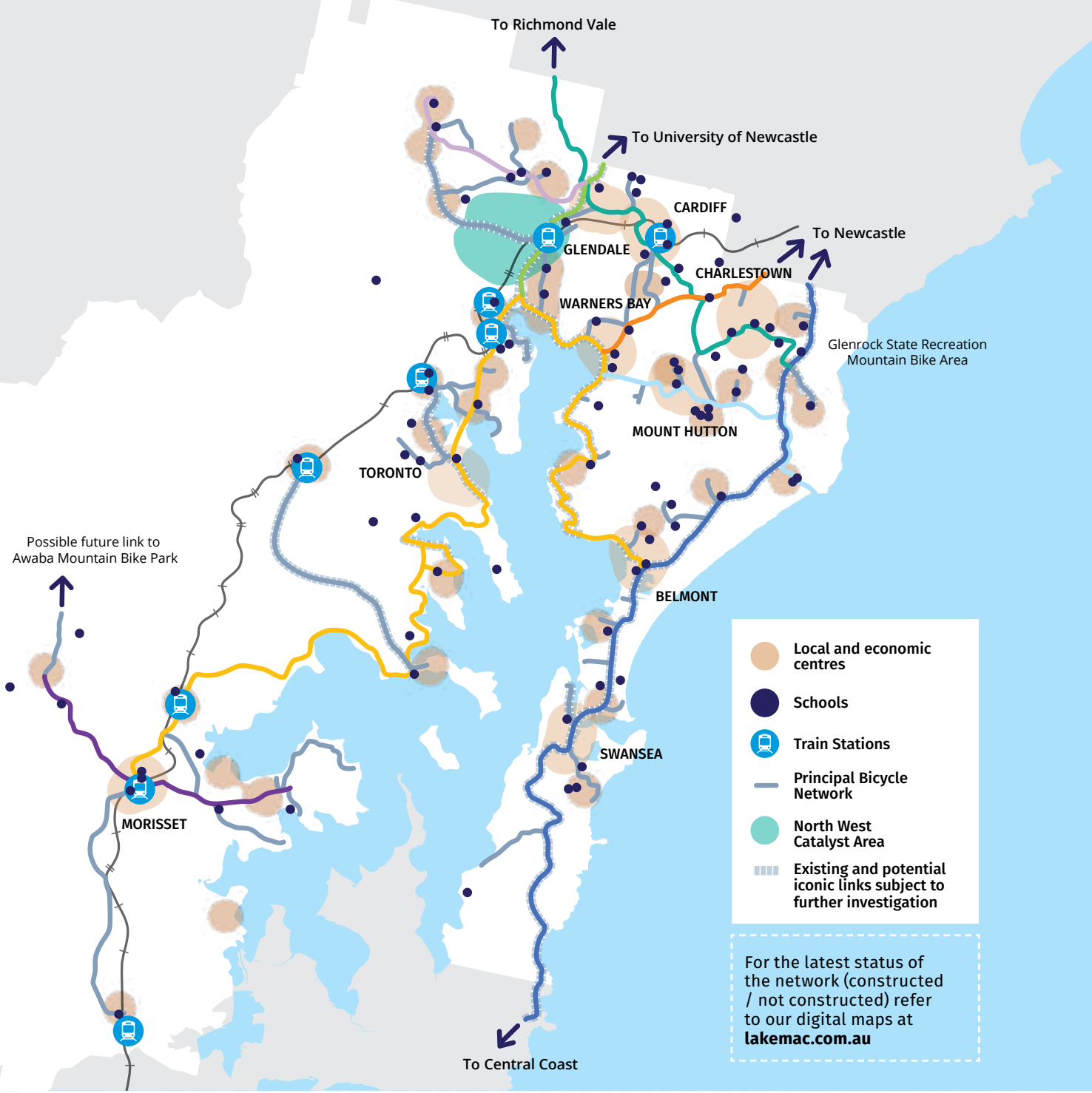
MAP 2: PRINCIPAL BICYCLE NETWORK

Regional routes

- Coastline Cycleway: Swansea to Newcastle (via Fernleigh Track); Swansea to Central Coast
- Richmond Vale to Fernleigh Track (via Charlestown)
- Belmont to Toronto (Northern Bays Way), Wangi Wangi, Morisset
- Warners Bay to Broadmeadow, Mayfield
- Speers Point to University, Newcastle*
- Morisset Peninsula to Cooranbong
- Northlakes Way (Glendale, Edgeworth, West Wallsend, Cameron Park)
- Warners Bay to Redhead Beach
- Richmond Vale to University, Newcastle*
- Maitland to University*

*Refer to City of Newcastle's Cycling Strategy

Appendix 1 provides more detail on Principal Bicycle Network routes.



IDENTIFYING PRIORITIES

We will prioritise projects that:

- have clear missing links on more established routes to create a more connected network, sooner
- include iconic links that inspire greater uptake of cycling
- better cater for shorter trips to economic centres and local centres
- service more schools and convenient travel to/from a school
- connect to more playgrounds, parks and community facilities such as libraries, sports fields and swimming pools
- address areas with limited or no available family-safe and convenient alternatives, and roads with higher traffic speeds and volumes
- offer benefits to multiple user groups, such as alignment with Principal Pedestrian Networks, where higher pedestrian demand is expected
- align with larger capital works, such as road reconstruction, park upgrades and public domain works
- align with objectives of grant programs
- have available development contributions funding support.

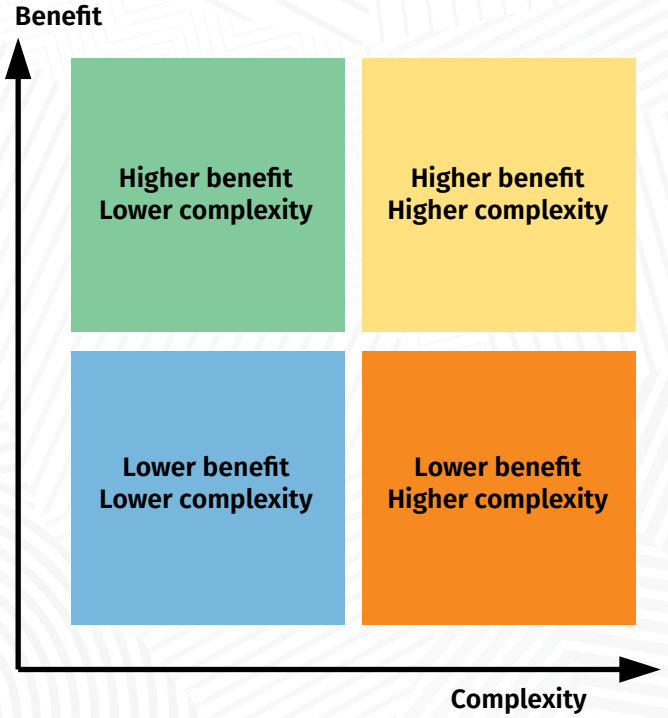
We have undertaken a high-level analysis including:

- engineering challenges and site constraints
- land ownership
- environmental, cultural and heritage matters
- multiple possible route options that require lengthier investigation time

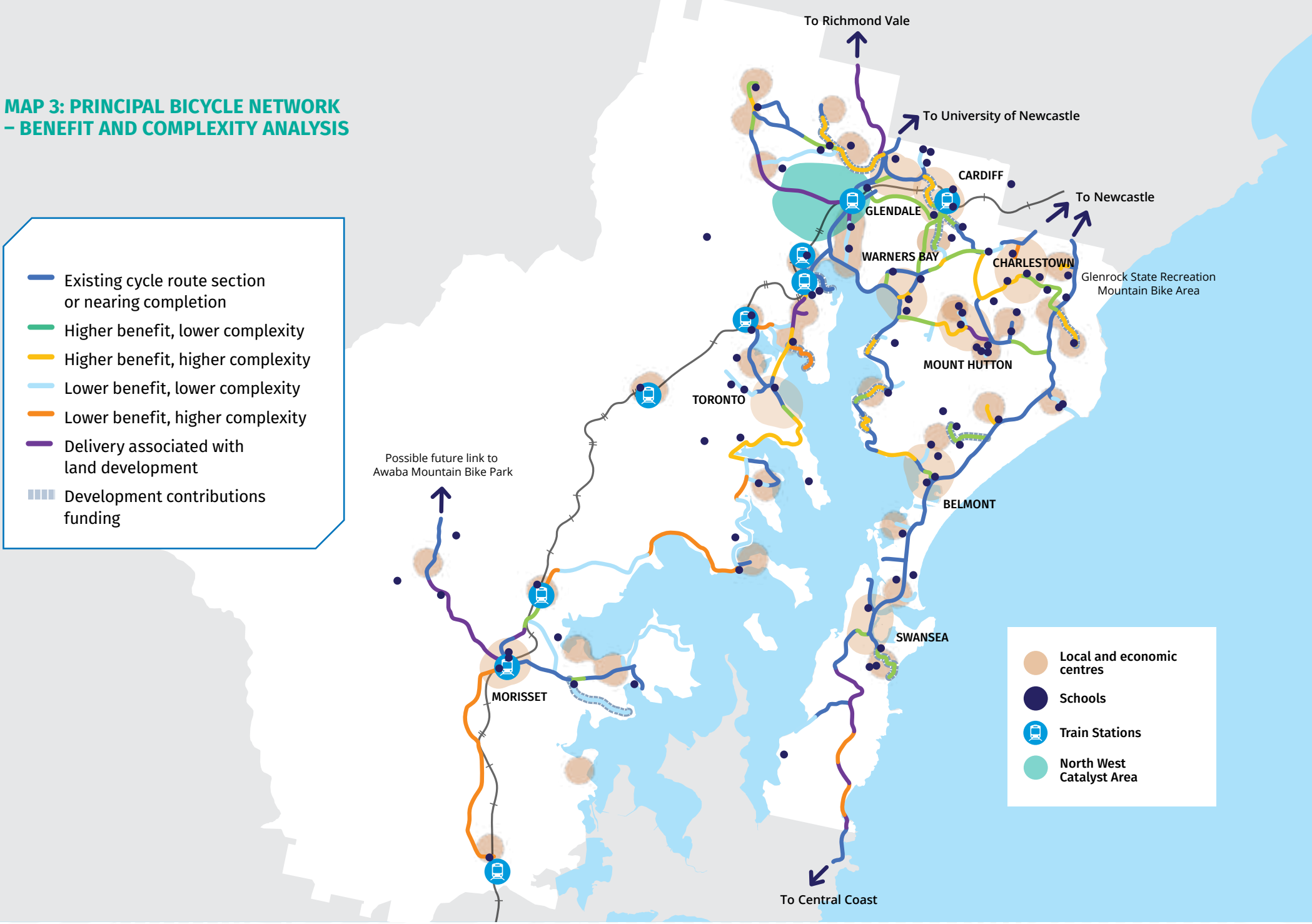
Applying our prioritisation criteria and complexity analysis together helps us identify high priorities that are readily implemented, as illustrated by **Map 3.** Route segments that are of high priority but also highly complex are more expensive.

Projects will be subject to further investigation before we commit resources to detailed design and construction. Route alignment, design options and detailed costs will be considered during investigation and design stages. For more complex projects, this requires one to two years.

We will prioritise construction based on aligned funding opportunities such as available development contributions and grants.



MAP 3: PRINCIPAL BICYCLE NETWORK – BENEFIT AND COMPLEXITY ANALYSIS



ICONIC LINKS

Iconic links are unique walking and cycling facilities with outstanding scenic and cultural qualities that are difficult to replicate. They encourage locals and visitors to walk and cycle by virtue of these characteristics, and help build people's confidence to cycle for transport.

Examples include:

- the Fernleigh Track, Fernleigh Awabakal Shared Track and Blacksmiths to Coon Island, Swansea (Coastline Cycleway)
- Eleebana Lions Park to the Museum of Art and Culture (part of Northern Bays Way), Warners Bay foreshore and Speers Point Park
- Fassifern to Toronto Greenway Rail Trail, Toronto foreshore
- Wallsend to Speers Point, via Cockle Creek and the Tramway Track

Other possible links, subject to further investigation and costing, include:

- Bareki Road, linking Thomas H. Halton Park to Eleebana Lions Park
- Belmont foreshore and Green Point, Valentine
- Kilaben Bay to Rathmines Park
- Richmond Vale Rail Trail
- Fernleigh Track to Dudley Rail Trail
- Catherine Hill Bay Heritage Trail
- Cockle Creek to West Wallsend Rail Trail
- Awaba Station-Wangi Wangi Rail Trail
- Wallarah Peninsula (southern Coastline Cycleway)

OTHER RECREATION FOCUSED TRAILS AND FACILITIES

Many cycling routes cater to both active travel and recreation. Cycling trails and other facilities not considered to cater for active travel, such as mountain bike trails, parks and pump tracks, will be investigated as part of future open space and recreational planning.

Other planning initiatives will also look at nature trails and experiences such as the Great North Walk, Yuelarbah Track, Wallarah peninsula, Munibung Hill and Wangi Wangi peninsula.

ACTIONS

Ongoing

- Design, implement and enhance cycle routes of the Principal Bicycle Network
- Investigate use of alternative and recycled materials that ensure a safe, comfortable and accessible experience for intended users without introducing unreasonable asset lifecycle costs

1-5 years

- Review and align local development controls and guidelines with updated local planning guidance for streets and cycling provisions*
- Embed Safe System road safety assessments in road-related infrastructure projects and provide staff training in the Safe System approach*
- Collaborate with the NSW Government and Lower Hunter councils to develop a strategic investment business case for the Principal Bicycle Network
- Monitor network use and install automated pedestrian and cyclist counters for improved network planning, asset management, construction detours, event planning and emergency response
- Prepare and implement a way-finding plan for the cycling network, including access to mountain biking trails, in accordance with Australian standards for cycle route way-finding and Council's signage guidelines
- Integrate/adapt the NSW cycling design toolkit and suite of standard drawings for various treatments (e.g. continuous path treatments, driveways) in conjunction with Transport for NSW and the City of Newcastle
- Provide up to date online information about current capital works projects and the status of route segments (investigation/design/construction/complete)

**See Planning for People, Movement and Places*

#3: NEIGHBOURHOOD SHARED PATHS AND STREETS

Neighbourhood shared paths and shared streets form the local access bicycle network, connecting people to the Principal Bicycle Network, local neighbourhood shops, schools, parks and playgrounds.

Shared paths are wider paths for both pedestrians and people on bicycles. Shared local streets are safer streets with 'design speeds' of no more than 30kmh that enable more people of all ages and abilities to cycle.

Shared streets are an important part of the cycling network as it is not feasible or desirable to provide separated cycling infrastructure on every street. They also improve the safety of pedestrians until footpaths are provided.

Our online cycle routes planning map identifies neighbourhood shared paths and potential shared street environments that form part of the local access bicycle network.

In addition, we will implement shared streets around our commercial centres and review development controls to provide shared streets for new residential neighbourhood developments.

IDENTIFYING PRIORITIES

As new neighbourhoods are planned and built, shared streets and neighbourhood paths will be added to the cycling network, guided by Council's Development Control Plan.

In existing areas, we will target missing links on more established routes closer to commercial centres, schools, parks and recreational areas. We will also prioritise projects where no family-safe alternatives are available. We will align projects with larger capital works, such as the upgrade of parks, foreshore areas and roads.

For shared streets, NSW councils do not have authority to change speed limits, however, we can:

- apply for special reduced speed areas on local streets surrounding main streets and commercial areas
- ensure streets in new neighbourhoods are designed to manage traffic speeds and improve cyclist visibility, guided by Council's Development Control Plan
- modify the design of streets to manage traffic when undertaking road reconstruction works.

In each four year Delivery Program we will aim to include sections of the Principal Bicycle Network and neighbourhood paths/shared streets.

ACTIONS

Ongoing
Design, implement and enhance neighbourhood shared paths and shared streets
Investigate/review 30-40kmh or less shared streets around commercial areas
1-5 years
Same actions as for the Principal Bicycle Network

#4: ACTIVE TRAVEL TO SCHOOLS AND ROAD SAFETY

Our City has 90 education institutions. In 2020, the City had approximately 40,000 school age children. This is expected to grow as Lake Macquarie continues to entice young families.

Most primary schools have student intake catchments of around 2km—a 15-20 minute walk or shorter bicycle trip. High schools draw on larger areas, requiring a combination of walking, buses and cycling.

Around 1 in 5 students walk to school/education, 1 in 3 catch the bus and 2 per cent ride their bike. Almost half of students arrive by car.

Safe crossing facilities provide the greatest benefit in helping young people get to school. Footpaths are also important as in NSW children under 16 years of age can legally ride on footpaths.

Many schools in older neighbourhoods lack footpaths and crossing facilities. Increased traffic around schools has also prompted more families to drive children to school.

IDENTIFYING PRIORITIES

We will collaborate with schools, the NSW Department of Education, School Infrastructure NSW and private schools to develop school entry and exit plans to help identify and align pedestrian, cycling and traffic improvements on priority streets.

Entry and exit plans identify preferred entrances and exits for parents and students. This assists with pedestrian safety and traffic management in the surrounding street network.

We will:

- target schools with agreed student entry and exit plans
- target streets with higher traffic volumes and speeds
- target schools with a greater proportion of students residing within a 2km area
- fast-track low-cost traffic, parking and bus stop adjustments, guided by officer technical investigations and stakeholder engagement
- review and identify key school active travel routes when preparing place-specific locality plans
- encourage communities to organise school ‘walking buses’ and promote walk and ride to school day.

Investigations and stakeholder engagement will be combined with Council's traffic management investigations and school sustainability engagement activities. Each year we will attempt to target both high school and primary school improvements as part of our overall pedestrian improvements program.

Schools will also benefit from investment in the Principal Bicycle Network and local access bicycle routes.

ACTIONS

Ongoing	
✓	Collaborate with education stakeholders to identify pedestrian, cycling and traffic improvements
✓	Promote walk and ride to school day
✓	Partner with schools/communities to facilitate the delivery of bicycle skills and maintenance training

#5: BUS STOPS AND MULTI-MODAL TRAVEL

BUS STOP UPGRADES

Our City has 2000 bus stops and a growing on-demand bus service. Council funds bus stop infrastructure including concrete slab boarding points, seats and shelters. Transport for NSW and bus service providers are responsible for the location of bus stops.

IDENTIFYING PRIORITIES

We will preference upgrading bus stops to meet national disability standards. This includes clear signage, tactile ground surface indicators for the vision impaired and a firm, evenly graded boarding point.

We will provide seats and shelters for stops adjacent to major trip generating land uses including shopping and commercial areas, train stations, community facilities and houses or premises for seniors and people with disability.

We will look to include bus stop upgrades in larger capital works projects. For discrete bus stop upgrades not part of larger works, in each four-year Delivery Program we will consider stops:

- with the most tap-ons
- on more direct, high-frequency routes
- on main roads
- servicing housing or premises for seniors or people with disability.

BIKES, TRAINS AND BUSES

Public bus services can facilitate travel by bike and bus by allowing customers to bring their bicycle on the bus, on a rack. While Council does not run bus services, we can advocate for improved services on behalf of our community.

From 2021, the NSW Government is expected to introduce a new intercity train fleet for services between Newcastle and Sydney. These new carriages include dedicated bicycle parking. We will advocate for improved bicycle storage at train stations, including lockers and secure cages.

STATION ACCESS PROGRAM

The NSW Government is responsible for upgrading train stations to improve accessibility. We will provide priority connections as part of our footpath and cycling programs.

BIKE SHARE AND OTHER ASSISTED MOBILITY SCHEMES

Bike share schemes allow locals and visitors to access a bicycle ‘on-demand’ when desired. Bike share schemes generally come in two forms: docking stations or dockless. Lake Macquarie already hosts several tourist-based docking stations. We will continue to facilitate the market in providing future share schemes.

ACTIONS

Ongoing	
✓	Upgrade bus stops as part of larger capital works projects and undertake discrete priority upgrades as part of a specific program
✓	Improve and maintain an up-to-date database of existing and proposed bus stop upgrades
✓	Monitor the effect of on-demand bus services on our bus stop upgrades program
✓	Review advertising arrangements on shelters and seats and replace seats to better meet community needs
✓	Advocate for the NSW Government to investigate improved bicycle storage for major transport interchanges and on bus services
✓	Assist the NSW Government and bus service providers with the roll out of digital timetable displays at priority bus stops
✓	Provide online program updates
1-5 years	
✓	Review and align local development controls and guidelines with updated local planning guidance for bus stop provisions*; and review processes to ensure construction complies with standards
✓	Review local policy and plans to facilitate the safe uptake of bike share and other possible assisted mobility schemes, ensuring appropriate and fair use of available public space for parking bicycles and devices

**See Planning for People, Movement and Places*

#6: OTHER CITY-WIDE IMPROVEMENTS AND SUPPORT

OUTLIER FOOTPATHS AND CROSSING FACILITIES

Beyond Principal Pedestrian Networks and key active travel routes to schools, there are many important destinations that require safe pedestrian access and improved accessibility.

We will:

- focus on projects that address demonstrable hardship, an urgent safety need such as crossing a main road or introducing traffic management measures
- primarily deliver projects as part of larger capital works, such as road reconstruction and community facility projects
- prioritise projects closer to housing or premises for seniors or people with disability, schools, clubs, community facilities, parks and beaches, bus stops, train stations, scenic shared pathways and commercial and employment areas other than urban centres
- prioritise projects on streets with higher traffic speeds and volumes and where verges result in more pedestrians walking on the road
- target short missing links that do not require design, following private development path construction.

UPGRADING EXISTING FACILITIES

We will assess the need to widen or redesign paths with high pedestrian and cyclist volumes when they near the end of their useful life or when other events such as storms, private development or road reconstruction projects trigger the need to reconstruct sections.

In some circumstances, available space and environmental and heritage matters may restrict what is possible, such as in the case of parts of the Fernleigh Track.

ON-ROAD CYCLING PROVISIONS FOR MORE CONFIDENT CYCLISTS

Council is guided by the notion that every street is a cycling street. In other words, apart from some roads nominated by the NSW Government excluding cyclists, people can legally ride on any road.

In accordance with Australian standards and NSW guidance, we will:

- provide wider shoulders when reconstructing roads where space permits and mark new cycle lanes as part of our line-marking program
- target 'high-difficulty' routes identified in our digital cycle route planning maps available online
- consider opportunities for every road project during planning.

Wider shoulders and on-road bicycle lanes

END-OF-TRIP FACILITIES

Local planning controls and more detailed place plans guide the planning and delivery of end-of-trip facilities such as bicycle parking, on-site bicycle storage, change rooms and showers.

We will:

- target bicycle parking in convenient and secure locations on main streets, libraries, community facilities, parks, playgrounds and sports grounds
- be open to community suggestions
- ensure planning controls for new developments meet current best practice.

ENCOURAGING WALKING AND CYCLING

Council can play a role in encouraging the uptake of more walking and cycling and safe driving behaviours. Subject to the availability of delivery partners and funding, we will seek to support initiatives such as:

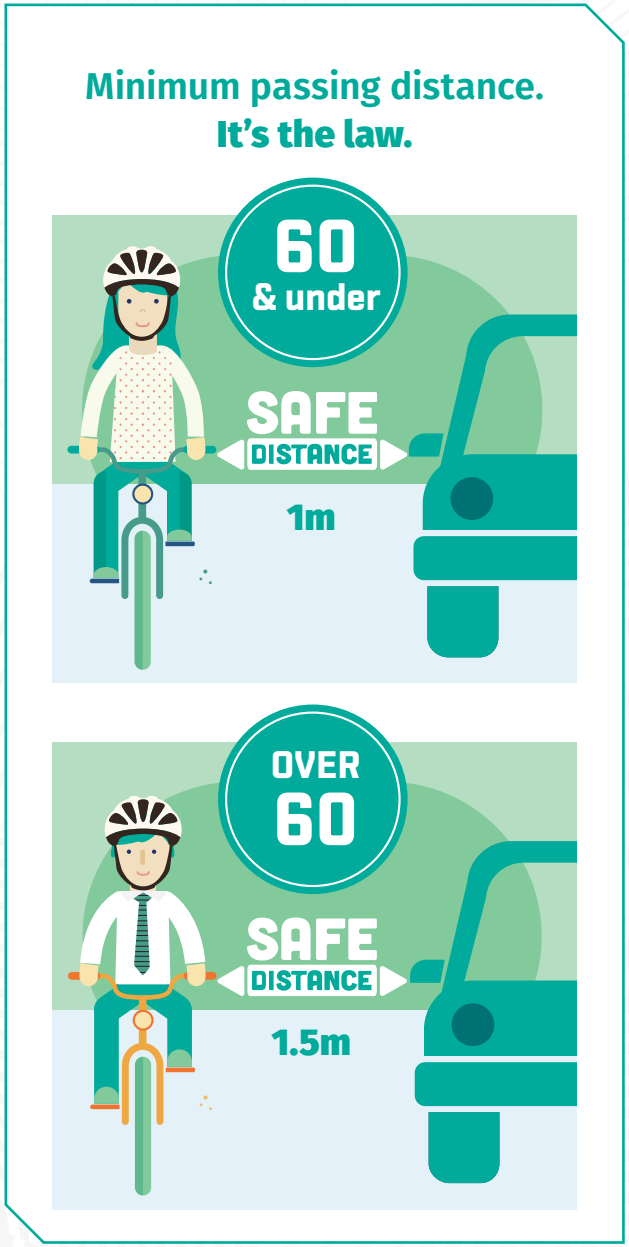
- National Road Safety Weeks, National Heart Week, NSW Bike Week, Walk and Ride to School Day
- bicycle skills and maintenance training, promotion of walking, cycling and public transport to Council run events
- promotion of road safety campaigns
- publishing information on established cycling routes.

ACTIONS

Ongoing
Install bicycle parking
Investigate/implement street tree plantings with reference to Council's *Environmental Sustainability Strategy*
Partner with the NSW Government and community organisations to promote and deliver skills development and road safety awareness initiatives
Advocate for the NSW Government to investigate improved bicycle storage for major transport interchanges and on bus services

1-5 years
Publish a cycling routes way-finding map, aligning with neighbouring local councils, and share data on recommended routes to help the NSW Government and third-party service providers improve digital trip planning services for walking and cycling
Undertake a citywide audit of bicycle parking
Review shared path signage and investigate opportunities for improvements to encourage shared path etiquette, including use of social media
Review Council's public lighting policy based on the latest research
Identify ways to help customers report unsafe and illegal motorbike use of shared paths to the NSW Police

5-10 years
Investigate an integrated approach to planning and prioritising local area traffic management interventions as part of area planning activities and road safety technical investigations, to better align with pedestrian and cyclist safety issues and priorities
Following community requests, investigate community crowdfunding funding models that ensure delivery of priority projects for the City



PLANNING FOR PEOPLE, MOVEMENT AND PLACES

Two best practice frameworks help us improve the safety and comfort of pedestrians and cyclists, and balance the needs of everyone who uses our streets: the **Movement and Place framework** and the **Safe System**.

Together with supporting guidance, such as the NSW Walking Space Guide, we have developed updated local planning guidance including:

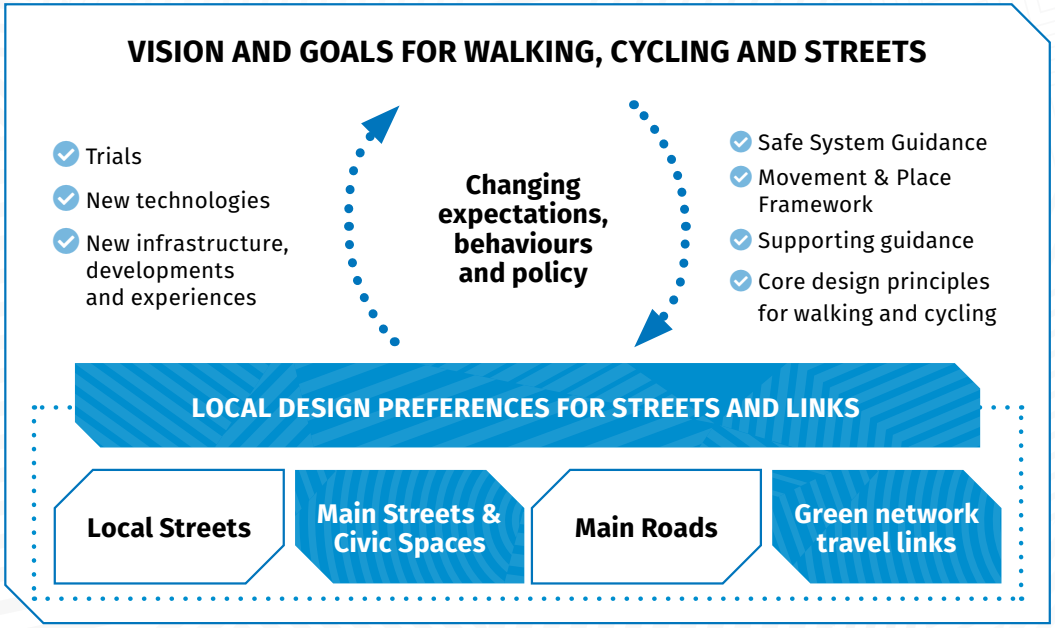
- different types of pedestrians and cyclists and their needs
- core planning and design principles for walking, cycling and streets
- local design preferences
- how to approach trials and temporary interventions
- how we'll incorporate community feedback and measure progress.

LOCAL DESIGN PREFERENCES

Local design preferences are an important part of local planning guidance. We have identified key preferences for different street types under the Movement and Place framework, plus green network links beyond the street network, such as the Fernleigh Track.

Local design preferences help us determine what is best suited to where, given our City's geography and local characteristics and lower population density in places. These aspects influence Council's ability to fund the maintenance of infrastructure into the future.

We will review and update local preferences with best practice guidance, as the City and expectations change and as Council revises its asset management strategy (the extent of roads and paths we can afford to maintain and replace into the future).



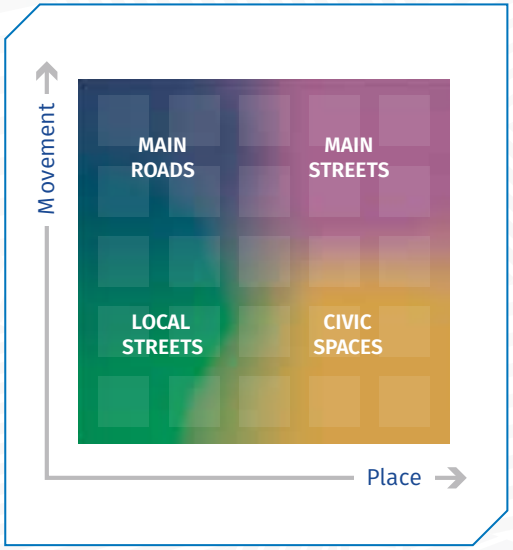
MOVEMENT AND PLACE AND THE SAFE SYSTEM

In NSW, the Movement and Place Framework has been developed and adopted as a collaborative 'place-based' approach to the planning, design and delivery of transport networks and places.

Movement is how people get about to access their jobs, education and services, as well as the movement of goods required for our cities and towns to function.

Places are the spaces where we get together, relax, celebrate, work and participate in civic life.

The framework recognises that roads are important for the movement of people and goods, but can also act as important places. It identifies four street types based on movement and place objectives: main roads, main streets, local streets and civic spaces.



The Safe System recognises people will inevitably make mistakes and may have road crashes, but the road system should be forgiving and crashes should not result in death or serious injury.

There are four pillars to the Safe System. Each must be working together to minimise the likelihood and severity of crashes:

- Safe roads
- Safe speeds
- Safe vehicles (technology and design)
- Safe people (behaviour of all road users)

Council's primary role is ensuring roads are designed to meet Safe System standards for all road users. We will implement what can be funded and ensure designs can be adopted to integrate longer-term solutions.

Movement and Place and the Safe System approach are embedded in key NSW Government transport and urban planning documents, including the Greater Newcastle Metropolitan and Future Transport Plans.

Together, these frameworks help us clarify the objectives for a street and the infrastructure and design outcomes required.

Safe System Assessment

We will assess pedestrian, cycling and road projects against the Safe System to inform design outcomes.

Where additional infrastructure needs cannot be funded, we will list for future investigation.

Supporting guidance

NSW Movement and Place Practitioners Guide

NSW Walking Space Guide

NSW Cycleway Design Toolbox

NSW Greener Places Design Guide

NSW Technical Directions

Austroads Guides

SAFE SYSTEM SPEEDS

Safe System guidance provides clear direction that pedestrians and cyclists should be separated from motorised traffic or speeds reduced to 30kmh or less.

Lower speeds results in fewer crashes, as road users have more time for reacting and decision-making and can stop within a shorter distance. Consequently, impacts on people and vehicles are less severe and the likelihood of serious injury or death is reduced.

Vehicle speeds of 30kmh or less

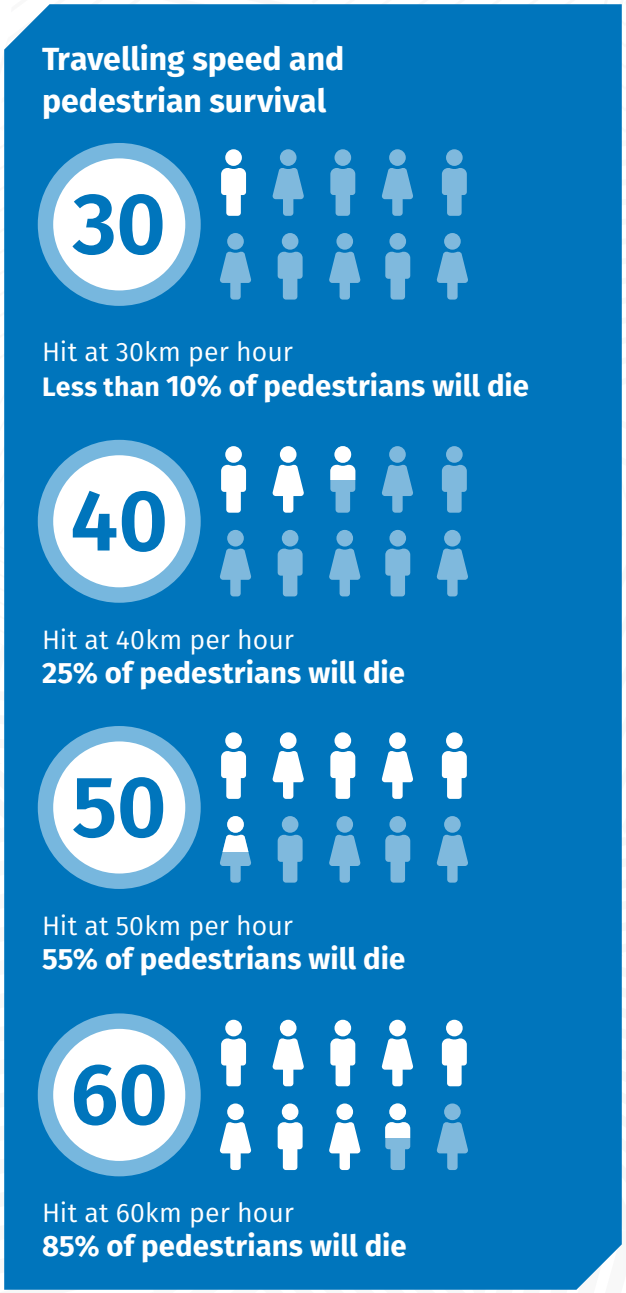
Pedestrians and cyclists can mix with low traffic volumes.

More than 30kmh

Above 30kmh the chances of survival decrease rapidly. Traffic separated infrastructure is recommended or, if this is not possible, streets should be designed to reduce the likelihood and severity of impact.

Under the Movement and Place framework, lower speeds are important for local streets, main streets and civic spaces.

Importantly, reducing speeds on local streets has little impact on overall travel time as these streets quickly connect to main roads.



SAFE SYSTEM INFRASTRUCTURE

Council and the NSW Government have historically provided 1.2m wide footpaths, shared paths and on-road bicycle lanes and markings.

Population growth and new road safety guidance require a variety of facilities and interventions.

Council has adopted several detailed area plans that already include traffic separated bicycle-only paths (also known as protected cycleways), such as King Street, Warners Bay and Station Street, Morisset.

Our community has suggested exploring alternative materials for cycling routes to deliver more infrastructure, sooner, such as spray sealed gravel paths. We will continue to take a life-cycle approach to planning and designing new infrastructure. This means we will balance construction costs with costs associated with maintenance over the expected life of an asset.

The provision of wider shoulders and on-road cycle lanes on busier roads for more confident cyclists will continue.

Wider footpaths in areas with more pedestrians and children under 16 years on bicycles

Kerb ramps are essential for people in wheelchairs, on mobility scooters, with prams or luggage

Kerb extensions and refuges to improve safety, especially for children, the elderly and people with disability

Continuous path treatment across local streets, to give pedestrians and cyclists right of way and to help reduce traffic speeds

Raised pedestrian crossings to give pedestrians right of way and help manage traffic speeds

Kerb extensions and narrow intersections reduce pedestrian time spent in the roadway area

Wider shared paths in areas of high pedestrian activity

Bicycle boulevards – special shared traffic streets with modifications to reduce vehicle speeds and increase the visibility of adults and children on bicycles

SHARING THE PATH

Shared paths are used for different purposes and will remain important links in the cycling network. We will ensure they operate as shared, welcoming and safe places for all to enjoy, by continuing to promote shared path etiquette through our online engagement activities.

We will also investigate opportunities to improve path signage. When it is time to upgrade or build new paths upgrade paths, we will investigate opportunities for widening in areas of high pedestrian activity and where space and funding is available.

Traffic separated bicycle-only paths

Off-road spray sealed gravel trails

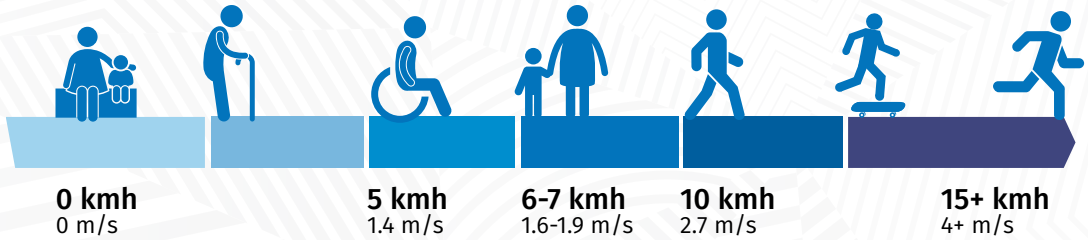
TYPES OF PEDESTRIANS AND CYCLISTS

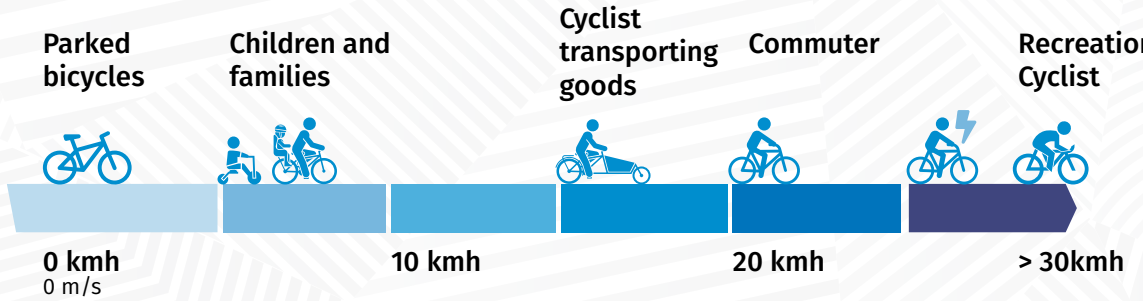
We will cater to all, but to achieve our goals we need to pay special attention to more vulnerable groups – children, the elderly and people with disability.

All pedestrians benefit from shorter crossing distances, refuge areas, ample room to wait at intersections, intersection control that prioritises their movement and separation from all but the lowest-speed and lowest volume traffic.

Kerb ramps are crucial for wheelchair users and people are walking with extra items, such as prams, trolleys and luggage.

People cycle for many different reasons. We need to cater for different travel needs as well as different skill levels. Replacing car trips with cycling trips will largely rely on building more infrastructure separated from traffic and creating reduced vehicle speed shared streets.





Cyclists may fall into multiple categories:

Traffic separated infrastructure and low-stress suited to all ages and abilities

On-road facilities suited to more confident cyclists

Curious but concerned

Potential or novice cyclists. Basic skills. Very low tolerance for mixing with traffic. Rely on way-finding. Ride shorter distances, typically between 1-5km. Prefer flat routes with less than 5% gradient. May not have ever ridden a bicycle.

School age

Cognitive skills and situational awareness in development. Require separated infrastructure.
Under 16 years of age can legally ride on footpaths in NSW.

Families with young children

Prefer separation from traffic. Ride shorter distances. Prefer flat routes with less than 5% gradient.
Adults / guardians may be walking alongside young children on bicycles.

Casual adult riders

People who ride irregularly in the City, typically for leisure or social trips. Prefer separation from traffic.
Rely on way-finding. Prefer flat routes with less than 5% gradient.

Regular adult riders (including commuters) and touring cyclists

More confident mixing with traffic, though still prefer separation. Commuters ride longer distances, typically less than 20km, and touring cyclists rider much longer distances. More likely to commute and combine with public transport. Prefer flat, direct routes, but may tolerate 10% gradients, or 15% with e-bikes.
Require all day secure parking, showers and change facilities.

Swift and savvy

Adult riders more confident mixing with traffic. If riding for training purposes, may ride very long distances, sometimes more than 100km.

Mountain biking / bike packing

Mountain biking, trail riding and bike packing cyclists purposefully seek out off-road adventures. When travelling on the street network or green network active travel links, these cyclists may fall into any of the above categories.
Note: Off-road cycling of this type is the subject of complementary open space and recreation planning.

Increasing: Confidence • Situational awareness • Distance • Speed

Assisted mobility and micromobility

Assisted mobility technology is constantly evolving and improving. The terms 'assisted mobility' and 'micromobility' are generally used in reference to motorised and non-motorised devices that help pedestrians move in ways other than walking.

Micromobility often specifically refers to the use of electric scooters by able-bodied persons. In some places, micromobility also includes use of bicycles.

Mobility scooters

Mobility scooters are familiar-looking motorised wheelchairs with a top speed of 10km/hr. They are used by people of all ages, providing an affordable substitute for cars, and can be combined with other forms of public transport. If Lake Macquarie's ageing population trend continues, use of mobility scooters will likely become more common.

In NSW, a motorised wheelchair user is considered to be a pedestrian and must comply with NSW Road Rules that apply to pedestrians. Generally, these devices are not to be driven on the road if there is a footpath available.

Electric scooters, skateboards and bicycles

Demand for battery powered scooters, skateboards and bicycles has surged in recent years in cities around the world. These devices are increasingly a common sight in Lake Macquarie, creating demand for more infrastructure, wider paths and safer streets. The NSW Government is investigating updating regulations to better accommodate these devices.

PLANNING AND DESIGN PRINCIPLES

Our planning and design principles guide the delivery of pedestrian, cycling and road infrastructure. Our principles also speak to how we plan our city more broadly, and we'll apply them when planning for streets and places.

People will walk and cycle when it is appealing and when they have the confidence to do so. This means walking and cycling is convenient, direct and preferable to other ways of getting around. It means having the right infrastructure and reducing perceptions of risk and actual danger.

Improving appeal is also about enabling people to live close to where they work, shop and access services. Managing car parking is also important.

To implement these principles, Council has adopted other plans including the Local Strategic Planning Statement, Housing Strategy and Parking Strategy.

What is within Council's control?

- Identifying land suitable for housing, employment, recreation
- Managing population density In line with NSW Government directions
- Footpaths, street trees and cycling facilities on local streets and behind the kerb on State roads
- Pedestrian refuges and crossing facilities where NSW requirements can be met
- Off-street 'green network' links such as the Fernleigh Track (subject to land ownership)
- Traffic calming
- Managing public parking
- Setting requirements for road design, pedestrian and cycling facilities and car parking in new subdivisions and building developments
- Bus stop infrastructure

What is not within Council's control?

- Speed limits (Council can apply to NSW Government for lower speeds in certain areas)
- Speeding vehicles (NSW Police)
- Location of bus stops
- Bus routes

PLANNING AND DESIGN PRINCIPLES

Low-stress and vehicle safe speeds

People have different perceptions of what feels safe or stressful for them. Pedestrian and cycling infrastructure that minimises interaction with vehicles and risk of traffic-related injury gives people of all ages and abilities more transport choices.

Intuitive, visible, logical and direct

Streets and paths should be easily navigable, forming a convenient and coherent route and linking people directly to where they want to go.

Accessible and comfortable

Streets and paths meet accessibility standards where pedestrian access is required. Surfaces and transitions are smooth and provide ample width and turning space for intended users. Separate or give more room to pedestrians and cyclists in areas of higher pedestrian activity.

Connected, with many choices

Multiple routes should be available for people to move between key destinations. This is especially important for pedestrians, where travel time is impacted by limited choices.

Sheltered, cool and leafy

Street trees and building awnings provide protection from the sun and inclement weather.

Well-loved and intriguing

People are attracted to beautiful and interesting streets and places and are more likely to walk and cycle and feel safe where other people are also present. Encourage active building frontages and spaces for play and rest, and provide greenery and public art.

Safe and inviting

Design for more ‘eyes on the street’, careful placement of public lighting and many entry and exit points to off-street paths, to reduce the likelihood of crime and help people feel safe.

More shops and services closer to home

People are more likely to walk and cycle when there are lots of places to visit and things to do nearby that many people can reach within an easy distance (generally 10-20 minutes). Plan existing and new neighbourhoods to provide local facilities within walking and cycling distance.

Inviting and convenient public transport

Every trip on a bus or train involves walking or use of assisted mobility and in some cases cycling. People are more likely to walk and cycle when public transport is frequent, reliable and comfortable.

Balance parking with other needs

Manage the supply and demand of car parking in such a way that ensures local places continue to thrive and the safety and accessibility needs of pedestrians, cyclists and people with disability are met.

LOCAL DESIGN PREFERENCES: LOCAL STREETS

Local streets make up the majority of streets within our City's transport network and are important places for local residents.

Local streets include primary and secondary streets and access streets such as laneways and no-through cul-de-sacs. Primary streets have more through traffic.

Local streets provide a means for people to get to and from home and to other places. They provide a space for walking, cycling, jogging, learning to ride and playing.

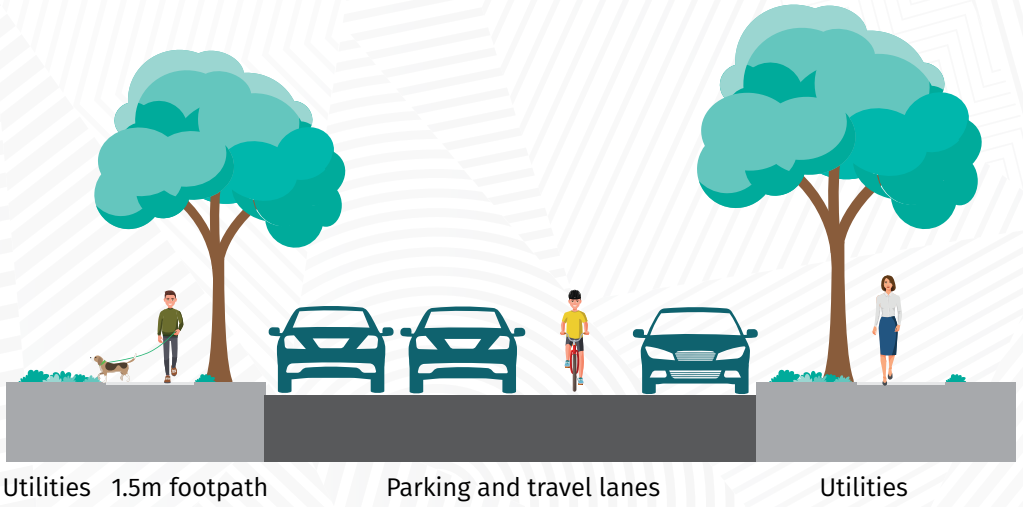
They are more than just pavement—they are important for managing stormwater flows, providing trees and greenery for our well-being and wildlife, and enabling power, water, sewer and telecommunications to service our homes. Road widths, footpaths and trees must be carefully planned to allow for future maintenance.

DESIRED OUTCOMES

Local streets encourage active living and make us feel good. Street design, traffic management and pedestrian and cycling infrastructure reduces the likelihood and severity of crashes.

Where footpaths are recommended for both sides of a street, the delivery of paths on at least one side of streets will generally be prioritised. Key exceptions include when connecting to a crossing facility or roads where crossing would not be considered safe, due to traffic volumes and speeds.

- Priority paths on at least one side of primary and secondary local streets, and both sides of primary streets within 400m of the Principal Pedestrian Network area and schools
- Priority paths on at least one side of access streets within Principal Pedestrian Network medium density zoned areas
- New footpaths 1.5m wide in Principal Pedestrian Networks, 1.2m-1.5m elsewhere depending on local constraints
- Use raised crossings and continuous pedestrian paths across intersections where requirements can be met to help manage traffic speeds and improve visibility of pedestrians
- Traffic separated cycling provisions or low-speed shared streets where a cycling route is identified
- New streets designed for 30kmh
- Street trees



Example local street configuration in a Principal Pedestrian Network


Priority for safety and vulnerability
Highest
Pedestrian
Cyclist
Vehicles
Lowest

LOCAL DESIGN PREFERENCES: MAIN STREETS AND CIVIC SPACES

Main streets and civic spaces are places that experience a lot of through traffic but are also places where we work, go for fun or to access shops, cafes, restaurants and services. Balancing the movement of people and vehicles with pleasant pedestrian, cycling and eating experiences is a common challenge.

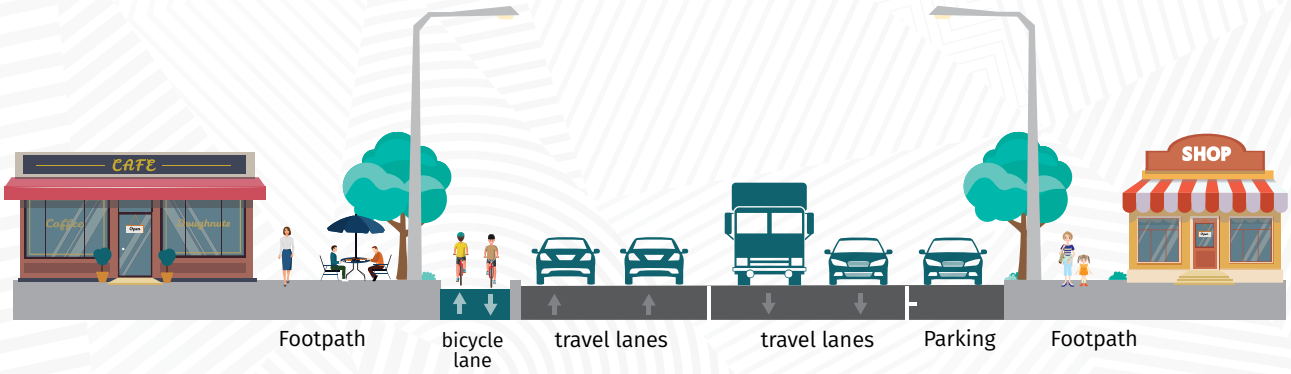
Examples include The Boulevarde, Toronto, Brooks Parade, Belmont and Pearson Street Mall, Charlestown.

DESIRED OUTCOMES

Main streets and civic spaces are inviting, thriving places that prioritise people of all ages and abilities and put vulnerable road users, amenity and local business first.

As sites of high pedestrian activity and cyclist and traffic movement, the safety and comfort of vulnerable road users is the priority.

- Wider paths on both sides of the street in accordance with Council's adopted Streetscape Master Plans
- Raised crossings, continuous pedestrian paths across connecting local streets and signalised crossings
- Main streets and connected to the cycling network and where a cycling route is identified along the main street, people on bicycles are separated from traffic and car parking movements
- 30-40kmh speeds
- Street trees and vegetation
- Bus stop shelters and seats



Example main street configuration


Priority
Highest
Pedestrian
Cyclist
Transit
Service
Single occupant car
Lowest

LOCAL DESIGN PREFERENCES: MAIN ROADS

Main roads are important thoroughfares for moving people and goods. They include motorways, freight corridors and major public transport, pedestrian and cycling routes.

Main roads are also known as distributor and collector roads, with more than 3000 vehicles per day and design speeds of 50km/h or more. Where main roads pass through urban centres, the road may instead be classified as a main street.

Being busy, main roads often act as barriers to people walking and cycling. Safe crossing facilities are critical.

Most main roads are classified as 'State' or 'Regional' roads under the Roads Act 1993. On State roads, Council is responsible for managing the kerb to property boundaries and the NSW Government is responsible for the roadway area. This means Council is responsible for providing paths and the NSW Government for providing crossing facilities, which may be done in partnership with Council.

DESIRED OUTCOMES

Main roads cater to all transport modes, safely and conveniently connecting people to places, allowing for the efficient movement of goods and providing access to local residences and industrial areas.

- Priority paths on both sides of main roads in areas where adjacent land use generates pedestrian activity, including industrial areas
- New footpaths 1.5m wide in Principal Pedestrian Networks, 1.2m-1.5m elsewhere depending on local constraints
- Less confident people on bicycles are separated from traffic where a cycling route is identified
- On-road cycling provisions for more confident cyclists
- Street trees

LOCAL DESIGN PREFERENCES: ALL STREET TYPES

- Driveway crossing concrete joints show legal right of way to pedestrians and have a maximum crossfall of 2.5 per cent
- Kerb ramps at intersections, mid-block crossings and to facilitate bus stop access
- Bus stops meet disability accessibility standards, and have seats and shelters for stops adjacent to shopping and commercial areas, train stations, community facilities and houses or premises for seniors and people with disability
- Street trees in accordance with Council policy

LOCAL DESIGN PREFERENCES: GREEN NETWORK LINKS

Green network links are dedicated pedestrian, cycling and assisted mobility thoroughfares beyond the street network that provide critical transport links between places and public transport. They also fulfil recreation needs.

In Lake Macquarie, green network links are typically shared paths and structures such as the Fernleigh Track, Booragul to Eleebana shared path including the Red Bluff Boardwalk, Cardiff Winding Creek shared path, Raspberry Gully, and Thomas H. Halton Park.

DESIRED OUTCOMES

Green network links are family-safe, comfortable and appealing, conveniently connecting people to places, public transport and Lake Macquarie's unique landscapes.

They are environmentally and culturally sensitive, cater to diverse user groups and seamlessly integrate with street network infrastructure.

- Pedestrians and cyclists are given priority at intersections where safe and possible, to reduce number of stops and trip time
- Path surfaces are constructed to be smooth with no bumps, enhancing user experience while reducing asset maintenance costs
- Compacted, spray-sealed gravel or equivalent may be investigated as an intermediate or site sensitive measure
- Transitioning between the street network and the green network is safe, smooth and clearly defined
- Good passive surveillance and many accessible entry and exit points
- Links that form part of the Principal Bicycle Network are 3m wide
- Provide wider paths or separate pedestrian and cycling facilities in areas of higher pedestrian activity, where feasible

Path design preferences also apply to shared paths built within street corridors

TRIALS AND TEMPORARY INTERVENTIONS

Lower-cost trials and place-making 'pop-ups' are a great way for the community to see and experience possible changes, provide feedback and build trust.

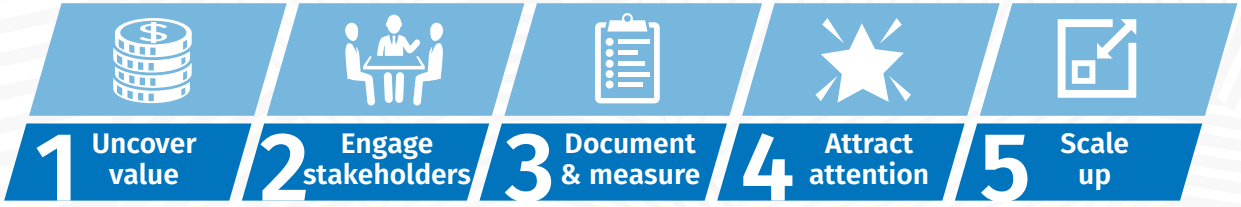
Trials also help reduce risk associated with big investments. A design can be improved upon before a more permanent solution is implemented. Lake Macquarie has a history of conducting trials, particularly with the use of materials in pathways.

The Global Designing Cities Initiative identifies five key lessons to ensure success:

- Uncover value – identify under-utilised space and transform it to contribute to safety, community building or economic goals
- Engage stakeholders – public outreach can generate new ideas, build community support and improve local understanding of issues
- Document and measure – collect before and after photos and metrics to support permanent solutions
- Attract attention – use colourful materials, art and creative promotional materials to draw attention to the transformation
- Scale up – pilot new approaches to transform policy and inspire new programs.

Exploring temporary, quicker and cheaper solutions is an evolving space in NSW. As both local and State governments are responsible for streets in different ways, trials are typically delivered in partnership.

We will refer to NSW guidance on temporary trials and work with the NSW Government to identify solutions that align with long-term plans.



LISTENING TO OUR COMMUNITY

Customer requests for new footpaths, crossing facilities and cycling facilities will be noted in our infrastructure planning database. We will analyse this information when assembling our four-year Delivery Program.

Requests for new infrastructure provide staff with local knowledge that informs our planning. However, projects will not be prioritised based on the number of requests, nor will individual requests influence our prioritisation methodology.

Customer requests for traffic and road safety investigations will be considered against our transport operations procedures. Where requests have merit, we will investigate. We may then recommend a new project for our capital works program.

Other ways to have your say

Each year we undertake a range of activities to better understand the community's needs. These provide another way for you to help shape the capital works program and local planning controls that influence development outcomes.

Planning for places -planning for your main street, local shops, neighbourhood parks and playgrounds.

Community surveys - we ask about your preferences and how satisfied you are with services.

Our Strategy is our filter

It helps determine priority footpaths, crossing and cycling infrastructure projects.

We will check in with the community every four-years to see if we are getting it right.

Customer feedback helps inform four-year planning cycle
(Delivery Program)

MEASURING PROGRESS

We will report on our progress indicators every four-years in our State of the Environment Report.

PARTICIPATION INDICATORS	DATA SOURCE	FREQUENCY
General		
Proportion of journeys to work by bicycle/walking	Australian Bureau of Statistics Census	Every 5 years
Proportion of residents who walked/cycled for transport (all trip purposes)	Transport for NSW Household Travel Survey	Annual
Proportion of residents who walk/cycle to major urban centres	Lake Macquarie Environmental Attitudes Survey	Every 4 years
Proportion of residents who cycle for transport	Cycling Participation Survey (local edition)	Every 2 years
Proportion of walking trips less than 2km and cycling trips less than 5km	Transport for NSW Household Travel Survey (data request)	Annual
Proportion of residents who rode in the 'last seven days' (at time of survey)	Cycling Participation Survey (local edition)	Every 2 years
Network counts	Automated pedestrian and cyclist counters	Real-time
Diversity		
Proportion of residents with a disability	Australian Bureau of Statistics	Every 5 years
Proportion of women who ride to work	Australian Bureau of Statistics Census	Every 5 years
Proportion of women who cycled in the 'last seven days' (at time of survey) / or gender split ratio	Cycling Participation Survey (local edition)	Every 2 years
Proportion of young adults aged 18-19 who rode in the 'last seven days' (at time of survey)	Cycling Participation Survey (local edition)	Every 2 years
Proportion of cycling trips made for education	Cycling Participation Survey (local edition)	Every 2 years
Road trauma		
Reported pedestrian and cyclist casualty crashes over a five year period	Transport for NSW – Centre for Road Safety	Annual
Greater Newcastle Metropolitan Area hospital admissions related to cycling incidents (pilot)	Local methodology to be developed with City of Newcastle	TBC

ATTITUDE INDICATORS	DATA SOURCE	FREQUENCY
Sentiment		
Reported satisfaction with footpaths, shared paths and cycleways, road surfaces, road safety and traffic management	Community Satisfaction Survey	Every 2 years
Reported importance of footpaths, shared paths and cycleways, road surfaces, road safety and traffic management	Community Satisfaction Survey	Every 2 years
Performance gap – satisfaction compared to importance – footpaths, shared paths and cycleways, road surfaces, road safety and traffic management	Community Satisfaction Survey	Every 2 years
Proportion of cyclists who feel comfortable or very comfortable cycling in Lake Macquarie	Cycling Participation Survey (local edition)	Every 2 years
Proportion of cyclists in agreement that cycling conditions have improved in the last two years	Cycling Participation Survey (local edition)	Every 2 years
Proportion of responses in agreement with the statement 'drivers are courteous towards cyclists'	Lake Macquarie Environmental Attitudes Survey	Every 4 years
Proportion of responses in agreement with the statement 'pedestrians and cyclists are courteous to one another on shared paths'	Lake Macquarie Environmental Attitudes Survey	Every 4 years

INFRASTRUCTURE INDICATORS	DATA SOURCE	FREQUENCY
Length of footpath (street network)	Geographical Information System	Every 5 years
Length of shared paths, bicycle paths and low-difficulty on-road cycling routes	Geographical Information System	Every 5 years
Length of on-road facilities for more confident cyclists	Geographical Information System	Every 5 years
Length of road network	Geographical Information System	Every 5 years
Length of road network covered by 40kmh or less high pedestrian activity or local traffic areas	Geographical Information System	Every 5 years

APPENDIX 1: PRINCIPAL BICYCLE NETWORK ROUTES

COASTLINE CYCLEWAY: SWANSEA TO NEWCASTLE/CENTRAL COAST

INCLUDING THE FERNLEIGH TRACK

ABOUT THIS ROUTE

This route forms part of a long-held aspiration for a continuous NSW coastline cycling route. It includes the iconic Fernleigh Track rail trail and the Fernleigh Awabakal Shared Track from Belmont to Blacksmiths.

The Fernleigh Track and Fernleigh Awabakal Shared Track will provide a continuous cycling experience from Swansea to Adamstown. The southern leg, Swansea to Central Coast, is complete to the Pacific Highway underpass at Murrays Beach. Beyond this, completion of the route will rely on future land development and engagement with NSW National Parks and Wildlife Service and Central Coast Council.

KEY ATTRACTORS

- **Economic centres:** Swansea, Belmont, Charlestown, Newcastle
- **Secondary/tertiary education:** Belmont TAFE, Belmont Christian College, Whitebridge HS, St Pius HS (Swansea HS, Belmont HS via sub-regional route)
- **Train stations:** Adamstown
- **Other:** Fernleigh Track, Glenrock State Conservation Area, Blacksmiths Beach, Pelican Foreshore, Caves Beach, Redhead Beach, Dudley Beach

LOCALITY PLANS

- Swansea Area Plan, Streetscape Masterplan and Local Adaptation Plan
- Belmont Area Plan and Streetscape Masterplan
- North Wallarah Peninsula Area Plan
- Catherine Hill Bay Heritage Precinct Area Plan
- Lake Macquarie Coastline Area Plan
- Marks Point Belmont South Area Plan and Local Adaptation Plan
- Pelican and Blacksmiths Local Adaptation Plan
- Dudley Heritage Precinct Area Plan

MAIN ROUTE SEGMENTS

Swansea to Belmont

- Swansea to Blacksmiths
- Blacksmiths to Belmont (Fernleigh Awabakal Shared Track)

Belmont to Adamstown (Fernleigh Track)

- Belmont to Redhead
- Redhead to Whitebridge
- Whitebridge to Adamstown

Adamstown to Newcastle (refer to City of Newcastle Cycling Strategy)

Swansea to Catherine Hill Bay

- Swansea to Murrays Beach
- Murrays Beach to Catherine Hill Bay (including Catherine Hill Bay Heritage Trail)

Catherine HIll Bay to Central Coast

- Catherine Hill Bay to Lake Munmorah (refer to Central Coast Cycling Strategy)

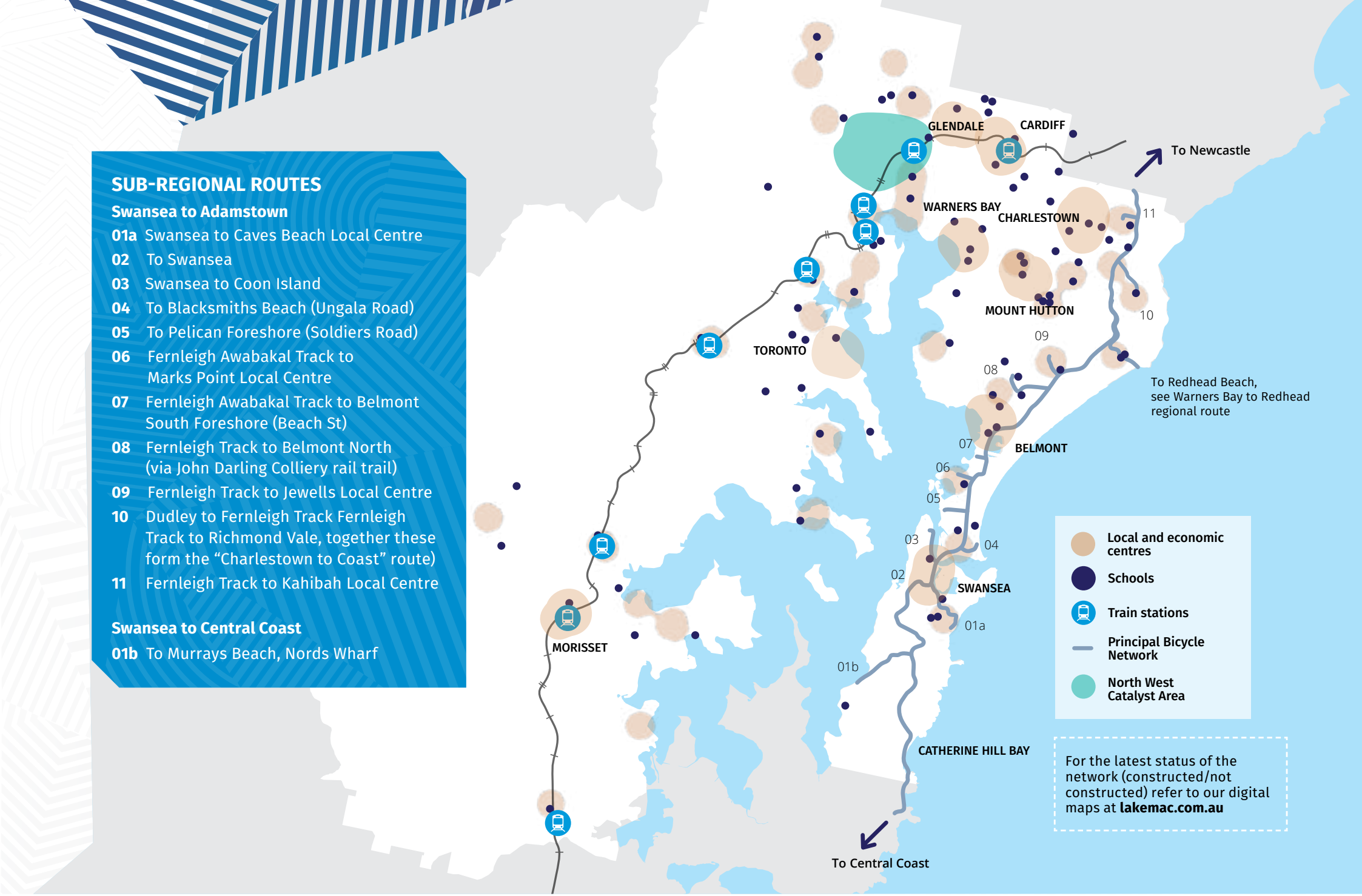
SUB-REGIONAL ROUTES

Swansea to Adamstown

01a Swansea to Caves Beach Local Centre
02 To Swansea
03 Swansea to Coon Island
04 To Blacksmiths Beach (Ungala Road)
05 To Pelican Foreshore (Soldiers Road)
06 Fernleigh Awabakal Track to Marks Point Local Centre
07 Fernleigh Awabakal Track to Belmont South Foreshore (Beach St)
08 Fernleigh Track to Belmont North (via John Darling Colliery rail trail)
09 Fernleigh Track to Jewells Local Centre
10 Dudley to Fernleigh Track Fernleigh Track to Richmond Vale, together these form the "Charlestown to Coast" route)
11 Fernleigh Track to Kahibah Local Centre

Swansea to Central Coast

01b To Murrays Beach, Nords Wharf



For the latest status of the network (constructed/not constructed) refer to our digital maps at **lakemac.com.au**

FERNLEIGH TRACK TO RICHMOND VALE RAIL TRAIL VIA CHARLESTOWN

ABOUT THIS ROUTE

This route will connect the north-western part of the Greater Newcastle Metropolitan Area (Minmi and the Richmond Vale rail trail) with the strategic centre of Charlestown and ultimately the Fernleigh Track.

The route passes through future land development sites at Minmi, Cameron Park and Edgeworth, then aligns with the Speers Point to Newcastle route briefly on Frederick Street, before continuing through Glendale to Cardiff via Stockland Drive or Winding Creek.

The route continues on Winding Creek through to Hillsborough and is then proposed to run parallel to the Inner City Bypass to Warners Bay Road (service road) to provide a gentler and safer climb to Charlestown relative to alternatives (E K Avenue or Charlestown Road).

The route passes through Charlestown to connect to Whitebridge and the Fernleigh Track via Kaleen Street.

KEY ATTRACTORS

- **Economic centres:** Charlestown, Cardiff, Glendale
- **Secondary/tertiary education:** Whitebridge HS, Cardiff HS, Glendale TAFE (Macquarie College via sub-regional route)
- **Train stations:** Cardiff
- **Other:** Fernleigh Track, Richmond Vale rail trail, Tramway Track

LOCALITY PLANS

- Charlestown Area Plan and Streetscape Masterplan
- Charlestown Transport Management Plan
- Cardiff Streetscape Master Plan
- Cardiff Transport Management Plan
- Glendale Area Plan and Streetscape Master Plan
- Edgeworth Area Plans (multiple)

MAIN ROUTE SEGMENTS

Whitebridge to Charlestown

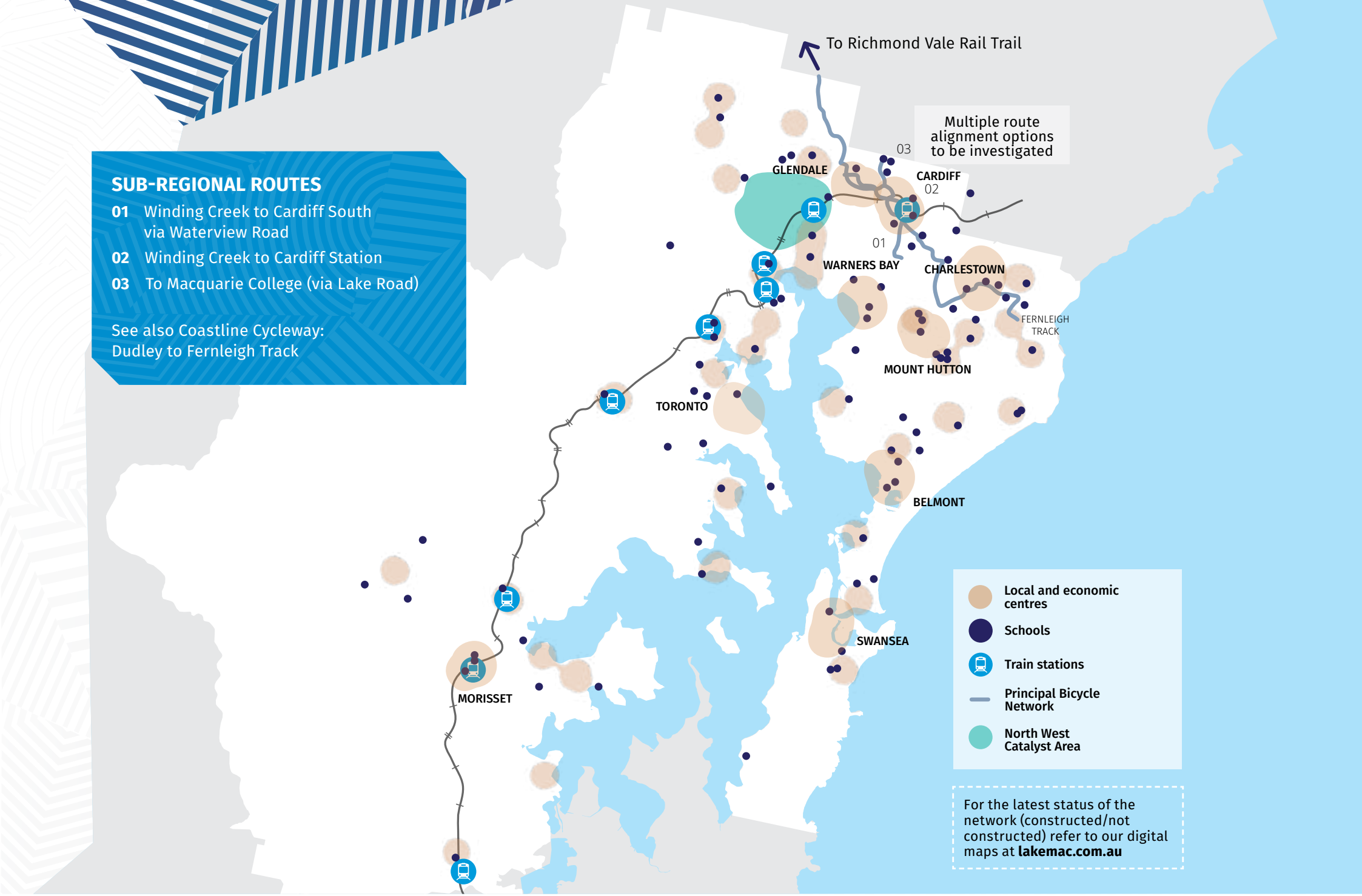
Charlestown to Cardiff

- Charlestown to Hillsborough
- Hillsborough to Cardiff

Cardiff to Glendale

Glendale to Richmond Vale

- Glendale to Edgeworth
- Edgeworth to Minmi (Richmond Vale)



SUB-REGIONAL ROUTES

01 Winding Creek to Cardiff South via Waterview Road

02 Winding Creek to Cardiff Station

03 To Macquarie College (via Lake Road)

See also Coastline Cycleway: Dudley to Fernleigh Track

BELMONT TO TORONTO, WANGI WANGI, MORISSET

INCLUDING NORTHERN BAYS WAY (BELMONT TO TORONTO)

ABOUT THIS ROUTE

This route traverses much of the eastern, northern and western perimeter of Lake Macquarie, offering unparalleled views and linking to major attractors such as Speers Point Park, the Museum of Art and Culture, the Fernleigh Track, and the main streets and lake foreshore areas of Belmont, Warners Bay and Toronto.

Priority missing links include Belmont to Valentine, Bareki Road at Eleebana and Booragul to Toronto.

KEY ATTRACTORS

- **Economic centres/foreshores:** Belmont, Warners Bay, Toronto, Morisset
- **Secondary/tertiary education:** Belmont HS, Belmont TAFE, Warners Bay HS, Lake Macquarie HS, St Paul's College, Morisset HS
- **Train stations:** Booragul, Morisset (Teralba, Fassifern, via sub-regional routes)
- **Other:** Speers Point Park, Museum of Art & Culture, Red Bluff Boardwalk, Green Point Reserve

LOCALITY PLANS

- Belmont Area Plan and Streetscape Masterplan
- Warners Bay Area Plan and Streetscape Masterplan
- Warners Bay Foreshore Masterplan
- Speers Point Park Masterplan
- Woodrising West Area Plan
- Blackalls Park / Fennell Bay Local Adaptation Plan
- Teralba Heritage Precinct Area Plan
- Toronto Area Plan and Streetscape Masterplan
- Toronto Foreshore Masterplan
- Toronto Heritage Precinct Area Plan
- Rathmines Park Masterplan and Heritage Precinct RAAF Base Area Plan
- Wangi Power Station Precinct Area Plan
- Morisset Area Plan and Streetscape Masterplan
- North Morisset Area Plan
- Dora Creek Township Flood Prone Land Area Plan

MAIN ROUTE SEGMENTS

Belmont to Warners Bay (Northern Bays Way)

- Belmont to Valentine
- Valentine to Warners Bay

Warners Bay to Toronto (Northern Bays Way)

- Warners Bay to Speers Point (Watagan Track)
- Speers Point to Woodrising/Fennell Bay
- Woodrising/Fennell Bay to Toronto

Toronto to Wangi Wangi

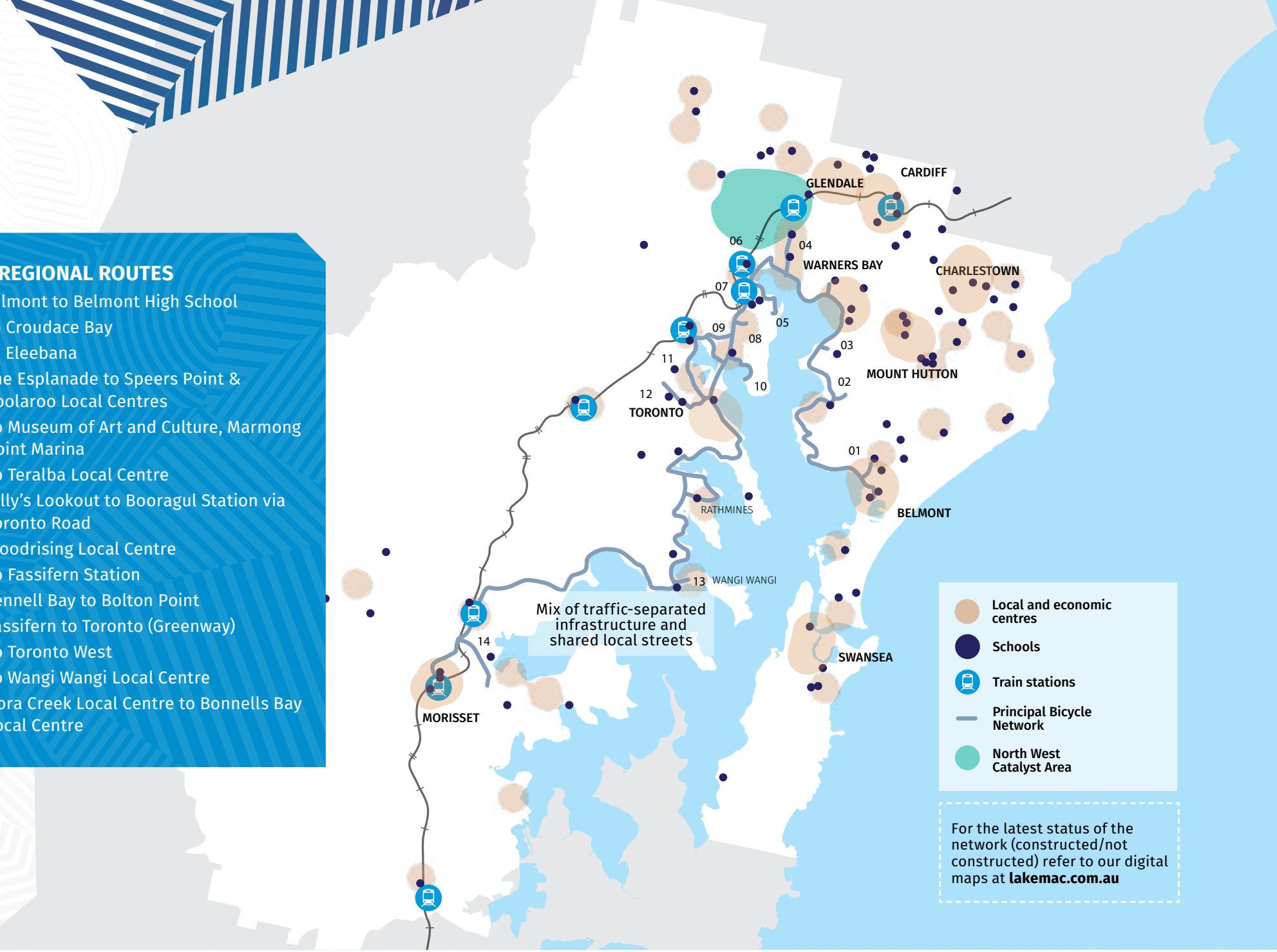
- Toronto to Rathmines
- Rathmines to Wangi Wangi

Wangi Wangi to Morisset

- Wangi Wangi to Dora Creek
- Dora Creek to Morisset

SUB-REGIONAL ROUTES

01 Belmont to Belmont High School
02 To Croudace Bay
03 To Eleebana
04 The Esplanade to Speers Point & Boolaroo Local Centres
05 To Museum of Art and Culture, Marmong Point Marina
06 To Teralba Local Centre
07 Billy's Lookout to Booragul Station via Toronto Road
08 Woodrising Local Centre
09 To Fassifern Station
10 Fennell Bay to Bolton Point
11 Fassifern to Toronto (Greenway)
12 To Toronto West
13 To Wangi Wangi Local Centre
14 Dora Creek Local Centre to Bonnells Bay Local Centre



WARNERS BAY TO KOTARA, MAYFIELD

ABOUT THIS ROUTE

This route provides a direct and convenient link between Lake Macquarie and Newcastle. It traverses two hills suited to more confident cyclists and users of electric bicycles (once complete).

From Warners Bay, the route uses Queen Street (parallel to King Street) to Hillsborough Road. An alternative route is via Lake Street, crossing King Street at Margaret Street. Through the Warners Bay commercial and employment area, two service roads are available until such time off-road facilities are investigated.

The route runs parallel to Hillsborough Road to reach Charlestown Road. Crossing Charlestown Road, an existing path connects to Kaleen Street, in turn connecting to the Raspberry Gully shared path (former colliery railway adjacent to Styx Creek) that links directly to the Kotara shared path network.

KEY ATTRACTORS

- **Economic centres/foreshores:** Warners Bay, Kotara, Broadmeadow, Mayfield
- **Secondary/tertiary education:** Warners Bay HS
- **Train stations:** Adamstown
- **Other:** Raspberry Gully rail trail

LOCALITY PLANS

- Warners Bay Area Plan and Streetscape Masterplan
- Warners Bay Foreshore Masterplan

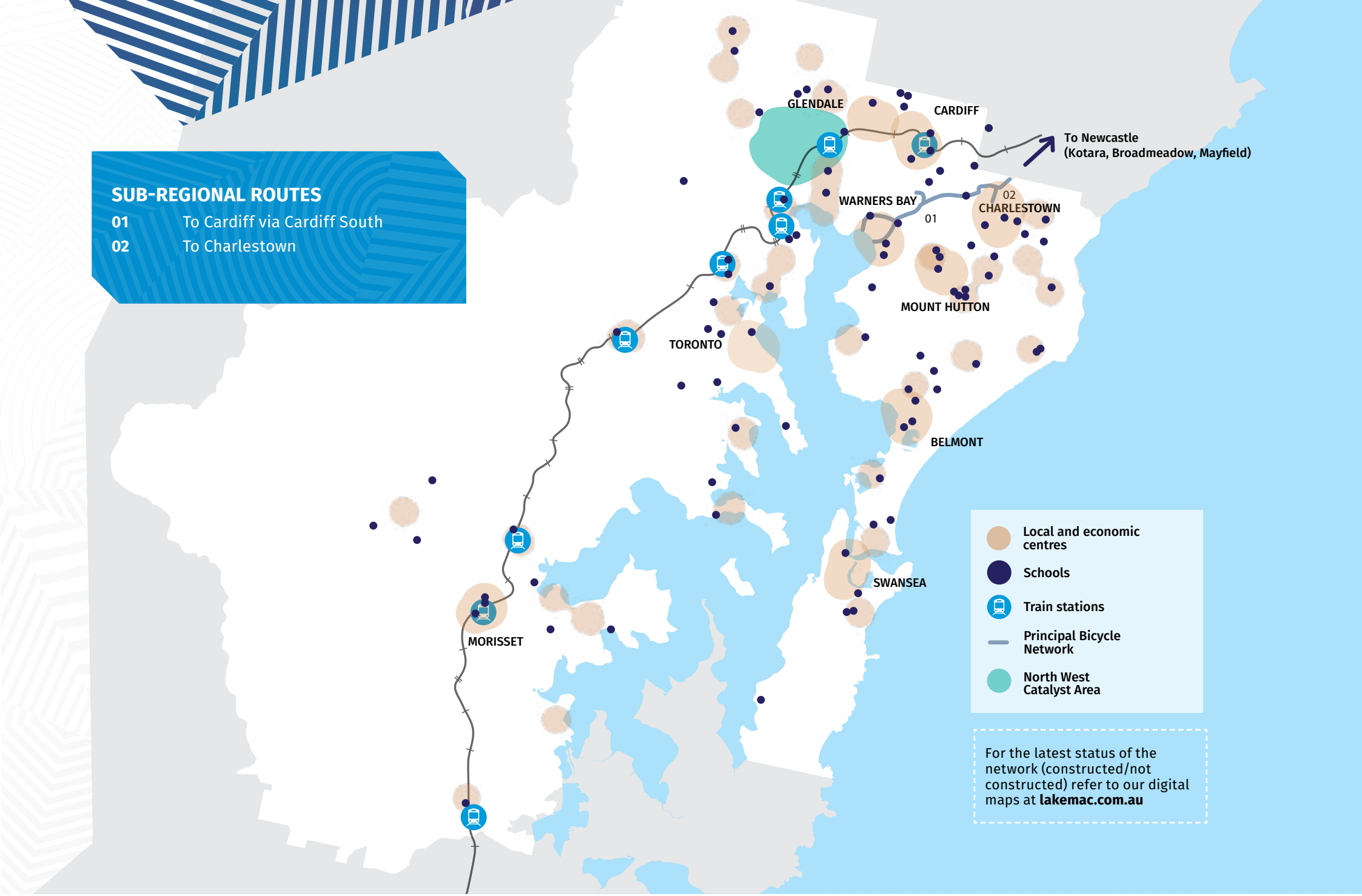
MAIN ROUTE SEGMENTS

Warners Bay to Kotara

- Warners Bay to Hillsborough
- Hillsborough to Kotara

Kotara to Mayfield

- (Refer to City of Newcastle's Cycling Strategy)


SUB-REGIONAL ROUTES
01 To Cardiff via Cardiff South
02 To Charlestown
GLENDALE
CARDIFF
To Newcastle
(Kotara, Broadmeadow, Mayfield)
WARNERS BAY
01
02
CHARLESTOWN
MOUNT HUTTON
TORONTO
BELMONT
SWANSEA
MORISSET
Local and economic centres
Schools
Train stations
Principal Bicycle Network
North West Catalyst Area
For the latest status of the network (constructed/not constructed) refer to our digital maps at lakemac.com.au

SPEERS POINT TO UNIVERSITY, NEWCASTLE

INCLUDING THE TRAMWAY TRACK

ABOUT THIS ROUTE

From Speers Point Park, this route follows Cockle Creek to Argenton before reaching the former Speers Point to Wallsend tram line.

At Glendale TAFE the route intersects with the Northlakes Way route to Cameron Park and West Wallsend, as well as the Richmond Vale Rail Trail to Fernleigh Track route.

From Wallsend the route follows part of the historic Wallsend to Newcastle tram line via Jesmond (continue east for University) and onward to Newcastle West via Lambton, Broadmeadow, Hamilton.

This route includes important connections to the Cardiff industrial employment area and the North West Catalyst Area identified in the Greater Newcastle Metropolitan Plan for future population and jobs growth.

KEY ATTRACTORS

- **Economic centres/foreshores:** Glendale, Wallsend, Jesmond, Lambton, Hamilton, Newcastle
- **Secondary/tertiary education:** Glendale TAFE, Macquarie College, University of Newcastle
- **Train stations:** Cockle Creek
- **Other:** Speers Point Park

LOCALITY PLANS

- Speers Point Park Masterplan
- Glendale Area Plan and Streetscape Masterplan
- Pasminco Area Plan
- West Wallsend Heritage Masterplan and Streetscape Masterplan

MAIN ROUTE SEGMENTS

Speers Point to Glendale

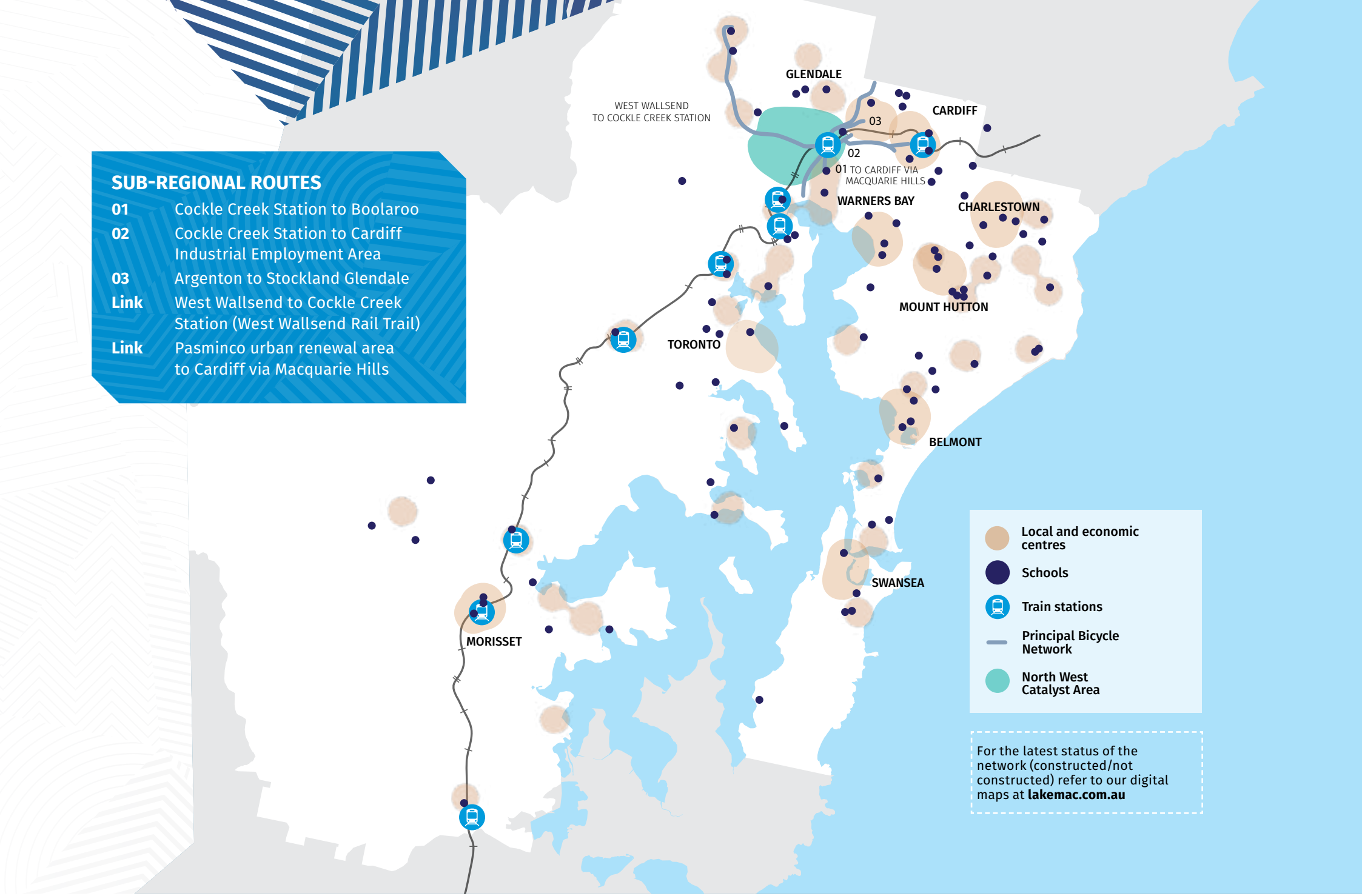
- Speers Point to Cockle Creek Station
- Cockle Creek Station to Argenton
- Argenton to Glendale

Glendale to Wallsend

- Glendale TAFE to Wallsend (Tramway Track)

Wallsend to Newcastle

- (Refer to City of Newcastle's Cycling Strategy)


SUB-REGIONAL ROUTES
01 Cockle Creek Station to Boolaroo
02 Cockle Creek Station to Cardiff Industrial Employment Area
03 Argenton to Stockland Glendale
Link West Wallsend to Cockle Creek Station (West Wallsend Rail Trail)
Link Pasminco urban renewal area to Cardiff via Macquarie Hills
GLENDALE
WEST WALLSEND TO COCKLE CREEK STATION
CARDIFF
03
02
01 TO CARDIFF VIA MACQUARIE HILLS
WARNERS BAY
CHARLESTOWN
MOUNT HUTTON
TORONTO
BELMONT
SWANSEA
MORISSET
Local and economic centres
Schools
Train stations
Principal Bicycle Network
North West Catalyst Area
For the latest status of the network (constructed/not constructed) refer to our digital maps at lakemac.com.au

MORISSET TO BONNELLS BAY, COORANBONG

INCLUDING TRINITY POINT

ABOUT THIS ROUTE

Morisset is identified as a strategic economic centre in the Greater Newcastle Metropolitan Plan. The Morisset peninsula to the east and Cooranbong surrounds to the west are key residential growth areas. This route connects peninsula suburbs to Morisset and Morisset to Cooranbong and the Watagan Park estate.

From Cooranbong, a potential route has been identified to the Awaba Mountain Bike Park (refer to digital planning map).

KEY ATTRACTORS

- **Economic centres/foreshores:** Morisset
- **Secondary/tertiary education:** Morisset HS, Avondale University College
- **Train stations:** Morisset
- **Other:** Trinity Point, Awaba Mountain Bike Park

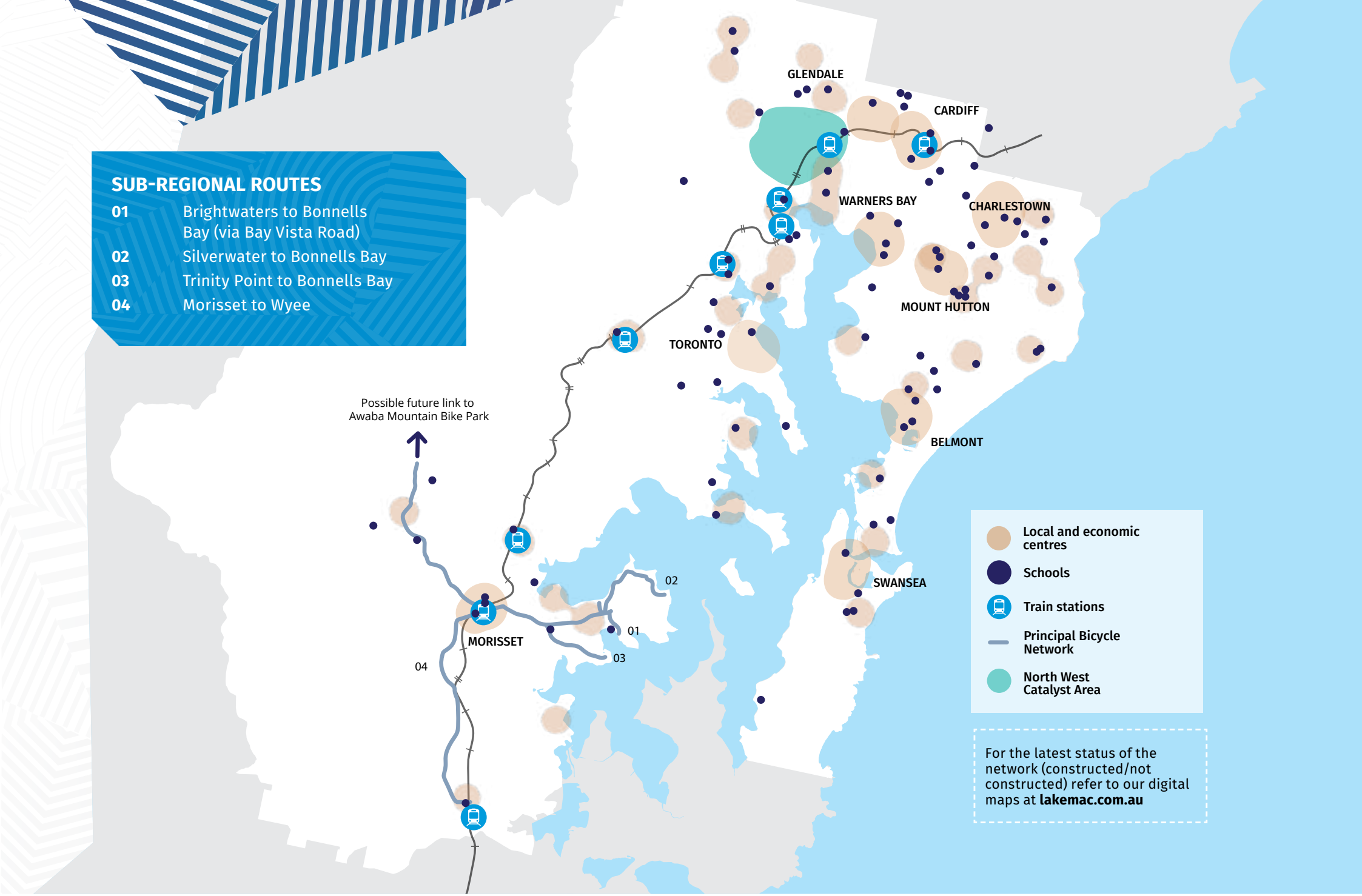
LOCALITY PLANS

- Morisset Area Plan and Streetscape Masterplan
- North Morisset Area Plan
- Cooranbong Seventh Day Adventist Heritage Precinct Area Plan
- North Cooranbong Area Plan

MAIN ROUTE SEGMENTS

Morisset Peninsula to Morisset

Morisset to Cooranbong / Watagan Park


SUB-REGIONAL ROUTES
01 Brightwaters to Bonnells Bay (via Bay Vista Road)
02 Silverwater to Bonnells Bay
03 Trinity Point to Bonnells Bay
04 Morisset to Wyee
GLENDALE
CARDIFF
WARNERS BAY
CHARLESTOWN
MOUNT HUTTON
TORONTO
BELMONT
SWANSEA
MORISSET
Possible future link to Awaba Mountain Bike Park
01
02
03
04
Local and economic centres
Schools
Train stations
Principal Bicycle Network
North West Catalyst Area
For the latest status of the network (constructed/not constructed) refer to our digital maps at lakemac.com.au

GLENDALE TO CAMERON PARK AND WEST WALLSEND VIA EDGEWORTH (NORTHLAKES WAY)

ABOUT THIS ROUTE

The City's north west is identified as a major growth area. This route connects emerging neighbourhoods with the Fernleigh Track to Richmond Vale route and Speers Point to University, Newcastle route via Glendale. Parts of the route reflect the historic tram line to West Wallsend.

KEY ATTRACTORS

- **Economic centres:** Glendale
- **Local centres:** West Wallsend, Cameron Park, Edgeworth
- **Secondary/tertiary education:** West Wallsend HS, Glendale TAFE, Macquarie College
- **Train stations:** Cockle Creek Station (via sub-regional connector)
- **Other:** Pasterfield Sport Complex

LOCALITY PLANS

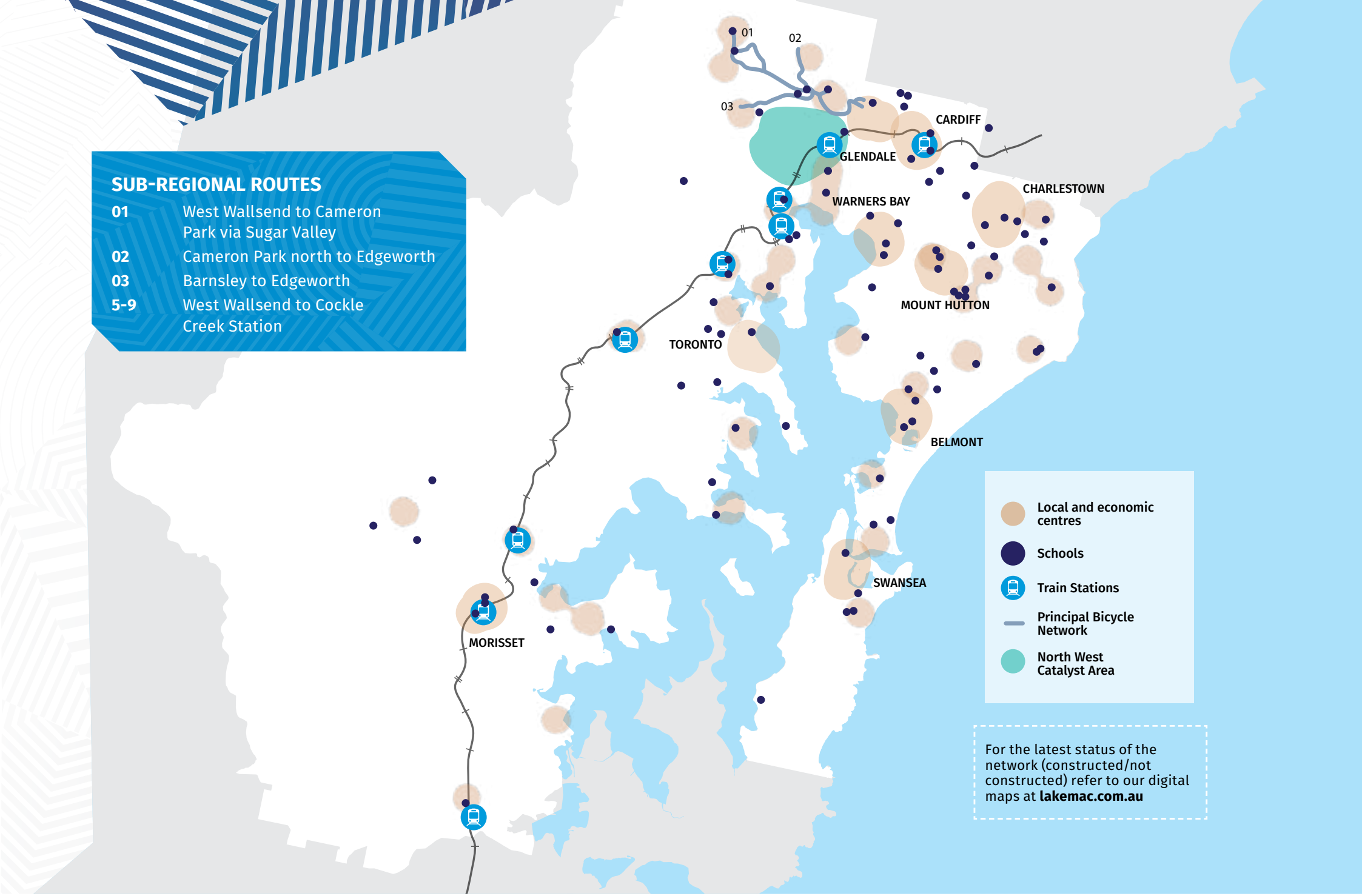
- Glendale Area Plan and Streetscape Masterplan
- Edgeworth Area 3 Area Plan
- West Wallsend/Holmesville Heritage Precinct Area Plan

MAIN ROUTE SEGMENTS

West Wallsend to Cameron Park

Cameron Park to Edgeworth

Edgeworth to Glendale (Glendale TAFE)


SUB-REGIONAL ROUTES
01 West Wallsend to Cameron Park via Sugar Valley
02 Cameron Park north to Edgeworth
03 Barnsley to Edgeworth
5-9 West Wallsend to Cockle Creek Station
01
02
03
CARDIFF
GLENDALE
CHARLESTOWN
WARNERS BAY
MOUNT HUTTON
TORONTO
BELMONT
SWANSEA
MORISSET
Local and economic centres
Schools
Train Stations
Principal Bicycle Network
North West Catalyst Area
For the latest status of the network (constructed/not constructed) refer to our digital maps at lakemac.com.au

WARNERS BAY TO FERNLEIGH TRACK, REDHEAD BEACH

ABOUT THIS ROUTE

This route connects the economic and local centres of Mount Hutton and Gateshead with the Belmont to Warners Bay route and the Fernleigh Track. While the route includes some hills, it also follows Scrubby Creek past Mount Hutton to the Pacific Highway, connecting Mount Hutton and Gateshead. The route follows the Fernleigh Track from Oakdale Road to Redhead before using various local streets in Redhead to reach Redhead Beach.

Important sub-connectors include links to Windale Local Centre, Hunter Sports High School, St Mary's Catholic College, Lake Macquarie Private Hospital and to Charlestown to Hillsborough.

KEY ATTRACTORS

- **Economic centres/foreshores:** Warners Bay, Mount Hutton
- **Secondary/tertiary education:** Warners Bay HS, Hunter Sports HS, St Mary's Catholic College
- **Other:** Lake Macquarie Private Hospital

LOCALITY PLANS

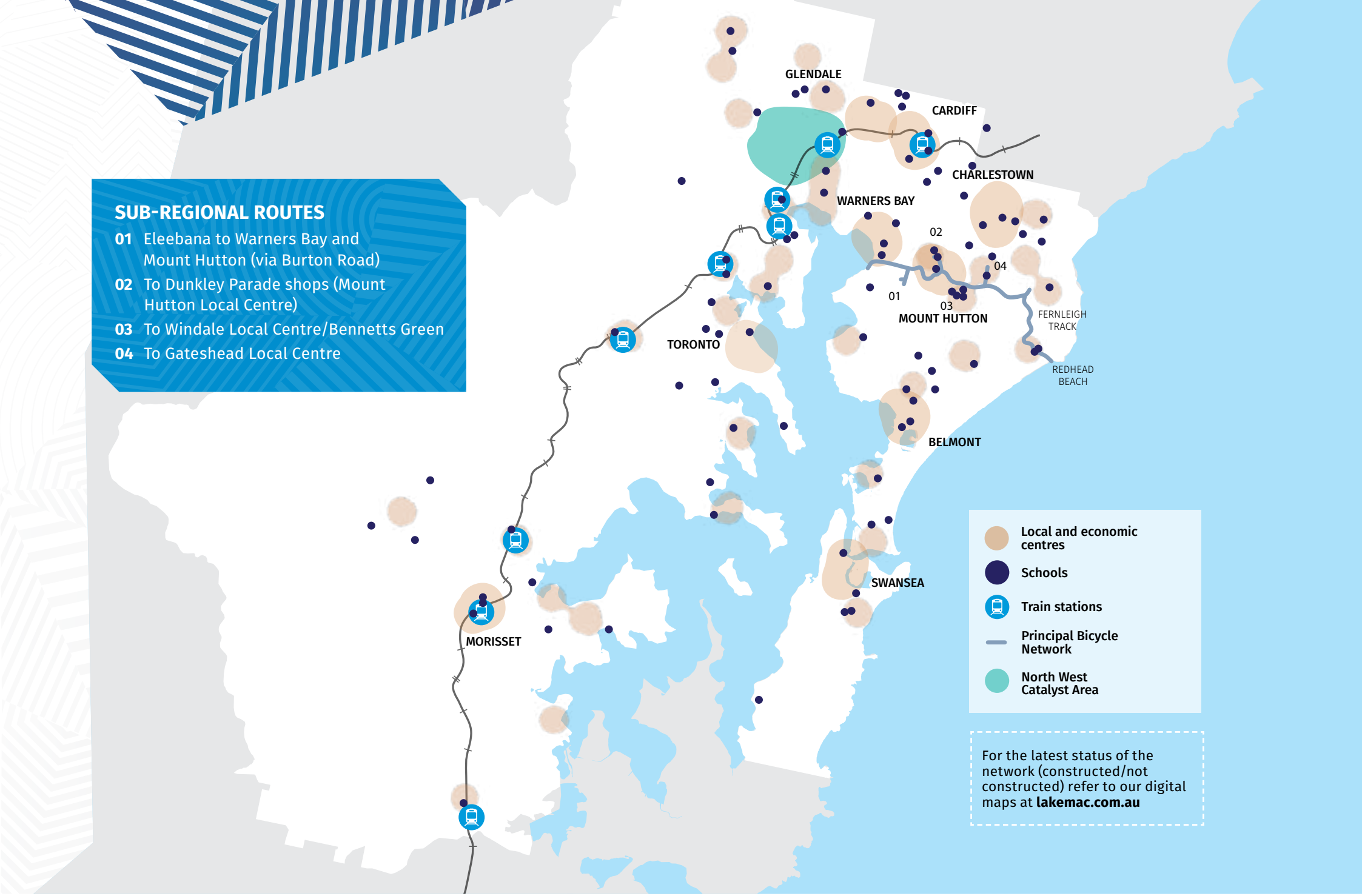
- Warners Bay Area Plan and Streetscape Masterplan
- Warners Bay Foreshore Masterplan
- Mount Hutton Area Plan and Streetscape Masterplan
- Windale Area Plan

MAIN ROUTE SEGMENTS

Warners Bay to Mount Hutton

Mount Hutton to Redhead

- Mount Hutton to Gateshead
- Gateshead to Redhead


SUB-REGIONAL ROUTES
01 Eleebana to Warners Bay and Mount Hutton (via Burton Road)
02 To Dunkley Parade shops (Mount Hutton Local Centre)
03 To Windale Local Centre/Bennetts Green
04 To Gateshead Local Centre
GLENDALE
CARDIFF
CHARLESTOWN
WARNERS BAY
02
04
01
03
MOUNT HUTTON
FERNLEIGH TRACK
REDHEAD BEACH
TORONTO
BELMONT
SWANSEA
MORISSET
Local and economic centres
Schools
Train stations
Principal Bicycle Network
North West Catalyst Area
For the latest status of the network (constructed/not constructed) refer to our digital maps at lakemac.com.au

For more information

lakemac.com.au lakemaccity ourlakemac lakemac 02 4921 0333

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