

Thematic Strategy

DRAFT Regional Integrated Transport Strategy 2022-2042

December 2022

The most liveable,
sustainable and
innovative place
in Australia



PORT MACQUARIE
HASTINGS COUNCIL

Version Control:

Version No.	Date	Author	Notes
0.1	2/03/2022	Kieran Metcalfe	1 st Draft - Working Paper
0.2	16/11/2022	Sandra Wallace	2 nd Draft



The draft Regional Integrated Transport Strategy (RITS) aligns with the United Nations General Assembly's Sustainable Development Goals (SDGs) which are a global strategy and form a blueprint to create a sustainable future for everyone. Goals 3, 8, 9, 10, 11, 12, 13, 15 and 17 are particularly relevant to the RITS.

Disclaimer:

Whilst every reasonable effort has been made to ensure that this document is correct at the time of printing, Port Macquarie-Hastings Council disclaim any and all liability to any person in respect of anything done or omitted to be done in reliance or upon the whole or any part of this document.

4 QBL Strategic Pillars

All strategies and plans are informed and guided by Council’s Quadruple-Bottom Line (QBL) Sustainability Framework including the 4 Strategic Pillars.



Environmental Stewardship

Environmental Stewardship documents are guided by the Environmental Sustainability Pillar in Council’s Sustainability Framework.

Leading & Supporting Strategies, Plans, Action Plans and Policies cover such themes as managing our catchments and waterways, natural resources, hazards and risks, biodiversity, and Council’s response to a changing climate.



Community Wellbeing

Community Wellbeing documents are guided by the Social Sustainability Pillar of Council’s Sustainability Framework.

Leading & Supporting Strategies, Plans, Action Plans and Policies cover such themes as providing quality sport, recreational and cultural infrastructure, cultural development, inclusiveness, community safety and reconciliation. Preserving the character and personality of centres, heritage and affordable housing are also addressed.



Economic Prosperity

Economic Prosperity documents are guided by the Economic Sustainability Pillar of Council’s Sustainability Framework.

Leading & Supporting Strategies, Plans, Action Plans and Policies cover such themes as revitalising our centres, employment, investment, being SMART and innovative, and providing opportunities for economic development..



Civic Leadership & Governance

Leadership & Governance documents are guided by the Leadership & Governance Pillar of Council’s Sustainability Framework.

Leading & Supporting Strategies, Plans, Action Plans and Policies cover such themes as open government, managing assets, improving services, long term funding, operational excellence, monitoring performance, being a good employer, engaging, educating, communicating and collaborating with our community.

PMHC Draft Strategic Planning Framework

The Draft Strategic Planning Framework (SPF) maps out the role of all current and future Council strategies and plans that work to deliver the vision for Port Macquarie-Hastings. The draft framework works from the highest level of strategic direction in the Community Strategic Plan (CSP) and Local Strategic Planning Statement (LSPS) through to more detailed plans that will eventually drive works projects and programs on the ground. The Strategic Planning Framework is comprised of the following levels:

- 1. LEAD STRATEGIES** provide high level strategic direction on key challenges and opportunities facing Port Macquarie-Hastings. They are informed by a sound evidence base that considers key trends and an understanding of the implications of key issues and opportunities on our LGA.

Timeframe: 10 - 20 years

- 2. THEMATIC STRATEGIES** break down broad theme areas discussed in the LEAD STRATEGIES into more specific themes which provide high-level direction and set key strategic objectives.

Timeframe: 10-20 years

- 3. STRATEGIC PLANS** identify high-level actions that are required, to deliver on the strategic objectives identified in the LEAD or THEMATIC LEAD STRATEGIES. They identify broad works projects and programs required to deliver on these high-level actions and may include indicative costing and resourcing requirements and delivery time frames.

Actions are accompanied by target implementation timeframes defined as follows:

Short: 1-2 years

Short-medium: 3-4 years

Medium: 5-7 years

Medium-Long: 8-10 years

Long: > 10 years

- 4. DETAILED ACTION PLANS** take actions from the STRATEGIC PLANS and identify specific works projects and programs required to deliver on these actions. Supporting plans include detailed costing and resourcing requirements and delivery timeframes. As detailed above, identified actions/projects will have associated timeframes for completion. These actions are then incorporated into Council's 4-years Delivery Program and annual operational plans as priorities and budgets allow.

- 5. GUIDELINES & POLICIES** provide detailed information, rules for activities or guidance for specific works.

Acknowledgement of Country

Yii Biiray Barray
This is Birpai Country

Nyura yii-gu mara-la barray-gu, nyaa-gi, ngarra-gi
You have come here, to the country to see, listen and remember.

Gathay Nyiirun Wakulda
Let's all go together as one

We acknowledge that we are on Birpai country and pay respects to all elders past, present and emerging. We acknowledge the ongoing connection to the Traditional Owners and Custodians of the lands and waters of the Port Macquarie-Hastings Region.

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Message from the Mayor & CEO



Dr Clare Allen - CEO

Mayor Peta Pinson

<To be inserted following public exhibition of the draft RITS and prior to endorsement of the RITS>

Introduction

Many aspects of our lives are impacted by how we get around, to work or school, shop and entertainment, and the movement of goods to support us. Transport systems shape our land use (and vice versa) and affect other aspects of the physical environment. It also has a vital role to play in enabling the social well-being of our community. Social and health impacts, such as isolation due to lack of access and reduced physical activity can be attributed to the way our transport systems have evolved. Transport also has the opportunity to keep people safe, develop and enhance tourism experiences, drive economic growth by connecting businesses to markets in Australia and across the world and create vibrant regional spaces and communities.

Transport is a shared responsibility across all levels of government. Council has a role to play in contributing to better social, economic and environmental outcomes for the Port Macquarie-Hastings community, through its transport and land-use decisions and actions.

The Port Macquarie Hastings Local Government Area (LGA) is continuing to evolve. There are geographical, environmental and other drivers that are leading to increased pressure on the existing transport network. Council needs to plan for the future so that residents, visitors, businesses and those who pass through the LGA can travel safely and efficiently. Our transport network users come from different socio-economic backgrounds and the availability of, and safe access to, transport has implications for levels of disadvantage experienced by our residents.

It is important that future transport in the LGA features more flexible travel options that increase choice, reduce carbon emissions and contribute to vibrant towns and villages. Public transport, cycling and walking are low emission forms of transport that make highly efficient use of space and support the activation of streets and places. Our future transport network will need to support a shift towards these modes. Particularly due to the geographic layout of our LGA, not all trips can be made in this way, and our residents, workers and visitors will continue to enjoy reliable, safe roads and freight networks when needed.

Further population and employment growth is forecast for the LGA with existing development areas expected to accommodate much of the growth. The demographics of the LGA's population is also changing. These factors will have a significant influence on travel patterns. For the LGA to thrive, the transport network needs to be planned to cater for the varying needs and demands of different users.

The RITS is the key strategic document that guides transport-related planning and decision-making over the next 10-20 years for the Port Macquarie-Hastings community. It is intended to provide a framework to guide the promotion, management and development of an integrated multi-modal movement network (both in terms of integration between modes and also with land use) to improve access and accessibility for all and encourage and facilitate sustainable and active travel.

The RITS outlines the most pressing challenges and the “big moves” required to make getting around in the Port Macquarie-Hastings more convenient, safer and more sustainable. It recognises that transport improvements are a journey in themselves and problems cannot be solved overnight. There is no simple solution to resolving all of our transport issues and these need to be carefully managed.

An Integrated Transport Strategy plans for all modes of transport in conjunction with land use planning

Scope of the RITS

The Port Macquarie Hastings Regional Integrated Transport Strategy (RITS) takes a holistic view of the entire transport network and identifies opportunities to address the changing nature of the transport network in and across the LGA. The RITS identifies key strategic transport and land use priorities to guide Council in the design, delivery and operation of its transport network. It outlines the policy direction for transport in the region through identifying and responding to transport challenges and opportunities that we face and providing a vision to address regional transport needs. It is not intended that the RITS will provide a list of the specific transport-related projects that Council should undertake. Details of these projects will be provided in supporting strategic plans and action plans.

As part of the development of the RITS, Council has considered:

- The community's desire to have more options to get around without always having to be in their car;
- All modes of transport (see below);
- Mobility and access within precincts and town centres;
- Planning for future technologies and digitalisation (including enabling connection and access to goods and services without physically moving); and
- Integrated land use and transport planning, including establishing alignment with relevant local, regional and state plans and strategies.

Creating more walkable neighbourhoods, a cohesive cycling network, and integrated public transport can only be achieved through the creation of a coordinated approach to land use and transport planning. The RITS provides the strategic blueprint to guide transport investment, policy and advocacy actions and a framework to facilitate coordination with State Government, industry and community stakeholders to ensure there is a 'one network' approach to transport planning, delivery and management. The RITS also considers transport planning throughout the LGA and the relationship between these networks and wider regional, state and national networks.

The following modes of transport are considered in the RITS:

				
Heavy & light vehicle movement (incl. freight)	Car-free transport options Including walking cycling and micro mobility	Public Transport (including buses and ferries)	Air Travel *	Parking

* It is recognised that air travel is an important element of an integrated transport network and that the Port Macquarie Airport is a key gateway into and out of our LGA. In this first iteration of the RITS, however, Air Travel is considered insofar as it relates to the Port Macquarie airport's interconnections with the other elements of the LGA's transport network. Future iterations will address the interconnectedness of air travel particularly as more becomes known about the potential and applicability of personalised air travel for the LGA. The framework and strategic direction to guide the future development of the Port Macquarie Airport are documented in the Port Macquarie Airport Master Plan.¹

¹ [Airport Master Plan Port Macquarie Airport](#)

The way we move within, through and around spaces influences our experiences and travel choices. Coordinated consideration of transport, infrastructure and land use priorities enables the creation of great places and spaces and facilitates effective movements that support community wellbeing and economic prosperity.

Role of the RITS

The RITS for Port Macquarie-Hastings takes an LGA-wide view and aims to identify a vision and desired outcomes for transport in alignment with state, regional and local planning to:

- Address challenges of the existing transport network within the Port Macquarie Hastings LGA
- Address forecast growth in the LGA and the transport needs of community, businesses and visitors;
- Guide actions for the improvement of integrated land use and transport infrastructure planning, services, policy and behaviour.

The RITS will be used:

By Council

- To guide the integration of transport planning and investment with our land use planning as we shape the development of our LGA,
- To inform land use planning controls in Council's Local Environment Plan (LEP) and Development Control Plan (DCP),
- To inform projects such as place plans, master plans and structure plans; and
- To inform our operational and delivery plans to better align with community needs and expectations,
- To identify transport infrastructure priorities, and help us advocate to other levels of government for new transport infrastructure and services to support a liveable, sustainable, and innovative community,
- To support funding applications for priorities identified within the RITS and supporting Action and Project Plans.

By the community

- To understand the transportation vision for the LGA and how it will affect them.

By the NSW Government

- To understand Port Macquarie-Hastings's direction for integrated transport planning; and
- Enable a partnership approach to transport planning in the region;
- To inform future State Government transport planning and investment.

By Developers and Industry Professionals

- To align planning, development and investment proposals with the community's vision for integrated transport.

This is Port Macquarie-Hastings Council's first ever RITS. This first iteration outlines the key priorities that Council will follow in the implementation and management of its transport network and identifies key areas of focus that will shape future strategic and operational planning work for both land use and transport planning.

Structure of the RITS

Part 1 of the RITS provides context for what follows, including the roles and responsibilities of the three levels of government in transport; a strategic planning context, and a geographic and demographic description of where Port Macquarie-Hastings is now.

Part 2 includes a summary of background studies and issues that informed the development of the RITS. The key challenges and opportunities facing Port Macquarie-Hastings that need to be considered in planning our transport requirements are also discussed.

Part 3 identifies the Vision, Desired Outcomes, Priorities and Directions that will guide the planning and delivery of our transport network.

The Appendices include an overview of our current transport network, further discussion of strategies and plans at the local government and state government levels that are relevant to the RITS, a discussion of emerging trends in transport and a Glossary of Terms used throughout the document.

Assumptions

The RITS is based on several significant assumptions and uncertainties that have associated uncertainties including:

- Unforeseen shifts in LGA demographics,
- The occurrence of impacts related to natural disasters, including those associated with the Covid-19 pandemic.

The RITS outlines future directions which will impact the future allocation of resourcing (both human and financial). The effectiveness of the RITS lies in Council's commitment to the required levels of resourcing for the programs and projects which will be identified in Action Plans that will support the directions outlined in this document.

Part 1 - Context

Responsibilities for our Transport Network

In practice, most aspects of transport are addressed by the three levels of government, with some areas of Overlap. The private sector also has a role to play. These responsibilities with respect to the Port Macquarie-Hastings community are summarised in Table 1.

	Highways/motorways	Local Roads	Bus Services	Heavy and light passenger rail	Cycle ways and footpaths	Ferries	Airport/ Air Services
Australian Government							
NSW Government							
Local Government							
Private Sector							

Table 1: Responsibilities across transport services and infrastructure in the Port Macquarie Hastings LGA.

The Australian Government has a responsibility for significant economic transportation infrastructure such as major highway networks and interstate rail networks and provides some funding for local transport network infrastructure through grant programs.

The NSW Government has a lead responsibility in responding to the needs and challenges specific to the state and to represent the state in various forums at both the national and international level. The NSW Government is responsible for public transport, vehicle licensing and registration, and regulates and enforces road user behaviour. It is responsible for public transport infrastructure, such as buses, trains, the planning of public transport networks, timetabling, information and service provision.

The NSW Government is responsible for provision and operation of the road network, though through the Roads Act 1993 and the Local Government Act 1993, some of these functions are devolved to local government. Through Transport for NSW, the NSW Government provides infrastructure for and maintains state roads, controls traffic on classified roads and has control of traffic signals on all roads. Through its policies and plans, the NSW Government can facilitate desirable land use and transport outcomes and facilitate travel behaviour change.

The NSW Government also sets the direction and legislation for land use planning across the State.

Local government (Council) makes local land use decisions and guides development outcomes, which impact on transport outcomes. In preparing local environment plans and development control plans, and in assessment of development applications, Council must consider how it can address objectives to improve access by sustainable transport modes, reduce travel demand and reduce dependence on cars.

Council facilitates the provision of roads, footpaths, cycleways, public transport support infrastructure and traffic management facilities by developers through preparation of development contribution plans and the application of appropriate consent conditions.

Council undertakes inspections and funds, prioritises and undertakes maintenance and upgrade of local roads and regional roads. Council is also responsible for the footways of state roads. Council constructs, inspects and manages footpaths and cycleways and associated infrastructure such as bike parking, in the public domain.

Under the Road Transport (General) Regulation 2013, Council is a parking authority and as such can establish and operate pay parking schemes, define restricted parking areas, and establish permit parking schemes. Council is an owner and provider of off-street and on-street parking, and is responsible for enforcement of parking rules throughout the LGA.

Council, in its capacity as a roads authority, approves the location of public transport stops. At its discretion, it provides infrastructure such as seating and shelters. If Council does choose to provide this infrastructure, it must ensure that it is compliant with the Disability Standards for Accessible Public Transport 2002.

Council has an advocacy role, on behalf of the community to other levels of government for improvements in transport in the city and funding to meet transport needs.

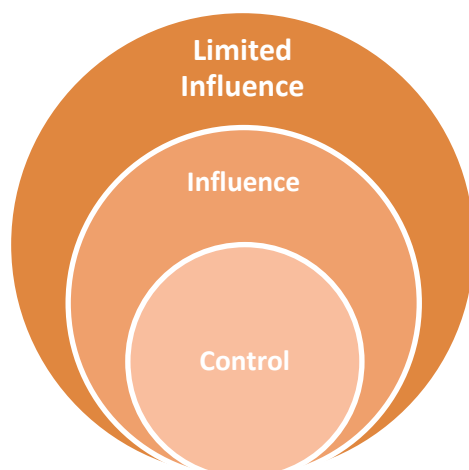
The private sector plays a role in financing, building and operating infrastructure, often in partnership with government. Private infrastructure may be funded directly by users, or by payments by the government.

This complex network presents a number of challenges for infrastructure planning. These include:

- **Line of sight between service need and planning/funding:** Ideally in providing a service to the community, there should be alignment of activity, planning and funding between all levels of government.
- **Accountability:** It is often difficult for the broader community to understand which level of government is accountable for services and the delivery of infrastructure. Despite these differences, there is a strong expectation that all levels of government will work together to meet the infrastructure needs of communities.

Council's Sphere of influence

The Sphere of Influence shown in Figure 1 shows areas in which Council can directly influence or control sustainable transport outcomes.



Control

- Integrated transport and land use planning
- Infrastructure provision for walking, cycling and local roads
- Road network improvements
- Implementation of technology
- Remote access delivery of services (e.g. mobile library)
- Parking regulation

Influence

- Public transport enhancements
- Resource sharing
- Car Pooling/Ride Sharing
- Changing attitudes to 'active transport' and 'safe driving'
- Travel demand management

Limited Influence

- Federal and State policy and funding

Figure 1: Council's Sphere of Influence

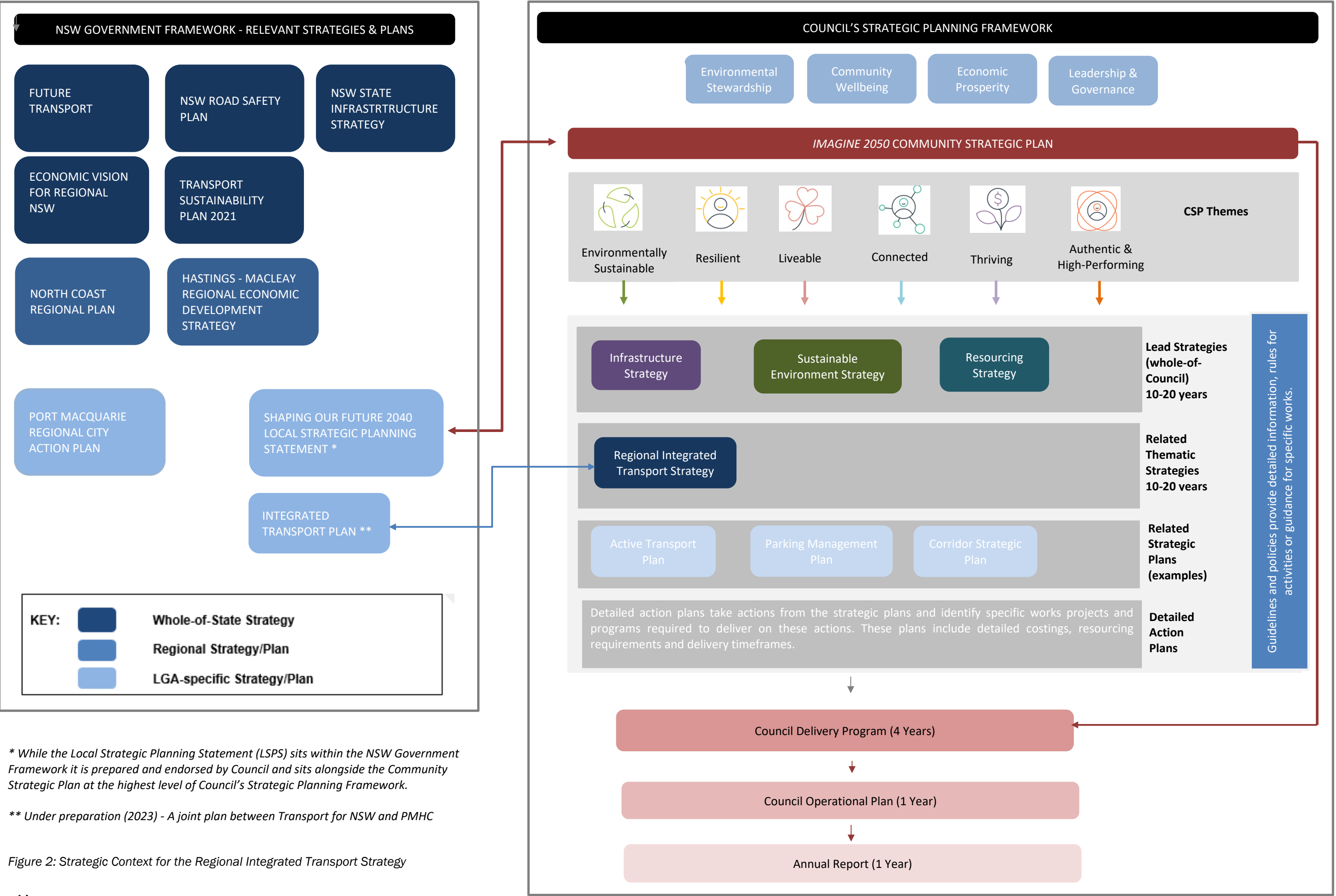


Figure 2: Strategic Context for the Regional Integrated Transport Strategy

Strategic Context

As highlighted, responsibility for transport is shared across the three levels of government, with some significant areas of overlap. Many of the issues faced by the Port Macquarie-Hastings community are shared by other communities across Australia. An overview of key strategic documents at the local and State/regional level that provide context follows.

Local level

The right-hand side of Figure 2 identifies the place of the RITS within Council's Strategic Planning Framework. The RITS aligns with, informs and supports Council's strategic plans, in particular Council's Community Strategic Plan, Local Strategic Planning Statement and Draft Infrastructure Strategy.

Imagine2050 - Community Strategic Plan (CSP)



In accordance with the NSW Government's Integrated Planning & Reporting Framework, the CSP is a council's highest level plan which outlines the community's vision for the future. *Imagine2050* translates our community's desired outcomes into six key themes with supporting strategic directions which support this vision.

Community Vision

*"The most liveable, sustainable and innovative place
in Australia"*

The strategic objectives (set out under the relevant CSP themes) which relate to this Strategy are outlined below:



Environmentally sustainable

- The impact of our built environment on our natural environment is minimised



Resilient

- We are resilient in the face of adversity and change
- We are a safe and healthy community



Liveable

- We have well-planned and liveable communities
- We have housing that meets our needs and is well-served by sustainable infrastructure
- We enjoy easy access to green and blue spaces and a wide range of active and passive cultural, sporting and recreational activities



Connected

- We safely and efficiently connect people, goods and businesses within and beyond our region
- We make more trips by active and public transport



Thriving

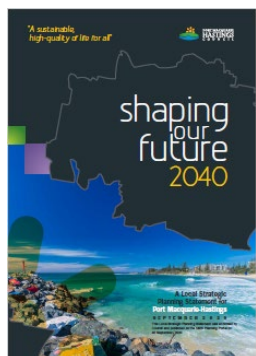
- We have a thriving, diverse and sustainable economy
- Our centres, main streets and village hubs are prosperous and vibrant



Authentic & High-performing

- We achieve great outcomes through collaboration
- Our Council manages its finite resources sustainably to support the service delivery expectations of our community

Shaping Our Future 2040 - Local Strategic Planning Statement (LSPS)



The LSPS is the core strategic land use planning document for the Port Macquarie-Hastings LGA. It outlines the vision for land-use planning over the next 20 years and sets the direction for our community's environmental, social and economic land-use needs.

The LSPS has as one of its 5 themes "Our connections" with the following associated vision:

"Our people are physically and socially connected. It is easy, safe and convenient for our community to move around our region via a network that embraces place - creating streets and neighbourhoods that are great places to meet."

Within this theme, the LSPS identifies Planning Priorities and Principles which are outlined below:

LSPS PLANNING PRIORITY	PLANNING PRINCIPLES
11. Provide a multi-modal integrated land use and transport network across Port Macquarie Hastings	<ul style="list-style-type: none"> - Coordinate land use and transport planning to protect transportation corridors and support the safe and efficient movement of people, goods and services across all modes of transport (including aviation) - Prioritise pedestrians over cars in centres to create places where people want to spend time and to ensure local streets and neighbourhoods encourage physical & social activity and connectivity - Mitigate the impacts of transport infrastructure on liveability and amenity
12. Develop a network of safe, accessible and sustainable local transport options linking key destinations	<ul style="list-style-type: none"> - Coordinate land-use and transport planning to prioritise active transport across the LGA - Improve local public transport connections to extend the reach of the regional transport network - Support smart technology, such as trials of new systems, to facilitate more efficient - movement across our LGA



The Draft Infrastructure Strategy for Port Macquarie-Hastings takes an LGA-wide view and aims to:

- Identify significant issues and challenges for infrastructure assets over the next 20 years and provide principles and priorities to guide investment and resourcing to address these issues and challenges.
- Demonstrate how Council plans to manage its infrastructure assets prudently and sustainably through future periods of growth and other pressures, which can be supported by our Resourcing Strategy including our Long-Term Financial Plan.
- Provide the principles for the development of long term financial plans and budgets for infrastructure.

Further details on the alignment of these key Council strategies with the RITS and an overview of other PMHC documents within the Strategic Framework which relate or support the RITS are given in Appendix A.

State and regional level

The left-hand-side of Figure 2 illustrates the strategic context at the State and Regional level within which the RITS sits. It identifies key informing strategies from the NSW State Government and also shows the interconnectedness with Council's strategic planning framework.

The principal NSW State Government transport-related strategies are Future Transport and the State Infrastructure Strategy which are described below.

Future Transport (2022 refresh)



Future Transport sets the strategic directions for Transport for NSW to “achieve world-leading mobility for customers, communities, businesses and our people.”² It is part of a suite of NSW Government strategies, policies and plans that integrate and guide land use and transport planning across NSW. Details of these are shown in Appendix A.

Future Transport provides the framework that informs network plans, service plans and policy decisions to achieve Transport for NSW's three high-level outcomes which are:

- Connecting our customers' whole lives
- Successful places for communities
- Enabling economic activity

Staying Ahead: State Infrastructure Strategy 2022-2042



This 20-year Strategy sets out Infrastructure NSW's advice on the current state of NSW's infrastructure and the needs and priorities over the next 20 years. It looks beyond the current projects and identifies policies and strategies needed to provide infrastructure that meets the needs of a growing population and a growing economy. The Strategy is framed around nine long-term objectives and accompanying strategic directions focused on meeting future challenges and seizing opportunities

² [Future Transport Strategy: Our vision for transport in NSW](#)

Transport for NSW is currently developing a Regional Transport Plan for the North Coast which will provide a regional response to Future Transport and support the objectives of the North Coast Regional Plan. The RITS acknowledges and responds to key outcomes and initiatives detailed in NSW State Government documents including Future Transport and the North Coast Regional Plan all of which will help guide the integration of land use and transport infrastructure as the LGA changes and grows over the next 10 years.

Further details on the alignment of *Future Transport* and *Staying Ahead* with the RITS and an overview of other State government strategies which are relevant to the RITS are given in Appendix A.



Geographic Context

The Port Macquarie-Hastings Local Government Area (LGA) is located approximately 420 kilometres north of the Sydney CBD, and 510 kilometres south of the Brisbane CBD and is the southern gateway to the North Coast of NSW. The LGA covers an area of 3686 square kilometres and extends west from the areas surrounding the mouth of the Hastings and Camden Haven rivers, through verdant hinterland to the Great Dividing Range. It adjoins the local government areas of Kempsey Shire to the north, Walcha to the west and Mid-Coast to the south. The Pacific Ocean coastline forms the eastern border of the LGA.

The LGA is one of the fastest-growing centres in NSW and is home to approximately 86,762³ people living in 34 communities spread across the coast and hinterland, in city, suburban and rural living environments. The hinterland is an integral part of the LGA and supports a variety of farming, rural living, horticulture, and tourism uses. The natural environment is a defining feature of the region. A large proportion of the LGA is State Forest and National Park, including beaches, waterways, coastal wetlands, flood plains and rugged mountain ranges.

A summary of the key settlement areas is detailed below:



● Port Macquarie - Regional City

- One of four regional cities on the North Coast
- Main driver of residential and economic growth
- Target migration and visitation destination
- Strategic hub of the LGA
- Stunning natural setting
- Target destination for visitation and migration
- Key built assets include:
 - two hospitals and a cluster of associated health services;
 - three tertiary education institutions;
 - Port Macquarie Airport and associated business park;
 - four major shopping centres
 - major industrial area
 - range and volume of visitor accommodation

● Wauchope

- Primary centre of the LGA west of the Pacific Highway
- Provides a range of services to the local community including the surrounding rural community
- Gateway to the hinterland
- Railway station, located on the edge of the Wauchope CBD, is a key transportation hub for the LGA, servicing passengers and freight between Brisbane and Sydney
- Strong connection to heritage of the timber industry and rail
- Key industries are farming, tourism, forestry and niche horticultural and primary production

³ 2021 Australian Census - Australian Bureau of Statistics

● Lake Cathie and Bonny Hills

- Coastal villages
- Anticipated to be the second fastest growing urban areas in the LGA.
- Strong connection to the water, both to the Pacific Ocean and Lake Cathie
- Nearby forests and waterways are great attractors for both visitors and new residents to the LGA

● Camden Haven

- Urban centre in Laurieton which supports a string of villages in North and West Haven, Dunbogan, Kendall and Kew.
- Laurieton sits at the base of Dooragan (North Brother) mountain which is one of the most dramatic landform features on the North Coast.

● Long Flat, Comboyne, Beechwood, and Telegraph Point

- Larger rural villages
- Important focal point for surrounding rural communities
- Strong sense of identity and place
- Hub for local businesses (including agribusiness)
- Drawcard for tourists seeking a hinterland experience to complement the coastal experiences on offer in the LGA

Geographic Accessibility

Geographic accessibility relates to how people and goods get into the LGA from outside the region, and the movement of people and goods within the region. Considerations can include the ease of tourists getting into the region as well as how easy it is to move around once here. It can include how residents travel to work or study, how well townships are connected, or where goods are moved.

Geographic accessibility is influenced by the links and nodes of transport networks (such as roads and destinations, or flight routes and airports), services that are provided along physical networks, and physical barriers that can inhibit accessibility. Land use is also a major contributing factor to accessibility and the need for different types of networks to be constructed.

The LGA is fortunate to have a range of passenger transport options. Strong road connections, commercial passenger flights and a regular passenger rail service.

- Rail: Passenger service (three northbound and three southbound daily)
- Airport: Regular routes to Sydney and Brisbane
- Road: Recent upgrades to the Pacific Highway
- Water: Fortnightly sea freight service 'Island Trader' from the East Coast of Australia to Lord Howe Island.

For a more detailed description of our Transport Network please refer to Appendix B.

Issues

- The LGA is geographically distant from other major centres - see Figure 3
- The transport network is heavily road-based
- The bus network has limited services and is focused on connecting residential areas with key destinations like CBD.
- There is a lack of connectivity between towns within the LGA.
- There is Increasing congestion on roads around Port Macquarie's employment centres (see Figure 4 and further discussion beginning on page 27).

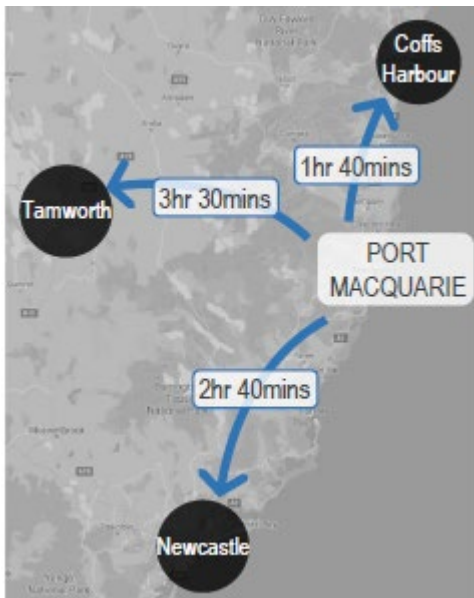


Figure 3: Travel times (by road) to neighbouring centres

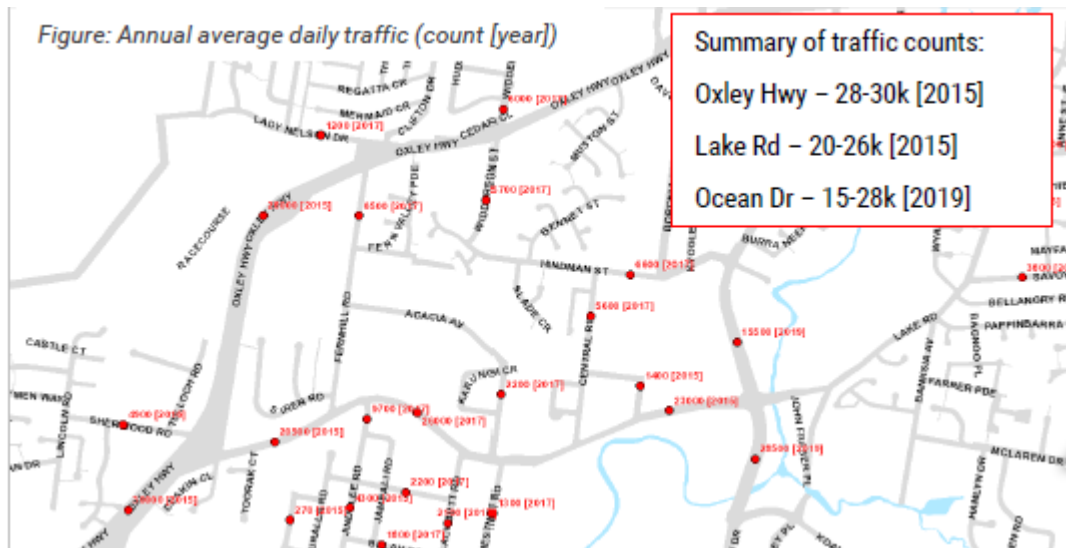


Figure 4: Annual average daily traffic (count [year])⁴

⁴ [Maps of Port Macquarie-Hastings Council \(nsw.gov.au\)](https://maps.portmacquarie-hastings.nsw.gov.au/)

Community Context

Demographic and transport-related census data (from the most recent census in August 2021 - except where stated otherwise) provide insights that will influence Council's approach to planning its transportation network.

Population

- The official population of the Port Macquarie-Hastings LGA was 86,762
- From 2011 - 2021, the population grew by approximately 11,353 people or around 1,100 new residents each year.
- Port Macquarie-Hastings is projected to grow by approximately 14,300 people between 2021 and 2041, reaching approximately 100,700 people in 2041 ^{5*}
- In 2021, the median age in the LGA was 49 years
- The 60-69 years' cohort is the most common with 12,805 people in 2021 (nearly 15% of the population).
- The 70-79 years' cohort recorded the largest change with a 25.4% increase from 2016.
- Of the 86,762 residents in 2021, 8.3% identified as having a need for assistance with core activities - this is a 24.5% increase from 2016.

The LGA's ageing population and increasing incidence of mobility and health-related issues has clear implications for transport network planning to ensure our residents have equitable access to transport options and don't experience transport disadvantage as a result of their age, ability, or personal circumstances.

Transport disadvantage is the effect of having less choice about when, where and how someone can travel compared to other people.⁶

Housing

- The average household size is 2.3 people per dwelling
- Trends indicate that around eight in every ten new households forming between 2021 and 2041 will be one or two person households
- The NSW Government's 2021 dwelling projections estimate the demand for just over 9,000 new dwellings between 2021 and 2041 to meet estimated population growth, this is around 450 new dwellings each year^{7*}

** Council is currently undertaking a project to provide more detailed population and housing forecasts for the LGA using a scenario-based approach.*

Table 2 (also using 2021 Census data) details the composition of dwelling types within the LGA. This shows that over 70% of people within the LGA reside in low density detached housing. Low density of population and the distribution of this population over a large geographical area results in a lower level of accessibility to community 'hubs' for active transport and generally results in insufficient demand to support sustainable public transport options. As such, the dominance of private vehicle usage is reflected by the way in which we live within our LGA.

⁵ Department of Planning & Environment (DPE) www.planning.nsw.gov.au/Research-and-Demography/Population-Projections/Explore-the-data

⁶ Draft Hunter Regional Transport Plan

⁷ Department of Planning & Environment (DPE) www.planning.nsw.gov.au/Research-and-Demography/Population-Projections/Explore-the-data

Dwelling structure Occupied private dwellings	Port Macquarie	%	New South Wales	%	Australia	%
Separate house	21,113	72.3	1,729,820	66.4	6,041,788	72.9
Semi-detached, row or terrace house, townhouse etc.	3,951	13.5	317,453	12.2	1,055,016	12.7
Flat or apartment	3,185	10.9	519,390	19.9	1,087,434	13.1
Other dwelling	777	2.7	23,580	0.9	64,425	0.8

Table 2 - Composition of Dwelling Types across the LGA (2021)

Dwelling Density

The density of population has a significant impact on transportation planning across the LGA. As expected, population is concentrated in our urban areas, particularly in Port Macquarie. Table 3 identifies the dwelling density across the six areas - known as Statistical Area Level 2 (SA2) - of the LGA shown in Figure 5.

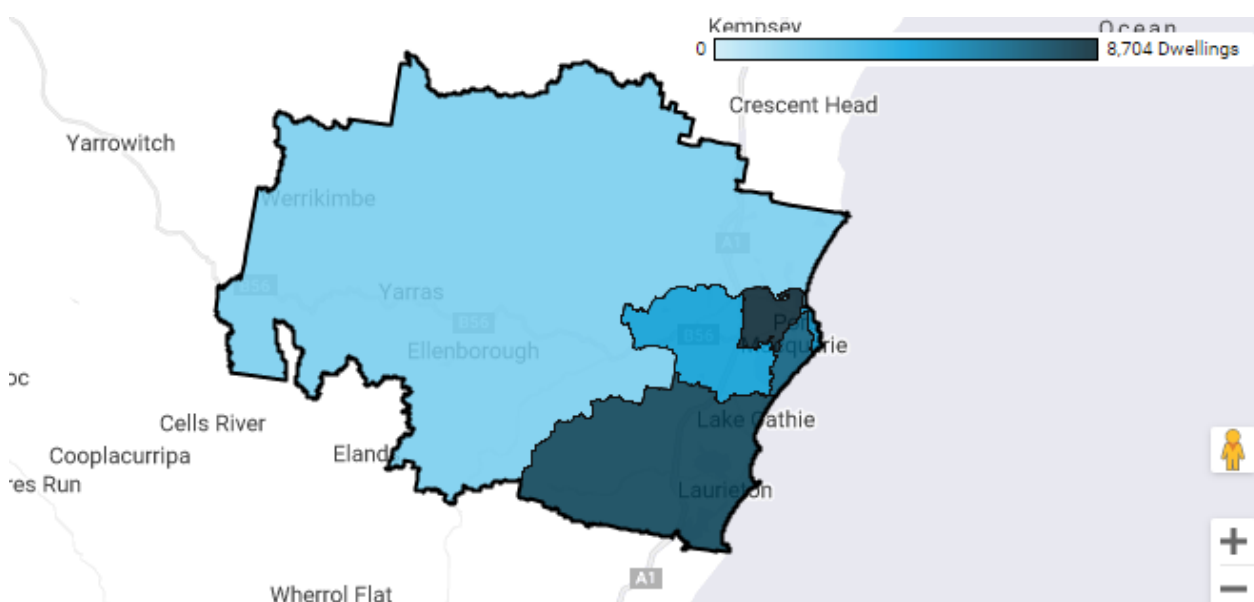


Figure 5 - Statistical Area 2 for Port Macquarie-Hastings LGA⁸

⁸ Ibid.

Statistical Area Level 2	Port Macquarie - Hastings (A) (2021)				
	Dwellings	%	Area (ha)	%	Dwellings / ha
Port Macquarie - West SA2 108041164 (map)	8,704	24.97%	5,416.680	1.47%	1.61
Laurieton - Bonny Hills - Port Macquarie-Hastings (map)	7,808	22.40%	52,428.778	14.24%	0.15
Port Macquarie - South SA2 108041620 (map)	6,855	19.67%	3,499.460	0.95%	1.96
Port Macquarie - East SA2 108041619 (map)	4,990	14.32%	709.340	0.19%	7.03
Wauchope SA2 108041166 (map)	4,620	13.26%	19,486.110	5.29%	0.24
Port Macquarie Surrounds - Port Macquarie-Hastings (map)	1,874	5.38%	286,698.739	77.86%	0.01
Total	34,852	100.00%	368,239.107	100.00%	0.09

Table 3: Dwelling Density across SA2 areas in the Port Macquarie LGA⁹

Schooling & Transport

There are approximately 11,800 children attending primary and secondary schooling in 2021 and a further 4,600 attending tertiary institutions - although the number attending online is not known from the ABS census data. Students in the LGA may be eligible for free or subsidised travel to and from school by bus or TAFE under the School Student Travel Scheme. Travel for education currently accounts for approximately 21% of all bus trips in the LGA.¹⁰

Employment

- Just over 50% of the population are in the labour force and of those employed 51.5 % were working full-time, 37.6 % part-time and almost 11% were away from work or unemployed at the time of the 2021 census.
- Of the 27,475 local workers in the LGA in 2016, 25,890 or 94.2% also live in the area. Approximately 500 people travelled from each of the neighbouring LGAs (Mid-Coast and Kempsey) to access work in the Port Macquarie-Hastings LGA.
- Of the 29,562 employed people living in the LGA in 2016, 87.6% also worked in the LGA. Approximately 800 residents (2.7%) worked in the Kempsey LGA and 350 (1.2%) worked in the Mid-Coast LGA.

Car Ownership

The 2021 Census indicates that:

- there were approximately 32,200 registered motor vehicles across the LGA, an average of 1.8 per household.
- 5.4% of private dwellings in the LGA do not have a car, which is almost half that for NSW (at 9 %).
- the proportion of households known to have access to at least two motor vehicles in the LGA has increased from 47.5% in 2016 to 55.9% in 2021, possibly reflecting demographic trends including increasing household incomes, increasing household size and changing household structures, such as adult children living at home for longer or with an increase in the proportion of households comprising unrelated individuals sharing rented properties such as students.
- the number of households with three or more vehicles is approximately the same for NSW as a whole.

⁹ REMPLAN Community Profile for Port Macquarie-Hastings <https://app.remplan.com.au/portmacquariehastings>

¹⁰ 16 Cities Survey - Transport for NSW 2022

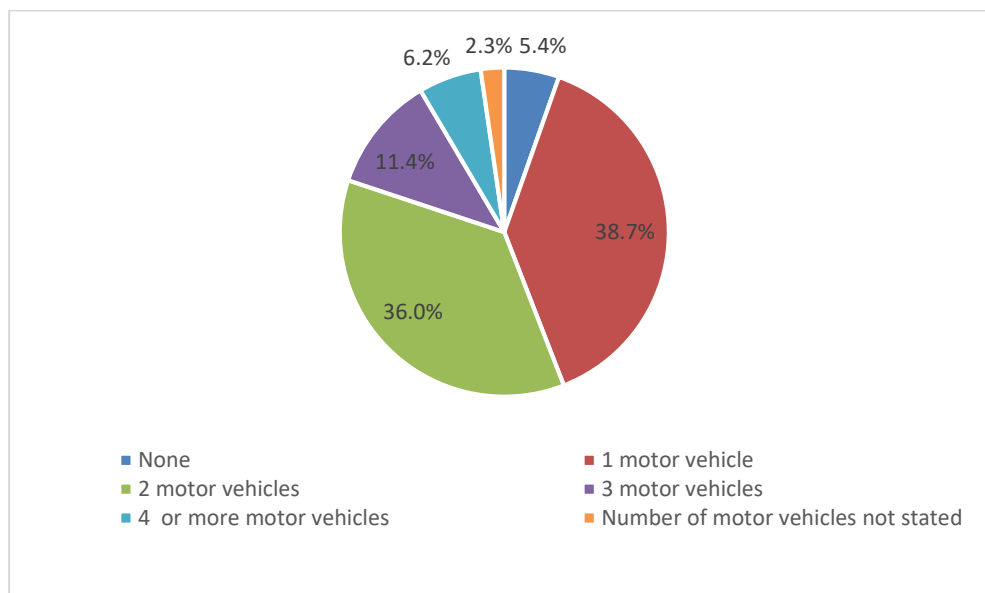


Figure 6 - Number of motor vehicles* per household in Port Macquarie-Hastings (2021)

* Motor vehicles excludes motorbikes, motor scooters and heavy motor vehicles.

There is a variation of levels of car ownership across the LGA as shown in Figure 7.

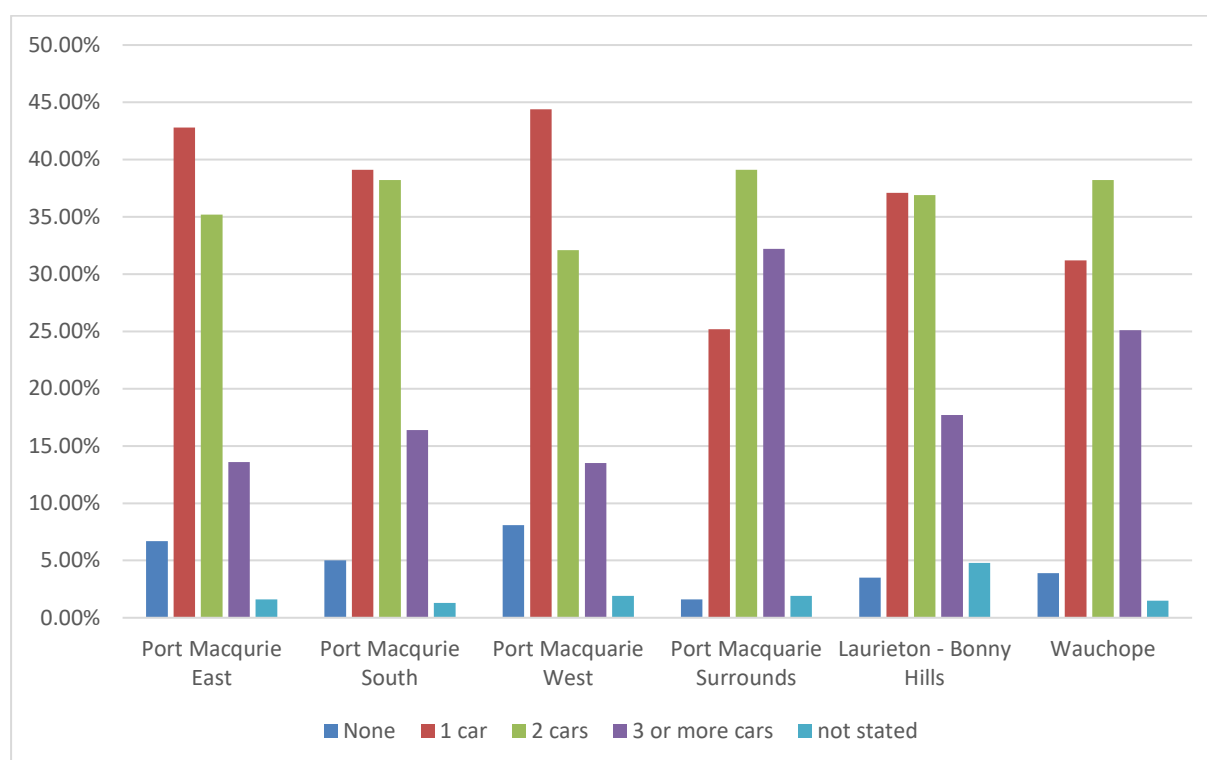


Figure 7 : Levels of car ownership across the LGA¹¹

Car ownership may be influenced by various factors, including income, prices, interest rates and demographic trends. The number of cars owned by a household affects how much residents travel and what modes are used. Access to employment and services, such as health and education services, are strongly influenced by access to transport. Households without a motor vehicle can therefore be disadvantaged if they are not in an area well-served by public transport.

¹¹ 2021 ABS Census data - Community Profile

Journey to Work

The predominant method of travel to work for residents of Port Macquarie-Hastings is the private car, with 70% of residents using this mode either as a driver or a passenger (see Table 4 and Figure 8) ¹². Similar to most other regional areas, this demonstrates the high car dependency for residents of the LGA. The proportion of residents travelling to work by more sustainable modes (public transport, motorbike, walking) is around 4% with the public transport mode share less than one percent. These figures are significantly less than the 5% and 8% targets respectively as detailed within the NSW Government's Future Transport Strategy.

Travel to work <i>Employed people aged 15 years and over (a)</i>	Port Macquarie (2016)	%	Port Macquarie (2021)	%	New South Wales (2016)	%	New South Wales (2021)
Car, as driver	19,014	70.0	23,253	65.3	1,953,399	57.8	1,587,613
Car, as passenger	1,401	5.2	1,696	4.8	144,820	4.3	117,413
Truck	294	1.1	366	1.0	32,908	1.0	26,390
Walked only	904	3.3	878	2.5	130,957	3.9	92,368
Motorbike/scooter			200	0.6			
People who travelled to work by public transport	218	0.8	255	0.7	540,215	16.0	147,492
People who travelled to work by car as driver or passenger	20,652	75.9	25,218	70.8	2,182,854	64.6	1,737,359
Worked at home	1,433	5.3	4,397 (b)	12.4	163,026	4.8	1,141,467

Table 4 - Method of travel to work (2021)

- (a) Records the methods of travel to work on 10 August 2021 and may not reflect the usual travel pattern.
- (b) The significant increase in the working from home figures between 2016 and 2021 is likely to be largely attributable to the Covid pandemic. While, anecdotal evidence points to a trend to at least working from home for at least part of the week is more common, any long-term trend is yet to be verified.

¹² ABS 2021 Census - Journey to Work

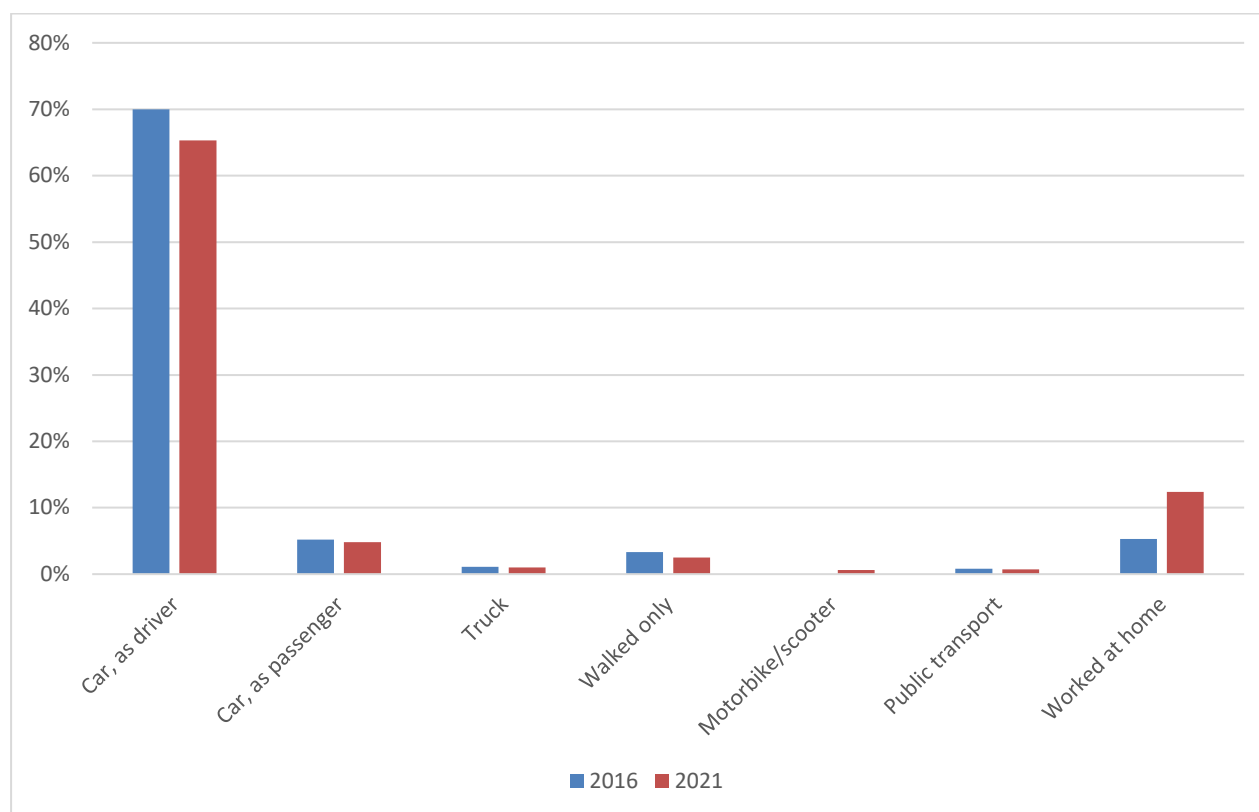


Figure 8- Method of Travel to Work

Average and median travel to work distances

For employed persons aged 15 years or more, the distance travelled to work is available in ranges as shown in Table 5. This shows that for workers in Port Macquarie-Hastings in 2016, the median distance travelled to work was in the 2.5 kilometre to less than 10 kilometre category and just over 13% travelled 30 kilometres or more to work. This amounted to just over 3,700 people travelling at least 30 kilometres each way to arrive at and return home from work.¹³

LGA	Nil distance	Over 0 km to less than 2.5 km	2.5 km to less than 10 km	10 km to less than 30 km	30 km and over
Coffs Harbour (C)	8.1%	12.9%	40.6%	27.4%	11.0%
Kempsey (A)	9.3%	15.6%	27.9%	25.8%	21.3%
Newcastle (C)	5.0%	14.1%	46.7%	24.7%	9.4%
Port Macquarie-Hastings (A)	8.9%	12.8%	43.7%	21.3%	13.3%
Tweed (A)	9.6%	10.3%	28.8%	30.4%	20.9%

Table 5. Distance travelled to work, (employed persons aged 15 years or more) Port Macquarie-Hastings LGA and comparable areas, 2016

¹³ ABS - Time Series Profile 2016.

Considerations for the development of the RITS

Travel in Port Macquarie Hastings

People in Port Macquarie Hastings travel for a variety of reasons. While work makes up a significant number of trips made on any given weekday, leisure trips for social and recreational purposes are also very important, as well as shopping and personal business. That's why our transport network must cater for a wide variety of trip purposes, not only the "9-to-5", suburb to workplace commutes. As an example, picking up/dropping off someone (usually to school) makes up a significant proportion of trip purposes. These trips usually occur during the morning peak period. When combined with trips to education, we can see how important the school run is to the functioning of our transport network. Providing viable options for children to walk, cycle and catch public transport to school and looking to travel demand management methods such as more flexible employment hours and locations will be key to managing congestion on our roads

Residents also travel differently depending on where they live, with walking and cycling options taken where distances to destinations are shorter. We tend to use private vehicle travel more in outer suburbs, towns and villages when distances are longer and travel choices can be more limited. This is a pattern seen in cities and towns around Australia. Travel demand and modal choice is often an outcome of land uses. Mixed use developments which feature homes, jobs, shops and leisure opportunities, tend to reduce overall demand for travel and increase the uptake of sustainable transport modes.

Travel Patterns

Port Macquarie-Hastings is a highly car dependent LGA. While there are many trips well beyond the public transport network, or routes that are too far or hilly to walk or cycle, there are a large number of short car trips that happen every day. The car has become the default mode of transport for many. This adds to congestion and parking pressure, reduces opportunities for physical activity and adds to carbon emissions, local air and noise pollution.

An origin destination (OD) study was undertaken in February 2020 on the Port Macquarie urban area during the AM (7:30 to 9:30am) and PM (3:00 to 5:00pm) peak periods as part of a wider transport network planning study.¹⁴ The survey included nine origin-destination 'gates' which could be used to establish movement patterns across the Port Macquarie urban area. - see Figure 10.

The survey data showed that the majority of the demand was either travelling to, or from within the study area. Long distance trips through the network were low across both peaks.

The resulting traffic model developed for the Port Macquarie urban area shows the derived trip length distribution for the am and pm peaks.

¹⁴ SMEC - Base Year Model Calibration and Validation Report - Port Macquarie Transport Network Improvement Planning Project, 26 October 2020

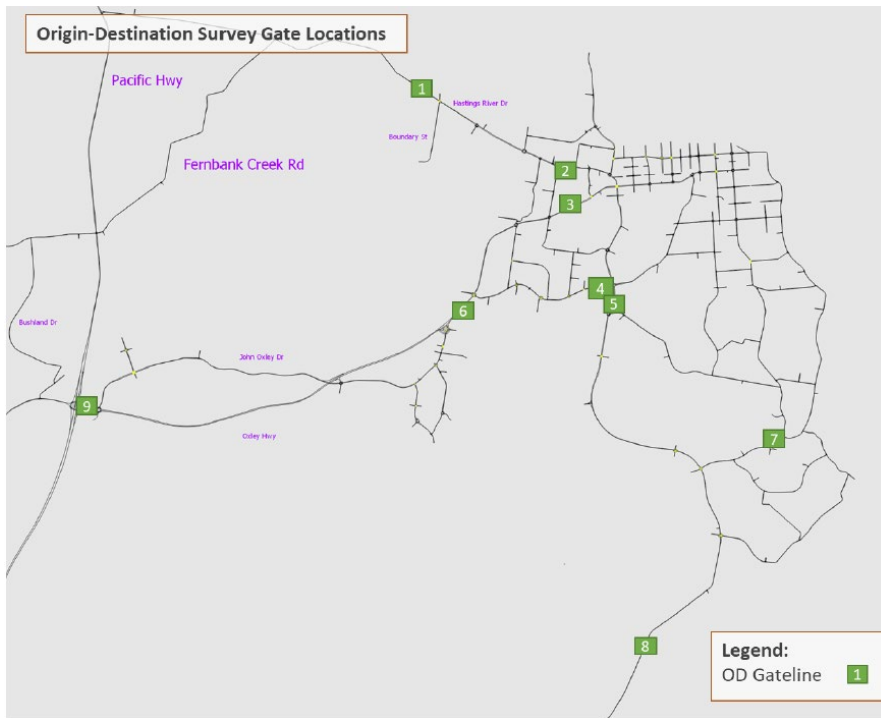


Figure 10: Origin-Destination Survey Gate Locations

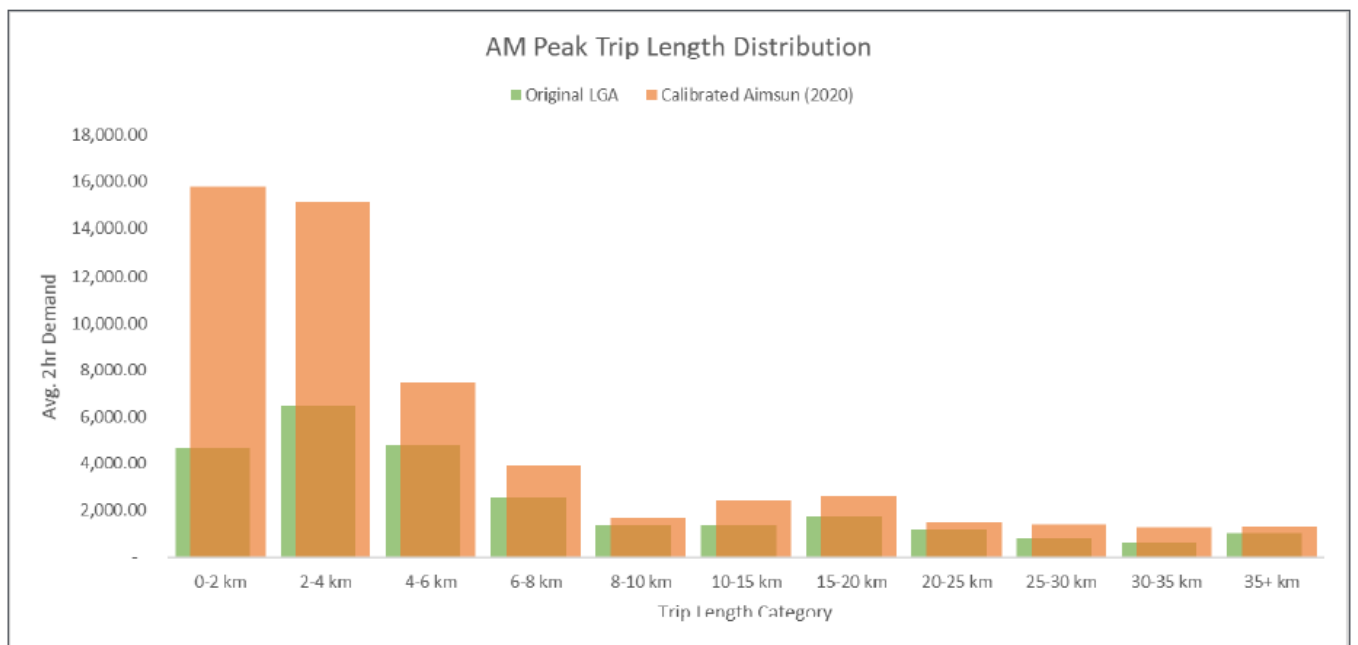


Figure 11: Modelled trip length model distribution (total demand) - AM Peak period

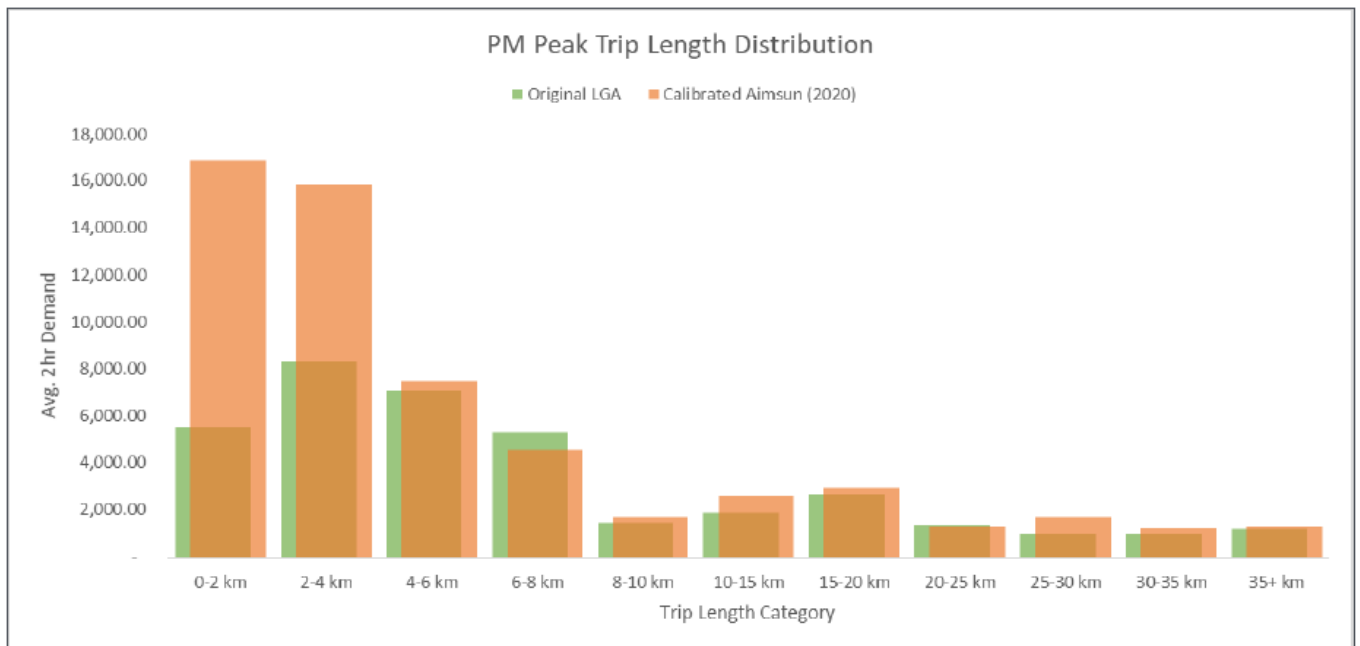


Figure 12: Modelled trip length distribution (total demand) - PM peak

Road Network Performance

Outside of the Port Macquarie inner area, traffic generally flows freely, with only small delays at key local junctions. Other general delays are experienced on single-lane sections of road where a slow-moving vehicle might create a build-up of traffic.

During the morning and afternoon peak traffic periods, in particular, the Pacific Highway / Oxley Highway interchange and Lake Road industrial areas become busy, with traffic from the north, south and west converging due to major business locations and facilities such as the Port Macquarie Base Hospital, Charles Sturt University campus, St Columba Anglican School and other health-related businesses. Specifically, the Oxley Highway is one of the busiest road corridors heading into Port Macquarie from Wauchope, with limited access between the large Wrights Road roundabout and its intersection with Lake Road. Eastbound traffic is able to flow freely until the impacts of the Lake Road roundabout are felt. North-east of Lake Road, roundabouts on Oxley Highway break up traffic flow and reduce speeds.

Lake Road is also congested with through traffic mixing with local traffic (including heavy vehicles) accessing the industrial area.

The northern sections of Ocean Drive can become heavily congested during peak periods. Capacity improvement works to widen Ocean Drive to a four-lane facility are currently in the early stages of construction.

Hastings River Drive is a busy corridor, with through traffic mixing with local access traffic. Adjacent retail, commercial and light industrial land uses and associated parking create friction with traffic movement.

Pacific Drive and Kennedy Drive provide a north-south connection between established residential areas and the Port Macquarie city centre. As these roads cater for relatively small proportions of through traffic, volumes are moderated and traffic flow is generally smooth.

Traffic volumes at some of these key locations described above are illustrated in Figure 9.

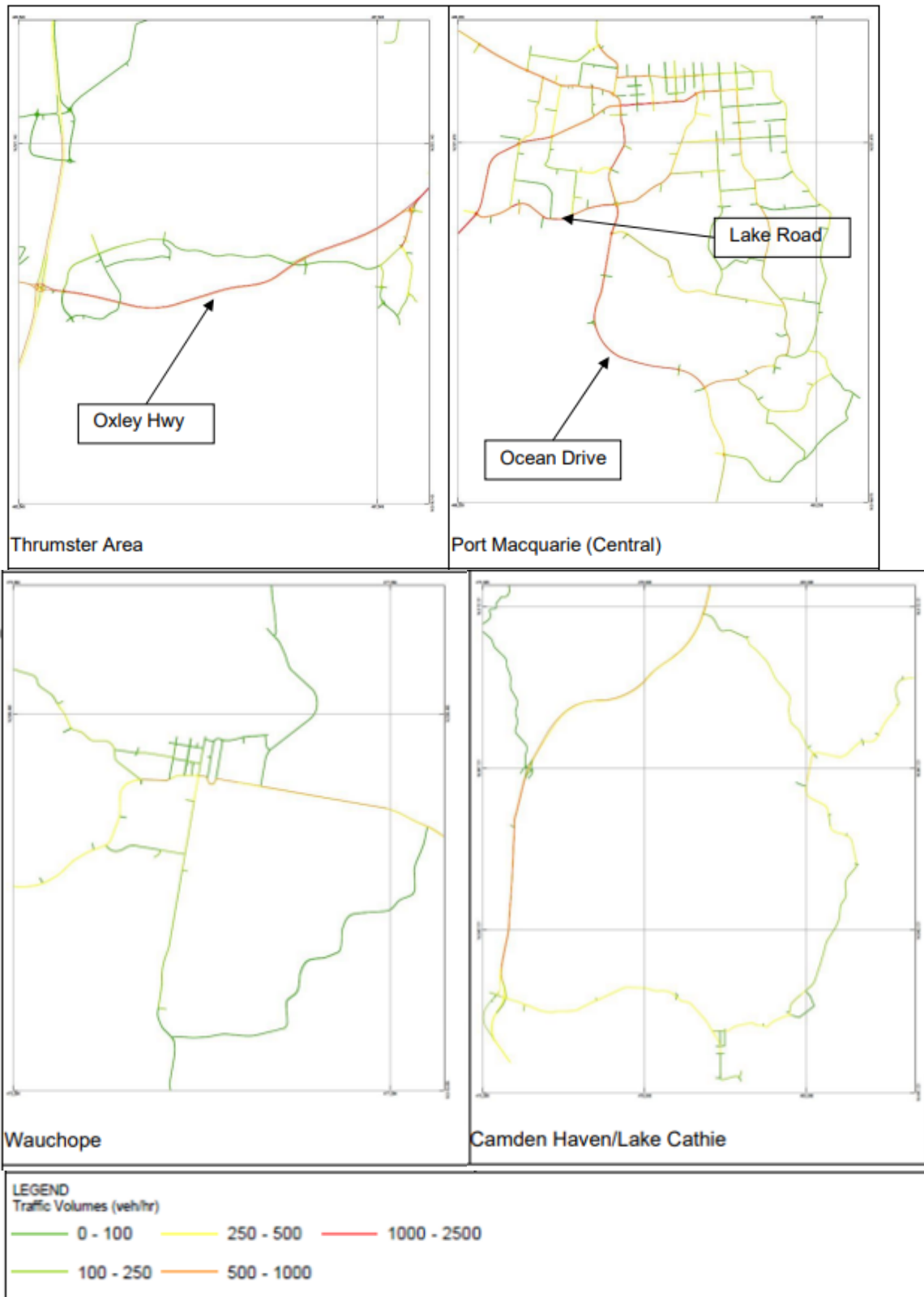


Figure 9: Traffic Volumes at Key Locations (2016)

The performance of urban road networks is primarily a function of the performance of key intersections. The top 10 intersections with the highest traffic volumes (2017 data) are presented in Table 6.

Intersection	Location	Maximum Volume (total vehicles per hour)
Ocean Dr / Lake Rd	Port Macquarie	4160
Oxley Hwy / Lake Rd / Sherwood Rd	Port Macquarie	3890
Oxley Hwy / Pacific Hwy 3660	Thrumster	3660
Oxley Hwy / Hastings River Dr / Ocean Dr / Gordon St	Port Macquarie	3500
Ocean Dr / Koala St	Port Macquarie	3230
Oxley Hwy / Widderson St	Port Macquarie	3030
Oxley Hwy / Clifton Dr / Fernhill Rd	Port Macquarie	2950
Gordon St / Horton St	Port Macquarie	2910
Oxley Hwy / John Oxley Dr / Wrights Rd	Port Macquarie	2800
Lake Rd / Jindalee Rd Lake Rd / Central	Port Macquarie	2680

Table 6: Top 10 Intersections by Traffic Volume

Road Network Planning

A number of road network planning studies and projects have either recently been completed or are currently underway. These include:

Road Corridor Strategy for Hastings River Drive, Ocean Drive and Kendall Road (drafted and pending endorsement by Council)



This 54km road corridor links Port Macquarie to neighbouring local towns and villages along the coast, and then inland to Kew and Kendall. This strategy is focusing on:

- preserving the corridor
- setting out a broad design framework for future transport network upgrades for all users, including traffic, walking, cycling, and public transport
- defining priorities for future road maintenance, operation, and the safety of all road users.

The draft Road Corridor Strategy identifies the following vision for this important part of the LGA's road network:

"To provide a safe and efficient transport route for all users in support of our growing region, while maintaining the sense of place, character and amenity of our unique and diverse communities"

Port Macquarie - Hastings Local Government Area Traffic Study (2018)¹⁵

Objectives of the Traffic Study included:

- Evaluating road network performance for future years and identifying a road hierarchy for future planning;
- Testing a range of infrastructure improvements and developing an implementation strategy timeframe for identified road network improvements; and
- Evaluating the current (at the time) road network performance including light and heavy vehicles, pedestrians, cyclists and on-road public transport.

¹⁵ [Microsoft Word - FINAL Port Macquarie-Hastings LGA Traffic Study Summary Report_Oct 2019.docx \(nsw.gov.au\)](#)

The study involved collection and analysis of various traffic data, reviewing population and land use forecasts, development of a traffic model for part of the study area, and considering the implications of future changes on the long-term operation of the road network.

The study found that the road network was generally operating well under existing conditions, and was expected to continue operating well in most situations as traffic demand grows over time. Some locations were identified where capacity was constrained and future growth, particularly associated with expansion of the urban area, would result in poor performance during peak periods. Locations were also identified where upgrades might be justified on road safety grounds. It was concluded that as traffic grows, the conflict between the needs of through traffic on major corridors, and local traffic seeking to access these corridors from adjacent areas, would increase.

Four general approaches to road network planning were identified, as potential responses to the analysis of existing conditions and the expected future needs of the study area:

- New road links, including for network connectivity, or bypass routes
- Corridor upgrades (including intersection modifications and road widening), for traffic efficiency and/or road user safety
- Localised works such as intersection upgrades, traffic calming, access restrictions / turn bans or other minor works
- Non-infrastructure approaches, such as demand management and land use planning initiatives.

While it is not the intention of the RITS to identify particular works and projects the above documents provide important commentary which has helped inform the development of this documents.

Road Safety

Road safety is a particular challenge on regional roads in NSW, where one-third of the population live but two-thirds of road deaths occur.¹⁶ Crash data for the 5-year period 2017-2021¹⁷ shows that there were 882 crashes in the LGA. Further analysis shows that:

- there was an average of over 220 crashes per year reported within the LGA, including a total of 27 fatalities and 300 people seriously injured over that time.
- approximately 48% of crashes resulted from the vehicle going off the road (split evenly across vehicles travelling on a straight piece of road or on a curve).
- half of the crashes, occurred on local roads and 33% on State roads
- 37% occurred at intersection locations
- 43% of crashes occurred in 50 km/hr zones
- 4.3 % of crashes involved pedestrians, 3.8% involved a bicycle and 13.7% a motorcycle.
- nearly 80% of crashes occurred in fine weather

Figure 13 shows the distribution of crashes and associated casualties over this 5-year period, and the type of casualties is shown in Figure 14.

¹⁶ [Regional NSW Services and Infrastructure Plan](#) , Transport for NSW

¹⁷ *Safe System Analytics-Council*, Transport for NSW

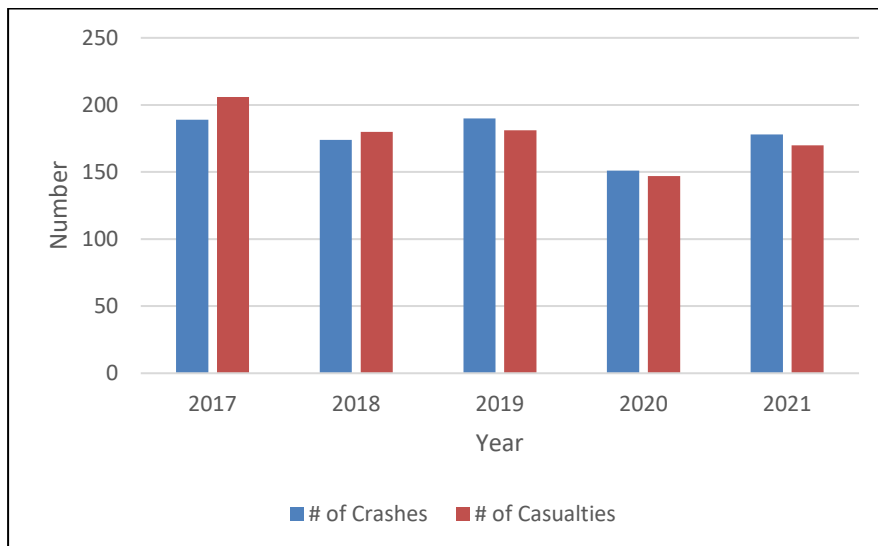


Figure 13: 5-year* Crash Data for Port Macquarie- Hastings LGA*

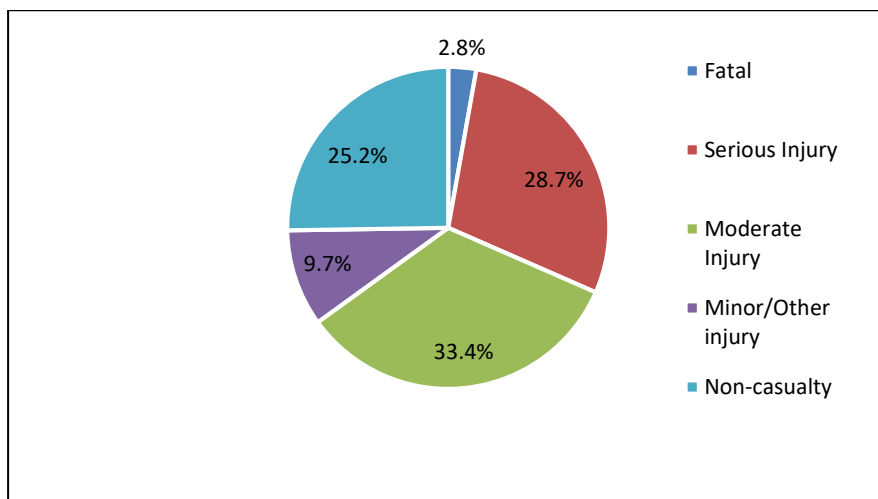


Figure 14: Degree of Casualties involved in Crashes 2017-2021*

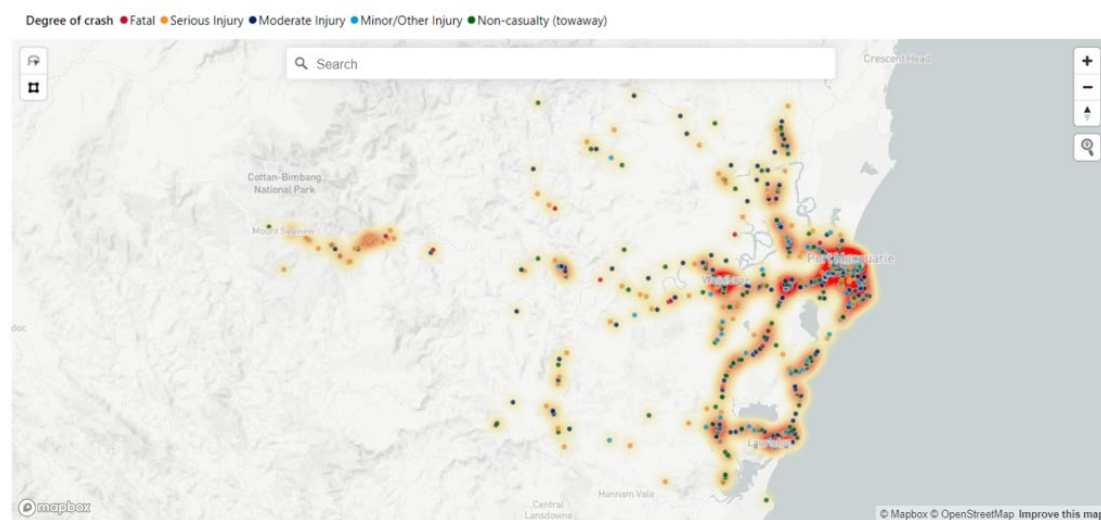


Figure 15: Crash Heat Map: Port Macquarie-Hastings 2017- 2021*

* Includes data from Q1 2022

Parking

Council has a limited influence on the total parking system as it provides and manages only a share of the total parking stock in the town centres. Most of the spaces are in private developments or off-street car parks that are not owned or managed by Council. The private sector is responsible for the provision and/or funding of parking spaces associated with new developments.

A description of Council's roles in relation to parking is set out below¹⁸, as the:

- **Provider:** Council is limited to providing on-street parking space and off-street parking such as foreshore parking and parking at public reserves and Council facilities. including:
- **Manager:** Council, as a road controlling authority under transport legislation, is responsible for managing road space for various purposes, including the provision of parking management at sites across the LGA including:
 - Part of the Port Central Shopping Centre, Port Macquarie
 - Part of the Coles site, Hayward Street, Port Macquarie
 - Short Street carpark, Port Macquarie
 - Part of the Supa-IGA carpark, Wauchope
- **Regulator:** Council uses the Development Control Plan (DCP) 2013 and the development consent process to manage the development of new parking spaces within the LGA that are undertaken as part of new developments to help manage the supply of off-street parking.
- **Facilitator:** Council can help other organisations or individuals to achieve shared goals, without providing direct funding. This role is only used in a limited way for managing parking in our town centres.

Table 7 identifies the current parking demand for 6 key locations across the LGA.

Car Park / Street Section	Supply	Average Occupancy		Peak Occupancy	
1. Port Macquarie East (Town Centre and Fringe East)	3,362	1580	47%	1984	59%
2. Port Macquarie West	1,593	669	42%	813	51%
3. Lake Road Industrial	1,886	792	42%	1000	53%
4. Wauchope	889	338	38%	516	58%
5. North Haven	305	76	25%	107	35%
6. Laurieton	917	220	24%	330	36%

Table 7: Summary of Existing Parking Demand¹⁹

Overall the findings of a future demand forecast undertaken in 2022, found that most centres appear to have adequate parking supply to support forecast future parking demands. The exception to this is finding is the Port Macquarie Town Centre which is forecast to:

- Generate the need for metered parking fees in a small core area from around 2035 to support improved availability through increased turnover, encouraging the use of parking in nearby streets and to discourage vehicle shuffling behaviours (i.e. office-based workers moving cars during the day).
- Have a potential shortfall of 100 to 350 spaces between 2036 and 2042. Accordingly, there is likely a potential need for additional parking supply to be created within the town centre area or alternative solutions such as a 'Park n Ride' service where an outer car park area is utilised and supported by an on-demand or shuttle bus style service to transport people into the centre of Port Macquarie.²⁰

¹⁸ PMHC Draft Parking Policy 2022

¹⁹ PMHC Parking Policy & Action Plan - Technical Report, Bitzios Consulting, September 2022

²⁰ Ibid.

Freight

The movement of freight is a critical component of the transport network and directly contributes to our LGA's wealth, competitiveness and efficiency. In 2021, the Transport, Postal & Warehousing sector contributed 3.6% of annual gross revenue in the LGA. This is up from 3.3% in 2016.²¹ The sector includes road and rail transport, postal and courier services and transport support services (including airport operations and support services). The agricultural and forestry sectors are also important contributors to our economy.

Freight operators and customers need a reliable transport network that enables them to move freight safely, productively and sustainably, ensuring the supply of goods to service local residents and industries and allowing the export of goods produced within the region to regional, national and international markets.

Freight is expected to grow over the period of this Strategy. Key drivers are the movement of construction materials for new infrastructure and residential development, increasing consumer deliveries as online sales increase, and the movement of waste as the population grows. The increase in consumer deliveries is a trend accelerated by COVID-19. This growth will influence the volume and nature of freight on our roads in the future and will have implications for our management of roads and kerbsides (for example to facilitate last mile delivery by automated vehicles) to ensure safety, amenity and access are maintained.

In addition to the exchange of goods to and from the region, major regional and interstate freight networks such as the Pacific Highway and the North Coast Rail Line also transect the region. The LGA currently has a significant supply of undeveloped employment zoned land within close proximity to these Sydney - Brisbane corridors, in locations such as Herons Creek, Thrumster and Sancrox. These areas provide an opportunity for the establishment of industry which would benefit from access to this infrastructure.



²¹ [Port Macquarie - Hastings Economy Profile | Output, Industries | REMPLAN](#)

Challenges and Opportunities

A number of broad issues, challenges and opportunities that will influence Council's strategic direction and actions across its transport planning and delivery are outlined below:

Traffic issues associated with population growth

From 2016 to 2021, the LGA's population increased by 4.8% and continued steady growth is predicted. A key challenge for the LGA will be to celebrate and maintain the lifestyle that makes it such a great place to live and visit identity while accommodating more people, more jobs, and more homes.

Building our way out of congestion is not a sustainable solution. Once built, fixed assets are difficult and costly to alter. Large infrastructure projects also have long lead times and can be disruptive to communities during construction. Growth over the past 10 years has resulted in some inefficient and outdated streets as part of the LGA's road network. Congestion and crowding occur when demand for travel reaches or exceeds capacity, resulting in increased travel times, reduced reliability and a poorer experience for users. Although not bad by comparison with cities such as Sydney, there have been noticeable increases in traffic congestion in parts of the LGA.

As our community continues to grow, congestion on our transport network will become an increasing impacting the productivity and wellbeing of our community. The opportunity exists to balance these demands and move towards an integrated transport system which focuses on people movement, is more dynamic and improves mobility choices and options.

High reliance on cars

The Port Macquarie-Hastings LGA, like many other regional areas of NSW, has traditionally relied on private motor vehicles as the primary source of transportation. This is attributable to factors such as:

- The low density development of our urban settlements, which generally provide inadequate demand for regular public transport.
- The largely segregated nature of residential, retail and commercial land uses, with general lack of 'mixed use' urban areas and connections between different types of land uses.
- Relatively large distances between towns and villages within the LGA and further afield to regional and major cities.
- Investment which traditionally has favoured increased capacity of motor vehicle infrastructure, such as roads and parking, rather than infrastructure for alternative transport options such as walking and cycling.

Whilst private motor vehicles generally provide an efficient 'point to point' form of transportation, they:

- Require substantial upfront and ongoing infrastructure investment (for example roads and car parking).
- Are natural-resource intensive in manufacture, operation and maintenance.
- Provide greater environmental impact in comparison to public and active transport (for example carbon emissions).
- Do not offer the range of social and health benefits related to active transport.
- Do not offer 'place making' and economic opportunities associated with non-vehicular transport.

Many of the trips that contribute to the traffic congestion highlighted above are short trips that could feasibly be undertaken by walking or riding if suitable active transport options are available or by public transport. The ability to reduce the mode share for car trips is both related to managing demand and modifying travel behaviour. Reducing car use reliance not only contributes to an overall reduction in carbon emissions but also enhances healthier community lifestyles and promotes equity across the LGA. Whilst it is important to manage car ownership to ensure that our LGA is as sustainable, liveable and equitable as it can be, it is important to not disconnect people from one another and from the services they need by taking away their only means of access.

Public health & safety

Changes in travel patterns over time, leading to a heavy reliance on cars for the majority of our trips, has contributed to sedentary lifestyles and associated health impacts. Across the MNC Local Health District, almost 65% of adults were overweight or obese in 2019 (up from less than 45% in 2002).²² Negative health impacts associated with high levels of obesity in Australia's population have contributed to efforts by all levels of government to encourage active transport. Initiatives which seek to increase active transport are potential contenders for partnership funding. Across the LGA, walking and cycling is not adequately supported by safe path networks and bike lanes around and between our centres and facilities.

Road safety is another key issue. Over the past 5 years, there were over 275 crashes on the LGA's roads which resulted in a fatality or serious injury. It is important that we understand the causes and minimise the risk and severity of collisions, so that every road user can travel in safety, whether travelling by foot, bicycle, public transport or motor vehicle.

Environmental impacts of transport

The transport sector is a significant contributor to greenhouse gases and other emissions that are detrimental to air quality. In 2017, the transport sector was the second largest contributor to greenhouse gas emissions in NSW.²³ In the Port Macquarie-Hastings LGA, transport accounted for 20% of the LGA's total emissions in 2020-21.

Motor vehicles are also a major source of common air pollutants, such as hydrocarbons, volatile organic compounds and nitrogen oxides. To reach net zero emissions by 2050, it is acknowledged the transport sector will need to play a key role in the transition towards a low emissions future.

Economic resilience

Many of our businesses and centres have faced and are continuing to facing economic challenges due the negative impacts of external events. Creating people-orientated, vibrant town centres and employment precincts will bolster businesses in the LGA, helping locals and visitors support commerce in the region, attract investment and build resilience to potential future events. Fuel-cost savings from the use of active and non-fossil fuel powered transport options can also provide economic benefits for community members.

Equity of access

Mobility is important to everyone in the LGA but currently there are limited options to access everyday services by convenient, safe transport if you are young, elderly, living with a disability, or on a low income. Port Macquarie-Hastings has a higher than average proportion of people who need assistance with core activities (8.7% compared with 6.1% for NSW)²⁴ and the proportion of people aged over 65 in the LGA is forecast to reach approximately 35% by 2041.²⁵ These projections support moves to increase transport choice and improve equity of access in public transport and our pedestrian networks in particular.

Adaptation and Resilience

In the years to come, natural hazards, such as extreme rainfall events, heatwaves, bushfires and extended periods of drought are expected to increase. We need to work with all levels of government to ensure our transport network and our communities are resilient to these changes.

Changing Focus in Transport Planning

Transport planning is increasingly shifting to focus on the concept of movement of people and goods, as opposed to movement of vehicles and the integration of creating great places using such models as the "Movement & Place" framework. This has implications for how limited road space can be used most effectively. Council will likely face opposition and some difficult decisions as the status quo is challenged.

²² [HealthStats NSW Overweight or obesity in adults by Local Health District, trends](#)

²³ [Net Zero Plan Stage 1: 2020-2030, NSW Government, March 2020](#)

²⁴ [2021 Port Macquarie-Hastings, Census Community Profiles | Australian Bureau of Statistics \(abs.gov.au\)](#)

²⁵ [NSW Population Projections | Planning Portal - Department of Planning and Environment](#)

Multi-agency Involvement

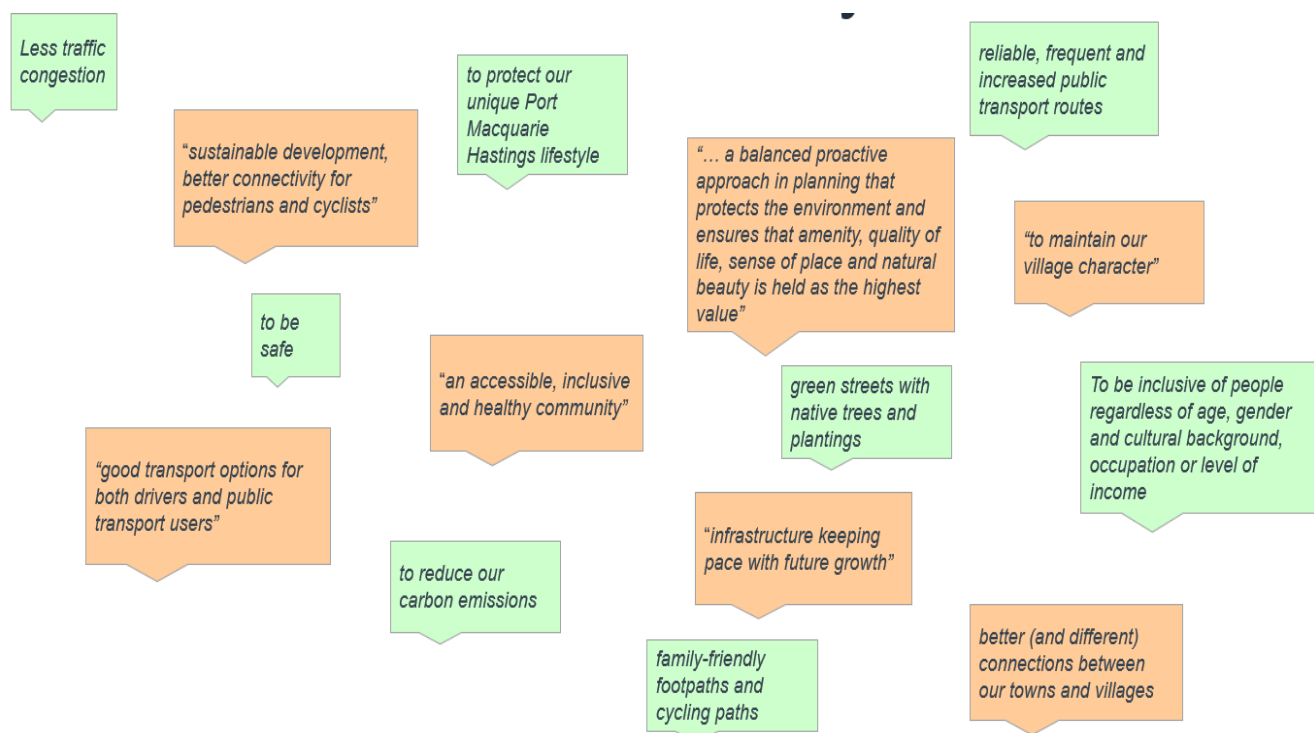
All levels of government contribute to transport outcomes in our LGA, with significant areas of overlap. This can be particularly challenging for coordination of action and the timing of projects, incentives and disincentives to encourage travel behaviour change. It may also provide opportunities for partnership and funding from the Australian and NSW Governments, as they look to implement policy objectives at a local level.

Financial Sustainability

In common with many councils across Australia, PMHC is faced with increasing costs of service provision, increasing expectations from the community about service levels and maintenance of a large asset base. For transport networks, maintenance expenditure will increase with ageing infrastructure and expansion of road and path networks. Council will continue to rely heavily on funding from the Australian and NSW Governments for maintenance of its road network.

Addressing the needs of an ageing population, improving equity of access and making walking and cycling and other mobility options more attractive by providing well-maintained connected networks will be ongoing challenges. With limited budgets, Council must focus on those areas of transport for which it has direct responsibility and which deliver the greatest benefit to the community from a quadruple-bottom line perspective.

What we heard from our community ²⁶



²⁶ Extracts from community engagement received to inform Council's Local Strategic Planning Statement and Community Strategic Plan

Part 3 - Our Transport Vision and how we will achieve it

The transport vision and objectives guide the development of the transport network and services for Port Macquarie-Hastings, and ultimately:

- Align with existing strategies and plans including the Port Macquarie-Hastings Community Strategic Plan Imagine2050;
- Align with the outcomes from the NSW Government's Future Transport strategy and planning priorities from Council's Local Strategic Planning Statement;
- Address the specific challenges and opportunities for the LGA; and

Vision

It is important that investments in our integrated transport system are future-focused and adaptable to an ever-changing world. Council's vision for our transport system (as described below) sets a framework for this desired state.

Our Integrated Transport Vision

We have a well-connected, safe, accessible and sustainable transport system that helps create great places, positively contributes to the health and wellbeing of our community and a strong economy while protecting our natural environment and unique character of our towns and villages.

To achieve this vision requires us to look differently at travel. We need to focus on the movement of people and goods, rather than the movement of vehicles and maximise **accessibility** (the ability to undertake a range of daily activities with a minimum of travel), rather than **mobility** (the ability to move freely).

This raises the challenge not only to make better transport and land use planning decisions, but also to better integrate these decisions for sustainable outcomes.

Desired Outcomes

The desired outcomes and broad community benefits associated with a more integrated and sustainable transport system to be delivered by the RITS are outlined further below:

Easier living for all as residents will be able to meet more of their needs by accessing goods and services locally and travel efficiently and seamlessly to where they work, live and play.

Improved health and wellbeing outcomes from more people achieving their required daily exercise through walking and cycling, for both recreational and travel-related purposes and improved mental health through increased social connectivity.

Safer travel that protects and improves the wellbeing of the broader community, minimises disruptions to the network caused by incidents and protects those people who are operating and maintaining the network.

Increased prosperity for businesses and individuals through the provision of a transport network that supports the efficient, safe and sustainable movement of freight, visitors and people to support economic wellbeing for the LGA.

A cleaner, greener environment by minimising transport-related emissions, considering environmental sustainability in infrastructure-related procurement and minimising the impacts on our natural resources, biodiversity and heritage.

Improved resilience by providing a transport network that is well-maintained and resilient to major disruptions associated with natural disasters, planned and unplanned events.

Value for our community by ensuring that investments made in our transport infrastructure and services contribute to our transport vision and provide the best possible outcome for our community considering economic, environmental and social perspectives.

Priorities

To achieve our transport system vision and desired outcomes, Council will be guided by the following priorities:

- **Plan for and deliver a safe, well-connected and efficient transport network for all users**
across all transport modes to ensure the safe movement of people and goods around, through and beyond the LGA and to improve connectivity to jobs, health, education, key community facilities and visitor attractions.
- **Co-ordinate transport, infrastructure and land use planning**
to build strategic centres and create great places that support our existing communities and shape future population growth.
- **Expand and improve the active transport network**
with a focus on walking and cycling including integration into the wider transport network and our place planning.
- **Plan and advocate for convenient, connected and accessible public transport**
by working collaboratively with Transport for NSW to improve public transport access to, within and from our LGA.
- **Build resilience into the transport network**
by anticipating and planning for potential disruptions and ensuring required levels of maintenance/renewal are carried out.
- **Influence travel behaviour to promote sustainable choices**
by working with the community and key stakeholders to raise awareness other benefits of sustainable travel and actively promote and support its use within the community.
- **Collaborate with key stakeholders to deliver innovative, sustainable transport solutions**
that balance the community's immediate and long-term needs using a strategic assessment approach to investment

Plan for and deliver a safe, well-connected and efficient transport network for all users

across all transport modes to ensure the safe movement of people and goods around, through and beyond the LGA and to improve connectivity to jobs, health, education, key community facilities and visitor attractions.

Transport Safety

Action on transport safety is the responsibility of all spheres of government. Governments can make roads safer through engineering, enforcement and education. The Australian government allocates infrastructure resources and regulates safety standards for new vehicles. The State government manages licensing, registration, enforcement, and education programs in addition to delivering safer road infrastructure. At the State level, transport safety forms part of the NSW Premier's Priorities relating to Safer Communities. The NSW Government has set targets to new targets to halve deaths and reduce serious injuries by 30% on NSW roads by 2030 and an aspirational target of zero fatalities and serious injuries on NSW roads by 2050 by focusing on stronger local government action, engagement and education programs and using technology in the fight to end road trauma.²⁷

Road safety is also a top transport planning priority for Council as we have a particular role to play as road managers, employers and leaders in the community. As road managers, councils build, maintain and regulate roads and have a responsibility to provide a safe operating environment for road users via local area traffic management, and education and awareness programs. Given that more than 50% of crashes in the LGA over the past 5 years²⁸ occurred on local roads controlled by Council, Council has a clear role in taking action to reduce road trauma.

"To save lives and prevent serious injuries, we must do two things: Recognise that everyone has a right to get home safe, every day, no exceptions and then, let's commit to actively look after every person on the road ahead, as if they were our loved ones."

*Peter Frazer
President*

Safer Australian Roads and Highways Group

Safe Systems Approach

NSW like many Australian jurisdictions has adopted a safe systems approach²⁹ which looks at 4 key areas that contribute to road safety - see Figure 16. This approach recognises that preventing road crashes is a priority but because people may do the wrong thing or make mistakes, crashes do happen. However, this shouldn't cost anyone their life.

The following guiding principles underpin this Safe Systems approach:

- **People make mistakes** – no matter how well trained, drivers and road users make mistakes. We aim for a road system which accommodates this where possible and feasible.
- **People are vulnerable** – the human body can only withstand so much trauma.
- **A 'forgiving' road transport system** – the roads on which we travel, the vehicles we travel in and the speeds we travel at need to be forgiving of human error.

²⁷ [2026 Road Safety Action Plan | Towards Zero \(nsw.gov.au\)](#)

²⁸ Safe System Analytics-Council, Transport for NSW

²⁹ [2026 Road Safety Action Plan | Towards Zero \(nsw.gov.au\)](#)

- **Shared responsibility** – all road users and organisations and professionals have a responsibility to design, manage and encourage safe road use. Federal, State and local government need to work together towards achieve zero road trauma.

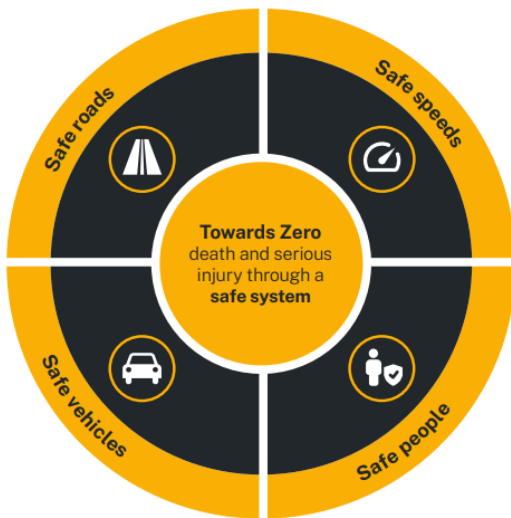


Figure 16: The 4 pillars of the Safe Systems approach ³⁰

As well as ensuring our road network supports a safe environment for all users the Safe Systems approach supports increased use of public transport and active transport modes such as walking and cycling - see pervious discussion.

The easiest way to understand the difference between the conventional approach to road safety and the safe systems approach is through this Austroads diagram - see Figure 17.

	Conventional	Safe System
What is the problem?	Accidents	Fatalities and Serious Injuries
What causes the problem?	Mainly poor road user performance Speeding, drink driving, inattention, deliberate risk taking	System failures
Who is ultimately responsible?	Individual road users	System designers and operators
What is the major planning approach?	Incremental approach to reduce the problem with an associated residual crash problem	A systemic approach to build a safe road system and minimise the harm
What is the appropriate goal?	Optimum number of fatalities and serious injuries based on competing objectives	Towards the virtual elimination of death and serious injuries
What is the trade-off?	A balance between mobility and safety	Maximising safe mobility
How is the effort coordinated?	Incremental gain within individual pillars (roads / speeds / vehicles / people)	Optimise solutions across pillars (roads / speeds / vehicles / people) – pillars compensate for each other where performance is poor
What are the cultural manifestations?	Legal liability avoidance and risk aversion	Risk assessment, innovation, trials and demonstrations
Context of tools in use	Bias towards pre-existing crash history, understanding crash causes and likelihood, optimising the network for motor vehicles	Risk analysis based on network design attributes supplemented by crash data, understanding crash consequence, optimising the network for all road users and human frailty

Figure 17: What is different about the safe systems approach?³¹

³⁰ Ibid.

³¹ Austroads Research Report AP-R560-18 Towards Safe System Infrastructure: A compendium of Current Knowledge, 2018

Perceptions of Safety

Transport safety is not only about reducing and preventing injury, it is also about creating an environment where people feel they can travel safely without fear, risk of harm or injury. Fear of crime/harm is now widely recognised as a barrier to public transport use. This fear is often not a reflection of actual risk and is influenced by a range of factors, including gender, age, ethnicity and socioeconomic status.

Council recognises the importance of creating a safe transport network and increasing perceived safety (particularly for shared path users and public transport users.)

Road Safety Funding

Council receives funding from the Commonwealth Government through Financial Assistance Grants (untied local roads component - approximately \$3.5 million for 2022/23)³², the 'Roads to Recovery' program (approximately \$1.8 million for 2022-23)³³, as well as competitive grant programs to address black spots, bridges renewal and heavy vehicle safety and productivity.

While not all of these funding programs are tied to specific road safety projects, safety is compromised if roads are not well-maintained or fit-for-purpose. With an expanding transport asset base and limited funds, Council will continue to have funding challenges to ensure that the safety of our road network is not compromised.

Council will:

DIRECTION	DESCRIPTION
Integrate road safety assessment, safety features and requirements into broader transport and land use planning and delivery to ensure early and ongoing assessment and management of road safety risks.	By embedding the Safe Systems approach to road safety as appropriate for Council's areas of responsibility for road safety.
Proactively address road safety deficiencies and high-risk areas of the LGA's road network and advocate for appropriate Commonwealth and State Government funding to support implementation.	By identifying where investments in road safety will have the greatest impact and continuing to implement infrastructure improvement strategies that include the latest safety treatments in all road and roadside upgrades.
Further strengthen road safety information and campaigns to educate all road user groups, including pedestrians and bicycle riders, about their road safety responsibilities, and how to better manage risks that can lead to casualty crashes in the LGA.	Using tools and resources created by Transport for NSW, Council can build local capability and help facilitate behaviour change by road users through road safety education programs and managing perceived as well as real safety issues.
As a significant employer and community leader take the opportunity to model good driver behaviour by staff and contractors and ensure high standards of vehicle safety.	By considering road safety in relevant policies, leadership initiatives, workplace safety practices and purchasing decisions.

³² [NSW State Summary 2022-23 \(infrastructure.gov.au\)](#)

³³ [2022-23-r2r-allocations.pdf \(infrastructure.gov.au\)](#)

Well connected - The Hub and Spoke Approach

As described previously within this RITS, urban areas of the LGA include the regional city of Port Macquarie, townships such as Wauchope, Lake Cathie, Bonny Hills and Camden Haven and villages such as Long Flat, Comboyne, Beechwood, and Telegraph Point. For the purpose of our road network, these areas are classified as 'hubs'. These hubs contain concentrations of residents, businesses and facilities that service the surrounding community.

People and goods move between these hubs to access things like work, education, goods and services. This movement is what is described as a 'spoke'.

Larger urban areas, such as Port Macquarie and Camden Haven, contain their own hubs and spokes. An example is the relationship between the Central Business District, Settlement City, Lake Innes and Thrumster in Port Macquarie. Each of these areas contain higher order services and facilities which generate movement between these areas within defined corridors.

Principles of the 'hub and spoke' approach include connectivity, flexibility and efficiency, access and equity, timeliness, provision of accurate information, and safety. An example of the application of this principle to the Port Macquarie LGA is illustrated in Figure 18.

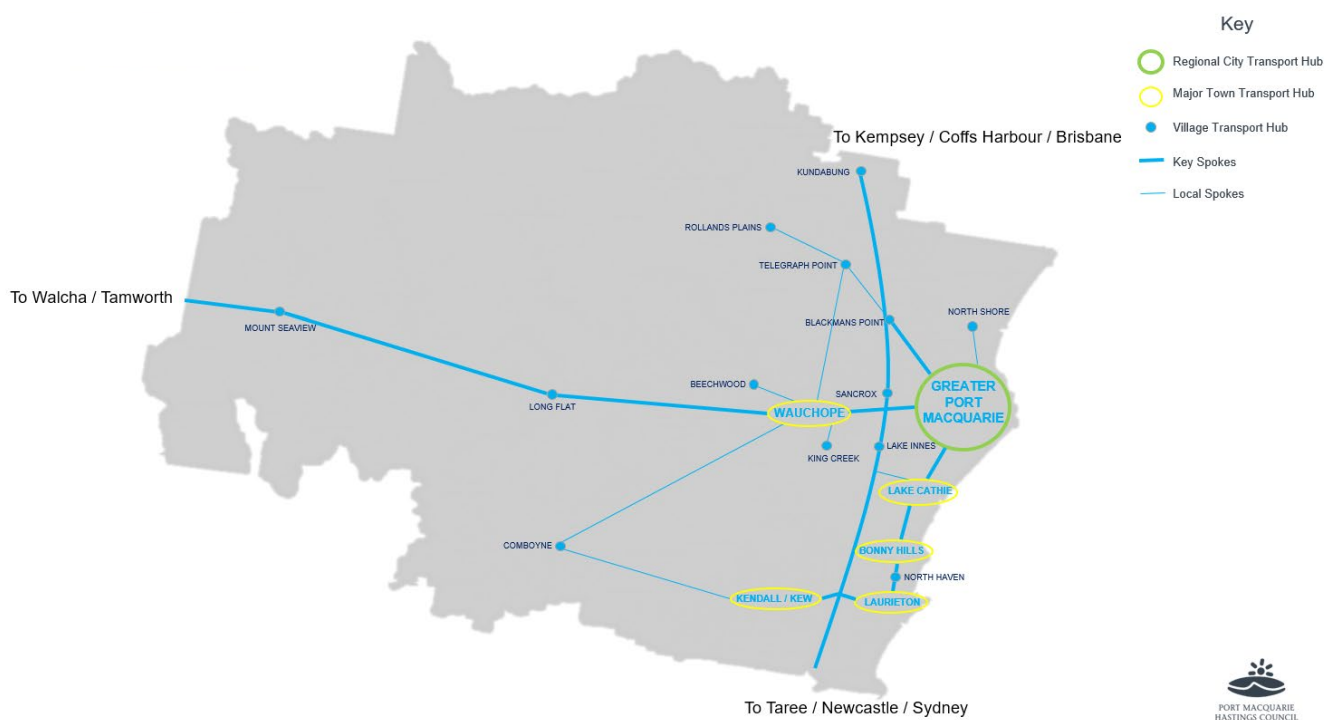


Figure 18: Hub and Spoke Map for the Port Macquarie-Hastings LGA

The 'hub and spoke' network within the LGA will complement the State Government's Regional NSW hub and spoke network model - see Figure 19. This reflects the role that regional cities and centres such as Port Macquarie have to play as hubs for employment and services such as retail, health, education and cultural activities for their surrounding and neighbouring catchment areas.

Previous regional planning has focussed on the connections of regional cities within a region or to Sydney. Whilst these will remain important, safe and efficient links to regional cities in adjacent regions (such as between Port Macquarie and Coffs Harbour) will also be prioritised.

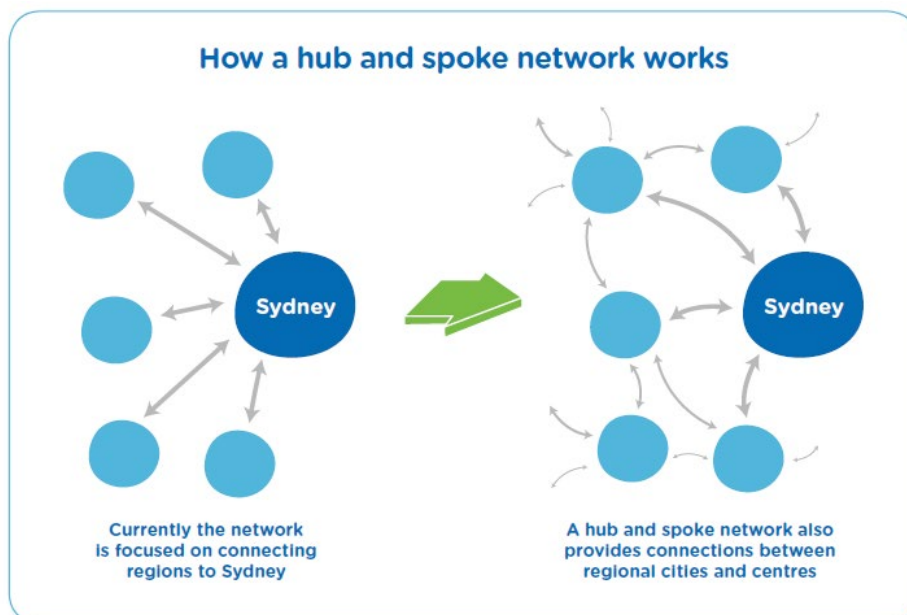


Figure 19: NSW Regional Hub and Spoke Network ³⁴

Council will:

DIRECTION	DESCRIPTION
Improve transport connections between key hubs and centres within and beyond our LGA.	By utilising the <i>Hub and Spoke</i> approach to plan the efficient movement of people and goods between centres and collaborate with NSW Government on improvements to key road corridors and provision of mass transit options.

An efficient transport network

Roads form a fundamental part of the transport network and serve a wide range of purposes for residents, workers and visitors. They facilitate vehicle movements for drivers travelling to and from different land uses within and beyond the LGA. This extends to buses, delivery vehicles to businesses and residences and people travelling to work, schools, the shops, sports and recreation facilities and the myriad of other reasons people need to drive or be driven around.

Planning for the road network requires consideration of all the users and their needs and an understanding of when vehicle trips should be provided for. This is particularly important in built-up areas in Port Macquarie, where there is currently visible road network congestion in peaks times of the day and further development will occur. It is critical to identify opportunities for people to use other modes or choose to travel at more appropriate times to improve efficiencies and keep traffic demand within the limit of the road network.

These changes would reduce the negative impacts of traffic congestion, including pollution, noise, increased trip times and increased parking demand in our centres. Further enhancements to how we plan our transport infrastructure will also enhance the efficiency of road travel for people and freight across the LGA and help to manage the significant costs of infrastructure delivery and maintenance - see Figure 20.

³⁴ Regional NSW Services and Infrastructure Plan

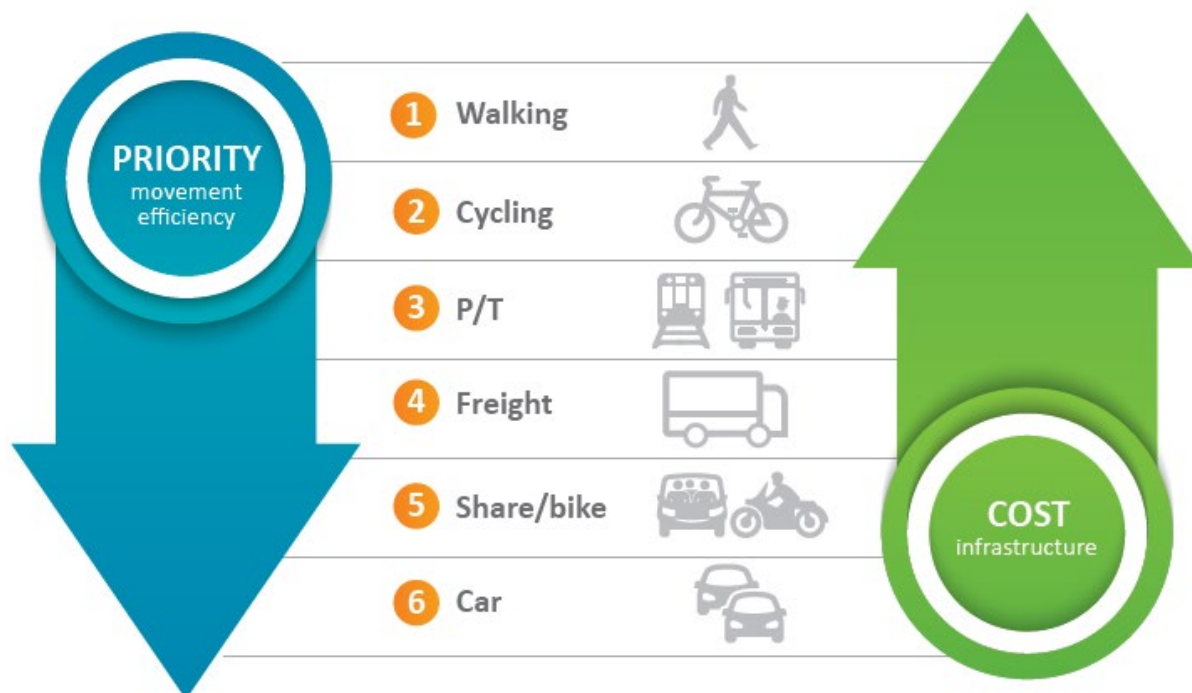


Figure 20: The Road User Hierarchy³⁵ - NB Cycling may include the use of micro mobility options (e.g. e-scooters)

Council will:

DIRECTION	DESCRIPTION
Improve the movement efficiency of existing and new transport links	By considering the road user hierarchy in the early planning stages of transport project design and delivery, Council will be able to optimise the mix of transport modes

Managing Traffic Congestion

Traffic on our roads is a sign of mobility and of a dynamic economy. However, excessive congestion has a range of undesirable consequences including increased costs to the community and businesses through longer, less predictable travel times, lost productivity, additional running costs of vehicles, and increased environmental pollution.

Traffic congestion is a product of both supply- and demand-side factors, some of which include:

- Road infrastructure design and operation
- The growing demand for travel
- Inadequate alternatives to the use of the private car, especially in newer suburbs
- Concentrated periods of travel to/from work and school

Traditional approaches to dealing with traffic congestion have focused on increasing capacity -- an expensive supply side initiative. While the immediate benefits from this type of initiative are clear, with limited finances, coupled with the projected growth for the LGA, this approach is unlikely to be financially sustainable.

Addressing the demand-side causes of congestion is essential for effectively managing it. Demand-side management initiatives normally aim to reduce the demand for road use during peak periods, either by

³⁵ Monash Integrated Transport Strategy 2017 - City of Monash

encouraging motorists to use their cars at non-congested times or to use other, more sustainable modes of travel.

This is normally achieved by making the costs of car use during congested periods more transparent to road users, and making the choice of alternative and more sustainable forms of transport more attractive to them.

Common demand management initiatives for traffic congestion include:³⁶

- **road space management**—strategies aimed at increasing the efficiency of roads through such initiatives as intelligent transport systems, freeway management systems, transit lanes, bus lanes, bicycle lanes, and the use of information technology to better manage freeway access and operation.
- **road pricing—an electronic tolling system on freeways and roads that can adjust charges to reflect the level of congestion, time of day or type of vehicle, so that the costs of congestion are borne by those responsible for it**
- **parking policies and pricing**—designed to ensure that car commuters pay a fairer share of the costs of congestion they cause, and to influence the adoption of more sustainable travel practices
- **travel planning**—initiatives to help commuters consider and use more sustainable alternatives to car use for their intended travel plans rather than driving for all purposes and destinations
- **publicity and public education campaigns**—aimed at increasing community awareness and up-take of related initiatives, including the use of more sustainable travel patterns and modes
- **ridesharing and carpooling**—aimed at reducing single-occupancy car use through initiatives that encourage the sharing of journeys to common or nearby destinations.

Demand management can mitigate the need to bring forward expensive investments in road infrastructure and free up limited resources for use in higher priority areas, such as public transport, where an even greater impact on congestion relief can be achieved.

While some of these initiatives identified above may be more suited to larger metropolitan settings than Port Macquarie-Hastings, there is clear need for Council to consider a range of demand management approaches if it is to manage the growing traffic congestion issue in a financially sustainable way.

Council will:

DIRECTION	DESCRIPTION
Assess the feasibility and appropriateness of demand-side initiatives to manage traffic congestion in the LGA	Coordinated and focused strategies that effectively address the main demand-side drivers of congestion will be increasingly critical for assuring that future infrastructure investments relating to congestion are fiscally responsible and soundly based.

A transport network for all

Integrated planning for safe and accessible travel by walking, private vehicle, catching public or flexible transport, and using assisted transport services, will be essential to support older people, people living with disability and others with mobility constraints.

People with a range of physical and psychosocial impairments can face difficulties accessing transport. In particular, older Australians can face a range of challenges when using public transport. Port Macquarie-Hastings has a higher number of older persons than the NSW average and forecasts suggest that this number is likely to rise significantly.

³⁶ *Managing Traffic Congestion Audit - Victorian Government 2013*

Mobility issues affect everyone in a different way. Many people with a disability may use different forms of transport without facing barriers related to their disability. On the other hand, people who do not identify as having a disability may also have mobility requirements at various stages in their lives, for example children learning to cycle on the road, parents with prams, people with temporary injuries and people using mobility scooters and other mobility aids.

Accessible transport also needs to provide for whole of journey accessibility, including seamless transfers between the modes that form a continuous journey. For example, a typical journey might involve looking up timetable information, travelling to a bus stop, waiting, getting on and off the bus, walking to a destination or taking another transport service. Such a journey is only fully accessible if journey planning information and the connection and integration between each part of the journey are easy and safe.³⁷

Accessibility can be achieved through the adoption of universal design principles that remove physical barriers to access and create buildings, products and environments that are usable by people of all abilities. Universal design requires that transport services also provide barrier-free access for people who have vision, hearing or cognitive impairments.³⁸

Consideration of how our transport and street environments are designed and maintained to meet these needs, is important. Any measures put in place to reduce the existence of current physical barriers to access and movement for these users will also benefit the wider community.

Improvements in our active transport and public transport networks (discussed elsewhere in this RITS) will also help to improve access for people on low/no incomes and those who do not own a car.



Wayfinding using tactile paving

Council will:

DIRECTION	DESCRIPTION
Ensure affordable, accessible and safe transport options are available to all users, regardless of age, ability and income	By working with community stakeholders and government agencies to address social and economic barriers to transport choice, such as travel cost, time and availability of fully accessible services and embedding universal design principles in transport infrastructure and place planning projects

³⁷ Future Transport Strategy

³⁸ Transport for NSW Disability Inclusion Action Plan

Moving Freight

The movement of freight, particularly along the 'last mile' into and within our key centres, can have negative impacts on the liveability of these places particularly where there is competition for both road and kerbside space. The NSW Government has created *The Freight and Servicing Urban Last Mile Toolkit*³⁹ to assist urban planners, developers and government to give greater consideration to freight and servicing demands for new buildings and precincts as part of the planning process. It also promotes better management of freight and servicing for existing buildings.

Conversely, as the LGA's population grows, and as discussed within this RITS, more space will be allocated to pedestrian spaces, public transport infrastructure and active transport corridors such as cycleways. While contributing to creating more liveable and dynamic centres, these initiatives can have a direct impact on accessibility and efficiency for the delivery of goods and services which are essential support functions for our residents and businesses.

With more last-mile deliveries, as well as a growing traditional container and bulk freight task, we will need an efficient, 'smart' freight network. More effective freight corridor planning, and support for intelligent transport systems (ITS), cooperative-ITS technology, connected and automated vehicles (CAVs), and electric vehicles, will be increasingly important to freight customers and essential to supporting economic growth.⁴⁰

It is important that:

- freight corridors are identified and protected from inappropriate development which could reduce the efficiency of the network,
- consideration is given to the capacity of the road network to accommodate delivery vehicles in urban settings
- freight depots and distribution centres are appropriately located within easy access to main roads and motorways
- serviceability (or how a building, precinct or place receives goods) is incorporated into building and precinct designs.
- Council is prepared for emerging approaches to the freight task including last mile delivery and understands their implications for our transport network

Council will:

DIRECTION	DESCRIPTION
Ensure our road network supports the efficient movement of freight to from and within our region	By incorporating the movement of freight into and around our region in our land use and transport planning to ensure successful place outcomes and to minimise impacts to the freight network.
Ensure existing and future key centres and precincts are supported with appropriate first and last mile freight solutions	Tensions between the growth in the freight task, population growth, and the desire to create more liveable spaces will need to be managed to ensure that an appropriate balance is reached.

³⁹ [My Sydney \(nsw.gov.au\)](https://my.sydney.nsw.gov.au/)

⁴⁰ Future Transport Strategy

Co-ordinate transport, infrastructure and land use planning

to build strategic centres and create great places that support our existing communities and shape future population growth.

Land Use and Transport

At all levels of government, efforts are being made to direct growth and change in our cities and towns in ways that are economically, socially and environmentally sustainable. An area of focus is transport and travel patterns.

At a local level, the way we plan for land use including the density and type of development in a particular area, influences how much and how people travel, the cost effectiveness of providing transport services, and the amenity and safety of our environment. For example, within higher density mixed use areas people can more easily access goods and services through walking or cycling. This facilitates higher levels of active transport. Higher density areas can also generate sufficient demand to support reliable and frequent public transport options and on demand services.

In contrast, in lower density communities, people often have to travel further for goods and services. A lower population may also mean that the establishment of frequent on demand and public transport services is not feasible, due to lower demand for the service. This lower density scenario is more likely to favour the use of private motor vehicles, which allow people to travel from point-to-point over larger distances, particularly where few other mobility options are available.

A reciprocal relationship exists, in that transport networks can shape land use. Integration of land use and transport planning is therefore critical to achieving more sustainable outcomes. Facilitation of sustainable transport in new developments can be supported through guidelines for street layout, active street frontages, provision of appropriate end of trip facilities and preparation of travel plans, for example.

Examples of urban form which do not facilitate sustainable transport include:

- poorly connected street networks
- vast areas of single use development
- low density development close to major centres and employment nodes
- major developments located in areas only accessible by cars.

Reducing the number of trips

Achieving sustainability in transport requires focus on:

- the movement of people and goods, rather than the movement of vehicles and
- maximising **accessibility** (the ability to undertake a range of daily activities with a minimum of travel), rather than **mobility** (the ability to move freely).⁴¹

Council influences transport outcomes through its land use planning and development control functions. The location of trip attractors such as schools, shops and employment, how they are placed in relation to where people live, and their density and mix, affects the number and length of day to day trips. Compact, connected urban environments, integrating a mix of land uses such as residential, open space and neighbourhood commercial outlets, create shorter distances between destinations. This is closely linked with the 20-minute city approach which many cities around the world are adopting.

The existing low-density character of much of the LGA means it is challenging to provide cost effective public transport with sufficient frequencies and coverage to be a viable alternative to driving for most people, thus the rate of car use is very high in the LGA. Bus Association Victoria Inc.⁴² suggests that densities of about 35 to 40 people (jobs and residents) per hectare are likely to support a public transport mode share of at least 10%, or

⁴¹ *Improving Transport Choice (NSW Department of Urban Affairs and Planning, 2001)*

⁴² *Monash Integrated Transport Strategy 2017 - City of Monash*

higher. In addition, if jobs, shops, services and other destinations are too far apart, walking and cycling rates will also be lower.

The designation of appropriate areas for higher density development, taking pressure off other well-established areas less likely to accommodate greater development intensity, to provide a well-planned series of well-connected centres (see discussion below) may prove more feasible than seeking a uniform increase in density across the LGA.

Council will:

DIRECTION	DESCRIPTION
Co-locate and concentrate compatible mixed-use development in new and existing centres to reduce trip lengths and the need for travel to access goods, services and employment	By increasing housing density, employment and visitation in accessible locations that offer greatest access to public transport and active transport infrastructure we can create connected communities and facilitate the use of sustainable transport modes.
Ensure community facilities and open spaces can be safely and conveniently accessed by sustainable transport modes.	The provision of a range of transport options for community facilities can play a crucial role in creating more connected communities and promoting sustainable travel behaviour.

Movement and Place

Communities are complex, multi-layered and diverse environments consisting of a collection of “places.” Places occur at a range of geographic scales, they can be as large as a whole city or region, through to a small precinct. Our roads and streets are also public spaces and serve many roles and functions to the community. They can move goods and people using a variety of modes and provide spaces for people to enjoy the environment, contribute to the economy and engage with the other community members.

Transport solutions need to consider how they best serve communities to support successful places and must therefore consider how different elements of the transport network perform different functions based on:

- The movement of people and goods
- Places for people and their activities

Transport solutions need to consider:

- The physical form and activity of a place, as well as how communities value and identify with a place
- Mobility through, within, and to and from a place
- Applying variable compliance standards where movement and place functions change at certain times of the day or days of the week to ensure safety and improve amenity, activity and productivity.

Balancing the need to move people and goods with the need for vibrant, liveable communities can be difficult in a car-dominated LGA like Port Macquarie-Hastings where there is a general expectation that travel by private vehicle is available for most trips and is convenient and expedient.

‘Movement and place’ refers to the liveability of our communities or ‘places’ and the ability for connection of people and goods between places. Movement and place is aimed at achieving efficient investment, by thinking about the built environment holistically including the social, environmental, and economic context.⁴³ Movement and place principles for regional NSW settlements as detailed within the Regional NSW Services and Infrastructure Plan are as follows:

- Separation of through movement (Movement Corridors) and reinforced place based activity (Places for People),

⁴³ [The Practitioner’s Guide to Movement and Place](#)

- Time of day and day of week management of customer and business needs that consider both movement and amenity,
- Prioritising access to centres for freight, walking, cycling, public transport and managing parking demand,
- Focused investment on making more Places for People linked to key transport nodes through effective land use and transport planning; and
- Integrating safety features with road function, accounting for needs of different road users in each environment.

Future Transport adopts a Movement and Place Framework to guide decision-making around how transport planning aligns with the planning for different places and ensure that space is used efficiently to support the needs of all users. Within this framework, four main categories of road type are defined with varying levels of movement and place, as shown in Figure 21 and described below. The Movement and Place framework should be used when considering changes to the movement function of roads and place functions adjacent to those roads.



Figure 21: Street classification under the Movement and Place Framework⁴⁴

In the framework, streets are classified as:

1. **Civic spaces** – are pedestrian-oriented streets with significant meaning and importance to the community.
2. **Local streets** – connect residents to their homes, schools, recreational areas and local centres. They are generally quieter neighbourhood streets suitable for walking and cycling with minimal through traffic movements. These are the majority of streets in the transport network with less intense activity levels but significant meaning for locals.
3. **Main streets** – have both significant movement and place functions, which can be challenging to balance.
4. **Main roads** – provide essential routes for movement of people and freight. These are not limited to streets that carry lots of cars. They include major public transport routes and motorways.

⁴⁴ [Classifying street environments \(nsw.gov.au\)](https://www.nsw.gov.au/classifying-street-environments)

Main Streets and Roads

Main streets and main roads form the key roads in the road network. Each key road is comprised of segments of varying movement and place values, depending on the associated land uses and road functions, which is a common challenge for integrated transport planning. General key road opportunities for improvement for the LGA are to:

- Investigate safety improvements locations which have crash clusters;
- Make improvements to intersections to minimise pinch points;
- Consider the recommendations of the active and public transport network when implementing road upgrades.
- Public realm improvements/ enhanced urban design within centres to improve Place function; see following pages.

Local streets

Local streets connect residents to their homes, schools, recreational areas and local centres. They are generally quieter neighbourhood streets suitable for walking and cycling with minimal through traffic movements. The proposed future modal hierarchy for local streets in the Port Macquarie-Hastings LGA prioritises the movement of people over the movement of private vehicles, in a safe, efficient and accessible way - refer Figure 22.

This level of prioritisation may not be applicable in all scenarios, but should be considered in future street and development planning. Local streets are suitable for mixed on road cycling as the lower vehicle speeds and volumes are less dangerous. Freight activities are limited to deliveries and services on local streets.

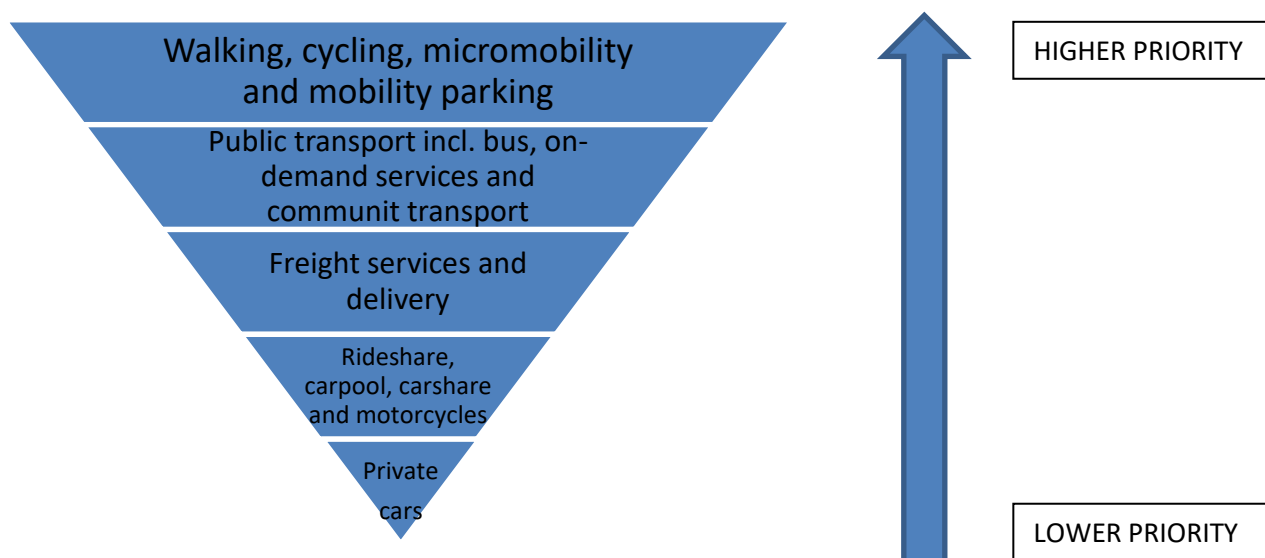


Figure 22: Proposed modal hierarchy in local streets

Space Management

How people move (whether walking, cycling, taking public transport, driving, or sitting and interacting in street-side locations), dramatically changes the productivity of street space - see Figure 23. As the number of people in our LGA grows, the challenge will be to cater to these different users while encouraging activities which are more spatially efficient. While different streets will have different demands for movement and place-making, they should be designed with consideration to safety, accessibility, character, amenity, greenery and desirability. Figure 23 illustrates how different uses of the same street space can be utilised and benefit a greater/lesser number of people.

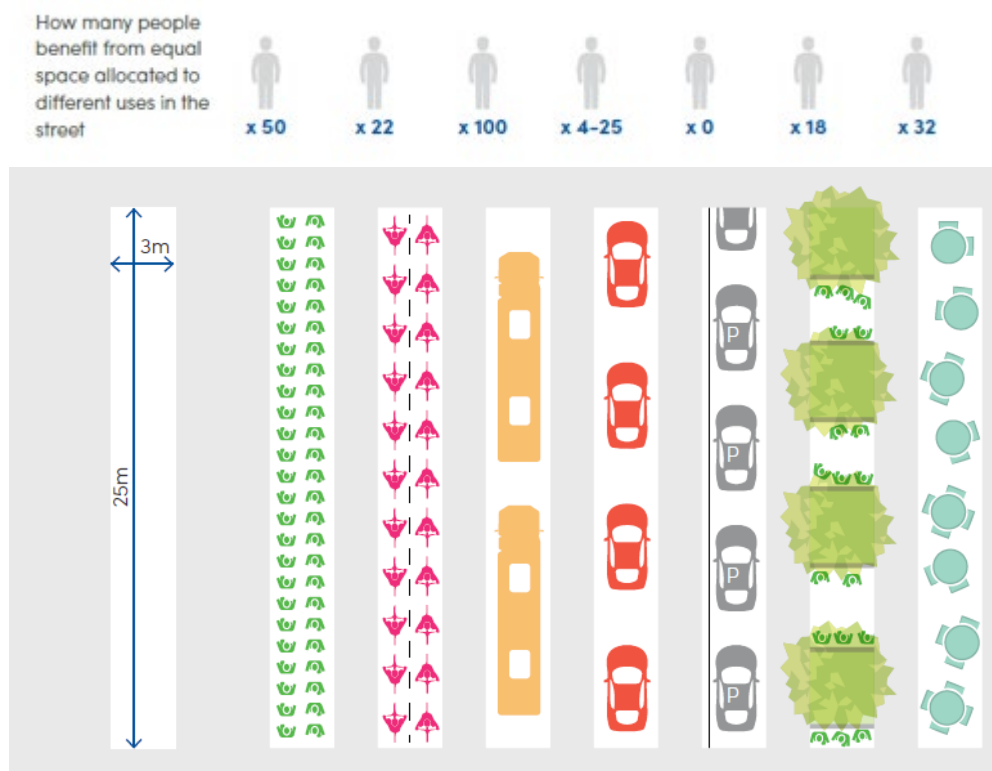


Figure 23: How different users utilise the same amount of street space⁴⁵

Our Centres

Centres are an important part of our LGA, as they provide access to jobs, education, health services and opportunities to travel. Council's Local Strategic Planning Statement recognises that the best opportunities to embrace population growth in the LGA is to plan for higher density population development in centres connected to transport and services. This ensures that the character of our quieter streets or suburbs is protected from development that does not fit the local character and the additional residents are connected to jobs and services by active and public transport.

It is important to satisfy the transport demands for different types of centre users, including residents, employees and visitors:

- **Employees** spend longer periods of time within a centre and should be encouraged to use public or active transport.
- **Visitors** generally spend shorter periods of time and travel a shorter distance to access a centre and should be encouraged to use active and public transport where possible, while supporting vehicle trips where this is essential.
- **Commuters** should be supported by walking and cycling catchments connecting to centres, where they can easily interchange to collector or feeder public transport services to continue their journey if required.
- **Residents** who live in or near a centre should be supported with car share opportunities to reduce overall car ownership. Residents should be encouraged to choose active and public transport.

Council's LSPS outlines a Place Hierarchy which helps to shape the development of our centres using a place-based approach. The function for each type of centre (which encapsulates this hierarchy) is described in the following as it has clear implications for transport and land use planning.

⁴⁵ Bankstown Complete Streets - CBD Transport and Place Plan - Canterbury Bankstown Council - October 2019

Strategic centres - including City Centres, Satellite Towns and Precincts e.g. Port Macquarie CBD, Wauchope and Laurieton, the Health & Education Precinct

Strategic centres are regionally significant commercial hubs that provide access to major employment, health and education land uses. Strategic centres should be supported by high quality public transport, with services connecting between regional, strategic and local centres. Residential populations should be connected to strategic centres via feeder/on-demand public transport services and large walking and cycling catchments.

When planning for development in strategic centres, it is important to consider the effects on parking demand. In general, longer stay parking should use off-street car parks in the periphery of the centre. Parking in the centre should consider the nearby land uses and visitor purpose to support the fairest use of parking through management systems such as having paid parking or duration restrictions. Bike parking in strategic centres should be consolidated in key locations, and major employers should be encouraged to provide end-of-trip facilities (e.g. showers and lockers). See further discussion on parking beginning on page 64.

Local centres - e.g. Innes Lake Shopping Centre, Sovereign Hills Town Centre, Waniora Shopping Centre

Local centres are important community areas that support day to day access to goods and services, close to where people live. Local centres should provide residents with public transport services connecting to schools and other local and strategic centres. They should also be supported by large walking and cycling catchments.

When planning for development in local centres, it is important to consider the effects on parking demand. Residential development in a local centre with access to high quality public transport generally results in lower private vehicle ownership, whereas residential development away from a local centre and away from high quality public transport results in increased parking demand at the centre. Parking restrictions within local centres should support short term parking for dropping off and picking up passengers and short-stay retail. Local shops should also be supported by loading zones and accessible parking spaces. Cyclists should be supported by bike parking in local centres.

Urban, Coastal and Hinterland Villages e.g. Lake Innes, Bony Hills and Comboyne

Our villages support local residents, usually providing a small amount of retail floor space including a small convenience store or supermarket. Villages and small villages should be supported by feeder bus routes to connect residents to local and strategic centres. Villages and small villages should provide short term parking and loading zones supporting local retail, as well as accessible car parking spaces. It is important to retain the community and neighbourhood feel in villages and local villages, and promote the attraction, accessibility and visitation by residents. Supporting local businesses is important for maintaining the local character of villages in the LGA. Pedestrians and cyclists should also be supported in villages and small villages.

Council will:

DIRECTION	DESCRIPTION
Create and enhance “Places for People” that reflect local character and the movement and place needs of the local community.	By using the Movement and Place Framework to guide the design of new centres and improvements to existing centres and in transport planning projects

Parking

The high levels of car dependence in the LGA have consequent impacts on car parking demand. The availability and location of car parking influences travel choices, from where and when people shop, or socialise, to how they travel to and from work. Parking demand is generated from land use activity, and residential vehicle ownership. While car ownership and reliance remain high in the LGA, parking will be required at the places people travel to and from.

A well-recognised feature of successful, productive cities and towns is that demand for car parking exceeds supply. It is estimated that for each car in a city, between 4 and 8 parking spaces are provided. For example, for every car, a car space is provided at home, at an office, in a shopping centre and in an activity centre.

Car parking represents among the least economically productive use of space in urban areas and if not properly managed, can also:

- Generate car travel demand causing congestion;
- Compete for valuable space both on and off-road;
- Have a significant impact on the environment and local amenity; and
- Come at direct financial cost to the community including decreasing housing affordability.

Requirements for car parking can also influence the relative attractiveness of our places and convenience of sustainable transport modes. An oversupply of parking can result in continued higher driver mode share (leading to increased traffic congestion) or occupying land that could be used to transport higher numbers of people or spaces that could support social and economic benefits e.g. outdoor dining.

The management of parking within the LGA is therefore critical to achieving high levels of amenity, good accessibility and long term sustainability. Council's traditional approach to land use and transport planning which has prioritised the use of private motor vehicles is reflected in planning controls which specify minimum parking space allocation for new developments, and the extensive presence of at-grade car parking throughout the key centres of the LGA such as Port Macquarie, Wauchope and Laurieton.

it is suggested that Council adopt a hierarchy for parking to service these centres which provides for high priority users to have parking spaces located closer to their destination. This user group priority is shown in Figure 24.



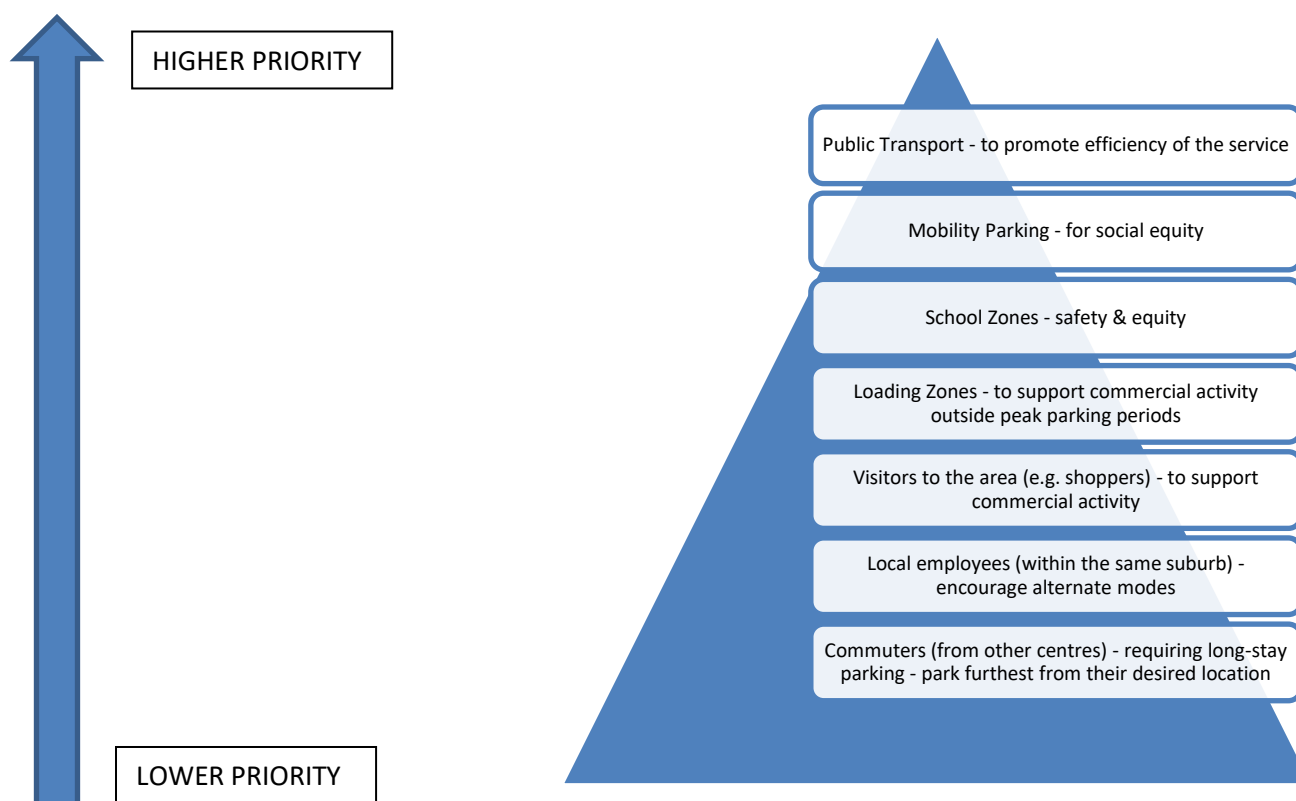


Figure 24: User group parking hierarchy for strategic centres

Council can influence travel behaviour through parking cost and availability that encourages alternative travel choices that are convenient and attractive while ensuring private vehicle travel is accommodated appropriately. Reconsidering existing car parking rates for residential and commercial developments (in tandem with improved access to public transport and improvements to bus routes and service frequency) and reducing parking opportunities at both origin and destination, will encourage greater use of public and active transport options.

Reducing required car parking rates may also reduce construction costs – for example, the average construction cost of a basement car parking space can be upwards of \$50,000. This in turn may increase development viability and put downward pressure on housing prices.

Council recognises that attempts to reduce parking provision are often highly contentious and disruptive with existing residents fearing loss of street parking and negative amenity effects from traffic. Similarly, visitors to centres are reluctant to pay for what was once free parking. Resolving questions of how to provide for housing supply in accessible areas while acceptably transitioning away from high mandatory car parking levels is a major challenge for Council.

Council will:

DIRECTION	DESCRIPTION
Ensure the provision of car parking is balanced with the need to promote more sustainable transport options.	Council needs to ensure parking supply is appropriate for the demand required by various land uses and is utilised efficiently now and into the future, while encouraging sustainable transport modes and reducing the reliance on private vehicles.

Plan and advocate for convenient, connected and accessible public transport

by working collaboratively with Transport for NSW to improve public transport access to, within and from our LGA.

A well-connected and efficient public transport system provides vital access to services and employment beyond an immediate walking and cycling range for people who either do not have access to a private car, are unable to drive or unable to walk or cycle. Buses are the main provider of transport to schools across the LGA. Public transport can also be a viable alternative for those people who choose not to use a car as often as they might. Public transport provides improved environmental benefits and more efficient use of our roads compared to private vehicles as well as opportunities to improve economic outcomes.

As described earlier, the NSW State Government is responsible for the planning, maintenance and operation of the public transport networks. While Council can improve connectivity and the public environment around public transport stops, its main role in getting additional and more frequent services and delivering a more connected network is one of advocacy for improved public transport links to employment, retail, education, services and recreation destinations within and between our strategic centres and also beyond the LGA.

The need for better planned co-ordination between different public transport services (e.g. the rail services at Wauchope and bus travel to Port Macquarie) and between public transport services and other modes, particularly walking and cycling, has been a consistent message from the community. This included suggestions such as the provision of smaller shuttle buses to run around suburbs to feed main public transport routes, Park N Ride facilities in outer suburbs, as well as upgraded signage around bus stops.

Buses need to be supported by infrastructure and given priority within local and strategic centres and must be accessible with Disability Discrimination Act compliance to support those with special mobility needs. Port Macquarie's emerging night time economy also needs to be supported by reliable public transport services outside of traditional peak periods and extend also to weekend periods.

Council will:

DIRECTION	DESCRIPTION
Play a targeted and co-ordinated advocacy role for an improved public transport system based on the needs of residents and visitors	By reviewing and documenting public transport service issues, Council will deliver a clear position on improvements required to support access within, into and beyond the LGA. This will give greater direction when Council advocates with relevant State Government agencies and service providers.
Seek to improve integration between walking, cycling and public transport at public transport stops and key destinations across the LGA.	As the quality of a public transport trip includes the quality of access to and from the station or stop, Council will identify and work in partnership with relevant agencies to implement improvements outside of its control.
Work with key stakeholders including state agencies, large employers, education facilities and land developers to investigate the feasibility of new public transport opportunities/technologies.	This may include services such as public/private shuttle services, Park 'N' Ride facilities, on-demand public transport, waterway transport.

Expand and improve the active transport network

with a focus on walking and cycling including integration into the wider transport network and our place planning.

Active transport generally refers to non-motorised forms of transport involving physical activity. Active transport covers walking (including by wheelchair or other mobility devices), cycling and other micro-mobility options such as scooters and skateboards. Increasingly, electric powered micro-mobility devices are grouped with active transport and cycling as there is cross over with the types of infrastructure they can share. For example, electric scooters could be considered viable as a form of micro mobility in the LGA, however trials are not yet supported without provision of appropriate infrastructure, and legislation is highly restrictive of where micro-mobility devices can be used.

The pleasant climate, the wide range of open spaces and ease of access to our foreshore are valued by residents and visitors and lend themselves to more active modes of transport. Walking and cycling also influence the design of attractive, liveable areas with street activity, improved safety and a quality public environment.

The benefits derived from high-quality, accessible and integrated walking and cycling networks can be grouped under 4 key areas: Health, social, environment and economic as detailed below:

Health

Physical activity is an important factor for maintaining overall health and wellbeing. Physical activity:

- Reduces the risk of many diseases and chronic conditions such as cardiovascular disease, osteoporosis, colon cancer, type-2 diabetes and obesity.
- Is beneficial to mental health and well-being and is known to alleviate depression and anxiety.
- Increases social interaction and integration

For many people, the easiest and most acceptable forms of moderate physical activity are those that can be incorporated into everyday life such as walking or cycling, instead of travelling by car. When 'health' is integrated into urban planning and design, the choice for people to be active becomes easier, more convenient, safe and enjoyable, contributing to a more active and healthier community.



Social

A walking and cycling friendly neighbourhood enhances its liveability and increases the sense of community and social inclusion that occurs. People interact with one another, exchange knowledge and skills and communities come together. Walking and cycling friendly streets have the ability to:

- Address social disadvantage by providing affordable transport options.
- Enhance social interaction.
- Increase the connectedness of different communities.

Environment

Walking and cycling are the most sustainable forms of transport and have a significant part to play in reducing carbon emissions and improving air quality by reducing particulate emissions. A small reduction in short trips made by car can generate a significant reduction in vehicle emissions as it is short journeys, when engines are cold that generate the highest emissions. A walking and bicycle friendly environment enhances the liveability and amenity of communities not only through reduced vehicle emissions but also through reduced vehicle noise and traffic congestion.

Economic

Walking and cycling have many direct and indirect economic benefits, both from the value derived from walking and cycling infrastructure and the spend levels of walkers and cyclists on local “high” streets. The Heart Foundation⁴⁶ explored the economic benefits of making streets more pedestrian and cyclist friendly and found that:

- Walking and cycling to local shops is good for the local economy and is essential to the success of town revitalisation strategies. A high proportion of all retail expenditure comes from local residents and workers who travel short distances.
- Streetscape enhancements to make streets walking and cycling friendly are associated with higher rents, the attraction of new businesses and higher land values.
- Space allocated to bicycle parking can produce much higher levels of retail expenditure than the same space devoted to car parking.
- Car parking is of less significance to local retail activity than is often thought. Space for people on foot is a more significant attribute.
- In many cases, customers arriving on foot or by bicycle visit main streets more often and spend the most money per month.
- Retail vitality would be best facilitated by traffic restraint, public transport improvements and measures to improve the walking and cycling environment.

Why Walking Is Undervalued⁴⁷

There are several reasons that walking and walkability tend to be undervalued in conventional transport planning. Some of these are discussed below.

Difficult to Measure

Walking tends to be more difficult to measure than vehicle travel, and walkability tends to be more difficult to evaluate than motor vehicle traffic. Travel surveys often collect little information on total walking activity, and it is relatively easy to count vehicles, measure traffic speeds and incorporate vehicle travel into travel models. Walking is given little attention in most travel models.

Low Status Historically

Walking is generally considered a lower status activity compared with motorised travel. Council decision-makers have historically chosen to be associated with improvements to driving conditions, major public transport initiatives, and air travel since they are perceived as more important and associated with success and progress.

Low Cost

One of the reasons that walking tends to be overlooked is that it is relatively inexpensive. As a result there is not an organised walking industry as with vehicles, public transport and air transport, and there is little dedicated funding. Improved walkability can provide cost savings to consumers, but such avoided costs are difficult to predict and are often given little consideration.

“Will Take Care of Itself”

Decision-makers often seem to assume that walking can take care of itself. For example, it is possible to walk along most roads, either in the roadway or on dirt paths that develop along road shoulders, even if they lack footpaths. As a result, many existing communities have been built without footpaths, and few communities devote significant resources to upgrading walkability in built-up areas. Such insensitivity to walking conditions is misplaced: areas with poor walkability tend to have significantly less walking and more driving than more walkable areas.

⁴⁶ Tolley R., *Good for Business - The benefits of making streets more walking and cycling friendly*, Heart Foundation South Australia.

⁴⁷ Litman, T - *Economic Value of Walkability*, Victoria Transport Policy Institute, April 2022

Walking and walkability

There are two key conduits for increasing walking:

- encouraging more walking for transport, and/or
- encouraging more walking for recreation.

People who use the street for recreation will have different needs to those people who are using the street to get to a particular destination, i.e. work or school. For example, there may be a need for more drinking fountains along a recreation trail while there may be a need for more seating along a footpath that is on a bus route. Previous community engagement has identified the need to reduce conflicts between users including pedestrians, dog walkers, users of mobility aids and cyclists along footpaths and off road shared paths and trails to ensure a more enjoyable walking and cycling environment for everyone.

Cycling

Transport for NSW research⁴⁸ shows that 48% of customers are “interested but concerned” about cycling and would ride a bicycle if they had access to safe cycling routes. These people would choose to cycle more often if cycleway design focused on the aspects these customers value the most such as safety, separation from cars, direct routes and having access to information such as wayfinding.

In addition to the above, the Australian Cycling Economy Report⁴⁹ shows that an estimated 69% of Australian cycling consumers would be encouraged to ride more if there was an increased feeling of safety while riding with motor vehicle traffic. An estimated 60% would be encouraged to cycle further if there were fewer heavy vehicles on the road when they cycle.

To achieve a better cycling environment, it is important to plan for the different travel needs and different skill levels of the broad range of cyclists as illustrated in Figure 25.



⁴⁸ [Cycling Customer Value Proposition \(CVP\) Report | TfNSW Open Data Hub and Developer Portal](#)

⁴⁹ [The-Australian-Cycling-Economy_October-2021-Updated.pdf \(weride.org.au\)](#)

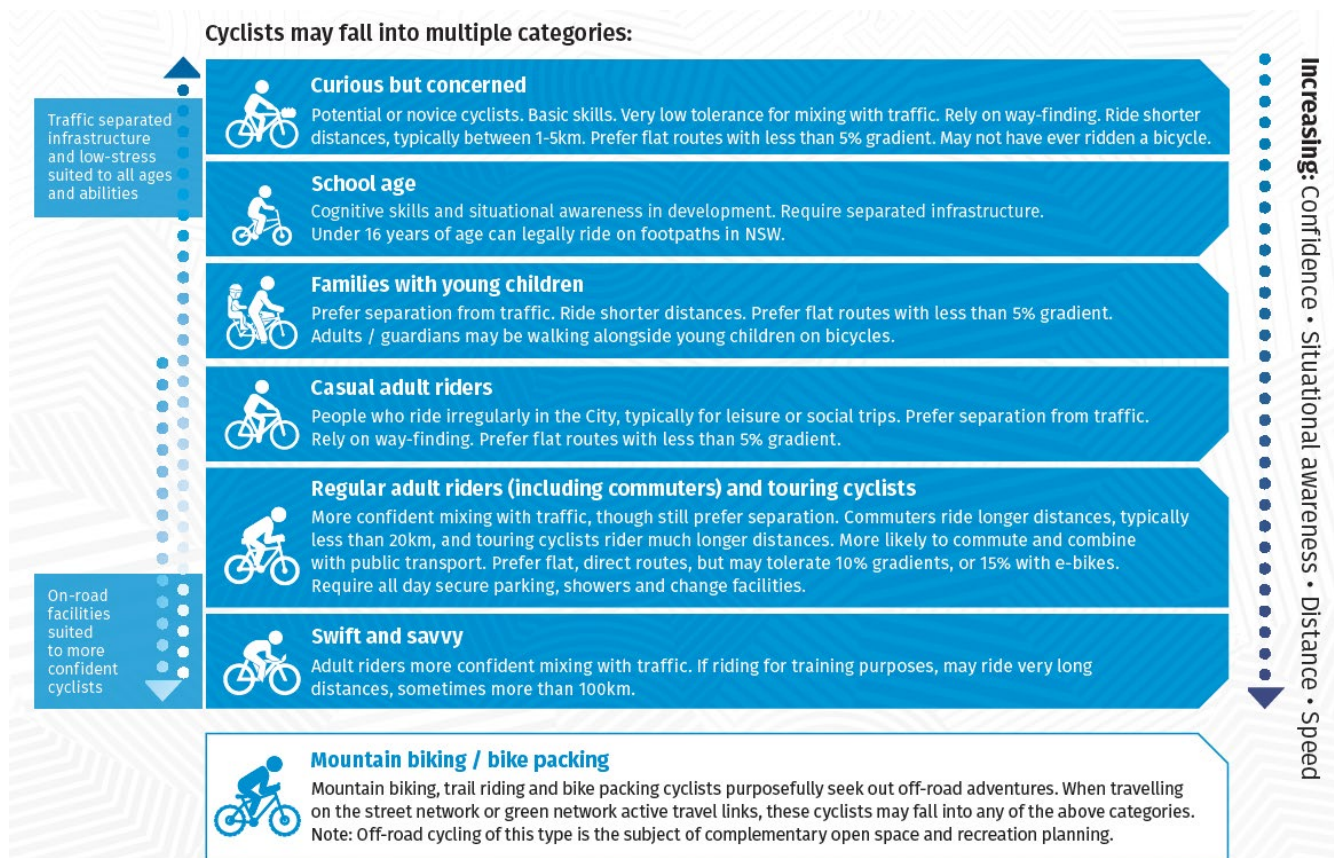


Figure 25: Catering to the needs and skill levels of cyclists⁵⁰

Replacing car trips with cycling trips will largely rely on building more infrastructure separated from traffic, creating reduced vehicle speed shared streets and providing high-quality, safe, and connected cycling infrastructure that would encourage more people to choose to cycle.

The designs of the LGA's active transport network should be informed by recent cycling and pedestrian guidance including:

- Walking Space Guide, Towards Pedestrian Comfort and Safety, Transport for NSW, 2020; and
- Cycleway Design Toolbox, Designing for cycling and micromobility, Transport for NSW, 2020.

These documents outline a contemporary understanding of pedestrian and cycling needs and incorporate place marking aspects into active transport network provision.

The LGA's reputation as a pleasant place to cycle for recreation also requires the continued development of a connected and high quality recreational cycling network that links open spaces with key destinations and visitor attractions.

It is also recognised that the quality of the public transport trip is often dependent on the quality of the pedestrian and cycle environment to and from the station or stop. Physical barriers across the whole of trip journey, including connections between different ways of travel (i.e. walking to a bus stop and catching the bus) need to be identified and removed.

⁵⁰ Walking, Cycling and Better Streets Strategy 2031, Lake Macquarie City

Council will:

DIRECTION	DESCRIPTION
Expand pedestrian and cycling networks to improve connectivity and safety, making walking and cycling attractive alternatives to the car	Infrastructure and initiatives should be designed to promote active transport as the first choice for shorter trips (particularly those under 5km), resulting in reduced traffic congestion, health, economic and sustainability benefits.
Assess and address the needs and safety requirements of pedestrians and cyclists in all transport infrastructure and land-use planning projects	By providing adequate space and appropriate treatments and facilities within and between neighbourhoods to facilitate safe and easy travel for people walking and cycling.



Build resilience into the transport network

by anticipating and planning for potential disruptions and ensuring required levels of maintenance/renewal are carried out.

Port Macquarie-Hastings unique landscape creates resilience issues for its transport network. It has exposure to a number of risks, including flooding, bushfires, and coastal erosion. In recent years, the LGA experienced two major flooding events which included river flooding, surface flooding and coastal inundation. These events caused widespread damage across the LGA. The bill from the emergency relief works was in excess of \$13.6 million with a further \$92 million estimated for the long-term. A major share of these costs were attributed to our transport network infrastructure.

Beyond the direct costs of rebuilding, there are also substantial indirect costs associated with losing transport infrastructure services. Disruption in the network affects the efficiency and reliability of freight movements, which reduces productivity and potential output. Longer disruptions can also greatly reduce visitor flows which can have significant impacts on local economies, especially those reliant on tourism.

Disruptions in the network also has impacts beyond the economic including substantial impacts on social and cultural wellbeing. Transport networks connect our communities and people to each other and to the places they value. They also provide critical access during emergency events allowing responders to perform more effectively.

Breaks in the network have the potential to isolate our communities; in many instances alternative routes that must be used are indirect, resulting in extremely long detours, or are unsuitable for certain vehicles (such as heavy freight trucks).

The transport system is therefore critical to our community. This is clearly demonstrated when the system is exposed to a shock. Shocks can include natural disasters and human-related risks such as cyber-threats. Stresses, which can increase the impact of shocks, include existing risks (such as the vulnerability of ageing infrastructure) and emerging risks (such as those arising from the increasing connectivity and interdependence of our infrastructure).

Our transport infrastructure needs to be more resilient to these risks and events, particularly as our transport network has a key role for other infrastructure systems in facilitating rescue and repair workers to get quickly in place to handle the consequences after a disruption

Resilience can be described as the ability of a system (in this case the transport system) to prepare for and to withstand, absorb and adapt to shocks, and to recover from the consequences in a timely and effective manner.

The properties that characterise a resilient transport system include:⁵¹

- Robustness
- Redundancy
- Resourcefulness and
- Rapidity

A **robust** transport system can withstand shocks with no or limited degradation of service. Roads, bridges, railways, drainage and other critical technical elements can be built to withstand and absorb considerable external stress and planned to be regularly inspected, repaired and maintained.

The most obvious example of increasing the resilience of a transport network through **redundancy** is to add links to increase the number of alternative routes. Different transport modes can partly substitute for each other.

Resourcefulness and **rapidity** are primarily associated with reducing the total consequences through timely mitigation and restoration. **Resourcefulness** reflects the ability to identify problems, prioritise actions and mobilise necessary material and human resources to adapt and recover the system.

⁵¹ Resilience of Transport Systems, Erik Jenelius, KTH Royal Institute of Technology, May 2020

Table 8 provides examples of actions that can be taken to enhance resilience against flooding (adapted from Jenelius).

Phase	Mechanism	Action	Effect on transport
Proactive	Avoidance	Restricting development in low-lying or vulnerable areas	Fewer travellers exposed to flooding
		Provide flood-free access to critical facilities (e.g. Port Macquarie Airport)	Minimise disruption to services
		Low-cost and vulnerable housing relocated and rehabilitated	Fewer travellers exposed to flooding
	Robustness	Providing proper drainage facilities at vulnerable areas	Decreased road inundation
		Replacement of impermeable road surface with permeable material in vulnerable areas	Decreased road inundation
	Redundancy	Construction of redundant infrastructure on critical routes	More route options
Reactive	Adaptation	Re-routing people during flooding	Travellers less affected by flooding

Table 8: Examples of possible actions to enhance resilience against flooding

There are a number of preventative actions that Council can take to enhance the transport network's resilience to extreme weather events including:

- Identifying whether there are potential 'single points of failure' in the networks, which leave parts of the LGA at risk of having vital economic and social links severed.
- Identifying a critical network, comprising those routes which are of economic and social significance and should be maintained to a higher level.
- Ensuring that asset management activities are undertaken as required (e.g. maintenance, upgrade, renewal) to ensure the integrity of the transport network is not undermined and potentially at higher risk of failure as a result of the weather events.

Council will:

DIRECTION	DESCRIPTION
Improve the resilience of its transport network including its ability to withstand and recover from a range of identified shocks and stresses likely to face the LGA	By better understanding the hazards facing the LGA and consequent risks, Council will be able to put in place a range of responses to improve the network's (and therefore the community's) resilience.

Influence travel behaviour to promote sustainable choices

by working with the community and key stakeholders to raise awareness other benefits of sustainable travel and actively promote and support its use within the community.

Private vehicles are likely to continue to play a prominent role in the LGA's transport environment well into the future. However, Council also has a responsibility to raise awareness of all transport choices and support suitable initiatives aimed at reducing transport related emissions. In addition to making it easier to choose more sustainable forms of transport (e.g. active and public transport) as described earlier, it will be important to raise awareness of and promote sustainable transport options and support travel behaviour change programs.

The choices people make about transport depend on many factors as shown in Table 9.

			
Economic	Physical	Social	Psychological
<ul style="list-style-type: none"> Vehicle operating costs Parking Costs (if any) Road use costs Fare costs 	<ul style="list-style-type: none"> Routes and travel times Accessibility Distance to and availability of public transport Reliability of service Availability of parking at the origin and destination 	<ul style="list-style-type: none"> Social status linked to car ownership Life stage difficulties (e.g. travelling with small children, mobility issues) 	<ul style="list-style-type: none"> Personal safety concerns "Freedom" of car use

Table 9: Factors that contribute to transport mode decisions

Encouraging people to change the way they travel requires us to collaborate with large employers in the LGA, the NSW Government and transport providers to raise the awareness of the benefits of sustainable travel and actively promote and support its increased use within the community. Table 10 outlines where we can control or influence people's travel choices.

Areas of control	Areas of influence
We can influence people's travel choices for trips under five kilometres by increasing accessibility to safe footpaths and cycleways and integrating them within the wider travel network.	We educate residents on alternative transport modes and benefits.
We control the availability of car parking by setting car parking rates in development control plans (DCPs) for new development.	We build relationships with transport providers to advocate for improvements to routes and service provision.
We may enforce parking costs in public car parks to manage parking demand.	We lobby the NSW Government for improvements to public transport and State road infrastructure, and seek grants and partnerships for local projects.

Table 10: Areas of control and influence

Individual perceptions matter when making decisions about transport choices. People who use public transport on a regular basis, such as commuting for work, are likely to have more positive perceptions of it as a form of transport, even if only for that trip, than others who rarely use a bus. Also, non-cyclists generally believe that cycling is more dangerous than cyclists.

Travel behaviour change programs in Australia have been built upon a theory that there is often a gap between perception and reality when it comes to community views on sustainable transport modes. Bridging that gap, by getting people to try a new mode of transport, such as cycling for Ride to Work Day, or by emphasising benefits of sustainable transport in a way which outweighs their perceived limitations, such as encouraging school children to walk to promote their health in contrast with concerns about their safety, is necessary to create a more sustainable transport system.

Behaviour change theory notes that individuals go through distinct stages when undertaking a new behaviour, as set out in Figure 26 using commuting to work by bicycle as an example.

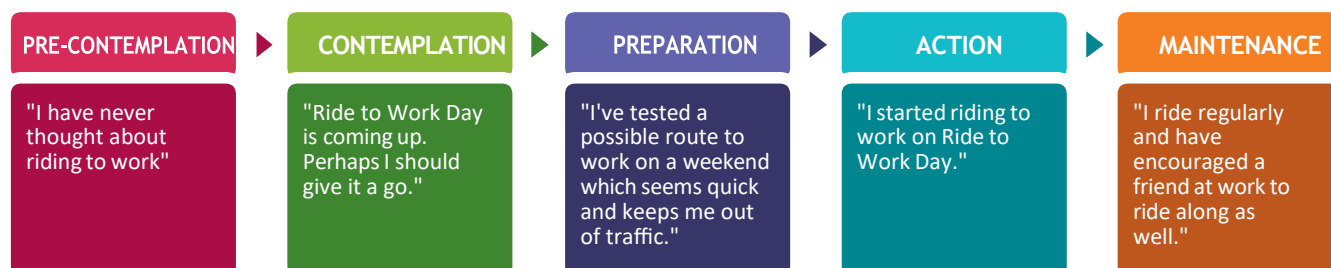


Figure 26 - Stages of behaviour change ⁵²

Council has an opportunity to work with other organisations and levels of government to change perceptions by developing and delivering effective travel behaviour change programs. This combined with infrastructure improvements will create a better local transport environment.

For example, in the LGA there are a number of key destinations which attract large volumes of people particularly at specific times of the day. These include primary, secondary and tertiary education facilities, large places of employment, such as the Port Macquarie Base Hospital and ancillary health facilities, and Council offices and larger areas such as the Lake Road Industrial Precinct. In addition, there are a number of events which attract large numbers of people including Art Walk and New Year's Eve Fireworks.

Irrespective of the destination or reason for travel there are often ideal opportunities to encourage people to consider alternative, sustainable modes of transport. Achieving a better balance between the mode of transport people choose to travel to and from these key destinations will go a long way to reducing congestion, and its associated impacts on our roads.

Council will:

DIRECTION	DESCRIPTION
Raise public awareness and acceptability of sustainable travel modes such as walking, cycling and public transport.	This is an important precursor to behaviour change programs, forming a base of greater public acceptability of sustainable transport modes and the need to make the transition away from private vehicles.
Facilitate and support greater use of sustainable transport modes and low emissions vehicles.	This could include the inclusion of electric vehicles within Council's vehicle fleet, and the exploration of car sharing options or shuttle bus services for Council employees between key locations as a substitute for use of private vehicles. This work could act as a pilot for assessing the merit and feasibility of implementing these programs on a broader across the LGA to residents and businesses.

⁵² Informed by the Transtheoretical Model of Behaviour Change, Prochaska and DiClemente 1977

Collaborate with key stakeholders to deliver innovative, sustainable transport solutions that balance the community's immediate and long-term needs using a strategic assessment approach to investment

Collaboration and partnering

The strategic purpose of collaboration and partnering between governments is to direct and structure arrangements, plans and strategies to influence actions, behaviours and outcomes.

The outcomes of collaboration and partnering with other stakeholders maximise the opportunity for aligned decision making, progression of priorities and the most effective and efficient allocation and expenditure of funding from various sources.

Collaboration and partnering requires a strategic approach driven by the principles of this RITS, to ensure Port Macquarie Hastings Council is able to clearly articulate its priorities on behalf of the community and ensure support from other levels of government are strategically aligned, are creating sustainable communities and are supporting the land use master planning for the growth of the LGA.

Partnering opportunities with the community and co-design of transport solutions is a critical element to the success of integrated transport planning. Identified initiatives and collaboration must be strategically aligned to the objectives and goals of the community and the alignment with the state and federal government collaboration and strategies.

Council will:

DIRECTION	DESCRIPTION
Be clear with all stakeholders and partners about its land use and transport infrastructure priorities for the LGA to support the community's vision	Council will ensure the principles of this RITS are embedded in State and local government joint transport plans and identify appropriate funding opportunities to support these plans.

Innovations in how we move

The way we move in and around our LGA is influenced by global, national and regional trends that influence where and how we chose to live, work and play. These trends include:

- innovation and technology in the private vehicle market, which will influence fuel choices in the short term and change the way people move in the longer term
- disrupters and the sharing economy, which challenge traditional transport models and influence demand for private vehicle ownership
- the increase in online and digital interactions, which highlights the need for better transport connections and flexibility for local distribution facilities to support freight logistics activities.

Emerging initiatives include a range of technologies and services that generally aim to increase convenience for network users, reduce congestion and pollution and improve the quality and variety of transport services available.

Transport for NSW has identified 4 major technology trends as illustrated in Figure 27.

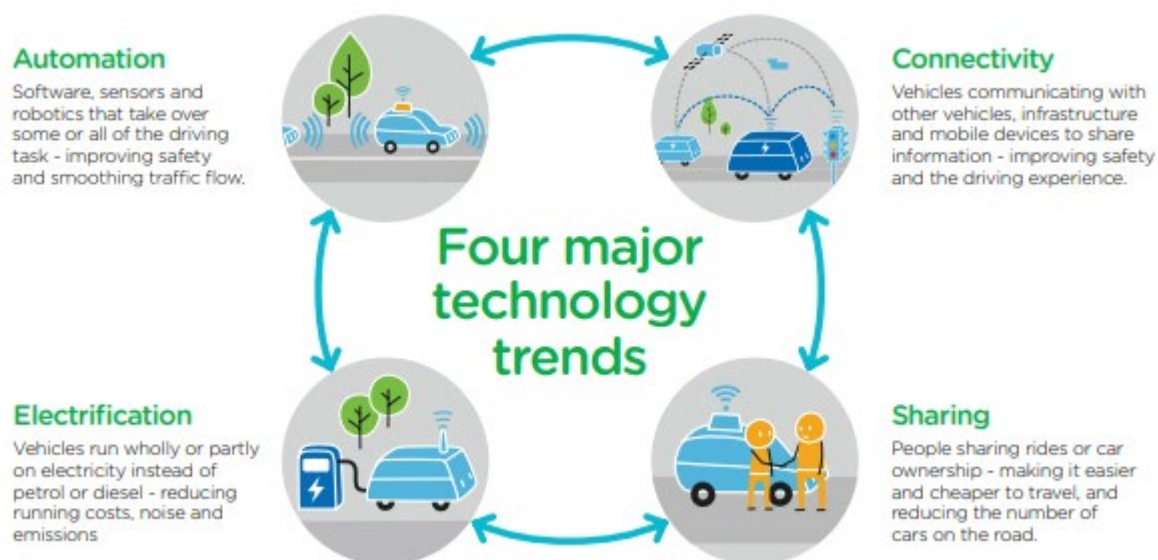


Figure 27 - Automated, connected, electric and shared mobility⁵³

Below are just a few examples of innovations that have the potential to significantly change the way we move people and goods from A to B. Documents such as Future Transport and the Electric and Hybrid Vehicle Plan have set the NSW State Government strategic directions going forward and facilitate the uptake of emerging technologies by private companies and the community. The key emerging initiatives that may be relevant to Port Macquarie Hastings are summarised in Table 11. Further details on these and other emerging transport trends are provided in Appendix C.

Council will:

DIRECTION	DESCRIPTION
Continue to assess emerging and proven technologies and innovative transport solutions and integrate them into our transport network where appropriate to deliver better transport outcomes for our community.	As new technologies transform transport, we must innovate and update our transport networks to maximise the benefits and opportunities for our community. We will partner with Transport for NSW, other Councils and private providers to leverage new technologies where they are appropriate for our community.

⁵³ [Future Transport Technology Roadmap | Transport for NSW](#)

TREND	SOURCE/ STATUS & TIMING	KEY DETAILS	TRANSPORT OUTCOMES FOR PORT MACQUARIE HASTINGS	COUNCIL POSITION
Connected and autonomous vehicles (CAV)	<ul style="list-style-type: none"> - Connected and Automated Vehicles Plan 2019 by NSW Government - Two regional trials in Armidale and Coffs completed 	Artificial intelligence will drive vehicles for us, pre-empt changes in traffic and tune in to the movements of all around them. It is possible that private ownership of cars will become a thing of the past, replaced by rideshare fleet memberships.	It would likely allow for a far more efficient use of existing road space and improve road safety by removing human error.	Open to opportunities for autonomous transport.
On demand public transport	Trials undertaken by TfNSW in the Northern Beaches, Wollongong and elsewhere	Bus services made available by online bookings, mostly to reach local transit nodes as a 'last mile' service.	This may prove useful to fill public transport service gaps.	Supportive and an advocate to state government to investigate provision in the LGA.
Mobility as a Service (MaaS)	Discussed in Future Transport <i>No official policy as yet</i>	Total mobility solution focused on the individual's need to get from A to B. It relies on digital platforms to enable users to plan, book and pay for multiple types of mobility services.	Easier to use transport network.	Supportive of smart technology to enhance transport services.
Electric vehicles	<ul style="list-style-type: none"> - NSW Government's EV Strategy and Action Plan - Financial incentives available for fleet transition and funding support for EV charging networks 	Electric vehicles offer a fossil-free alternative to internal combustion engine (ICE) vehicles.	Offers economic benefits for users and environmental benefits for the community (including lower carbon and vehicle particulate emissions)	Supportive of investigating the use of EVs in Council fleet and facilitating improvements to the EV charging network in partnership with State Government, businesses and private providers.
E-bikes and micro - mobility options (e.g. e-scooters)	Available now	Bicycles and scooters with batteries and electric motors to assist movement. Trials are occurring in metro areas prior to full-scale adoption.	Will overcome terrain barriers for some users. Can increase the attractiveness of cycling and non-car travel particularly for older people.	No public position.
Drones	Identified in the Future Transport Technology Roadmap for investigation	Drones are unpiloted very small aircraft that are navigated using a GPS tracking system from the ground. They operate with different levels of autonomy through a software-controlled flight plan.	Could provide a fast, cheap, and more efficient alternative for last mile freight delivery which would avoid surface congestion.	No public position - has implications for airspace

TREND	SOURCE/ STATUS & TIMING	KEY DETAILS	TRANSPORT OUTCOMES FOR PORT MACQUARIE HASTINGS	COUNCIL POSITION
Advanced Air Mobility (AAM)	<p>The Civil Aviation Safety Authority is developing guidelines for the design of vertiports - a new type of aerodrome designed to service next-generation vertical take-off and landing (VTOL) aircraft.</p> <p>In May, 2021 the Australian Government released the National Emerging Technologies Policy Statement which sets out how government will support individuals, businesses and industry to adopt new and emerging digital aviation technology including Advance d Air Mobility</p>	AAM refers to emerging aviation technologies, such as electronic vertical take-off and landing vehicles (eVTOL) and other uncrewed or automated aircraft, to move people and cargo.	May provide freights and personal movement options within and beyond the LGA.	No public position.

Table 11: The Status of Emerging Transport Initiatives relevant to Port Macquarie-Hastings

Adopting a uniform approach to sustainable transport

As with its related broader notion of sustainability, sustainable transport is designed to help our community meet its transport needs now by doing so in a manner which does not diminish the ability of future generations to meet their needs.

To achieve a sustainable transport network, we must consider the 4 pillars of sustainability and ensure that we are being environmentally responsible in the way we plan, deliver and operate our transport system, embed economic sustainability in our decision-making and build a transport system that is resilient to future shocks and stresses. This approach is consistent with that adopted by Transport for NSW in 2021⁵⁴ and Council’s own Sustainability Policy.⁵⁵

The following discussion addresses the most important sustainability aspects associated with our transport network.

Environmental sustainability

Emissions

The transport network (particularly our road network) makes a significant contribution to the LGA’s carbon emissions - see Figure 28.

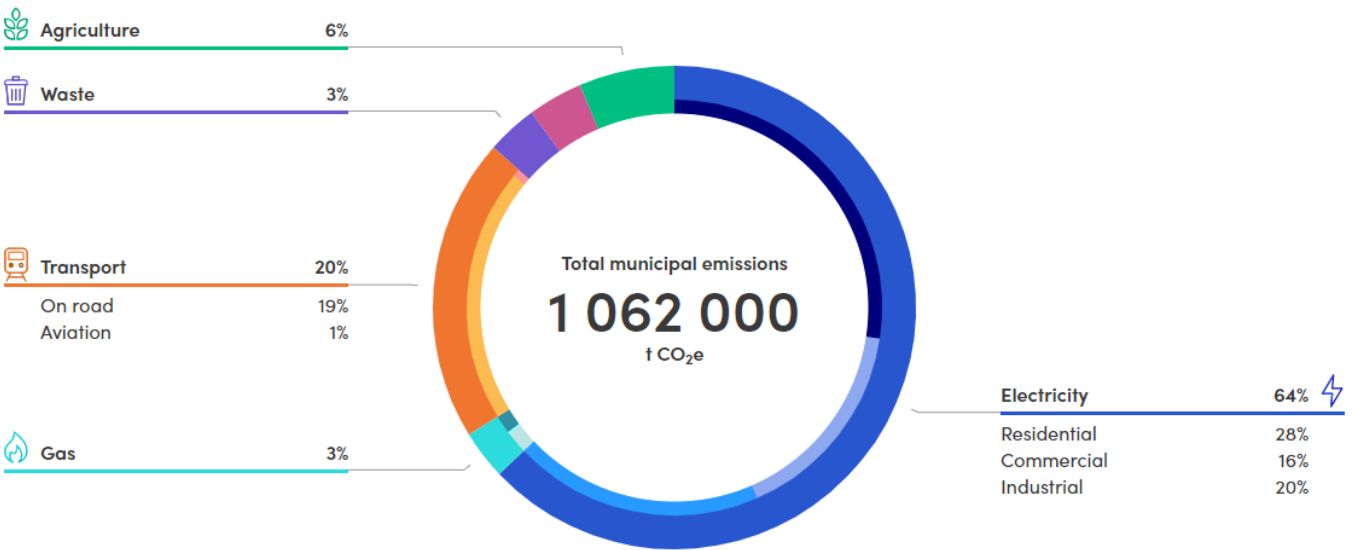


Figure 28: Port Macquarie-Hastings 2020/21 municipal emissions snapshot⁵⁶

Highway vehicles, trains and aircraft are also sources of pollution in the form of particulate matter emissions which affect air quality and human health.

Biodiversity

Transportation also influences biodiversity. The need for construction materials and the development of land-based transportation have led to loss of vegetation. The need to maintain road and rail corridors or to stabilise slopes along transport facilities can result in restricting the growth of certain plants and may produce changes in plants with the introduction of new species. Many animal species are becoming endangered as a result of changes in their natural habitats including the fragmentation of their habitat by transportation infrastructure.

⁵⁴ [Sustainability at Transport for NSW](#)
⁵⁵ [PMHC Sustainability Policy 2021](#)
⁵⁶ [Port Macquarie-Hastings, NSW :: Snapshot \(snapshotclimate.com.au\)](#)

Resource Management

Managing the lifecycle of our transport infrastructure is very resource intensive. Due to advances in technology, Councils have the opportunity to utilise recycled materials in their roads and footpaths, as part of the transition to a circular economy. This is achieved through the application of the principle of “designing out waste,” maximising material resource value while in use and prioritising the use of sustainable materials.⁵⁷

An increasing number of studies and trials have demonstrated the successful use of recycled materials into roads and pavements, using features of a circular economy approach.⁵⁸

Council will:

DIRECTION	DESCRIPTION
Protect and enhance biodiversity in our transport planning and delivery activities.	We will do this by using the “Avoid, Minimise, Offset” hierarchy in managing the impacts of transport infrastructure on the LGA’s biodiversity and areas of high environmental value.
Advocate for, facilitate, deliver and promote transport solutions that minimise carbon and particulate emissions	By offering active transport and public transport options and helping our community to transition to low- or no-emission vehicles we create a healthier environment.
Develop a circular economy approach to the use of resources in our transport projects including embedding sustainable practices throughout the project lifecycle to design out waste and pollution	Maximising the use and value of resources brings major economic, social and environmental benefits. It contributes to innovation, growth and job creation, while reducing our impact on the environment

Economic Sustainability

Improved economic outcomes for our community

The principal role of transport is to provide or improve access to different locations for people and goods. The quality of transport links can affect the relative competitiveness of one area over another because of quality of life, lower costs to access resources and markets and access to larger markets. At the urban level, there is strong evidence that transport links can have major effects on the location and pattern of development.⁵⁹ Transport investments can have significant impact on urban form by enhancing or detracting from it, leading to an impact on the attractiveness of an area as a place to live, work and visit.

Council will:

DIRECTION	DESCRIPTION
Align the delivery of all forms of transport with our land-use and master planning to activate our centres and employment lands	Master Planning maximises opportunities for mixed land use, proximity of employment land to residential land, the planning of efficient heavy vehicle movements and places in which people can live, work, shop and play with minimal movement.

⁵⁷ [Too Good To Waste Discussion paper on a circular economy approach for NSW](#), EPA, 2018

⁵⁸ [Guide to Recycled Materials in Roads and Pavements.pdf \(lgnsw.org.au\)](#)

⁵⁹ *Contribution of transport to economic development Economic development and transport project Summary report*, Ministry of Transport, March 2016

Financial Sustainability

Responsible Procurement

Council purchases significant volumes of goods, services and materials in the design, construction, delivery and maintenance of our transport infrastructure. Our purchasing power can be used to drive economic, social and environmental benefits for our communities.

Whole-of-Lifecycle decision-making

Project prioritisation and decision-making needs to take into account the impacts and costs over the full lifecycle of the project from development, procurement, design, construction, operation, maintenance, refurbishment and recycling of assets.

Making the most of our existing assets

Demand management can mitigate the need to bring forward expensive investments in road infrastructure and free up limited resources for use in higher priority areas, such as public transport, where an even greater impact on congestion relief can be achieved.

Council will:

DIRECTION	DESCRIPTION
Ensure transportation project decisions deliver value for money over the full lifecycle of the project taking into account the social and environmental impacts as well as the financial.	By paying attention to the operation and maintenance, depreciation, capital renewal program and service life, at the prioritisation phase of infrastructure projects, with a Quadruple Bottom Line assessment.

Social Sustainability

Social sustainability in integrated transport is achieved when the strategies, master planning, initiatives, projects and their relationships actively pursue intergenerational equity to support the creation of healthy and liveable communities.

In planning our transport and land use future, social sustainability creates successful places that promote wellbeing, by understanding what people need from the places they live, work, shop and play.

Liveable and sustainable communities

A liveable and sustainable community meets the needs of the present while ensuring that future generations can meet their own needs.

Liveable communities are safe, attractive, are socially cohesive and have affordable and diverse housing linked by high quality public and active transport. A liveable neighbourhood is one in which it is easy and comfortable to carry out daily life, for a range of different people.

The growth of population for Port Macquarie Hastings will challenge the cohesiveness of the community and it is critical transport infrastructure and land use planning are master planned to protect community character and attractiveness.

Equity, social inclusion and community participation

The transport choices we make, or are able to make, have a significant impact on our individual and collective ability to fully participate in society. The transport solutions should strive to reflect the needs of the diverse communities of Port Macquarie Hastings that they serve and should fulfil the “4 A’s”: available, accessible, affordable and acceptable.

Minimise harm to all users

Aligning the movement function of transport infrastructure with the surrounding environment and uses can significantly reduce the risk, incidence and severity of user crash and conflict.

Council will:

DIRECTION	DESCRIPTION
Ensure social sustainability performance considerations including health, safety, wellness, equity, work-life balance , volunteerism and community empowerment are applied in the prioritisation of transport-related projects.	It is important to ensure the design of the physical infrastructure and space support social and cultural activities, social amenity and spaces for people and places to evolve.

Effective Leadership & Governance

Transport Planning requires governance to ensure the practical and effective use of existing resources as well as better allocation of new resources. The governance of transport infrastructure is critical because of the strategic, economic and social importance of transportation and the multi-jurisdictional character of Federal, State and local governments inter-related responsibilities. Transport is not of mere convenience but a fundamental infrastructure that must be systematically and continuously available to all its users.

Informed and transparent decision-making

Transport Planning requires the prioritisation of initiatives for competing and limited resources. The prioritisation and decision making will be assessed by the Quadruple Bottom Line principles of financial, social, environmental and governance and leadership.

Identified projects and initiatives must consider:

- How well the initiative meets Council's Community Strategic Plan goals and priorities
- How well the initiative supports economic growth
- How well the initiative protects the environment and uses resources sustainably
- How well the initiative promotes social inclusion
- What the risk and confidence profile is for delivery on time and on budget
- What the social return on investment is for the cost and benefit
- What the financial return on investment is

Transparent long term master planning for growth is needed to support high quality land use planning and Port Macquarie Hastings' urban development. This will build a compelling case for state and federal funding of the improvement required in public transport infrastructure and inter modal connections.

Council will:

DIRECTION	DESCRIPTION
Ensure informed and transparent decision making that is in alignment with the vision for Port Macquarie Hastings.	By applying a transparent Quadruple Bottom Line assessment and long term master planning to inform the prioritisation of transportation initiatives to create the most liveable, sustainable and innovative place in Australia.

Implementation, Monitoring and Review

Implementation and delivery

The Directions articulated in the RITS will inform supporting Strategic Plans such as the Integrated Transport Plan (currently under development by Council in collaboration with Transport for NSW) and action plans relating to specific transport themes (e.g. Active Transport Plan, Parking Management Plan). Specific programs and projects identified in these Plans will be integrated into Council's 4-year Delivery Program and Operational Plans as funding and priorities allow.

Any planning for transport related projects within the LGA should align with the vision, desired outcomes, priorities and directions identified in the RITS, and should include an assessment against these elements

As the RITS also identifies land use planning Directions, there are also potential changes to planning controls following further investigations and land use planning and precinct planning work.

Indicators to evaluate the success of the RITS

The effectiveness of a strategy like the RITS can be measured against its achievement of the Desired Outcomes. Examples of performance measures against the proposed Desired Outcomes are shown in Table 12. These measures will be developed as part of Council's overall Performance Management Framework.

DESIRED OUTCOME	OUTCOME INDICATOR	SOURCE OF MEASURES
Easier living for all	<ul style="list-style-type: none">• Increase in walking, cycling and micro mobility options for local trips• DDA compliance of the pedestrian network• Improved walkability of neighbourhoods and improved access to goods and services within centres	<ul style="list-style-type: none">• Monitoring of key cycling routes through path counters and public Strava data• Super-Tuesday bike counts (in partnership with Bicycle NSW)• Regular monitoring of pedestrian counts at key destinations• Level of investment in shared paths (new or renewal of existing)• Length of on-road cycle lanes or routes and length of continuous cycle lanes• Number of DDA compliance improvements completed• Number of Council facilities accessible by sustainable transport options• Levels of traffic congestion during peak times• Origin/destination traffic studies• Walkability studies
Improved health and wellbeing	<ul style="list-style-type: none">• Increase in walking and cycling for recreation and commuting	<ul style="list-style-type: none">• Journey to work census data to show changes in mode share• Visitor and employment travel surveys for key destinations within the LGA

Safer travel	<ul style="list-style-type: none"> Reduction in accident rates, including for pedestrians and cyclists 	<ul style="list-style-type: none"> Transport for NSW annual crash statistics Accident blackspot analysis
Increased prosperity	<ul style="list-style-type: none"> Increased proportion of retail activity accessed by sustainable modes of transport Increased public transport services across the LGA to link residents to employment and services 	<ul style="list-style-type: none"> Survey of shoppers to assess spending by transport mode of access Track improvements in public transport service and facilities and use of public transport
Cleaner, greener environment	<ul style="list-style-type: none"> Increased sustainable mode share of trips Proportion of Council vehicles using low emission fuels Increased use of recycled material in infrastructure builds No net loss of biodiversity Climate change risks considered in all decisions 	<ul style="list-style-type: none"> Snapshot data of carbon and particulate emissions from transport Waste and procurement data
Improved resilience	<ul style="list-style-type: none"> Fewer interruptions to services due to transport infrastructure failure 	<ul style="list-style-type: none"> Road/bridge closures (days) Number of Incidents of infrastructure failure
Value for our community	<ul style="list-style-type: none"> Projects are prioritised based on maximising their social, economic and environmental benefits for the community 	<ul style="list-style-type: none"> Number of transport project business cases evaluated against Quadruple Bottom Line (QBL) factors

Table 12: Outcome indicators and measures

Stakeholders

Stakeholders who will help us to deliver the vision for our transport system include:

- residents
- State agencies including Transport for NSW, the Department of Planning and Environment
- the development industry
- large employers and businesses
- education institutions
- private and community transport providers
- active transport advocacy groups
- sustainable transport agencies

Monitoring and review

It is crucial to monitor and review the RITS over the next 20 years to ensure that objectives are met and infrastructure works align with the desired outcomes for the LGA. The articulated outcomes will be monitored through progress against actions identified in supporting implementation plans. While the RITS considers a 20-year horizon, Council recognises that the world changes quickly. The RITS therefore aims to be flexible to emerging technologies and transport trends. Transport solutions that benefit the LGA and aligns with our transport vision may not yet be developed. We therefore expect to review, exhibit and re-adopt the RITS at least very five years (or sooner should significant events require a more immediate response) to ensure transport networks and services meet the needs and lifestyles of our community.

Appendix A - Strategic Planning Documents

The following provides further information on the strategic documents which inform this RITS and where relevant the alignment between the RITS and these documents.

At a local level

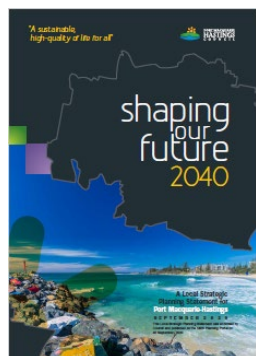


Alignment of the RITS with CSP Themes and Objectives

The strategic objectives (set out under each of the CSP themes) which relate to the RITS are outlined below, as well as a brief explanation of how the RITS serves to support these objectives.

 Environmentally sustainable	
Objective:	The impact of our built environment on our natural environment is minimised
Response:	The natural environment is one of the reasons people choose to live and visit our LGA. The RITS has been designed to minimise the impact transport systems can have on our natural environment.
 Resilient	
Objective:	We are a safe and healthy community
Response:	The RITS outlines the need for a transport system that prioritises walking and cycling and provides everyday opportunities for physical activity and connection to nature both of which will help make the Port Macquarie-Hastings community healthier. The RITS also outlines Council's commitment to improving road safety.
 Liveable	
Objectives:	<ul style="list-style-type: none"> - <i>We have well-planned and liveable communities</i> - <i>We have housing that meets our needs and is well-serviced by sustainable infrastructure</i> - <i>We enjoy easy access to green and blue spaces and a wide range of active and passive cultural, sporting and recreational activities</i>
Response:	The RITS recognises the importance of creating vibrant streets and provides the guidance necessary to progressively re-align our key streets in activity centres to reflect the aspirations of our community for sustainable, liveable town centres. It also provides opportunities to bolster opportunities for the community to connect with our special natural environment and key facilities via improvements to walking, cycling, micro mobility and public transport.
 Connected	

Objectives:	<ul style="list-style-type: none"> - <i>We safely and efficiently connect people, goods and businesses within and beyond our region</i> - <i>We make more trips by active and public transport</i>
Response:	A strategic approach to transport provides a diverse set of mobility options, helping to connect communities. For physical activity and connection to nature, and delivers greater coverage and frequency of public transport, will help make the Yarra Ranges community healthier and more connected.
 Thriving	
Objectives:	<ul style="list-style-type: none"> - <i>We have a thriving, diverse and sustainable economy</i> - <i>Our centres, main streets and village hubs are prosperous and vibrant</i>
Response:	An effective transport system is critical to a healthy economy, bringing product to market, activating the growing tourism industry, attracting investment and allowing residents to access employment opportunities. Enhancing the quality of the walking and cycling network helps to support local businesses by encouraging people to do their shopping locally, and makes Port Macquarie Hastings an even more attractive place to visit. Ensuring our Airport is responsive to the needs of travellers will also enhance our local economy.
 Authentic & High-performing	
Objectives:	<ul style="list-style-type: none"> - <i>We achieve great outcomes through collaboration</i> - <i>Our Council manages its finite resources sustainably to support the service delivery expectations of our community</i>
Response:	The RITS outlines key strategies to deliver improved efficiency and reliability for transport users. It recognises the importance of collaborating with other levels of government and private providers to achieve the desired community outcomes



Alignment of the RITS with LSPS Objectives

Within the “Our Connections” theme are the following Planning Priorities and Principles which are relevant to the RITS:

LSPS PLANNING PRIORITY	PLANNING PRINCIPLES
11. Provide a multi-modal integrated land-use and transport network across Port Macquarie-Hastings.	<ul style="list-style-type: none"> - Coordinate land use and transport planning to protect transportation corridors and support the safe and efficient movement of people, goods and services across all modes of transport (including aviation) - Prioritise pedestrians over cars in centres to create places where people want to spend time and to ensure local streets and neighbourhoods encourage physical & social activity and connectivity - Mitigate the impacts of transport infrastructure on liveability and amenity

12. Develop a network of safe, accessible and sustainable local transport options linking key destinations	<ul style="list-style-type: none"> - Coordinate land-use and transport planning to prioritise active transport across the LGA - Improve local public transport connections to extend the reach of the regional transport network - Support smart technology, such as trials of new systems, to facilitate more efficient movement across our LGA
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Alignment of the RITS with the Draft Infrastructure Strategy

The Draft Infrastructure Strategy identifies the following Opportunities and Desired Outcomes which are relevant to, and inform the RITS.

Opportunities:

- Focus on maintenance and rehabilitation of existing infrastructure to reduce the long-term cost of repair and improve network resilience;
- Create well-connected communities and local services, improved connections for all modes to local services and housing;
- Provide reliable journey times for people and freight through lane and intersection capacity improvements;
- Improve safety on our roads through initiatives such as targeted safety projects, speed management and road improvements;
- Provide for and promote active and public transport, which will lessen traffic congestion and decrease the carbon footprint left by road services;
- Create a transport network that enhances the attractiveness and liveability of the urban environment;
- Explore innovative and technology solutions to create a better performing and lower emissions transport system.

Desired Outcomes:

- The safety and reliability of the LGA's transport network has progressively improved so that there are fewer fatal and serious injury crashes and acceptable travel times and reliability.
- Access to real-time transport information has improved the ease of public transport use and the customers' experience.
- Active transport's share of commuter trips to work has increased.
- There are multiple methods of accessing key locations across the LGA e.g. education and health facilities, the airport, tourism sites.

Table A1 outlines key Council policies and strategies of relevance to the RITS.

STRATEGY/POLICY	OVERVIEW
Draft Local Housing Strategy	<p>The Draft Port Macquarie-Hastings Local Housing Strategy (LHS) has been developed to set a clear path for the delivery of new housing across the Port Macquarie-Hastings Local Government Area to 2041. It builds on the framework set out in the North Coast Regional Plan and Council's Community Strategic Plan and LSPS.</p> <p>The LHS describes what Council can do to manage growth and change sustainably and ensure our communities are resilient, healthy, and connected. It sets out actions that move us towards a housing supply that is diverse, affordable, and inclusive by encouraging the right kind of housing in the right locations.</p> <p>Integrating transport planning with new housing in both established and new urban areas will improve the connectivity between key destinations and provide residents with more efficient and sustainable transport options. Concentrating growth near established centres, and along key or proposed public transport routes will provide greater opportunities to provide more frequent public transport services and reduce congestion. There is also strong community demand to provide better cycling, walking and micro mobility networks between key residential areas and employment centres, shops, and schools. Increasing walking, cycling and micro mobility networks will help to create healthy and connected communities with more equitable transport choices.</p>
Urban Growth Management Strategy 2036	<p>The Urban Growth Management Strategy (UGMS) relates to urban development in the Port Macquarie-Hastings LGA, particularly in our major towns and villages. This includes housing, shops and industry, tourism development, parks, playing fields, public spaces, community facilities and physical infrastructure, such as road, water, sewerage and stormwater infrastructure.</p> <p>The UGMS looks at population projections and the expected demand for new dwellings. It looks at our natural environment, to determine where we should best locate new housing and employment growth. We also need to consider the infrastructure that will provide for this growth and what we can do to make our towns and villages better places for the community as a whole. The preparation of this Transport Strategy is action 26 of the UGMS.</p> <p>NB - This Strategy is to be reviewed in 2022/23.</p>
Resourcing Strategy	<p>The Resourcing Strategy outlines the resources (financial and human) that Council will require, to deliver on the community's priorities over the life of the Community Strategic Plan. The Resourcing Strategy has three components which are all vital to ensure that Council can achieve its objectives:</p> <ul style="list-style-type: none"> • Long Term Financial Plan - provides a 10-year overview of financial planning with specific financial details for the term of the four-year Delivery Program. • Asset Management Plan - summarises the assets that Council has responsibility for and its plans for managing these assets going forward, in order to be able to deliver services to the community.

	<ul style="list-style-type: none"> • Workforce Management Plan - provides a four-year plan of how Council is addressing its workforce needs and any gaps that have been identified that might impact on the Delivery Program.
Delivery Program	The Delivery Program (DP) is a four-year plan that turns the strategic goals found in the Community Strategic Plan into actions. It is the point where a council makes a commitment to the Community Strategic Plan, and acts upon those issues that are within its area of responsibility. The Delivery Program is the key 'go to' document for the councillors. It identifies all of the key activities the council has committed to undertake over its four-year term. All of Council's plans, projects, activities and funding allocations must be directly linked to the Delivery Program.
Operational Plan	The Operational Plan is a one-year plan that spells out the detail of the Delivery Program, identifying the individual projects and activities that will be undertaken in a specific financial year to achieve the commitments made in the four-year Delivery Program.

At a State and regional level



Alignment of the RITS with the Future Transport Strategy

Future Transport identifies steps the State Government will take to achieve its long-term vision:

- **More choice, better access**
Improving transport solutions for our customers
- **Environmentally responsible**
Moving towards net zero emissions
- **Thriving places**
Enhancing liveability for customers and communities
- **Maximising the use of our network**
Releasing the potential of our infrastructure
- **Resilient communities**
Building for resilience and economic growth



Alignment of the RITS with Staying Ahead: State Infrastructure Strategy 2022-2042

Strategic Objectives and Directions relevant to the RITS are highlighted in Table A2.

STRATEGIC OBJECTIVE	STRATEGIC DIRECTIONS
Boost economy-wide productivity and competitiveness	<ul style="list-style-type: none"> • Deliver efficient transport networks to support thriving cities, businesses and communities. • Improve freight efficiency, security and capacity to support NSW's industries and supply chains.

	<ul style="list-style-type: none"> • Support existing, and emerging knowledge and manufacturing industries in dedicated precincts with high-quality infrastructure.
Service Growing Communities	<ul style="list-style-type: none"> • Improve access to efficient, quality services through better use of assets and a better mix of physical infrastructure and technology-enabled solutions.
Embed reliability and resilience	<ul style="list-style-type: none"> • Apply a structured and systematic approach to resilience across multiple asset types, multiple risks and the infrastructure asset lifecycle. • Establish a rigorous and funded program to identify and remedy assets most likely to cause service failure. • Deliver assets that reduce the risk and impact of major natural hazards and shocks.
Achieve an orderly and efficient transition to Net Zero	<ul style="list-style-type: none"> • Pursue cost-effective initiatives to reduce emissions from State assets and infrastructure.
Protect our natural endowments	<ul style="list-style-type: none"> • Foster sustainable use of natural resources and construction materials through reuse and recycling. • Implement a strategic and practical approach to managing biodiversity. • Capitalise on blue-green infrastructure opportunities.
Harness the power of data and digital technology	<ul style="list-style-type: none"> • Prioritise the application and use of data and digital technology across all aspects of service delivery and throughout the infrastructure asset lifecycle. • Modernise legacy infrastructure and government systems, while retaining agility to avoid asset redundancy.
Integrate infrastructure, land use and service planning	<ul style="list-style-type: none"> • Coordinate infrastructure, land use and service planning to meet housing, employment, industry and community needs. • Increase private sector participation in the delivery of government-led precincts.
Design the investment program to endure	<ul style="list-style-type: none"> • Reconsider megaprojects and invest in existing infrastructure through augmentation, digitisation and maintenance. • Diversify funding sources to deliver future investments. • Ensure the construction market has the capacity, capability and productivity to meet increasing demands. • Consolidate a robust process for investment prioritisation, project sequencing and investment appraisal.

Table A2 - 2022 State Infrastructure Strategy objectives and strategic directions

Table A3 outlines key NSW Government policies, strategies and plans of relevance to the 2022 State Infrastructure Strategy, Future Transport and the RITS.

STRATEGY/POLICY	OVERVIEW
NSW Economic Blueprint 2040 ⁶⁰	The Blueprint identifies challenges and risks, and highlights major opportunities for the NSW Government to grow industries, innovate and improve the economy to 2040.
20-Year Economic Vision for Regional NSW (including the Draft Refresh) ^{61,62}	<p>The Economic Vision sets out the NSW Government's priorities and plans to achieve long-term social and economic success for regional communities across the State over the next 20 years.</p> <p>The 2018 Economic Vision was refreshed in 2021 response to the drought, bushfires, flood and COVID-19 pandemic that changed the economic landscape in regional NSW.</p>
Hastings/Macleay Regional Economic Development Strategy (under review) ⁶³	This Strategy identifies regional specialisations and key industries for the Hastings Macleay Region, and provides the primary evidence base to identify and prioritise NSW Government investment and policy decisions to support regional economic development.
The Smart Places Strategy ⁶⁴	The Strategy takes a place-based approach to smart cities, connected infrastructure and services to realise the real value of smart places and interconnected systems. It aligns with related initiatives from the Australian Government, local councils and delivery partners in the private sector.
NSW Climate Change Policy Framework ⁶⁵ and Net Zero Plan Stage 1: 2020-2030 ⁶⁶	These strategies set the foundation for NSW's action on climate change and goals to reach Net Zero emissions by 2050. They outline the NSW Government's plan to grow the economy, create jobs and reduce emissions over the next decade.
The North Coast Regional Plan 2041 ⁶⁷	<p>The North Coast Regional Plan is a 20-year blueprint for the future of the North Coast. The NSW Government's vision for the North Coast is to create the best region in Australia to live, work and play thanks to its spectacular environment and vibrant</p> <ul style="list-style-type: none"> • The most stunning environment in NSW • A thriving, interconnected economy • Vibrant and engaged communities • Great housing choice and lifestyle options. <p>NB: The North Coast Regional Plan is currently under review and is scheduled to be released by the end of 2022.</p>

⁶⁰ NSW Treasury, [Economic Blueprint 2040](#), NSW Government, 2019.

⁶¹ NSW Government, [A 20-Year Economic Vision for Regional NSW](#), NSW Government, 2018

⁶² NSW Government, [A 20-Year Economic Vision for Regional NSW](#), NSW Government, 2021

⁶³ NSW Government, [Regional Economic Development Strategies](#), NSW Government website, 2021

⁶⁴ DPE (Department of Planning and Environment), [The Smart Places Strategy](#), website

⁶⁵ DPE, [NSW Climate Change Policy Framework](#), NSW Government website,

⁶⁶ DPE, [Net Zero Plan Stage 1: 2020-2030](#), NSW Government website

⁶⁷ DPE [North Coast Regional Plan 2036](#) - NSW Government website

Port Macquarie Regional City Action Plan ⁶⁸	<p>The Port Macquarie Regional City Action Plan establishes a vision, objectives and actions to guide the growth of Port Macquarie city. The plan articulates the following vision for Port Macquarie:</p> <p>“Nestled between the Pacific Ocean and the Hastings River, on the traditional lands of the Birpai people, Port Macquarie is recognised as a smart, sustainable and vibrant regional city with a strong cultural and social heart. The people of Port Macquarie protect and embrace the beauty and diversity of the natural environment and take pride in their cultural story and community connections. As the southern gateway to the North Coast, Port Macquarie is economically strong and diverse and delivers on its potential as a welcoming city to visit, live, work and play”</p> <p>The Plan sets a delivery framework that:</p> <ul style="list-style-type: none"> • ensures planning provisions to maximise employment opportunities and ensure future housing needs are met to cater for a variety of lifestyle choices and needs • delivers a vibrant, innovative city with a lively waterfront and green corridors and integrated transport systems • creates new jobs from the development of a health and education precinct and airport business park • delivers infrastructure according to an agreed staging and sequencing of development • includes measures to help Port Macquarie’s large koala population thrive
Regional NSW Services and Infrastructure Plan	The Regional NSW Services and Infrastructure Plan is the NSW Government’s blueprint for transport in regional NSW from now until 2056. It sets out the Government’s thinking on the big trends, issues, services and infrastructure needs which are now, or will soon shape transport in regional NSW. The Regional NSW Services and Infrastructure Plan outlines the vision and customer outcomes that the government will use to go about its detailed transport planning in each region and also support its future decision making
Connected and Automated Vehicles Plan	The Connected and Automated Vehicles Plan is NSW’s plan to progress connected and automated vehicles over the next five years
Disability Inclusion Action Plan (2018-2022)	The Disability Inclusion Action Plan is part of Transport for NSW’s strategy to improve accessibility for all.
Maritime Safety Plan 2026	The Maritime Safety Plan 2026 is working towards zero fatalities and serious injuries on navigable waterways in NSW by 2056.
NSW Freight and Ports Plan 2018-2023	<p>In recognition of the critical role that freight and logistics plays in regional NSW, the Freight and Ports Plan has been developed as part of the Future Transport suite of documents. This Plan includes the following which are of relevance to the RITS:</p> <ul style="list-style-type: none"> • Exploring the implementation of initiatives to facilitate freight access to key urban centres including efficient ways of moving freight through the five road types of the movement and place framework • Promoting alternative last mile modes that are safe, sustainable and efficient within urban centres as well as to the farm gate
Older Persons Transport and Mobility Plan 2018-2022	Outlines how the transport network will continue to meet the needs of an ageing population.

⁶⁸ DPE [Port Macquarie Regional City Action Plan | Planning Portal - Department of Planning and Environment \(nsw.gov.au\)](#)

Future Transport Technology Roadmap 2021 - 2024	The Technology Roadmap is NSW's headline transport technology strategy. It showcases Transport for NSW's focus on customers and communities, its technology toolkit and six priority programs to transform customers' transport experience
2026 Road Safety Action Plan	The 2026 Road Safety Action Plan - Toward zero trauma on NSW Roads - is aimed at reducing death and serious injury in regional NSW. The Plan aligns the Towards Zero vision with Future Transport, which aims to have a NSW transport network with zero trauma by 2056.
Tourism & Transport Plan	In recognition of the critical interconnect between transport and tourism in regional NSW, a supporting tourism plan has been developed.
NSW Electric & Hybrid Vehicle Plan	NSW's Electric and Hybrid Vehicle Plan reflects the growing focus on future mobility and technology innovations
Transport Sustainability Plan	Outlines a uniform approach to sustainability across all modes of transport

Table A3 - NSW Government policies, strategies and plans

Appendix B - Overview of our Current Transport Network

Active Transport Network



Walking

Our LGA has more than 220 kilometres of footpaths. Pedestrian activity is typically highest around our town centres, schools and other educational facilities, commercial/retail centres, recreational nodes, hospitals and medical facilities, aged care facilities and public transport nodes. Our pedestrian network planning has therefore focused on these key areas.

The pedestrian networks in urban areas across our LGA are however disjointed with poor connectivity and are more sporadic in residential areas. Many streets do not have footpaths, even in well-established residential areas. Where a path is provided it is often on one side of the road only, and may not be continuous or connect to other facilities. As a result, there are some areas along busy streets where pedestrians are forced to walk either on the roadway or on the nature strip. There are numerous controlled crossing points for pedestrians although main roads form a significant barrier to pedestrian movement.

Land use in the LGA is relatively dispersed, making walking a less attractive mode of travel than it might otherwise be. Within the inner Port Macquarie area, the major arterial roadways, particularly Oxley Highway, Ocean Drive and Hastings River Drive, present significant barriers to pedestrian movement, due to a combination of traffic volume, speed, road width and car-dominated land uses. Opportunities for pedestrians to cross these roads are limited, with many intersections controlled by roundabouts rather than traffic signals.

In recognition of the differing standards and lack of connectivity in the existing footpath network Pedestrian Access and Mobility Plans (PAMPs) were prepared in 2001 (and updated in 2015) for the main urban areas and in 2017 for our key villages, and have formed the basis for subsequent construction of pedestrian facilities along main pedestrian desire lines. The aim of the PAMPs is to coordinate investment in safe, convenient and connected pedestrian routes. They provide a framework for developing pedestrian routes or areas identified by the community as important for walkability, safety, convenience and mobility.

Spending on footpaths currently comprises a relatively small proportion of Council's annual transport network budgets primarily due to funding constraints and the higher prioritisation of projects for vehicle-related infrastructure works in recent years. As a result, implementation of the PAMPs has not progressed as planned.



Cycling

A bicycle network is a defined set of routes, both on and off-road, that make it possible to travel around a region by bike in a safe and connected manner. A bicycle network must enable cyclists of a wide range of abilities and experience to move safely. The basis of a bicycle network is the road network, augmented by special on-road facilities together with dedicated infrastructure such as off-road paths, and wide footpaths where permitted. Research suggests that a significant increase in cycling levels only occurs when a good quality network is in place.

Council has been developing a bicycle network since the 1990s. Whilst some progress has been made, the existing facilities are isolated and do not represent a coherent and well-connected network. New or upgraded main roads generally include shoulder bike lanes but older main roads do not provide such facilities. Off-road shared paths have been constructed in some new land release areas and along creek and coastal corridors. A number of more-recently constructed major road projects, however, such as sections of Hastings River Drive and Ocean Drive, incorporate high-quality pedestrian and cycle facilities.

A Bike Plan was prepared in the late 1990s (and updated in 2015) for the main urban areas and for regional connectivity between these areas. The Plan is intended to assist in co-ordinating the delivery of cycling

infrastructure in order to create a cohesive and connected cycle network. The Plan has guided ongoing cycleway construction. The long-term vision of the Bike Plan is to encourage a healthy and active community supported by recreational infrastructure and ensuring our natural environments can be assessed by a network of footpaths, cycle ways and coastal hinterland walkways.

A map of the Port Macquarie Bicycle Network is shown in Figure 29. Similar maps exist for Wauchope; Lake Cathie - Bonny Hills; Camden Haven; Kendall - Lakewood as well as two Inter-town Network maps (North & South).

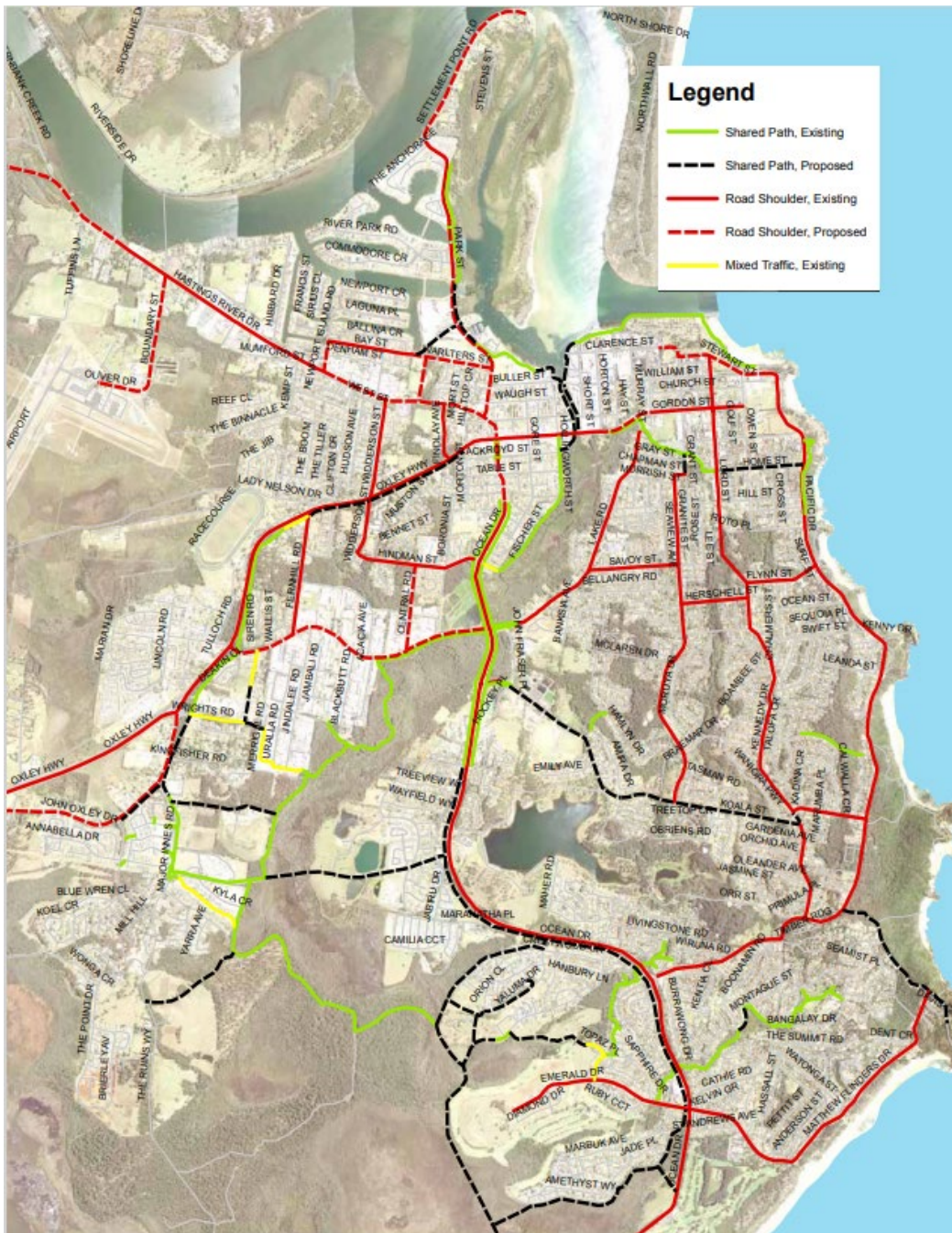


Figure 29: Port Macquarie Bicycle Network



Our Public Transport Network

Public transport covers a broad range of transport modes including trains, buses and ferries and also taxis and community transport. The LGA's bus and rail services are outlined below, our ferries described further on as part of our maritime network - see page 100. Taxis and community transport are outside the scope of the RITS.

Bus Services

Bus services in the region are operated by Busways under a NSW Government contract. They cover the main urban areas including Port Macquarie, Wauchope, Laurieton and Kendall. These bus routes and associated timetables are illustrated in Figures 30, 31 and 32 overleaf. Busways also operate school bus services for most schools in the area. The bus network serving the LGA is limited in terms of routes and frequencies of service. There are also inter-regional bus services to the north, south and west of Port Macquarie provided by both private providers and NSW TrainLink although the frequency is limited.

In an attempt to maximise coverage, routes are often circuitous resulting in lengthy journey times. Service frequencies are typically much lower than those found in major metropolitan areas. Night-time services are also limited.

Bus fares are set by the NSW Government's Independent Pricing and Regulatory Tribunal (IPART) and full adult fares are relatively expensive, particularly when compared to fares for similar journeys in the Greater Sydney Metropolitan area.

The limited nature of public transport services is evidenced by the low numbers of people using buses for the journey to work (0.7% in 2021). Transport research suggests that a significant increase in public transport usage will only occur as a result of a series of coordinated measures. Increasing the number of services, for example, may on its own only result in a marginal increase in usage.

Port Macquarie is one of the locations identified in Transport for NSW's "16 Regional Cities Services Improvement Program". The program aims to provide improvements to regional bus services, including providing better connections to where customers need to go for:

- work
- education
- health and
- social and recreational activities.

Detailed planning is underway on the project for Port Macquarie.



Figure 30: Port Macquarie Bus Network ⁶⁹

⁶⁹ [Port Macquarie Network Map301121 \(busways.com.au\)](http://Port Macquarie Network Map301121 (busways.com.au))



Figure 31: Lake Cathie, Bonny Hills,
Laurieton and Kendall Bus Route

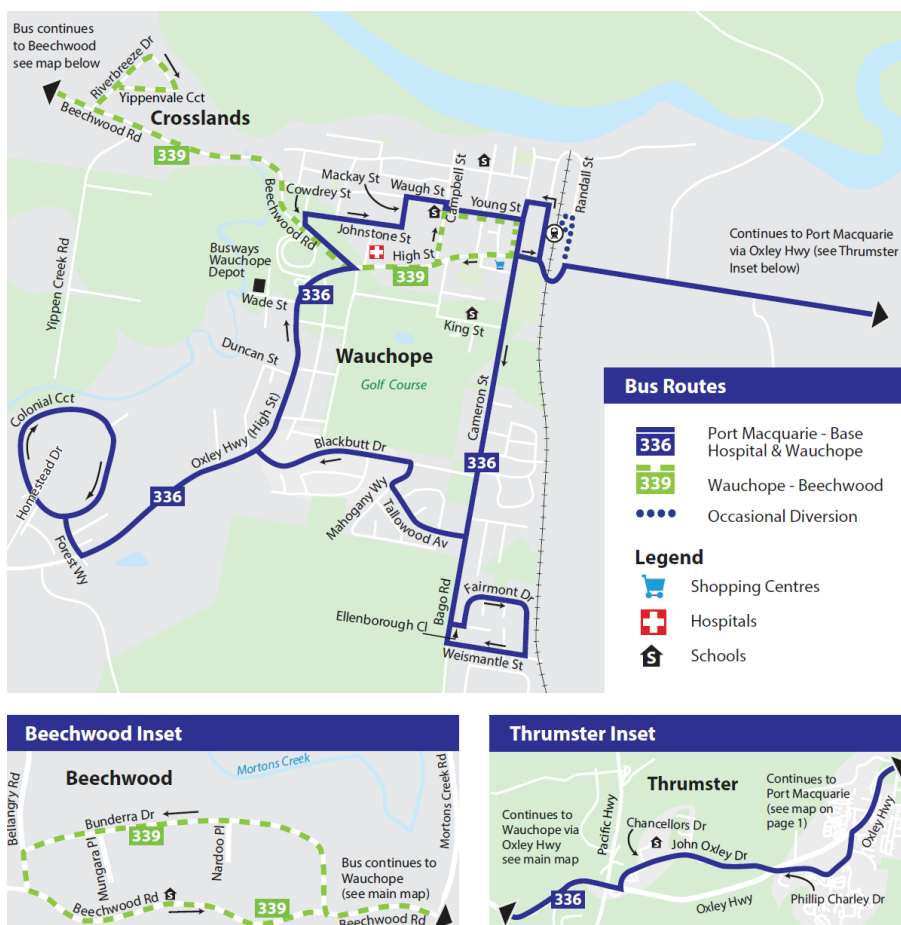


Figure 32: Beechwood and Wauchope Bus Route



Our Road Network

The road network is the primary form of transport within the LGA and covers a diverse range of road types, traffic activity and adjacent land use types. The LGA has over 1300 kilometres of roads (approx. 920km sealed and 459km unsealed) and caters for a range of traffic movements typical of journeys in regional NSW as shown in Figure 34.

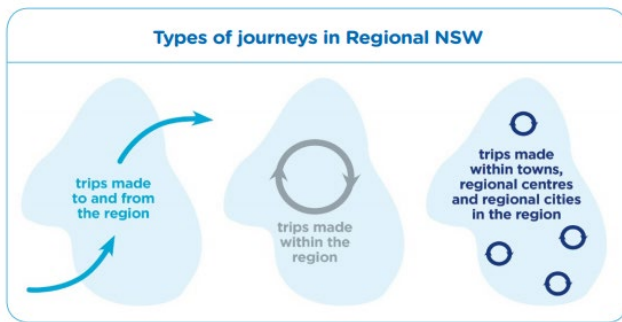


Figure 34: Types of journeys in Regional NSW⁷¹

Road Network Characteristics

Roads within NSW are categorised in the following two ways:

- By Classification (ownership); and
- By the function that they perform.

Road Classification

Roads are classified (as defined by the Roads Act 1993) based on their importance to the movement of people and goods within NSW (as a primary means of communication). There are three key classes of roads:

- **State Roads** – Major arterial links through NSW and within major urban areas. They are the principal traffic carrying roads and fully controlled, maintained and funded by Transport for NSW. In the Port Macquarie-Hastings LGA, the State Roads are the Pacific Highway which provides for north-south traffic (between Sydney & Brisbane), and the Oxley Highway, providing an east-west connection between the east coast and west of the Great Dividing Range).
- **Regional Roads** – Roads of secondary importance to State Roads which, with State Roads, provide the main connections to and between smaller towns and perform a sub arterial function in major urban areas. Regional roads are the responsibility of councils for maintenance funding, though Transport for NSW funds some maintenance based on traffic and infrastructure. In the LGA, Regional Roads include Ocean Drive, Hastings River Drive, Gordon Street, Comboyne Road, Kendall Road, River Street, Graham Street and Nancy Bird Walton Drive.
- **Local Roads** – These are remainder of the Council-controlled roads. Local Roads are the responsibility of Council for maintenance funding. Transport for NSW may fund some maintenance and improvements based on specific programs (e.g. urban bus routes, road safety programs).

The LGA's classified road network is shown in Figure 35.

⁷¹ NSW Regional Transport Strategy

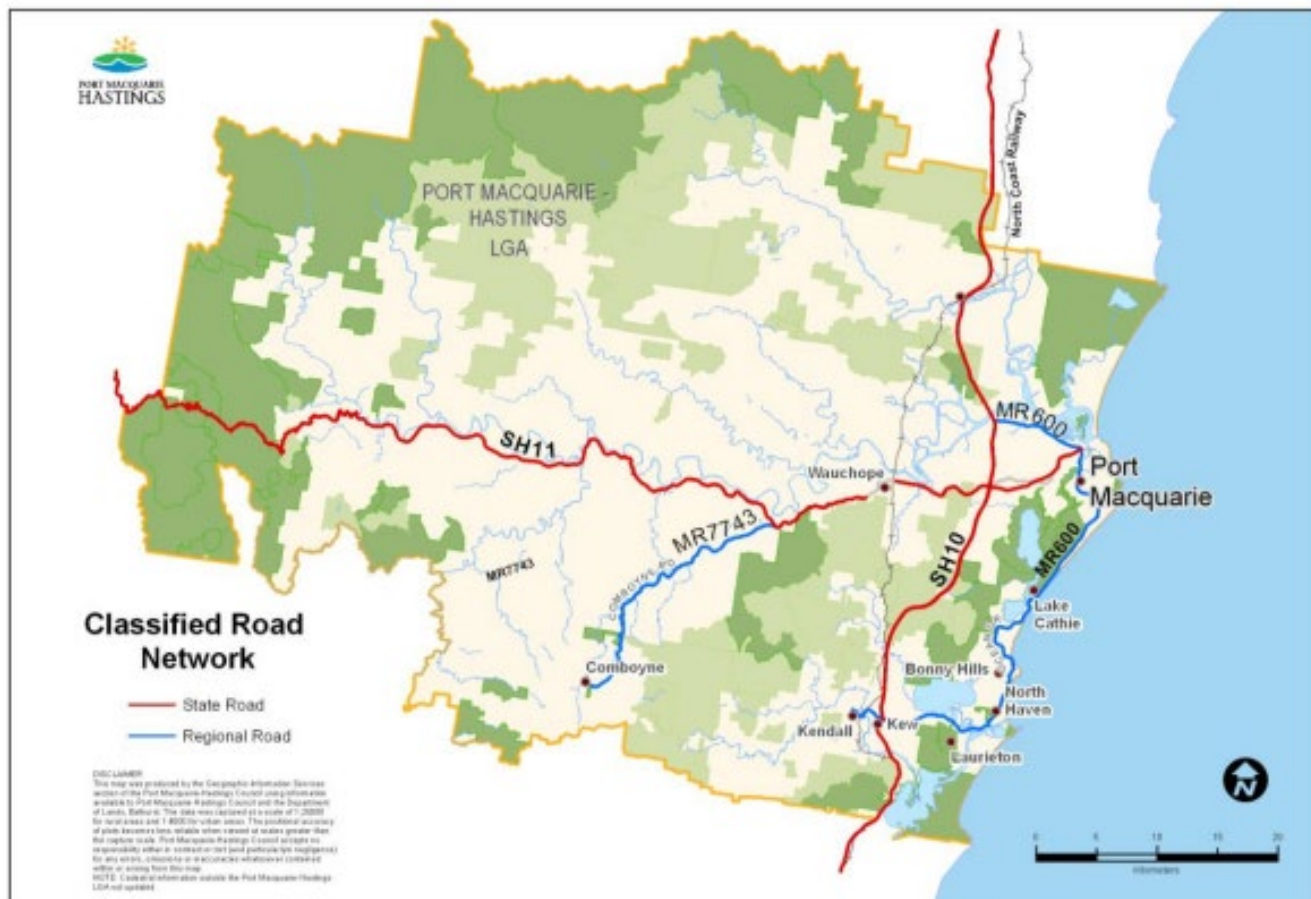


Figure 35: The Classified Road Network in Port Macquarie Hastings LGA

Functional Hierarchy for Roads

Functional road classification involves the relative balance of the mobility and access functions. Transport for NSW define four levels in a typical functional road hierarchy, ranking from high mobility and low accessibility, to high accessibility and low mobility. These road classes are outlined in Table B1.

			
<ul style="list-style-type: none"> Designed to carry vehicles long distance between regional centres Generally controlled by Transport for NSW Generally supports more than 15,000 vehicles per day Primary freight routes Limited access Speed limits generally 60-90 km/hr Examples in the LGA: <ul style="list-style-type: none"> - The Pacific Highway - The Oxley Highway - Hastings River Drive and - Ocean Drive 	<ul style="list-style-type: none"> Designed to carry through traffic between specific areas in a sub region, or provide connectivity from arterial road routes (regional links) Can be managed by either Transport for NSW or Council. Operating capacity ranges between 10,000 and 20,000 vehicles per day Speed limits generally 60-70 km/hr Examples in the LGA: <ul style="list-style-type: none"> • Lake Road (Oxley Highway to Ocean Drive) • Houston Mitchell Drive • Kendall Road / River Street / Graham Street / Lorne Road • Nancy Bird Walton Drive • Comboyne Road • Bago Road / Cameron Street • Stoney Creek Road (south) • Pembroke Road 	<ul style="list-style-type: none"> Designed to provide connectivity between local roads and the arterial road network Managed by Council Typically carry between 2,000 and 10,000 vehicles per day Speed limits 50-60 km/hr Examples in the LGA: <ul style="list-style-type: none"> - Lake Road (Ocean Drive to Gordon Street) - Boundary Street - Clifton Drive - John Oxley Drive - Major Innes Road - Bay Street - Findlay Street - Park Street - Gordon Street - Buller Street / William Street - Lord Street / Kennedy Drive - Koala Street - Pacific Drive - Kew Road / Bold Street • Camden Head Road • Beechwood Road • Blackbutt Drive 	<ul style="list-style-type: none"> Provide direct access to properties and the collector road system Typically carry between 500 and 4,000 vehicles per day. All roads other than those identified above are "Local Roads" in function.

Table B1: Functional Hierarchy of Roads in the Pot Macquarie LGA

The road network can be split into three discrete but related areas as detailed below:

Port Macquarie Road Network

The Port Macquarie area is located in the north-eastern portion of the LGA. The Port Macquarie CBD is located at the eastern end of the Oxley Highway (refer Figure 36). The Oxley Highway (up to 26,000 vehicles per day), Hastings River Drive (up to 15,000 vehicles per day) and Ocean Drive (up to 18,000 vehicles per day) radiate outwards from the city centre providing access to the surrounding suburbs, as well as connections to other regions. Lake Road (up to 18,000 vehicles per day) also provides a critical east-west link, being the southern-most connection between Ocean Drive and the Oxley Highway / Pacific Highway within the Port Macquarie urban area.

Within Port Macquarie the major land use is residential, interspersed with bushland and public open space. A large industrial area is centred around Lake Road, with smaller light industrial and bulky-goods retail along Hastings River Drive. There is also a large industrial area at Sancrox on the Pacific Highway, mid-way between Port Macquarie and Wauchope.



Figure 36: Port Macquarie Road Network

Wauchope Area Road Network

The town of Wauchope is located on the Oxley Highway to the west of the Pacific Highway (refer Figure 37). From Wauchope, the Oxley Highway continues westwards towards Tamworth. However, the major traffic activity is east of Wauchope, with traffic connecting to the Port Macquarie area. The volume on the Oxley Highway east of Wauchope is approximately 12,000 vehicles per day, while west of Wauchope the volume is approx. 3,000 vehicles per day.

Connection to the Pacific Highway is via the Oxley Highway, however for trips north and south more direct travel options are provided by Pembroke Road (up to 2,000 vehicles per day) and Bago Road (approximately 3,000 vehicles per day) respectively. Due to the relative standards of the Oxley Highway and Pacific Highway compared to the alternative routes, the travel time differences are not significant.

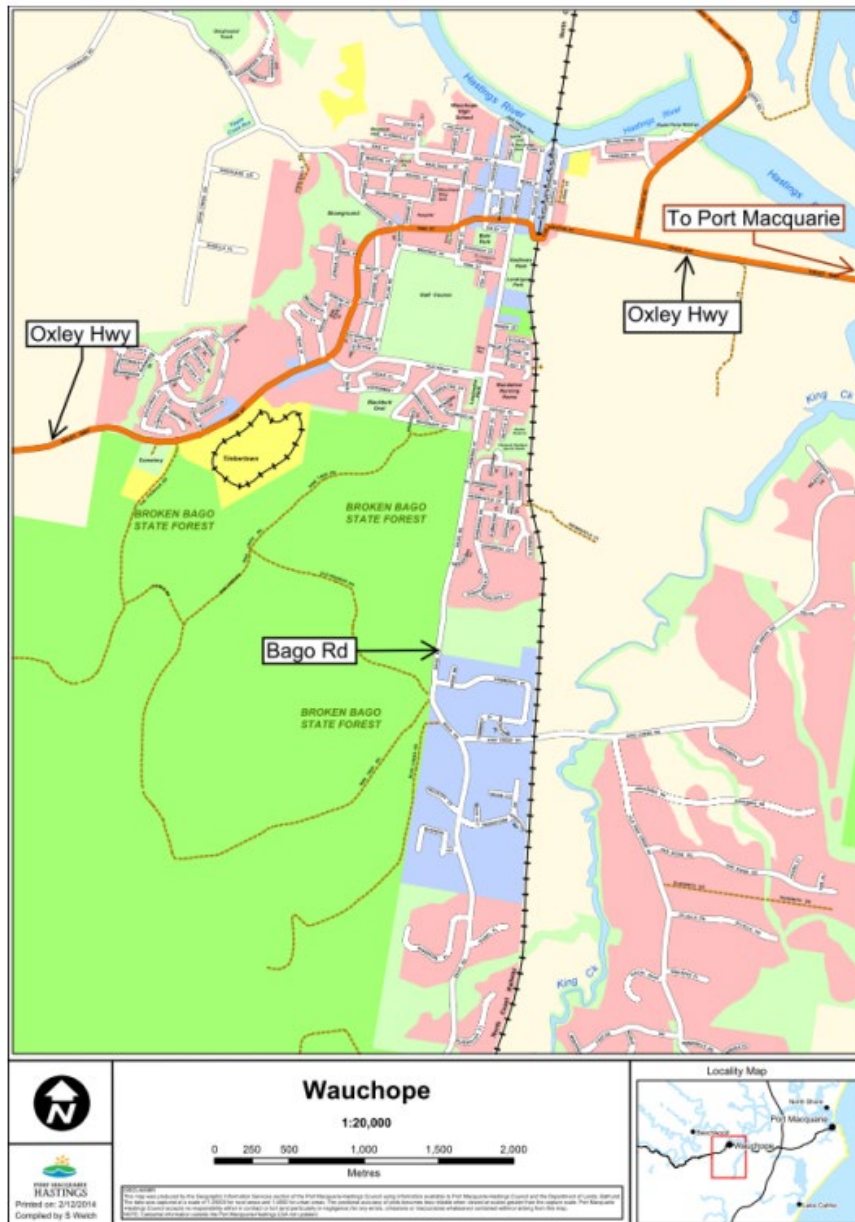


Figure 37: Wauchope Road Network

Camden Haven Road Network (incl. the Ocean Drive Corridor)

Ocean Drive connects Port Macquarie with the Pacific Highway, travelling via the coastal towns of Lake Cathie, Bonny Hills, North Haven, Laurieton, West Haven, Lakewood and Kew (refer Figure 38). Dunbogan, Camden Head and Kew are each located off the main Ocean Drive spine.

Daily traffic volumes vary along the route, with up to 11,000 vehicles per day west of Laurieton, 8,000 vehicles per day between Bonny Hills and Lake Cathie, and 7,000 vehicles per day south of the Port Macquarie urban area. Houston Mitchell Drive (approximately 3,000 vehicles per day) provides a connection to the Pacific Highway between Lake Cathie and Bonny Hills, but otherwise this area is predominantly reliant on Ocean Drive for road network connectivity. Land use in this area is primarily low-density residential with associated services.



Figure 38: Camden Haven Road Network



Our Maritime Network

Council operates two ferries within Port Macquarie that provide vehicle access across the Hastings River to the North Shore. There is no set timetable for ferry crossings, as the time taken to journey across the river varies depending on tidal conditions, however it generally takes no longer than seven minutes per crossing.

The Settlement Point Ferry crosses the Hastings River from Settlement Point Road to North Shore Drive. There is no scheduled timetable for when the ferry runs, however, generally it will run once it is loaded with cars, every 15 minutes or so. This ferry operates 24 hours per day 7 days per week.

The Hibbard Ferry crosses the Hastings River from Boundary Street to Riverside Drive 6.30am to 9.50am and 2.45pm to 6.50pm and 8.00am to 6.50pm on Weekends and Public Holidays (with the exception of Christmas day and one day per month for maintenance).

The Port Macquarie - Hastings has extensive waterways and recreational marine infrastructure. These resources are used widely by residents and tourists for recreational purposes.

Port Macquarie and Laurieton also have established marine industries. This includes a substantial shipyard at Port Macquarie which incorporates a dry dock, slipway and associated facilities that can accommodate vessels up to 450 tonnes on the slipway and 1000 tonnes in dry dock, with fabrication facilities suitable for vessels up to 50m in length. This industry also provides sea freight from mainland Australia to Lord Howe Island.

Our Aviation Network



Port Macquarie Airport is owned and operated by Port Macquarie-Hastings Council and is the only public airport in the LGA. The Airport is operated as a commercial business unit of Council, and is self-funded by revenue received from airport operations. It is a key gateway for business, tourism and personal travel, as well as high-value freight. The Airport serves the Greater Port Macquarie and wider Mid North Coast region, and caters for approximately 230,000 passengers per year, making it the 5th largest regional airport in NSW.

The Airport also supports a vibrant general aviation sector including pilot training, aircraft maintenance and repair work, freight and charter operations, emergency aero medical (patient transfer), search and rescue and bushfire fighting services (both fixed wing and helicopters), joy/adventure flights, private and recreational flying, and skydiving.

Council has developed the Port Macquarie Airport Master Plan 2010 (the Airport Master Plan). The Airport Master Plan presents a 20-year vision for the Airport site and provides the framework and strategic direction to guide the future development of the Airport to underpin our region's growth, economic development and tourism potential.

Council's Vision for the Airport is to be the premier gateway to the NSW Mid North Coast, whilst Council's Mission for the Airport is to continue to grow the Airport's contribution to the regional economy by promoting a range of competitive airline services that underpin the region's business and tourism industries; and by establishing an airport precinct business park to attract new employment and inward investment opportunities to the region. Council's priority objectives for the Airport are:

- To provide adequate infrastructure and facilities to meet the forecast demand for future regular public transport (RPT) airline operations; and
- To provide opportunity for commercial property development to promote employment opportunities, facilitate economic development, and support the long-term financial viability and sustainability of the Airport business.

Following completion of the Stage 1A airside infrastructure upgrade in 2013, Council has recently reviewed and updated the Master Plan by way of an Addendum Report which identifies future development required to:

- Continue to comply with Civil Aviation Safety Authority (CASA) aerodrome standards,
- Cater for forecast growth in airline (RPT) services and passenger numbers,
- Cater for demand for future general aviation (GA) activities,
- Provide opportunity for commercial property development; and
- Promote the establishment of flood-free road access to the Airport.

Council is also currently investigating opportunities for recently rezoned land, comprising approximately 28 hectares of land to the east of the existing general aviation precinct, as an Airport Precinct Business Park.

Improvement of connections between the airport and other key hubs such as the Port Macquarie CBD and Health and Education Precinct will improve transport network integration and associated economic growth for the region.

Appendix C - Emerging Trends in Transport

Electric and Alternative Fuel Vehicles

Low and zero-emission vehicles include hybrid, plug-in hybrid, battery electric and hydrogen fuel cell vehicles. These vehicles offer major benefits compared to conventional internal combustion engine vehicles. Benefits of a move away from fossil-fuelled transport include:

- Lower costs for users – running costs are one third to one quarter of traditional vehicles (although up-front costs are currently higher)
- Reduced air pollution and lower greenhouse gas emissions compared to internal combustion engine vehicles
- Health benefits from air quality improvements
- Reduced noise from vehicle operations (particularly buses), which improves the amenity and liveability of places
- Improved energy security through reduced reliance on non-renewable imported fuels.⁷²

As at January 2021, of the 20.1 million registered motor vehicles in Australia there were 23,000 electric vehicle registrations. Although only just over 1% of the vehicle registrations Electric vehicle registrations increased by 62.3% from the previous year⁷³

Light and medium electric commercial vehicles are now also available and more electric heavy vehicles are being trialled. In addition, walking, cycling and micro mobility options, such as electric bikes, help lower emissions for short trips and can provide connections to public transport.⁷⁴

Australia's infrastructure for charging electric vehicles is centred around the more populated states and territories. In August 2021, New South Wales had a total of 1017 charging points⁷⁵ and the crowd-sourced PlugShare mapping application indicates that there are currently 17 charging locations within the Port Macquarie Hastings LGA.⁷⁶ Provision of this infrastructure is currently being implemented by various public and private sector organisations, including the NSW Government.

With Electric Vehicles forecast to reach upfront price parity with traditional combustion engine vehicles in Australia from 2024,⁷⁷ combined with the NSW Government's aspirational target of having up to 10 per cent hydrogen blended into the NSW gas network by 2030, this necessitates the need for a transition towards a future where both electric and hydrogen fuel cell vehicles become the norm rather than the exception.

Connected and Automated Vehicles

Automated Vehicles utilise technology to assist or replace the driver of a vehicle. Connected and automated vehicles (CAVs) are technologies that could help address current and future challenges around the safe and efficient movement of people and freight, improve transport services and experiences for customers, and achieve better outcomes for our residents and visitors and our places.

In the coming years, CAV technologies will support a growing variety of passenger and freight vehicles of all sizes to serve different customer needs in different places. CAVs have the potential to offer a broader range of flexible travel options and safer, smoother and faster journeys. CAVs can also be used for certain freight operations, for example in first- and last-mile delivery applications.

⁷² [Future Transport Strategy \(nsw.gov.au\)](https://www.nsw.gov.au/future-transport-strategy)

⁷³ [Motor Vehicle Census, Australia, 31 Jan 2021 | Australian Bureau of Statistics \(abs.gov.au\)](https://www.abs.gov.au/motor-vehicle-census-australia-31-jan-2021)

⁷⁴ Future Transport Technology Roadmap 2021-2024).

⁷⁵ [Australia: charging points for electric vehicles by state 2021 | Statista](https://www.statista.com/chart/11111/australia-charging-points-for-electric-vehicles-by-state-2021)

⁷⁶ [PlugShare - EV Charging Station Map - Find a place to charge your car!](https://www.plugshare.com/ev-charging-station-map)

⁷⁷ [Net Zero Plan. Stage 1: 2020-2030 \(nsw.gov.au\)](https://www.nsw.gov.au/net-zero-plan-stage-1-2020-2030)

CAVs may change the way our centres operate, as they require fewer traffic signals, signage, kerbs and lines to guide their movement, potentially reducing unnecessary ‘street clutter’. As CAVs require less parking infrastructure, extra space could also be made available for trees, cycle ways and wider footpaths.

As far as possible, CAV technology needs to work with existing road infrastructure. While the onus must be on those developing the technology to make sure it can work for a range of different road types and environments, without forcing unreasonable costs onto road authorities and taxpayers, some changes to roads will be needed for CAVs to operate safely and deliver benefits.

Consideration will need to be given to which modifications to existing infrastructure may be needed, such as lane markings, roadside signage, road geometry (e.g. lane width) and construction and maintenance, or whether CAVs can manage existing infrastructure without imposing a cost on our community.

We will also need to plan for the future needs of CAVs and other emerging technologies and services into precinct and project plans. In the longer term, this could extend to larger scale changes to our infrastructure needs and the shape of the future road network, such as repurposing land currently used as parking spaces.⁷⁸

Mobility-as-a-Service (MaaS)

MaaS is a total mobility solution focused on an individual’s need to get from A to B. It is evolving from service models which provide vehicle transport without the cost of ownership. Car share has quickly grown in popularity from its origins on university campuses, while ride share or hailing services such as Uber are more recent but now well-established entrants. MaaS combines multiple transport modes such as car and ride share, with public and even active transport options. Crucially, MaaS offerings are designed to out-compete conventional car transport options via a compelling user experience with dynamic journey planning and streamlined payment processes.

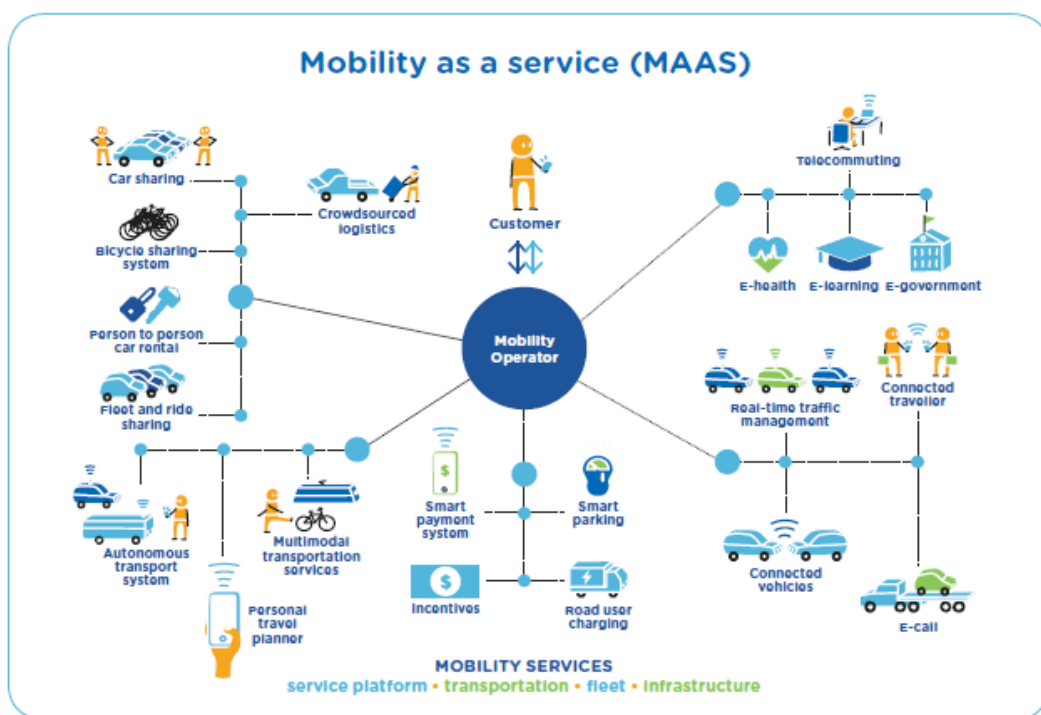


Figure 39: Example of the Mobility as a Service (MaaS) concept ⁷⁹

⁷⁸ [Connected and Automated Vehicle \(CAV\) Readiness Strategy | Transport for NSW](#)

⁷⁹ [Future Transport Strategy \(nsw.gov.au\)](#)

Mobility Hubs

A mobility hub locates multiple transportation services in one place, letting travellers move more seamlessly from one to another. Such a hub, while providing traditional public transport (transit) services via bus might also encourage walking; provide racks for bicycles on buses and trains; offer bike share, rideshare, and car share programs; operate high frequency, local shuttle services; and enable other regional and local transit connections.

New aviation technologies

The increasing capability and deployment of drones and small scale personalised aircraft are providing opportunities and innovations that could provide benefits across a range of areas including: customer mobility, last-mile delivery for freight customers and operators, efficient and effective management of built assets, and rapid deployment of emergency personnel, maintenance crews and equipment.

With numerous companies in Australia and other locations around the world actively exploring the potential for drones to be used for small parcel freight delivery and point-to-point transport for people, there is likely to be competition for air and landing spaces for drones and other aviation technologies in the future.

The future use of drones and other aviation technologies will need to consider potential community impacts (such as noise pollution), access arrangements for multiple operators, safety issues and supporting infrastructure requirements (e.g. the design of vertiports - a new-style aerodrome designed to service next-generation vertical take-off and landing (VTOL) capable aircraft).

Appendix D - Glossary

A

Accessibility

The degree to which a place, service or environment is available to as many people as possible.

Active transport

Transport that requires some individual physical effort to provide mobility. Active forms of transport for personal travel include walking, use of a wheelchair or other mobility aid, cycling using a traditional bicycle (without power assistance) and power-assisted micro mobility (such as e-bikes and e-scooters). Active forms of transport for freight delivery include both pedal-powered and electric power-assisted cargo bikes.

Activity Centres

Suburban centres that provide a focus for services, employment, housing, transport and social interaction.

Amenity

Attractiveness, comfort or convenience

C

Catchment

The area and population from which a transport hub attracts users or customers

Circular economy

An economic system aimed at minimising waste and promoting the continual reuse of resources. The circular economy aims to keep products, equipment and infrastructure in use for longer, thus improving the productivity of these resources.

Climate change

A change in global or regional climate patterns over time; in particular, a change apparent from the mid to late 20th century onwards and attributed largely to the increased levels of greenhouse gas emissions such as carbon dioxide.

Climate change adaptation

In human systems, adaptation is the process of adjustment to the actual or expected climate and its effects to moderate harm or exploit beneficial opportunities. In natural systems, the process of adaptation is adjustment to the actual climate and its effects; human intervention may facilitate adjustment to the expected climate and its effects.

Connectivity

The number of connections to and from a particular place, the level and quality of access for transport users.

Cost Benefit Analysis

An appraisal and evaluation technique that estimates the costs and benefits of a project or program in monetary terms.

Critical infrastructure

The assets, systems and networks required to maintain the security, health and safety, and social and economic prosperity of a community, such as energy, water, communications, transport and health infrastructure.

H

Housing Density

One of several measures that describe how intensively an urban area is developed usually measured in dwellings per hectare.

I

Infill

Development of unused or under-utilised land in existing urban areas. Most infill development sites are in inner and middle suburbs, offering the possibility of better utilising existing infrastructure to accommodate population growth.

Infrastructure

Systems and networks (both physical and non-physical) by which public services are delivered to the community, including water supply, sewerage, energy and transportation network (physical).

Integration

Combining or bringing together two separate entities/process. For example, transport and land use planning.

L

Land use planning

The organisation of land, resources, facilities and services with a view to securing physical and economic efficiency, social inclusion, the protection of environmental values, amenity, and health and wellbeing outcomes for urban and rural communities.

Liveability

A measure of residents' quality of life, used to benchmark cities and towns across the world. Usually includes socio-economic, environmental, transport and recreational measures.

M

Master Plan

A long-term visualisation of a "place" e.g. city, centre or other area, to be realised with future development.

N

Net Zero Emissions

Net Zero emissions are achieved when anthropogenic emissions of greenhouse gases to the atmosphere are balanced by anthropogenic removals over a specified period.

O

Open Space

Includes land reserved for natural landscape, parklands, recreation and active sports, as well as waterways and bays.

P

Precinct

A specific geographic area within a city or a region where infrastructure investment, changes to planning controls, business attraction and/or other levers are used to attract facilities, services, businesses and other organisations to co-locate in order to drive economic, environmental, social and cultural value.

Q

Quadruple Bottom Line (QBL)

Quadruple Bottom Line is a framework to evaluate performance across 4 pillars: economic, environmental, social and governance.

R

Resilience

Resilience can be described as the ability of a system (in this case the transport system) to prepare for and to withstand, absorb and adapt to shocks, and to recover from the consequences in a timely and effective manner.

Resilience assets

Classes of infrastructure assets specifically designed to improve resilience to shock events, for example flood mitigation infrastructure.

S

Safe Systems

A guiding framework for delivering road safety outcomes that aims to minimise the risk of death or serious injury in interactions between all road users.

Smart places

Smart places integrate technologies into the built environment to capture and convey data and insights. The embedded technology helps to capture information on the asset or local environment. The information is then analysed to help people and governments make better, evidence-based decisions about how to improve the productivity, liveability and resilience of cities, towns and communities.

Smart infrastructure

Infrastructure that uses data gathered through sensors and technologies that are embedded in the infrastructure or surrounding environment. NSW has a Smart Infrastructure Policy.

Sustainability

Sustainability describes managing resources without depleting them for future generations. It is a commitment to live within the carrying capacity and resource limits of the planet. This concept goes beyond environmental sustainability, which concerns earth's natural resources, to include economic and social sustainability, which relate to meeting people's current social and economic needs without compromising future generations.

T

Transport Modes

Different types of transport, including public transport (train, tram, bus, taxi), private transport (motorcycle, private car, truck) and active transport (walking and cycling).

V

Vertiport

A new-style aerodrome designed to service next-generation vertical take-off and landing (VTOL) capable aircraft.

W

Walkability

Walkability describes the quality of walking conditions, including safety, comfort and convenience.