

# TRAFFIC & TRANSPORT STRATEGY





*Journey Through Time*, created by local school students and artist Steven Campbell.

## Acknowledgement of Country

Cessnock City Council acknowledges that within its local government area boundaries are the traditional lands of the Wonnarua people, the Awabakal people and the Darkinjung people. We acknowledge these Aboriginal peoples as the traditional custodians of the land on which our offices and operations are located, and pay our respects to Elders past and present. We also acknowledge all other Aboriginal and Torres Strait Islander people who now live within the Cessnock Local Government Area.

---

November 2023

© Copyright, Cessnock City Council 2023

### Disclaimer

While every reasonable effort has been made to ensure that this document is correct at the time of printing, Cessnock City Council, its agents and employees, disclaim any and all liability to any person in respect of anything or the consequences of anything done or omitted to be done in reliance upon the whole or any part of this document. Information and data compiled in this report by Bitzios Consulting.

# Contents

Mayor's Message	4
Executive Summary	6
<b>1. Introduction</b>	<b>16</b>
<b>2. Current Situation</b>	<b>22</b>
<b>3. Challenges and Opportunities</b>	<b>28</b>
<b>4. Strategic Direction</b>	<b>36</b>
<b>5. Action and Implementation Plan</b>	<b>38</b>
<b>6. Summary</b>	<b>72</b>

# Mayor's message

## Jay Suvaal

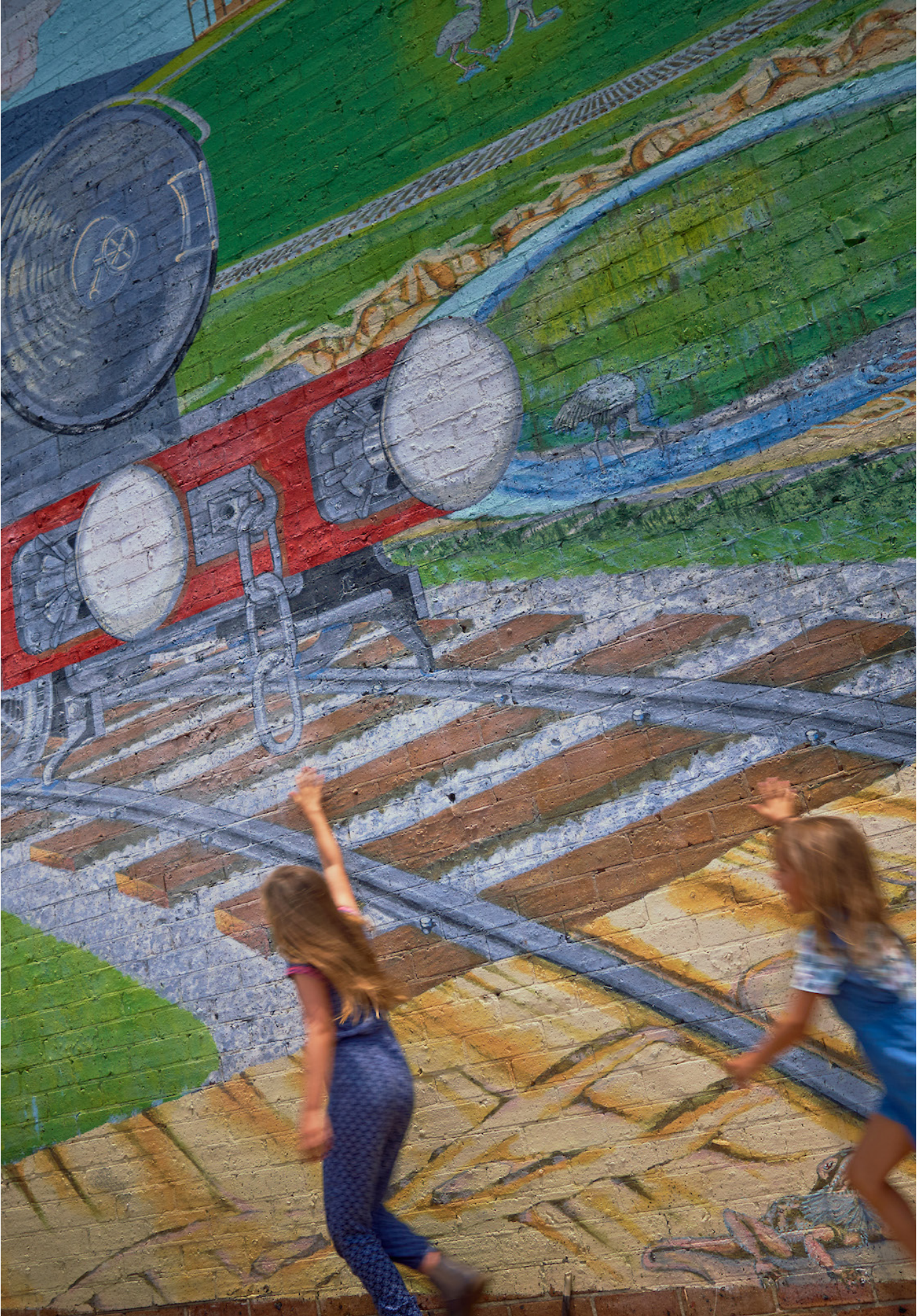
**The Cessnock local government area is experiencing rapid growth and it is incumbent on Council to have a plan to accommodate this change and leverage the opportunities that are presented. The Cessnock LGA Traffic and Transport Strategy 2023 sets out a bold blueprint to improve and expand our transport network to better support the needs of current and future populations.**

The long-term vision contained in the strategy is used to guide transport related decision making between now and 2041. The

document uses sound transport principles to identify specific actions that respond to identified challenges across the Cessnock transport network.

Looking ahead, I am filled with confidence in the strategic direction of Cessnock City Council. There are a number of forward-thinking projects laid out in the blueprint and I'm looking forward to seeing Council execute the strategy to deliver the quality outcomes our community deserves. We will continue to work diligently to ensure we provide the essential traffic and transport infrastructure that our community needs to thrive.





# ***EXECUTIVE*** SUMMARY

# What is the Cessnock LGA Traffic and Transport Strategy 2023?

The purpose of the Cessnock LGA Traffic and Transport Strategy (CTTS) 2023 is to provide a long-term vision that can be used to guide transport related decision making between now and 2041. It identifies a range of actions that Council, the State Government, and other stakeholders need to consider to improve and optimise the transport network for years to come.

The CTTS 2023 has been developed as an update to the existing CTTS which was originally developed in 2018 (CTTS 2018). This update has been required as the existing strategy did not consider, and could not have predicted, the significant population growth, changed work environments, and changed population behaviour that has occurred post the COVID-19 outbreak.

For context, CTTS 2018 forecasted the 2041 population as 69,928 compared to the updated data utilised in CTTS 2023 which forecast 112,419 residents.



# Transport Challenges

Cessnock, like many regional NSW local government areas, is a collection of towns and villages of varying sizes. With the regional city of Newcastle to the east, its strong mining base, and numerous tourist attractions, Cessnock has a robust economic foundation which is leading to growth. This growth is expected to introduce further traffic, pedestrian, cyclist, and parking demands which need to be managed in a way that encourages greater use of sustainable transport modes and retains the liveability of local communities.

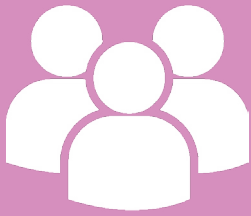
The LGA is expected to:

- Increase in population from 64,067 residents in 2021 to 112,419 residents in 2041, resulting in an average increase of 2,400 residents per year
- Increase in employment from 18,903 jobs in 2016 to 26,285 jobs in 2041, resulting in an average increase of 295 jobs per year
- In 2020/21, approximately 166,000 trips per day were made within the LGA with 97% being made by a private vehicle and only 1.1% using public transport and 1.9% walking.

Considering the increase expected in population and employment, combined with 97% of trips being made by a private vehicle, the existing transport network is not expected to be able to suitably accommodate the future traffic volumes.







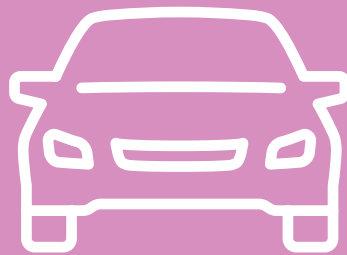
Population is expected to grow by **45,300** people by 2041.



Key roads experience **high levels of traffic congestion** during the morning and evening peak hours.

Important **tourist destination** which is expected to grow and diversify.

**97%** of all trips are via private vehicles.



**44%** of the population are vulnerable users.

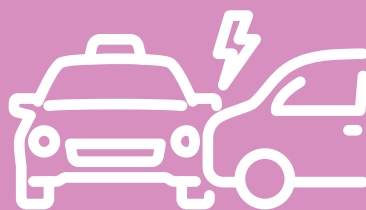


Cessnock is a **collection of small urban centres** with a lack of significant density.

**55%** of employed people living in Cessnock travel from outside the Region daily.

In NSW, transport activity accounts for **19%** of CO<sub>2</sub>e emissions.

Cessnock has a **37%** higher fatality rate than the NSW Stage average.



Poor road condition was the 2nd highest concern of Cessnock residents, behind congestion.

# Identifying the Strategic Direction

The vision of the CTTS 2023 is defined as:

***A people focussed transport network that is safe, sustainable, accessible, and connected which advances economic growth, tourism, and local amenity.***

To achieve the vision statement for the CTTS 2023, six (6) key themes have been identified which aim to address the issues facing the future transport network. These themes include **liveable, sustainable, safe, connected, productive, and resilient**. These themes have been developed to closely align with the overarching Hunter Regional Transport Plan.

The six (6) key themes have assisted in the development of objectives and actions which should be pursued to achieve the desired future transport network in the LGA.

## Options to Meet the Challenges

### Transport Principles

The Strategy has identified several key transport principles that can be applied to assist in responding to the challenges of the LGA. These include the “Movement and Place Framework”, the “Safe Systems Approach”, “15-Minute Neighbourhoods”, “First Mile, Last Mile”, and “Emerging Technologies”:

These principles have been utilised as the basis to assist in defining specific actions that will respond to the identified challenges of the Cessnock transport network.

### Transport Opportunities

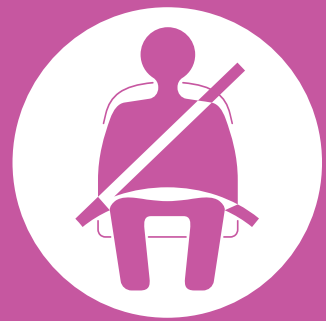
The key transport opportunities include:

- The extensive Council controlled road network
- Integrated land use and planning
- Increased uptake of active and public transport
- Future use of the existing heavy rail corridor
- Improvements to health and safety for residents and visitors.



The **Movement and Place** framework focusses on creating successful streets and roads by balancing the movement of people and goods with amenity of places.

The **Safe Systems** approach recognises that people will continue to make mistakes and aims to provide a more forgiving road network to reduce the likelihood and severity of incidents occurring.



The **15 Minute Neighbourhood** supports living locally by providing most of the residents everyday needs within a 15-minute trip via active or public transport.

The **First Mile, Last Mile** principle identifies and focusses on the distance a commuter is required to travel to reach public transport at the start and end of their journey.



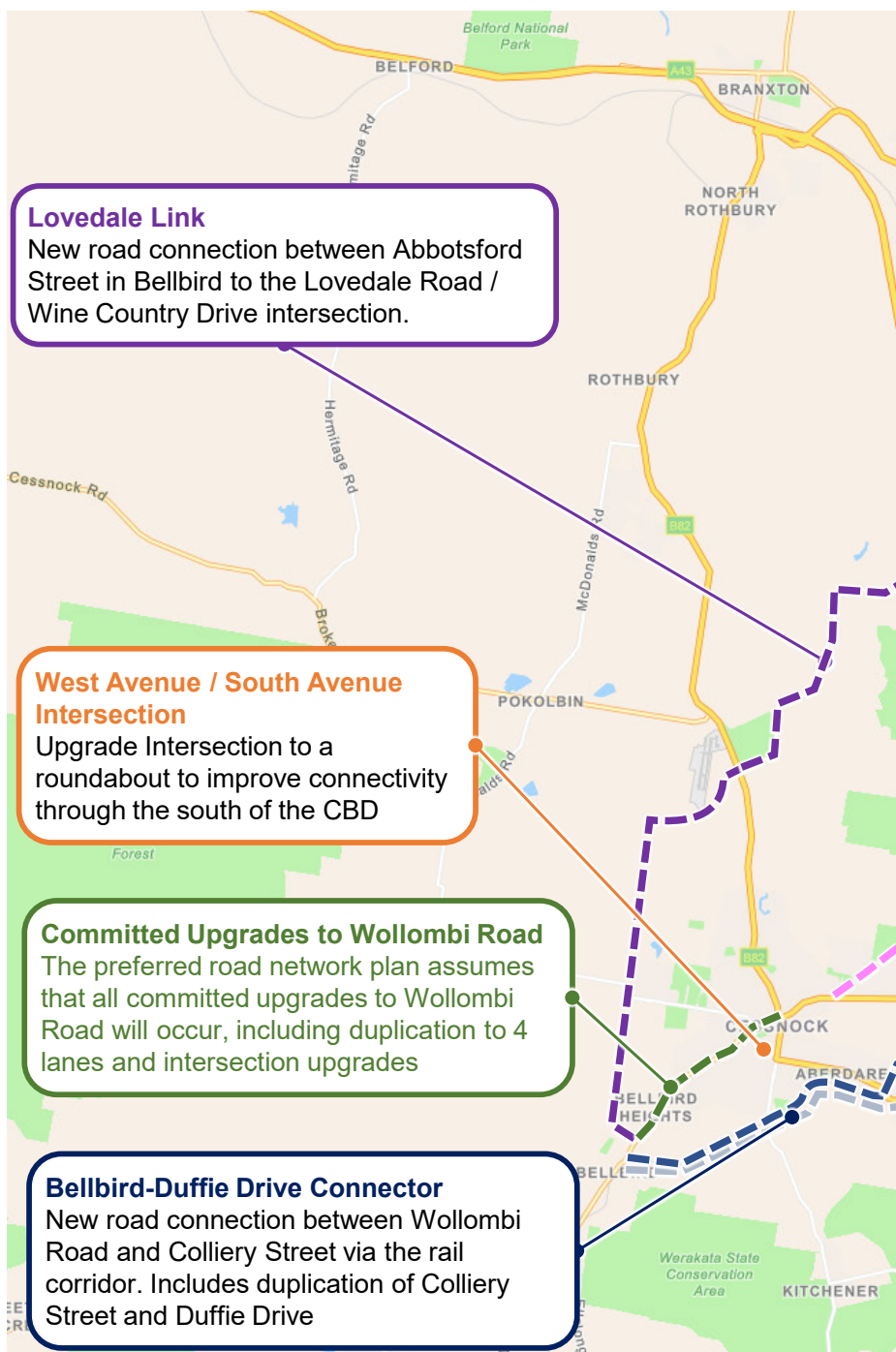
**Emerging Technologies** provide an opportunity for the region to adopt more sustainable transport modes in a goal to reach zero emissions.

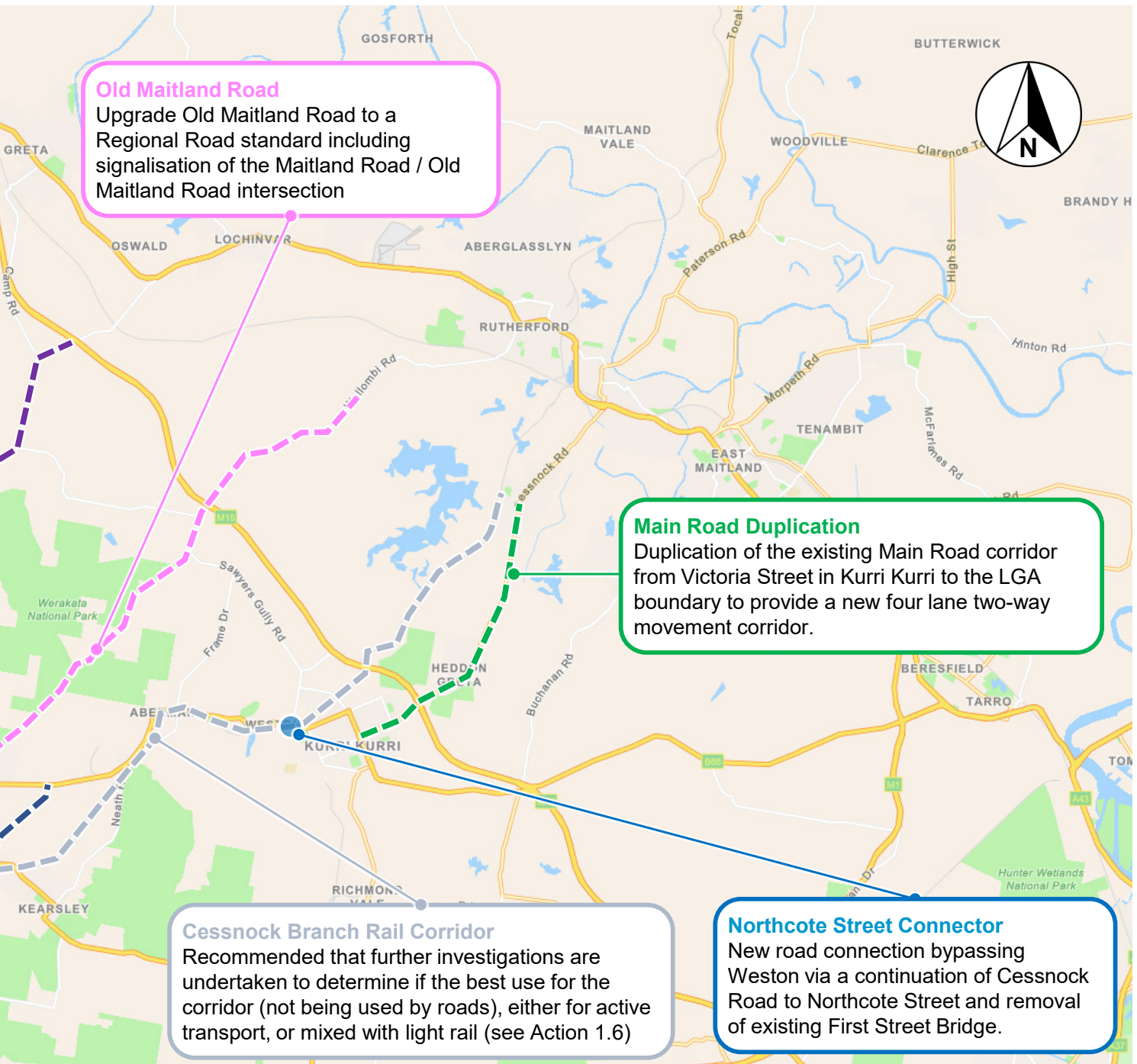
# Preferred Road Network Plan

Network improvement options have been developed and tested to address key challenges faced within the LGA, particularly related to predicted traffic congestion issues. Aimsun strategic traffic modelling was used to analyse the proposed upgrade options and output a “Preferred Road Network Plan” as illustrated pictured right.

The “Preferred Road Network Plan” includes the following:

- Assumes that committed upgrades to Wollombi Road will occur as planned
- Upgrading Old Maitland Road to a Regional Road standard
- A new road connection between Abbotsford Street in Bellbird and the Lovedale Road / Wine Country Drive Intersection
- A new road connection between Bellbird and Aberdare via the existing heavy rail corridor
- Duplication of the existing Main Road corridor from Victoria Street in Kurri Kurri to the LGA boundary
- A new road connection bypassing Weston via a continuation of Cessnock Road to Northcote Street and removal of the existing First Street bridge.



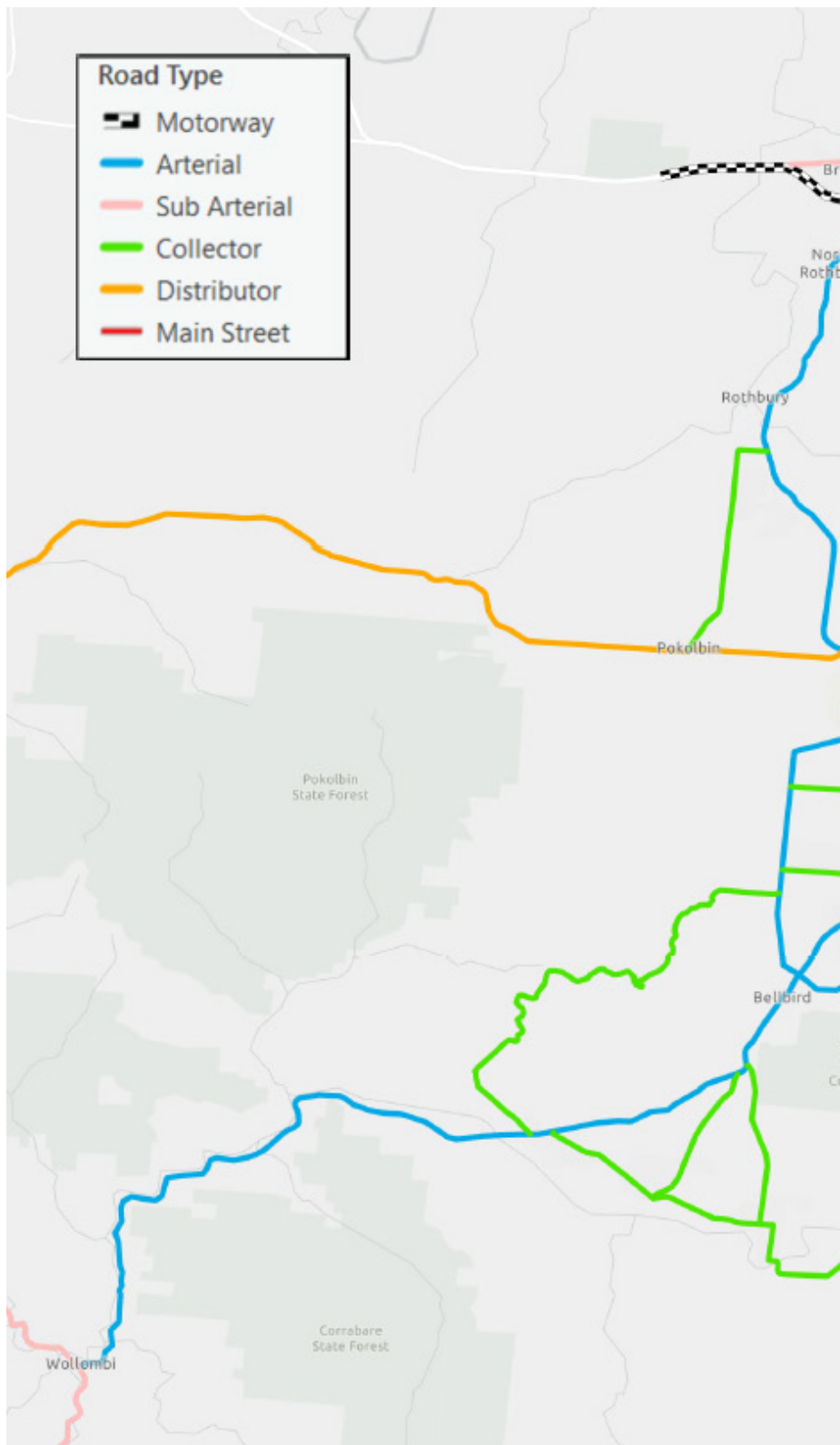


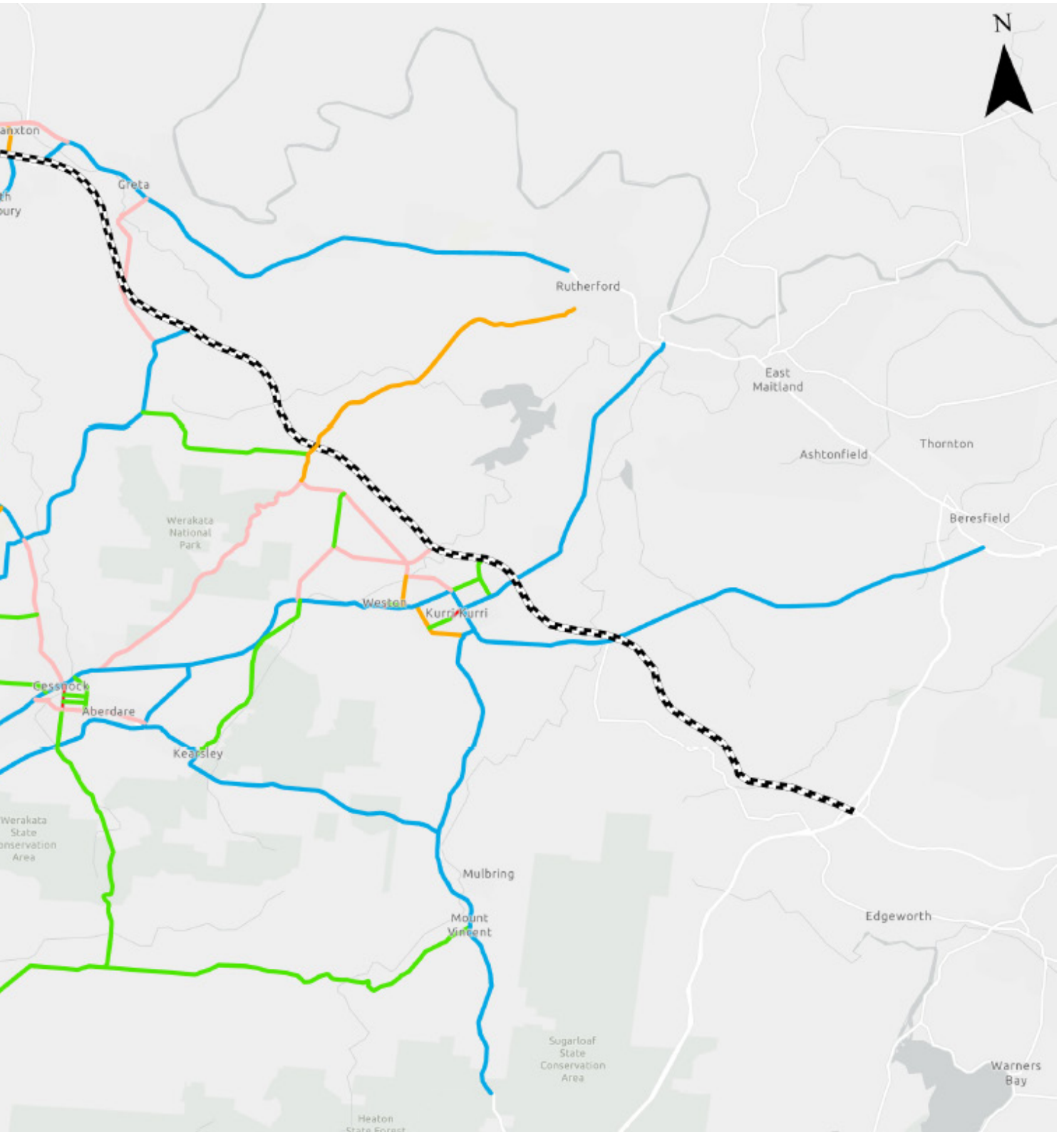
# Integrated Action Plan and Implementation Plan

Transport modelling has been undertaken for the 2026, 2031, and 2041 design horizons to identify specific road network upgrade requirements for each design horizon. The “Preferred Road Network Plan” will service the 2041 forecast traffic volumes; however, there are opportunities to implement the proposed upgrades in stages to ensure that planned growth is continually accommodated over future horizons.

As part of this modelling, a new road hierarchy has also been determined. This classifies each road into a specific hierarchy based on the purpose, function, management, and design of the corridor, while also considering the additional impacts associated with the “Preferred Road Network Plan”.

Additionally, the CTTS 2023 provides a list of actions to be considered / implemented between now and 2041. A list of 65 targeted actions have been provided relating to the key themes: **liveable, sustainable, safe, connected, productive,** and **resilient**. The action plan also applies each relevant action to specific locations within key local centres such as the Cessnock CBD, Kurri Kurri, Weston, Branxton, Greta, Nulkaba, and Wollombi.





# ***INTRODUCTION***



# 1.1 Context

Cessnock, like many regional NSW local government areas, is a collection of towns and villages of varying sizes. With the regional city of Newcastle to the east, its strong mining base, and numerous tourist attractions, Cessnock has a robust economic foundation which is leading to significant growth. This growth is expected to introduce further traffic, pedestrian, cyclist, and parking demands which need to be managed in a way that encourages greater use of sustainable transport modes and retains the liveability of local communities.

The Cessnock LGA covers 1,966 square kilometres and includes the centres of Cessnock, Kurri Kurri, Weston, Branxton, Greta, Abermain, Aberdare, Bellbird and Wollombi, as well as several other small townships. Figure 1.1 presents a map of the Cessnock LGA.

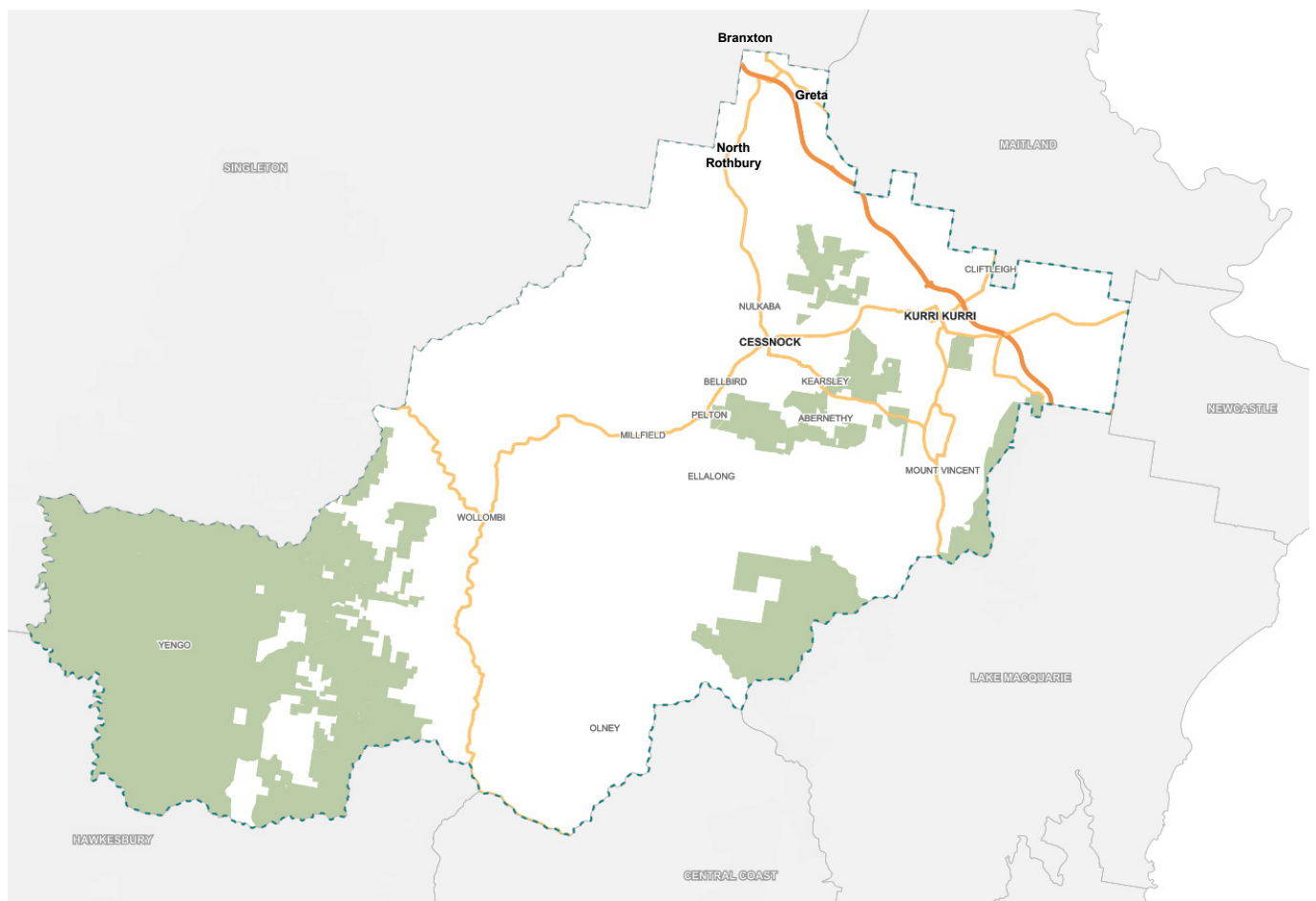


Figure 1.1: Cessnock LGA Map

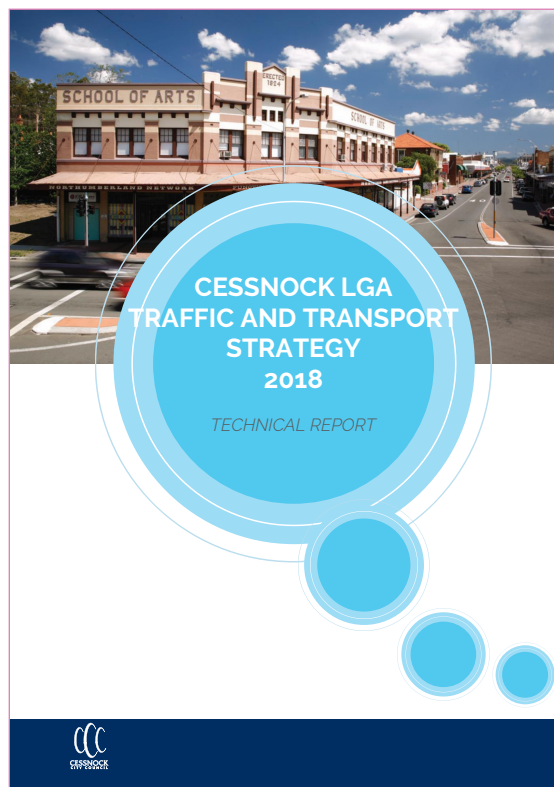
## 1.2 Why Update the Strategy?

In 2016, Cessnock City Council initiated the development of the first comprehensive transport master plan for the LGA, the “Cessnock Traffic and Transport Strategy” (CTTS 2018), which provided a master plan that was used to guide transport decision making. However, the strategy could not have foreseen the significant population growth, changed work environments, and changed population behaviour that is occurring post the COVID-19 outbreak. As such, an update to CTTS 2018 has been undertaken to reflect the revised current and future conditions of the LGA.

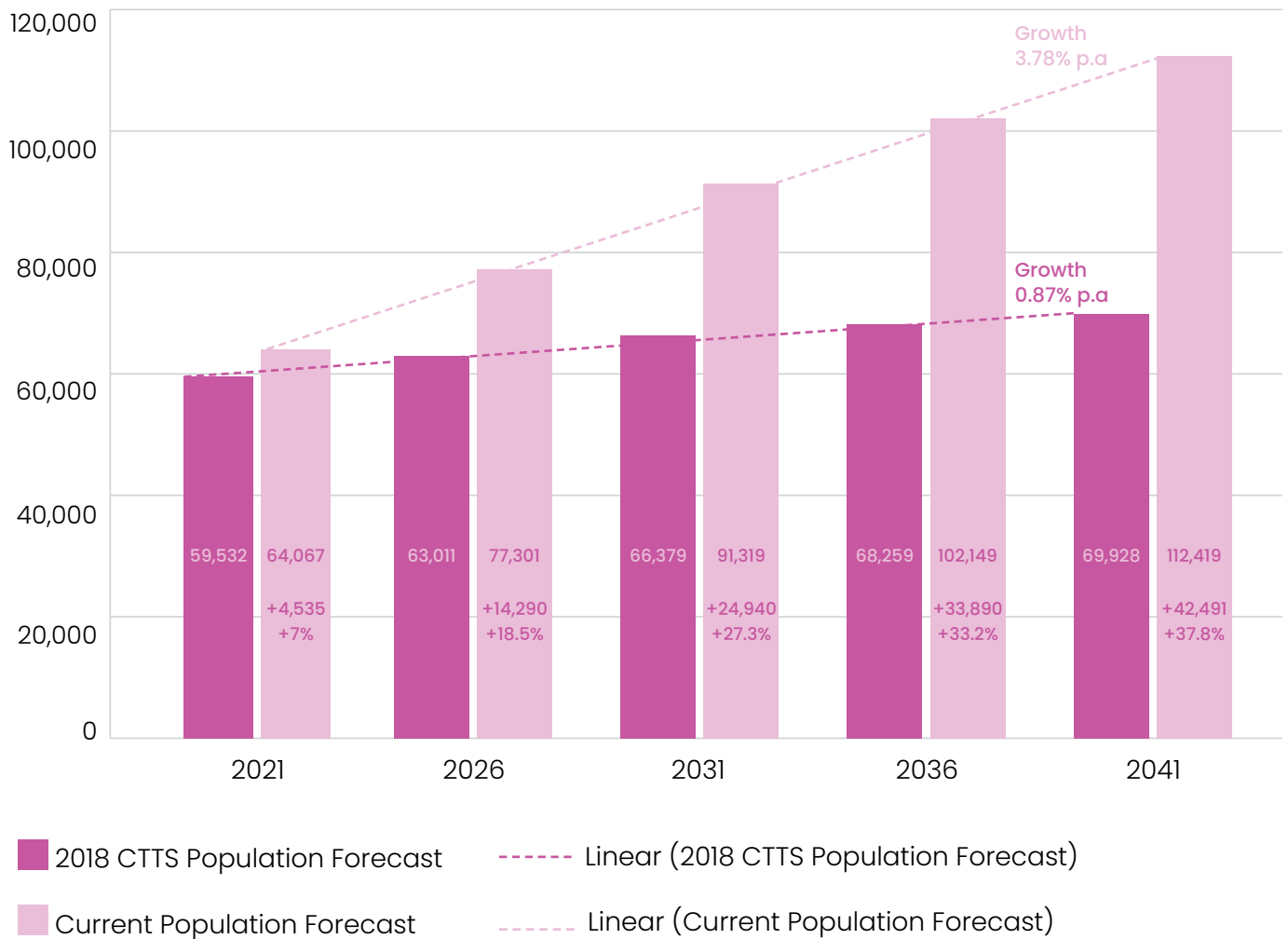
Due to the impact of the COVID-19 pandemic the opportunity for employees to work from home has significantly increased, either on a full time or part time basis. As a result of this, employees are generally more accepting of relocating further away from the major employment centres such as Newcastle and Sydney. This employment behavioural change, along with the more affordable property market and social / lifestyle benefits has significantly increased the number of people migrating to the Cessnock LGA.

For context, CTTS 2018 forecast a population of 59,532 by 2021 and 69,928 by 2041. However, contemporary estimates based on more recent population data (sourced from Forecast.id) show a 2021 population of 64,067 growing to 112,419 by 2041. This forecast shows an additional 42,491 residents (or +61%) using the transport network by 2041 that were not considered in CTTS 2018.

Figure 1.2 provides a comparison of the assessed population in CTTS 2018 compared to the current population forecasts.



# Population Forecast Comparison



**Figure 1.2: Strategy Population Forecast Comparison**

The above statistics highlight the need for an updated CTTS to ensure that the transport network has sufficient infrastructure and capacity to accommodate the forecast growth.



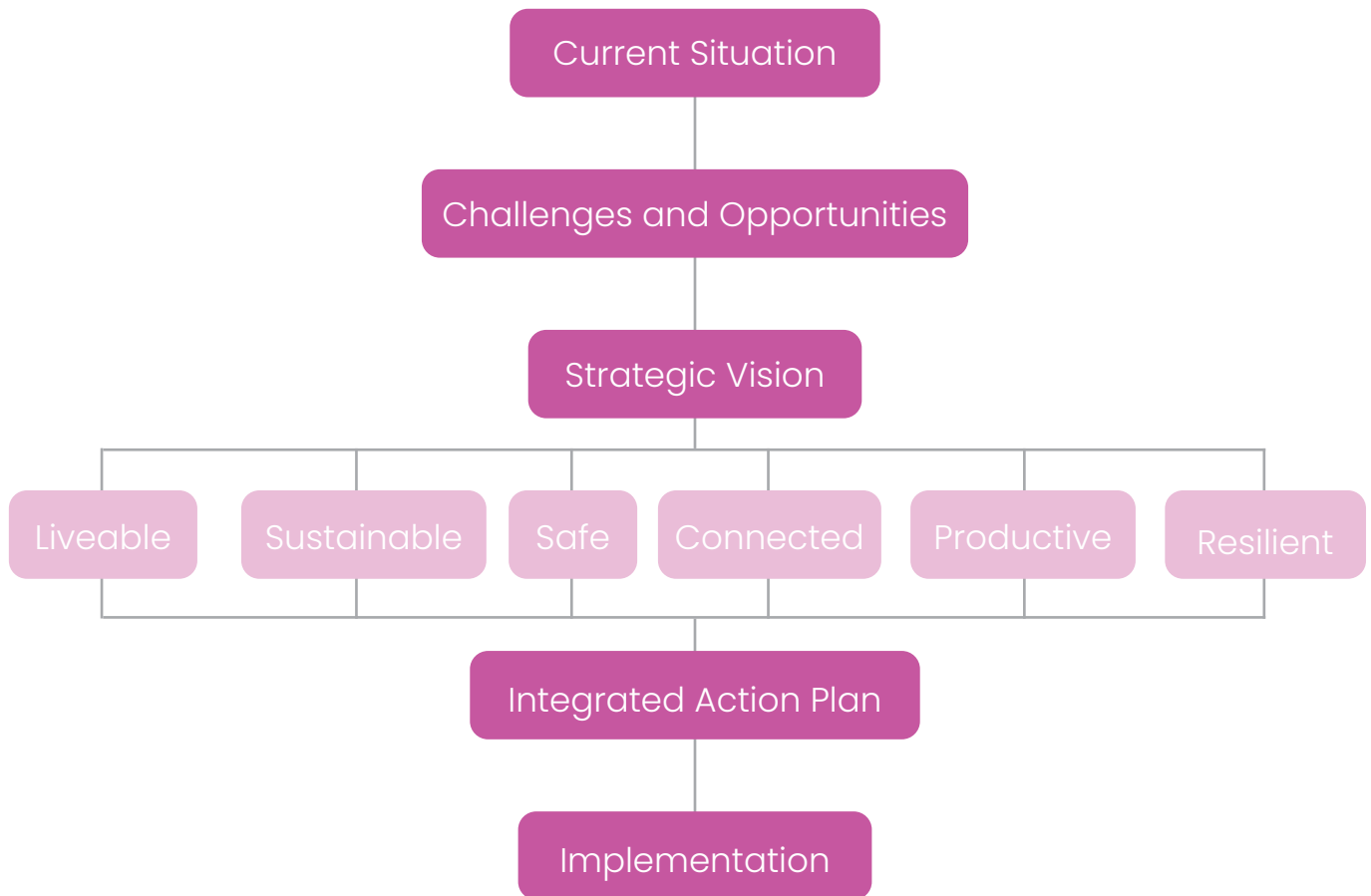
# 1.3 Purpose of the Strategy

CTTS 2023 is the blueprint for the LGA’s transport network to 2041. It provides a plan to keep Cessnock moving as the forecast growth occurs, as well as providing Council and residents a vision for the transport network by improving access to housing, jobs and services.

It cannot be understated how important the data inputs are to CTTS 2023 and utilising the most recently available information and statistics to forecast the future population and subsequent transit volumes. A data-driven approach is critical to an accurate strategy. This update is provided with a particular focus on the expected accelerated growth in the LGA beyond what was previously estimated to ensure the recommended infrastructure and strategies will meet the changing needs.

The development and renewal of the CTTS included the following four (4) key components:

- Challenges and Opportunities
- Strategic Vision
- Action Plan
- Implementation.



This report provides the vision framework for traffic and transport planning and operational decisions within the Cessnock LGA between now and 2041. Key findings and recommendations developed as part of this strategy are also expected to form a foundation for undertaking more detailed investigations into specific upgrades and mitigation treatments.

This report and its implementation plan is intended to be a ‘live’ document that is regularly monitored and reviewed to reflect the most recent statistics.





# ***CURRENT*** SITUATION

## 2.1 Works Completed Since CTTS 2018

CTTS 2018 identified a number of “immediate” and “Short Term” actions for the road network across the LGA. Since CTTS 2018 was endorsed a number of these upgrades have been completed. Table 2.1 and figure 2.1 below provide a summary of the works completed to address key items within CTTS 2018.

Table 2.1 List of works completed since CTTS 2018

LOCATION		WORKS COMPLETED
Cessnock Road / Orange Street intersection	Abermain	Upgrades to signalised layout
Cessnock Road between Kline Street and Station Street	Weston	Parking restrictions applied to increase intersection capacity
Wollombi Road between Abbotsford Street to Allandale Road	Cessnock / Bellbird	Grant funding obtained to duplicate to four (4) lanes and early works commenced
Barrett Street / Mount View Road intersection	Cessnock	Intersection upgrades to left in / left out are currently occurring as part of Mount View Rd upgrade
Wine Country Drive / Bridge Street roundabout	North Rothbury	Upgraded to a 2-lane roundabout (State-controlled road)
Bridge Street / Drinan Street intersection	Branxton	Road resurfaced to make skid resistant
Wollombi Road / Bellbird North New Access intersection		
Wollombi Road / Campbell Street intersection		
Wollombi Road / Darwin Street	Cessnock / Bellbird	Grant funding obtained to upgrade to signalised intersections
Wollombi Road / James Street / Ivan Street		
Charlton Street	Cessnock	Road and pedestrian link upgraded
Colliery Street / Greta Street intersection	Aberdare	Culvert extension / road widening works completed
Hart Road / Sawyers Gully Road intersection	Abermain	New roundabout installed
Hart Road	Abermain / Weston	Reclassified as a Regional Road

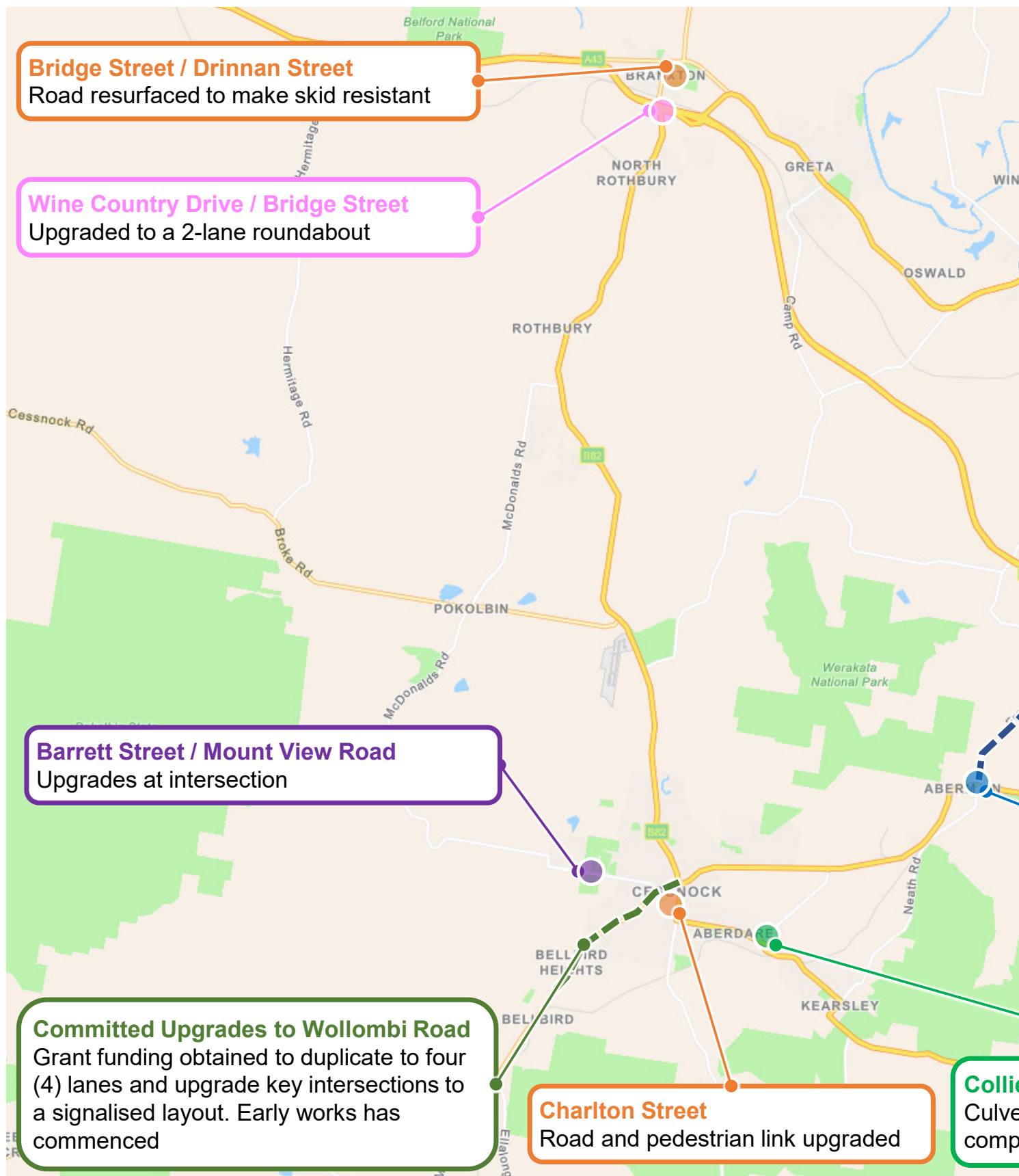
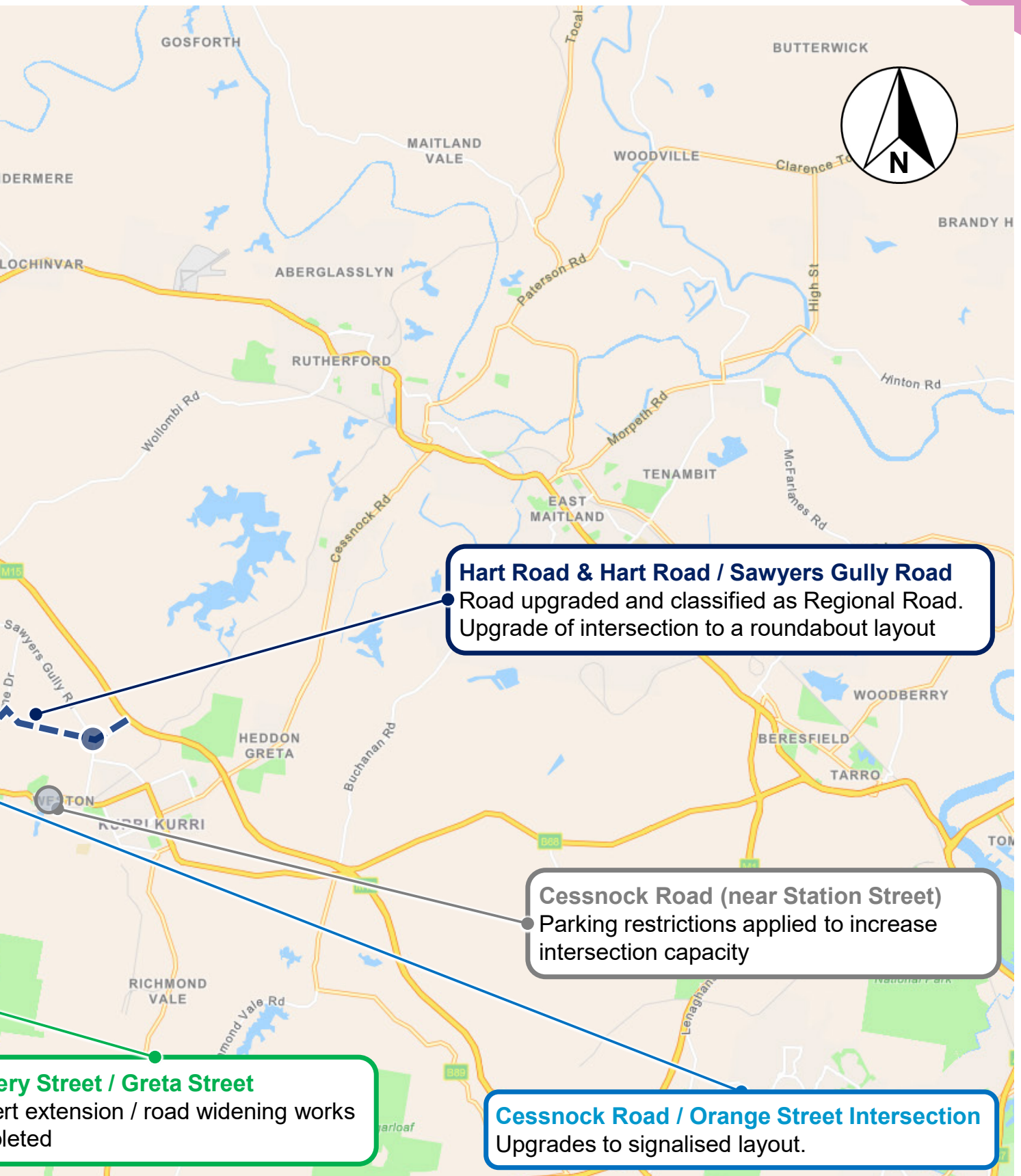


Figure 2.1: Map of Works Completed Since CTTS 2018





## 2.2 Forecast Population Growth Across the LGA

The Cessnock LGA is growing rapidly with the population set to increase by approximately 45,300 (or +67% growth) between 2023 and 2041. To put this growth in perspective, the Australian Governments Centre for Population shows that with a growth rate of 3.78%, the Cessnock LGA would be ranked 2nd in NSW and 11th in the Nation (out of 563 LGAs) for growth.

This is significant because the growth being observed and planned is occurring at a very high rate within the 98th percentile Australia wide. This means that the challenges faced by the expected growth cannot be mitigated through 'normal' planning and investment strategies and a wholistic approach is required to adequately meet the demands of the LGA.

## 2.3 Tourism

The Cessnock LGA experiences unique weekend travel characteristics when compared to similarly sized cities. The wineries, villages, shops, dining, sporting activities and special events (such as music festivals) attract a large number of discretionary trips from residents and overnight tourists. In addition to the high demand put on the network by residents, the city attracts considerable numbers of day trippers on weekends from neighbouring areas such as Sydney and Newcastle. These existing tourist attractions are expected to grow, which in turn increases the demand of vehicles on the road.

Consideration of the unique tourism demands of the LGA is of critical importance to provide attractive facilities for tourists in the area and to encourage visitors both nationally and internationally.

## 2.4 Existing Transport Network

The Hunter Expressway (HEX) is a vital link between the Cessnock LGA and Newcastle (and nearby coastal areas) which increases the attractiveness of Cessnock for future residents. The Hunter Expressway traverses the northern and eastern sides of the LGA and connects with several higher order roads such as Wine Country Drive, Lovedale Road, Hart Road and Main Road.

The existing non-Motorway transport network within Cessnock is generally characterised by historic corridors which have received sequential upgrades over time to meet increasing demands.

The key east-west route through Cessnock CBD and the whole LGA is Wollombi Road-Maitland Road-Cessnock Road-Main Road, which connects Cessnock to Kurri Kurri and provides the most direct (distance wise) connection between these areas and the Hunter Expressway. The New England Highway and Wine Country Drive provide important north-south connections between Branxton and Greta / Maitland and Cessnock respectively.

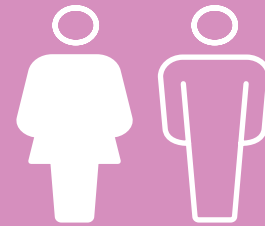
The Old Maitland Road corridor also forms a key east-west connection between Cessnock and Maitland, providing a link between the LGA's that does not include an interchange to the Hunter Expressway.

Generally, there is only one (1) higher order road connection between each centre (e.g. Wine Country Drive, New England Highway), with alternative lower order connections limited in most instances.

# Cessnock at a Glance



Land of area **1,966 square kms**



Largest age group is **35 to 49 years**

Higher population of people **under 18** compared to wider region

Estimated resident population

2021: **64,067**  
2026: **77,301**  
2031: **91,319**  
2041: **112,419**



Growth rate is **3.8x higher than NSW**

Over **1 million visitors** per year



Estimated gross regional product of **\$2.98 billion**

Annual economic output of **\$5.86 billion**

Over **10% of jobs within Cessnock** are in Tourism



Cessnock supports **18,242 jobs**

By 2041 Cessnock will support **26,285 jobs**



# ***CHALLENGES*** AND OPPORTUNITIES

# 3.1 Consultation Activities

## 3.1.1 Overview

The Cessnock community was engaged in the development of this strategy through four (4) community drop-in sessions, online community surveys and individual consultation with key stakeholders. A total of 138 Cessnock LGA residents responded.

Four (4) community drop-in sessions were held in October 2022 to allow the local community to provide input and feedback throughout the development of the strategy. The online survey was publicly open from 30th September 2022 to 28th October 2022 and allowed LGA residents to complete a questionnaire consisting of 27 questions with an additional option to specify issues on a map which covers travel behaviours, public transport and active transport.

The sessions were promoted through Council’s website, social media (Facebook posts), a media package issued to local outlets, newspaper advertisements and a local radio spot, to ensure that residents were aware that the sessions were occurring.

In addition to the community, a number of key stakeholders were individually contacted for feedback regarding the Strategy, including TfNSW, NSW Police Force, NSW SES, Corrective Services NSW, Tafe, local Business Chambers, local Chambers of Commerce, Clayton Barr MP, local bus services, local taxi services and local primary and secondary schools.



## 3.1.2 Key Findings

### *What Are Your Main Traffic/Transport Issues in the Area?"*

This question had 130 text responses. The most common issues are noted:

- Congestion on Wollombi Road
- Congestion in other areas such as Main Road, Heddon Greta and First Street, Weston
- Poor road conditions (e.g. potholes)
- Insufficient public transport options
- Limited active transport facilities with safety issues
- Safety for pedestrians and motorists around schools
- Safety and congestion at the Wollombi Road / Darwin Street roundabout.

### *"How Difficult Do You Find It to Travel Around Your Local Area?"*

Figure 3.1 summarises the perceived level of difficulty experienced by participants when travelling around their local area.

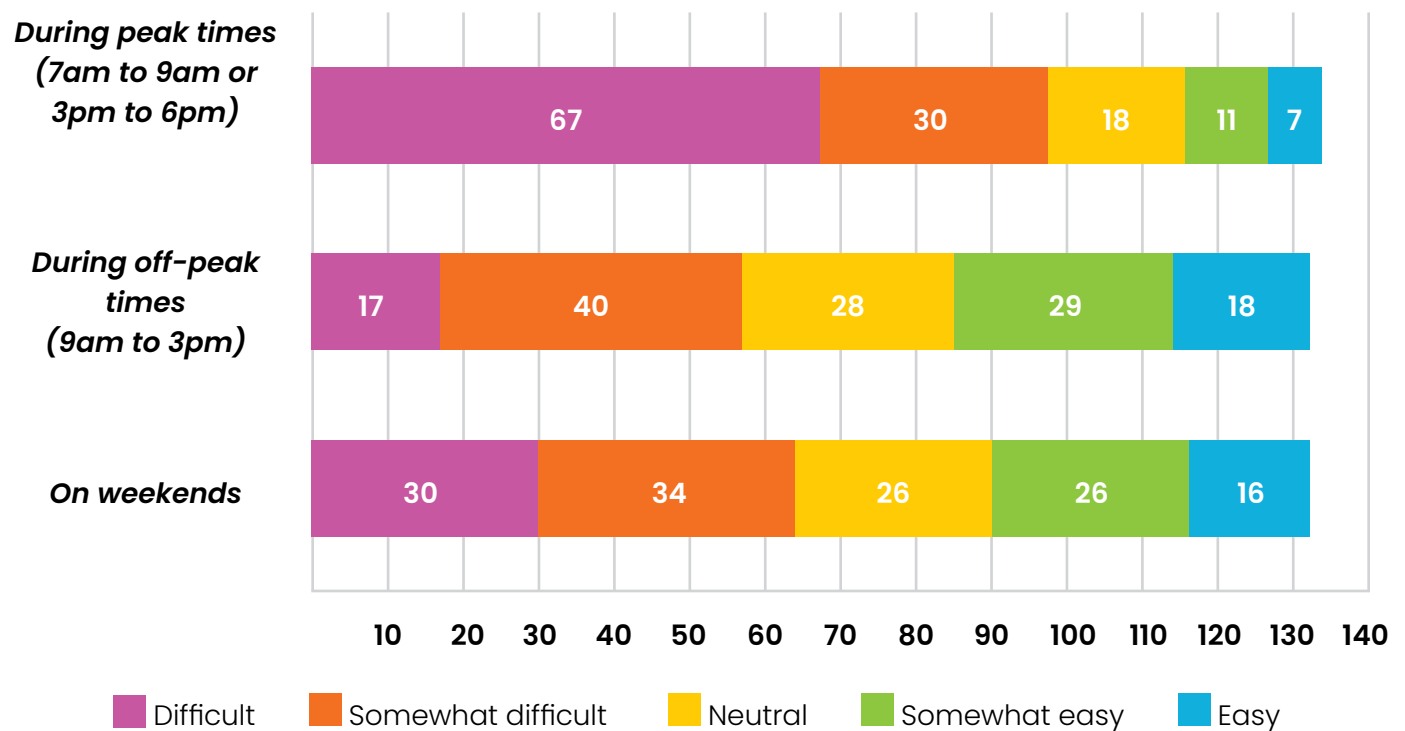


Figure 3.1: "How Difficult Do You Find It to Travel Around Your Local Area?" Results

Key findings are noted:

- 73% of participants found it 'difficult' or 'somewhat difficult' to travel around their local area during peak periods (morning and afternoon)
- 43% of participants found it 'difficult' or 'somewhat difficult' to travel around their local area during off peak periods (middle of the day)
- 47% of participants found it 'difficult' or 'somewhat difficult' to travel around their local area on weekends

Respondents were also asked for a text response to the above question. This question had 104 text responses. The most common issues are noted:

- Congestion on Arterial level roads
- Vehicles are not able to join/exit the Arterial level roads safely from/to the side streets.

## Online Mapping Tool

An additional mapping tool was developed which allowed participants to identify locations for ideas and improvements. 93 individual responses were collected within the following six (6) categories:

- Traffic Safety and Behaviour (31 responses)
- Traffic Congestion (36 responses)
- Public Transport (4 responses)
- Parking (3 responses)
- Walking (16 responses)
- Cycling (3 responses).

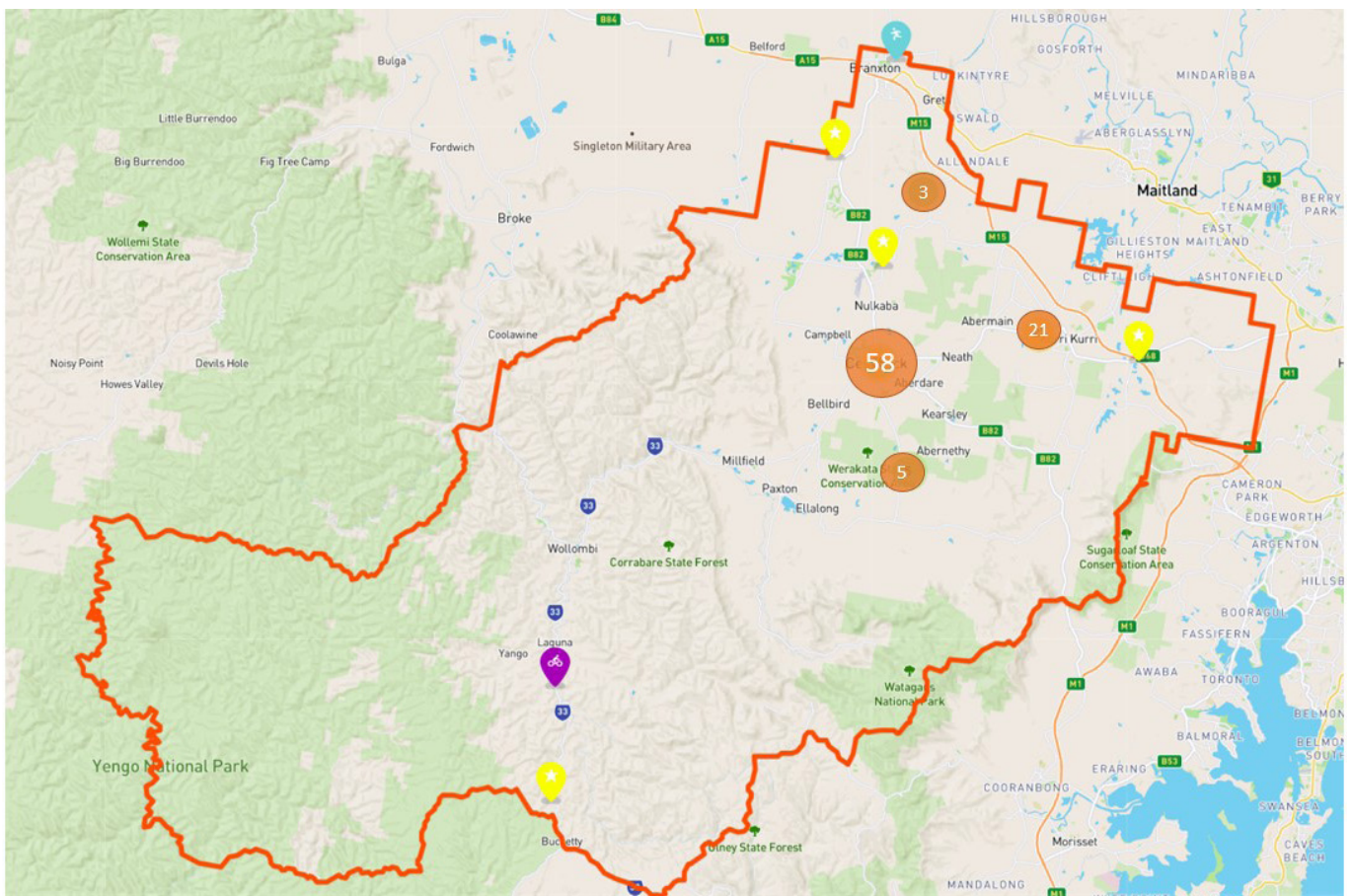


Figure 3.2: Traffic and Transport Strategy Mapping Community Feedback Map

The most common issues and suggestions included:

- Congestion during AM and PM peaks across the network, with a specific focus on Wollombi Road congestion and access
- Poor road condition with potholes
- Congestion occurring in roads running parallel to main roads as a result of “rat running” behaviour
- Lack of pedestrian crossings and pathways within the area
- Flooding issues on certain roads
- Adding northbound on-ramp to the Hunter Expressway from Lovedale Road
- Limited public transport.

Based on the outcomes of the above consultation, the top three findings were:

## 1. Significant Road Congestion During Peak Periods

- Significant feedback regarding peak congestion on Wollombi Road between Bellbird and Cessnock CBD – this was noted as the most critical road within the region
- Concerns raised for many other roads such as: Main Road at Heddon Greta, Wine Country Drive at Nulkaba and Cessnock, Mount View Road at Cessnock, Vincent Road at Cessnock and First Street at Weston
- Concerns raised regarding safety on these roads such as inability to turn right onto these roads as well as “rat running” behaviour on surrounding local streets
- Concerns raised regarding pinch points within Cessnock, primarily due to a lack of alternative routes to avoid Cessnock CBD.

## 2. Poor Road Condition Leading to Safety Issues

- Significant feedback regarding road condition – primarily associated with potholes
- Concerns were raised about the safety of many roads due to road condition causing traffic to weave, slow or change behaviour
- Concerns also raised regarding impacts for cyclists and pedestrians along these roads as the surface is unsuitable for these users.

## 3. Lack of Quality Active Transport Infrastructure Across the Region

- Significant feedback regarding the lack of coverage across the region for footpaths and cycle facilities, especially inter-Region links
- Concerns raised about the lack of facilities near key attractors such as schools
- Concerns raised about the level of facilities in smaller urban areas of the LGA (e.g. Branxton, Laguna, Kitchener)
- Concerns raised about the quality and maintenance of existing facilities resulting in users being unable to walk or ride on specified paths without hazard.



## 3.2 Transport Challenges

As identified through public consultation, and independent review the Strategy identified a number of key transport challenges facing the Cessnock LGA, such as:

- LGA Growth and New Development
- Traffic Congestion
- Car Dependence
- Urban Spread
- Tourism
- Health and Ageing Population
- Journey to Work
- Climate Change
- Road Safety
- Road Management.



Population is expected to grow by **45,300** people by 2041.

Important **tourist destination** which is expected to grow and diversify.

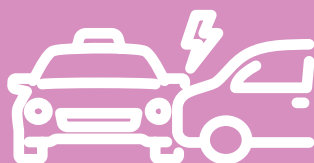
**97%** of all trips are via private vehicles.



Cessnock is a **collection of small urban centres** with a lack of significant density.

**55%** of employed people living in cessnock travel from outside the Region daily.

Cessnock has a **37%** higher fatality rate than the NSW Stage average.



Key roads experience **high levels of traffic congestion** during the morning and evening peak hours.



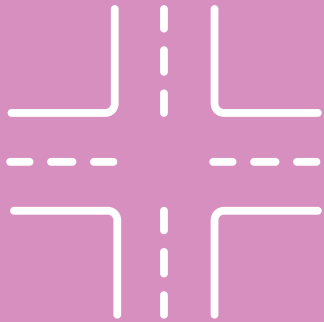
**44%** of the population are vulnerable users.

In NSW, transport activity accounts for **19%** of CO2e emissions.

Poor road condition was the 2nd highest concern of Cessnock residents, behind congestion.

## 3.2 Transport Opportunities

The LGA contains several key opportunities that have been reviewed as part of this Strategy to identify suitable measures to meet the challenges identified. These opportunities are identified below:



**Council-controlled Road Network:** Council controls an extensive network of roads of varying hierarchy across the LGA, with opportunities to improve road network efficiency and design.

**Integrated Land Uses:** Opportunities exist to revise the land use strategy across the LGA to increase residential densities along existing transport spines to minimise access times to employment, education, shopping, recreation, and services.



**Public and Active Transport:** Improved infrastructure and connections can promote alternative transport modes and increase the convenience of non-private vehicle trips

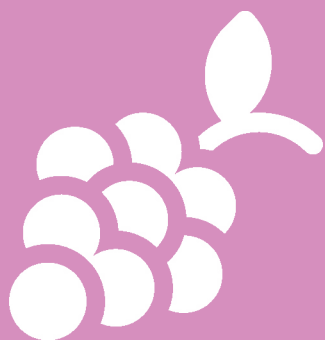
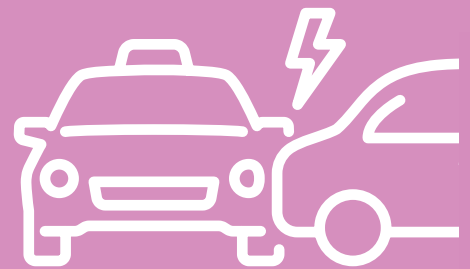


**Existing Heavy Rail Corridor:** There may be an opportunity to re-purpose the land currently occupied by the Cessnock Branch Rail Line





**Health and Safety:** There is an opportunity for the transport network to improve the lives of residents and visitors and promote the health and prosperity of the LGA.



**Tourism and Vineyards Region:** There is an opportunity to increase the attractiveness of the area for visitors and residents by ensuring that this region is suitably serviced by all modes of transport.



# ***STRATEGIC*** DIRECTION

## 4.1 Vision

The updated vision for the CTTS 2023 is defined as:

A people focussed transport network that is safe, sustainable, accessible, and connected which advances economic growth, tourism, and local amenity.

## 4.2 Themes

To achieve the vision, we have identified six (6) key themes which aim to address the issues and opportunities facing the future transport network. These themes have been developed to closely align with the Hunter Regional Transport Plan.

Figure 4.1 illustrates the six (6) key themes of the transport vision.

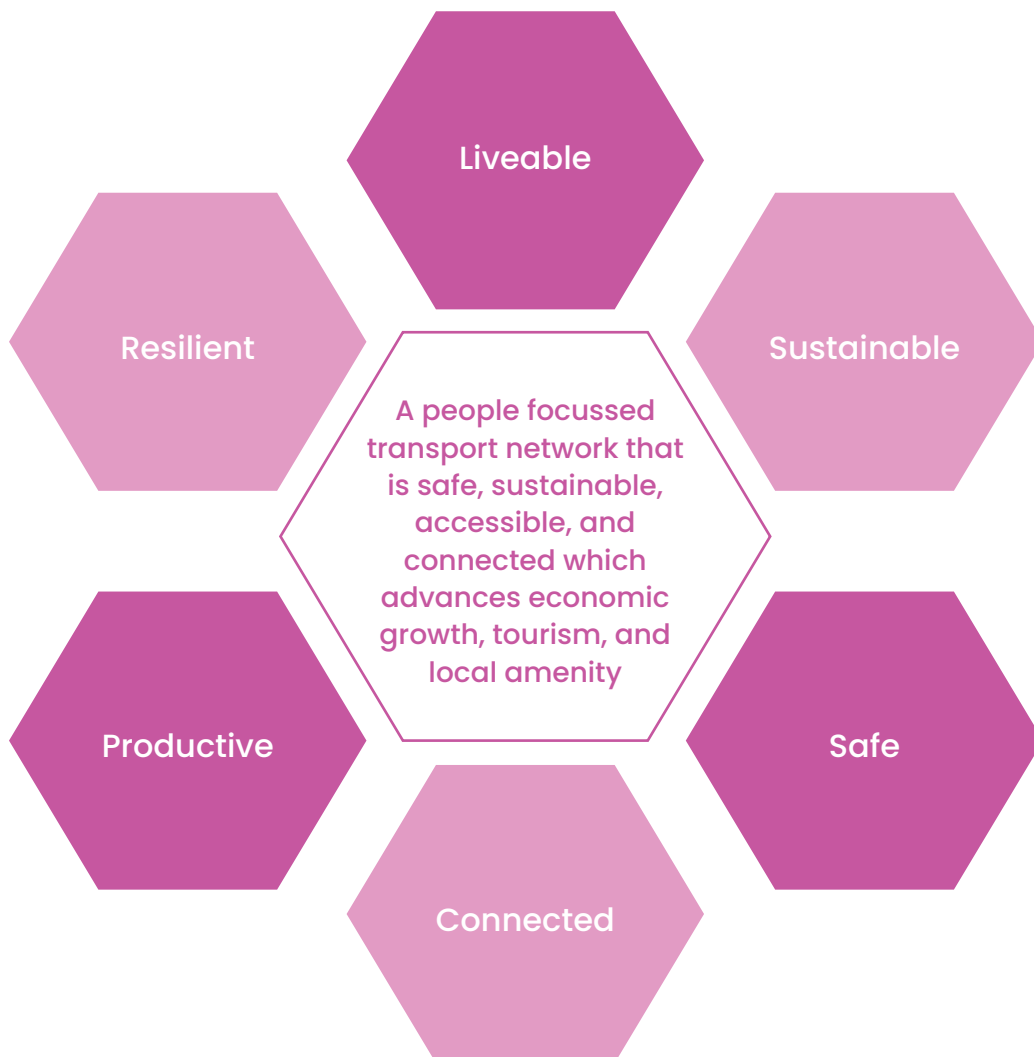



Figure 4.1: Key Themes



# ***ACTION &*** IMPLEMENTATION PLAN

# 5.1 Objectives and Actions

The six (6) key themes have assisted in the development of objectives and actions which should be pursued to achieve the desired future transport network in the LGA. The objectives are detailed further herein with respective actions detailed in the following sections.

## 5.1.1 Liveable

A liveable LGA is one that caters for the needs, and promotes the wellbeing, of all residents. This is vital to the on-going prosperity of the LGA, and one of the most important factors the Strategy considers.

This Strategy seeks to ensure that the transport network considers people first. The Strategy seeks to achieve this in a variety of ways including the promotion of healthier living, guiding integrated land use planning, improving local centres, and enabling the successful movement of people to places regardless of age or ability.

The liveable theme can be split into two (2) core elements:

- People: Ensuring that the transport network puts the needs of people first, and allows for improved amenity, increased recreation, and connections with Place

- Prosperity: Ensuring that the transport network promotes prosperity through the ability to access employment and the development of strong urban centres.

A well planned and liveable transport network ensures people of all ages live near, and have convenient access to, key services and employment, which is supported by strong active and public transport networks. This will result in an improvement in the overall wellbeing of the LGA, while also promoting a sense of place and creating prosperous town centres.

To achieve the goal of a liveable transport network, the following objectives have been identified.



Figure 5.1: Liveable Objectives

Table 5.1 summarises the targeted actions and relevant category of transport planning related to the Liveable Objectives.

ID	ACTION	TRANSPORT CATEGORY				
		Integrated Land Use	Active Transport	Public Transport	Parking	Roads and Freight
<b>Objective #1: Provide active and public transport for people of all abilities to support active and healthy lifestyle habits</b>						
1.1	Investigate development incentives/controls to encourage the facilitation of improved active transport accessibility and connectivity. This includes achieving or maintaining a high level of network permeability, especially in centres and near key public transport infrastructure.	✓	✓			
1.2	Integrate the principles of Crime Prevention Through Environmental Design (CPTED) into active and public transport development projects to reduce the occurrence of anti-social activity.		✓	✓		
1.3	Improve car free accessibility to open space areas, national parks, and other natural assets through the provision of key active transport and public transport links.		✓	✓		
1.4	Provide facilities along active transport links to promote universal uptake, such as rest areas, shade, etc.		✓			
1.5	Investigate the potential for the provision of heavy rail along the Cessnock Branch Line.			✓		
1.6	Undertake a detailed investigation into the potential suitability of providing light rail, or mixed use transport corridor along the Cessnock Branch Line.			✓		
<b>Objective #2: Provide active and public transport for people of all abilities to support active and healthy lifestyle habits</b>						
2.1	Investigate the implementation of lower speed limits within urban centres such as Cessnock and Kurri Kurri CBDs.		✓			✓
2.2	Investigate the implementation of threshold treatments within urban centres to clearly indicate to all motorists the changed road environment and higher presence of pedestrians and cyclists.		✓		✓	✓
2.3	Improve priority for walking trips in centres. This may include measures such as reallocating road space to wider footpaths, improved lighting and providing more frequent and longer duration pedestrian crossing phases at signals.		✓			



ID	ACTION	TRANSPORT CATEGORY				
		Integrated Land Use	Active Transport	Public Transport	Parking	Roads and Freight
2.4	Provide alternative routes for urban centres in accordance with the Movement and Place Framework to separate through trips and to improve the "Place" function of centres.		✓			✓
2.5	Ensure suitable off-street parking is provided on the fringe of centres to adequately support long stay demands (such as workforce) whilst ensuring that desirable parking near businesses is accessible for centre visitors. Accessible active transport provisions will also need to be provided between the city centre and the log-stay parking.		✓		✓	✓
2.6	Develop a warrants and implementation policy for Local Area Traffic Management (LATM) within centres in accordance with the Movement and Place Framework.		✓			✓
2.7	Assess the Cessnock LGA industrial areas and truck routes for impacts on residential areas & develop appropriate management measures to ensure HV traffic always uses the higher order road network. This may include upgrading higher order road networks to ensure they are suitable to accommodate HVs.					✓
2.8	Audit kerbside parking allocation in key centres and revise allocation to meet the needs and demands of the centre.				✓	
2.9	Monitor parking occupancy levels in centres and expand time-limited parking area when occupancy levels exceed 85% capacity at peak times				✓	
<b>Objective #3: Transport planning is to be integrated with land use planning to ensure future developments are suitably accessible to shape a vibrant and connected LGA</b>						
3.1	Through planning controls, discourage residential densification in areas without adequate transport infrastructure to service the travel demands.	✓				
3.2	Through planning controls and zoning, encourage new development in close proximity to the key business centres/villages or close to employment to reduce trip lengths and encourage more sustainable transport options.	✓	✓	✓		✓
3.3	Development controls be updated to reflect the level of cycling end of trip facilities required in each area. Development controls are to include a component of visitor cycle facilities.	✓	✓			

ID	ACTION	TRANSPORT CATEGORY				
		Integrated Land Use	Active Transport	Public Transport	Parking	Roads and Freight
3.4	Investigate development incentives/controls to encourage the facilitation of active and public transport provisions for major developments in alignment with a 15-minute neighbourhood.	✓	✓	✓		
3.5	Development controls including within Part E (specific areas) should be updated to align with safe systems principles and the movement place network.	✓	✓	✓	✓	✓

Figure 5.1: Liveable Objectives and Actions



## 5.1.2 Sustainable

A sustainable transport network is one that considers and accommodates the current population, but also supports the future generations within the LGA to ensure that they benefit from a strong and enduring transport system. Transport is a major contributor to carbon dioxide equivalent emissions globally, and in NSW it is the second highest contributor, behind electricity.

This strategy seeks to ensure that the transport network is and will continue to be sustainable for all generations as we build towards the NSW interim goal of 50% emissions cut by 2030 and the ultimate goal to reach net zero by 2050.

The sustainable theme can be split into two (2) core elements:

- **Sustainable Travel:** Increasing uptake of reduced emissions transport options such as electric vehicles, public transport, E-scooters / bikes, and active transport, compared to conventional private vehicle trips
- **Sustainable Networks:** Ensuring that the transport network, including all infrastructure, is designed and planned to limit impacts on the environment.

A sustainable transport network encourages the use of low or zero emissions transport modes for a variety of uses by providing infrastructure and quality alternatives to conventional private motor vehicles. It also considers at a broad level the impacts that the planning, construction, and maintenance of the transport network can have on the environment and seeks to reduce impacts to these wherever feasible.

To achieve the goal of a sustainable transport network, the following objectives have been identified.

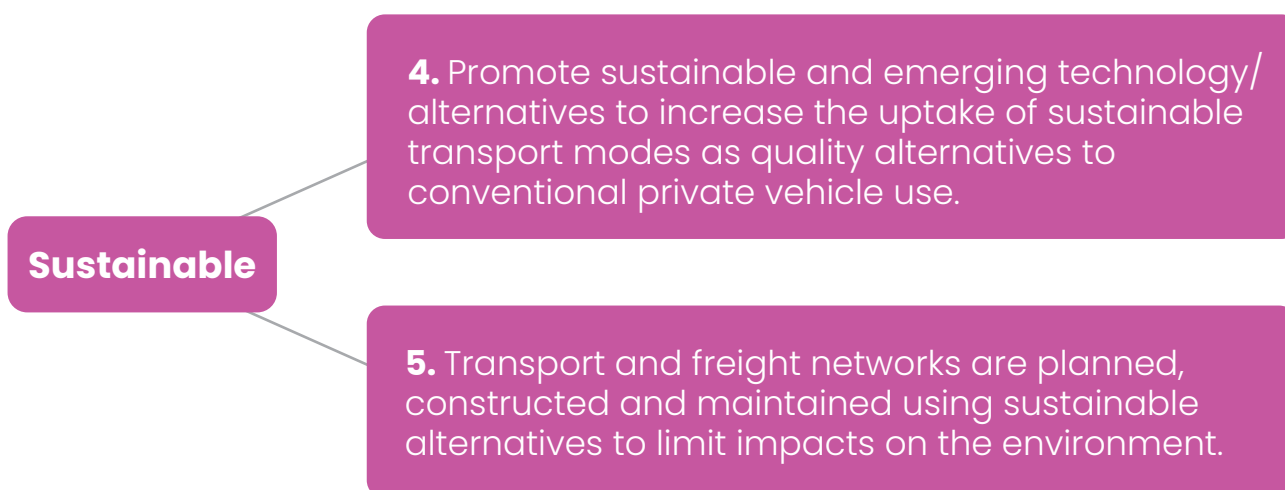


Figure 5.2: Sustainable Objectives

An Integrated Action Plan has been identified in Part 4 order to meet the above objectives.

Table 5.2 summarises the targeted actions and relevant category of transport planning related to the Sustainable Objectives.

**Table 5.2: Sustainable Objectives and Actions**

ID	ACTION	TRANSPORT CATEGORY				
		Integrated Land Use	Active Transport	Public Transport	Parking	Roads and Freight
<b>Objective #4: Promote sustainable and emerging technology / alternatives to increase the uptake of sustainable transport modes as quality alternatives to conventional private vehicle use</b>						
4.1	Develop evidenced-based, mode share targets for the LGA and track the on-going adoption of alternative transport modes.		✓	✓		✓
4.2	Support the integration of emerging modes (such as the e-scooters) into the existing transport network and ensure planning does not restrict potential uptake in the future.	✓	✓			
4.3	Set an electric vehicle procurement target for Council owned vehicles and promote transition to electric and zero emissions fleet and freight vehicles for Council. This should also include systems to encourage similar targets for public transport operators and local business.			✓		✓
4.4	Identify trial locations for innovative parking technology such as on-street electric vehicle charging.				✓	
4.5	Identify opportunities to increase the adoption rate of Electric Vehicles (EV) and develop a network of facilities to promote the use of EV and hydrogen fuel technologies				✓	✓
4.6	Collaborate with schools to promote the use of alternative transport modes, such as adopting the NSW Government's Walk / Wheel Once a Week (WOW) initiative.		✓			
4.7	Consider measures and regulatory reforms to promote carpooling, car sharing and increased vehicle occupancy in point-to-point mobility.					✓
<b>Objective #5: Transport and freight networks are planned, constructed and maintained using sustainable alternatives to limit impacts on the environment</b>						
5.1	Integrate sustainability baseline targets and sustainable management plans into roads and transport planning, construction, maintenance and operations.					✓
5.2	Investigate opportunities to offset planned road upgrades through conservation and ecological restoration projects.					✓

## 5.1.3 Safe

Safety is the most important consideration when designing and implementing a transport system. Every year over 1,000 Australians lose their lives on roads, and Cessnock is not immune to this statistic. In fact, Cessnock has a fatality and road casualty rate higher than National and State averages.

This strategy seeks to ensure that the transport network is safe for all modes of transport under all conditions to align with State, National and International targets related to road trauma. This will be achieved through several key methods such as:

- Adopting the Safe Systems approach to road safety
- Improving awareness, education and information related to safe travel and operations on roads
- Ensuring all planning and works are completed in accordance with current best practice
- Aiming to separate travel modes wherever possible, including keeping through traffic on Arterial Roads and not on Local Streets.

Furthermore, this strategy will build on the actions outlined within the Cessnock Road Safety Strategic Plan 2020–24, which prioritises safety around key areas, such as:

- Safety around schools
- Motorcycle safety
- Excessive and inappropriate speed
- Road safety in the workplace
- Older road users
- Visiting drivers.

A safe transport network ensures that all people can undertake daily travel without experiencing trauma due to crashes, conflicts, or disruptions. Whilst this is a high aim, it is critical to the liveability of the LGA that the road network is as safe as possible. This improves the lifespan and wellbeing of people within the LGA and reduces the 'cost' that the road network has on the community.

To achieve the goal of a safe transport network, the following objectives have been identified.

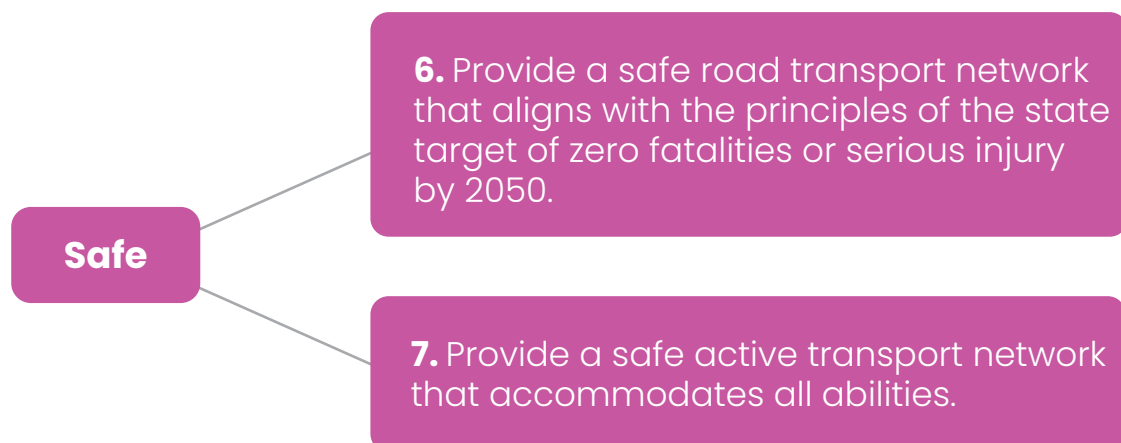


Figure 5.3: Safe Objectives

Table 5.3 summarises the targeted actions and relevant category of transport planning related to the Safe Objectives.

**Table 5.3: Safe Objectives and Actions**

ID	ACTION	TRANSPORT CATEGORY				
		Integrated Land Use	Active Transport	Public Transport	Parking	Roads and Freight
<b>Objective #6: Provide a safe road transport network that aligns with the principles of the state target of zero fatalities by 2050</b>						
6.1	In alignment with the Cessnock Road Safety Strategic Plan 2020-2024, develop and deliver effective road safety education programs to the community of the Cessnock LGA.		✓	✓	✓	✓
6.2	Set evidence-based targets for key performance measures across transport modes to deliver zero trauma by 2050 and regularly monitor progress.		✓	✓		✓
6.3	Undertake an annual Road Safety Audit and Speed Limit Review program to review the safety of the existing road network and identify future improvements.		✓			✓
6.4	Adopt the principles of the Safe Systems Approach as default safety requirements in the planning and design stages of all transport projects, in alignment with the Transport for NSW, 2026 Road Safety Action Plan.		✓	✓	✓	✓
6.5	Deliver road and transport network infrastructure planning which is safe, efficient and complies with contemporary industry standards and best practice		✓	✓	✓	✓
6.6	Investigate emerging technologies that could improve driver awareness of potential vehicle-strike wildlife hotspots.					✓
<b>Objective #7: Provide a safe active transport network that accommodates all abilities</b>						
7.1	Enhance the safety and continuity of cycling within the LGA by creating connected cycling routes, and providing appropriate crossing and on-road treatments.		✓			
7.2	Implement the "High" priorities from the Cessnock Pedestrian Access and Mobility Plan, Cessnock Cycle Strategy, and Cessnock Trails Strategy.		✓			
7.3	Develop a Cycleway Corridor Plan to provide the foundation for safe, convenient and well-connected cycleways across the LGA, such as rail trail between Cessnock and Kurri Kurri		✓			

ID	ACTION	TRANSPORT CATEGORY				
		Integrated Land Use	Active Transport	Public Transport	Parking	Roads and Freight
7.4	Adopt the principles of the Safe Systems Approach as default safety requirements in the development of any active transport pathways and crossings		✓			
7.5	In accordance with the Cessnock Trails Strategy, assess the availability and quality of safe walking paths to/from each school and develop a program of improvements/upgrades, prioritised on the basis of proximity to each school.		✓			



## 5.1.4 Connected

A connected road system is the key to ensuring that people and goods are able to get where they need to be, when they need to be there. This is one of the most important roles that the transport network plays and is vital to the ongoing success of the Cessnock LGA.

This strategy seeks to ensure that the transport network provides a high level of connectivity across geographical areas and across different travel modes to seamlessly connect all people and places.

The connected theme can be split into two (2) core elements:

- **Connecting Places:** Ensuring that the transport network connects areas geographically, both within Cessnock and external to the LGA
- **Connecting Modes:** Ensuring that the transport network connects transport modes with each other to provide an integrated and fully accessible transport system.

A connected transport network focusses on the “movement” aspect of the movement and place framework and ensures that suitable options are provided to move people and goods efficiently between places and seamlessly between transport modes. This will improve the viability of residential and commercial areas by allowing quality access to the Hunter Expressway and local centres, as well as providing key tourist links to attractors. It also plays a key role in the uptake of alternative transport modes by ensuring that the “first mile and last mile” integrate with the rest of the transport network.

To achieve the goal of a connected transport network, the following objectives have been identified.

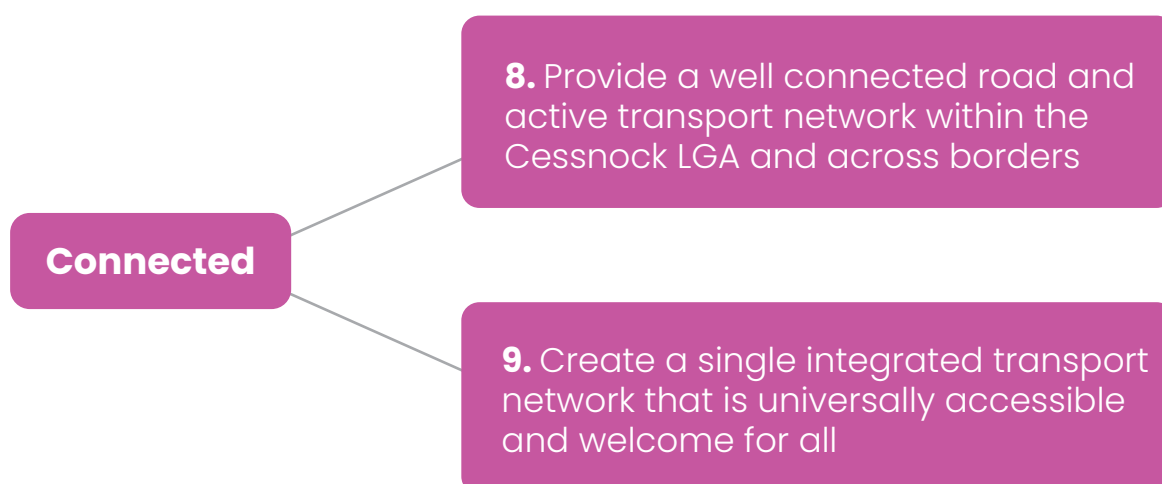


Figure 5.3: Safe Objectives



Table 5.4 summarises the targeted actions and relevant category of transport planning related to the Connected objectives.

**Table 5.4: Connected Objectives and Actions**

ID	ACTION	TRANSPORT CATEGORY				
		Integrated Land Use	Active Transport	Public Transport	Parking	Roads and Freight
<b>Objective #8: Provide a well connected road and active transport network within the Cessnock LGA and across borders</b>						
8.1	Investigate key linkages and undertake negotiations with land owners for right of way corridors through sites, such as the Richmond Vale Rail Trail.		✓	✓		✓
8.2	Develop a series of cycling and walking guide maps of Cessnock LGA including safe cycling and walk routes to key destination (e.g. Wineries, Arts and Community Centre, Libraries).		✓			
8.3	Improve local bus and community transport, focusing on increased availability, improved reliability, and consistent timetabling.			✓		
8.4	Continue to increase annual funding for cycling infrastructure		✓			
8.5	Adopt the principles outlined in Council's Cycling Strategy and Trails Strategy to create a safe and connected cycle network for people of all abilities.		✓			
<b>Objective #9: Create a single integrated transport network that is universally accessible and welcome for all</b>						
9.1	Assess the availability and quality of safe cycle routes to/from each primary school and develop a program of improvements/upgrades, prioritised on the basis of proximity to each school.		✓			
9.2	Integrate safe and separate, first and last mile walking and cycling connections and trip facilities into future planning and projects to promote active transport for all travel purposes for people of all ages and abilities. This should include consideration to planning controls.	✓	✓	✓		
9.3	Investigate commuter parking opportunities at public transport nodes and along Hunter Expressway interchange nodes.				✓	✓
9.4	Lobby State Government to increase the frequency of existing rail services along the Hunter Line (which services Greta and Branxton).			✓		

ID	ACTION	TRANSPORT CATEGORY				
		Integrated Land Use	Active Transport	Public Transport	Parking	Roads and Freight
9.5	Work with the State Government and bus operators to integrate and expand service coverage of bus services, with specific consideration of Urban Release Areas.			✓		
9.6	Consult with Aboriginal people and culturally and linguistically diverse communities to design solutions to ensure that these users are not disadvantaged when accessing transport.	✓	✓	✓	✓	✓
9.7	Deliver improved customer experiences at public transport facilities including better wayfinding, real-time information, location information.			✓		
9.8	Assess the availability and quality of walking paths along key routes, including to/from bus stops, and develop a program of improvements/upgrades, prioritised on the basis of proximity and utilisation.		✓	✓		



## 5.1.5 Productive

A productive LGA is one that promotes business, industry and tourism and accommodates the workforce necessary to sustain these. The transport network plays a vital role in the productivity of the Cessnock LGA and is responsible for delivering the efficient movement of freight and people.

A productive transport network with a high level of service provides an economic benefit by allowing shorter travel times for all transit modes, which increases economic potential.

In order to prioritise productivity across the LGA the transport network needs to be robust and reliable meaning that people know how long a trip will take and know that the trip will not be constrained by significant delays. A productive transport network should provide the following key elements to all users:

- Always operate with an appropriate level of service and limited delays
- Provide reliability in terms of route choice, travel times and delays
- Be adaptive to atypical road and weather events
- Allow convenient access to key destinations without using local roads.

To achieve the goal of a productive transport network, the following objectives have been identified.

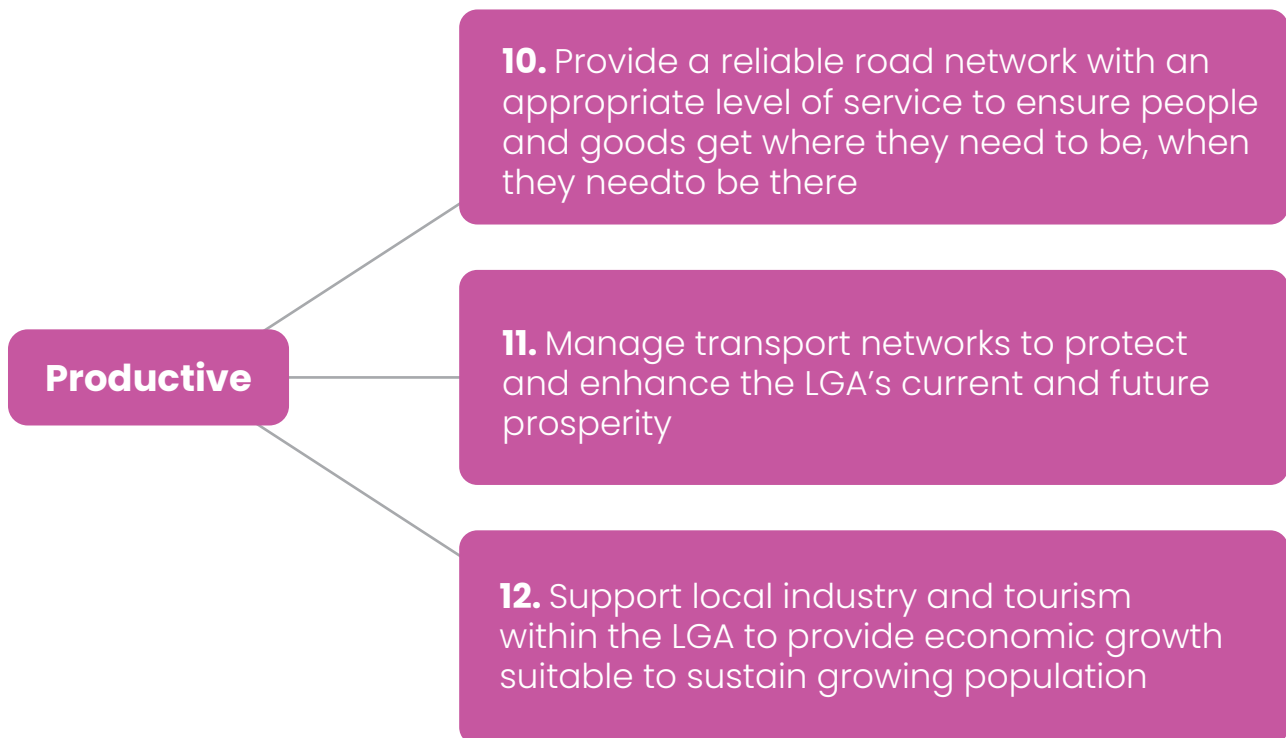


Figure 5.5: Productive Objectives

Table 5.5 summarises the targeted actions and relevant category of transport planning related to the Productive objectives.

**Table 5.5: Productive Objectives and Actions**

ID	ACTION	TRANSPORT CATEGORY				
		Integrated Land Use	Active Transport	Public Transport	Parking	Roads and Freight
<b>Objective #10: Provide a reliable road network with an appropriate level of service to ensure people and goods get where they need to be, when they need to be there</b>						
10.1	Update the functional road hierarchy and access management plan based on current and future traffic demands and patterns for local government roads within the Cessnock LGA to support the arterial road system and improve local accessibility.					✓
10.2	Provide upgrades to key road corridors to ease congestion and reduce travel time delays during peak periods without compromising the use of corridor for local business and on-street residents.					✓
10.3	Identify and monitor "Pinch Points" across the road network and work closely with the state government on future pinch point improvement projects for key road corridors					✓
<b>Objective #11: Manage transport networks to protect and enhance the LGA's current and future prosperity</b>						
11.1	Manage/introduce access controls on the arterial road network to reduce delays and improve safety for road users.					✓
11.2	Develop alternative routes of centres and villages (e.g. Cessnock CBD) to facilitate for longer distance trips and heavy vehicles not using centres for travel.					✓
<b>Objective #12: Support local industry and tourism within the LGA to provide economic growth suitable to sustain the growing population</b>						
12.1	Investigate opportunities through collaboration with tourism operators and event organisers to facilitate improved public and active transport connections to, from and between events and locations, such as park 'n' ride, increased shuttle bus services, bicycle parking.		✓	✓	✓	
12.2	In alignment with the Land Use Strategy Plan for the Pokolbin/ Wine Country area, formalise a network of cycle trails to showcase the LGA to tourists via bicycles (or e-bikes), and to drive economic benefit to the LGA.		✓			

ID	ACTION	TRANSPORT CATEGORY				
		Integrated Land Use	Active Transport	Public Transport	Parking	Roads and Freight
12.3	Investigate RV, coach and caravan/trailer parking near town centres and key attractors.				✓	
12.4	Undertake further investigations into the key traffic routes within the Vineyards District during peak tourist periods to identify, if upgrades are required to infrastructure along these routes.					✓



## 5.1.6 Resilient

A resilient LGA is one that can respond to the emergent needs faced, as well as being capable of dealing with long term impacts of weather and climate events. The Cessnock LGA is in an area that annually experiences a number of severe weather events that impact the safety, productivity and connectivity of the transport network. Most notably this includes flooding, which can quickly cause road closures isolating people, properties, and even entire townships.

However, there are not only short-term impacts of flooding, as the transport network often deteriorates after being submerged by water which can create potholes and other road damage requiring increased maintenance and works.

This strategy seeks to ensure that the transport network is resilient and can adapt to the ever-changing environment of the area. A resilient transport network can withstand the challenges of the LGA and provide reliability for all residents and visitors, at all times. This ensures that the road network is always safe and in operation, and can respond to the immediate needs faced during unplanned events.

To achieve the goal of a resilient transport network, the following objectives have been identified.

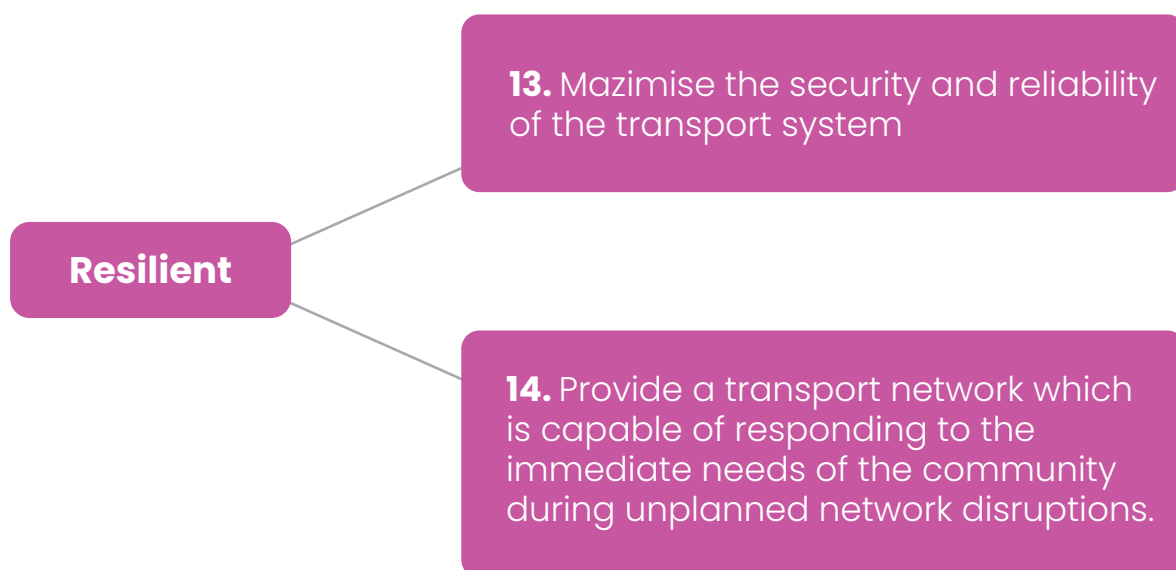


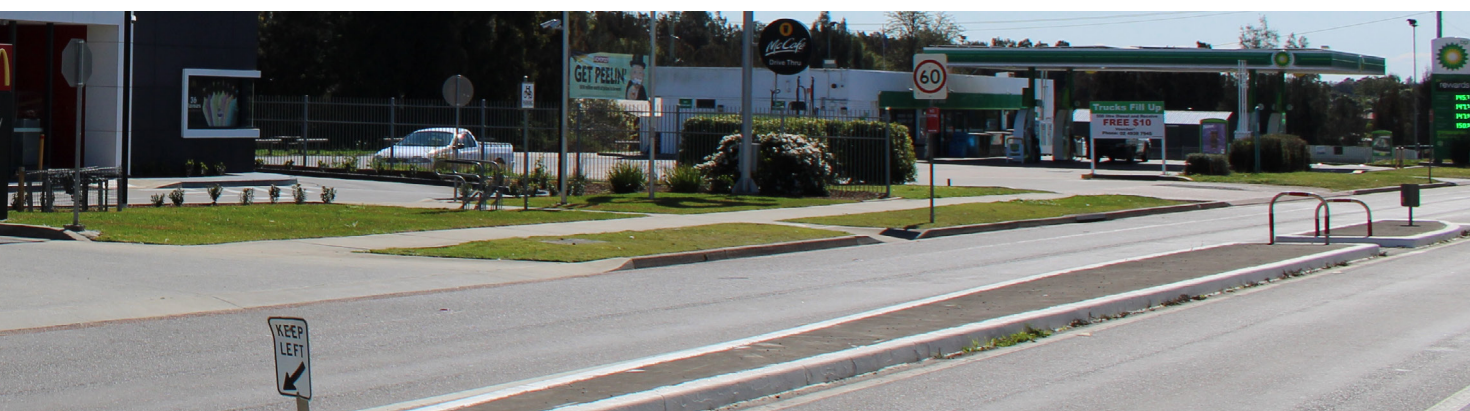
Figure 5.6: Resilient Objectives



Table 5.6 summarises the targeted actions and relevant category of transport planning related to the Resilient objectives.

**Table 5.6: Resilient Objectives and Actions**

ID	ACTION	TRANSPORT CATEGORY				
		Integrated Land Use	Active Transport	Public Transport	Parking	Roads and Freight
<b>Objective #13: Maximise the security and reliability of the transport system</b>						
13.1	Provide guidance and support packages to embed Climate Change action, resilience and disaster preparedness into Council's traffic and transport planning.	✓	✓	✓	✓	✓
13.2	Investigate opportunities to improve regional network resilience and recovery, through planning controls and zoning.	✓				✓
13.3	Establish a clear pipeline of maintenance projects to improve resilience with a focus on adaptability and 'building back better' after a disruption.		✓	✓		✓
<b>Objective #14: Provide a transport network which is capable of responding to the immediate needs of the community during unplanned network disruptions</b>						
14.1	Incorporate climate resilience measures in the planning and design of all transport infrastructure and services aligned with the principles of disaster management.		✓	✓		✓
14.2	Improve information and alerts for residents and local business providing real-time information and monitoring of emerging conditions and threats.		✓	✓	✓	✓



## 5.2 Principles

The Strategy has identified five (5) key transport principles that can be applied to assist in responding to the challenges of the LGA. These principles have been ingrained in the identified objectives and actions and form the basis of the identified road network upgrades.



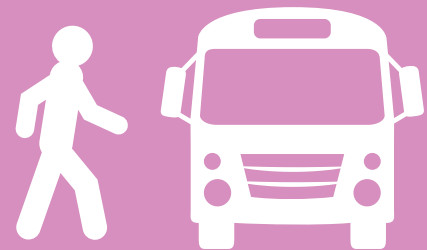
The **Movement and Place** framework focusses on creating successful streets and roads by balancing the movement of people and goods with amenity of places.

The **Safe Systems** approach recognises that people will continue to make mistakes and aims to provide a more forgiving road network to reduce the likelihood and severity of incidents occurring.



The **15 Minute Neighbourhood** supports living locally by providing most of the residents everyday needs within a 15-minute trip via active or public transport.

The **First Mile, Last Mile** principle identifies and focusses on the distance a commuter is required to travel to reach public transport at the start and end of their journey.



**Emerging Technologies** provide an opportunity for the region to adopt more sustainable transport modes in a goal to reach zero emissions.



# 5.3 Preferred Road Network Plan

## 5.3.1 Overview

Network improvement options have been developed and tested to address key challenges faced within the LGA, particularly related to predicted traffic congestion. To test the network improvement options, the Aimsun mesoscopic traffic model developed as part of CTTS 2018 was revised and updated to meet the current conditions and volumes. This model was then used to analyse the proposed options and inform the development of a “Preferred Road Network Plan”.

During the option development process, the following documents were consulted to ensure that the proposed upgrades support existing strategies set out for the LGA:

- Cessnock Traffic and Transport Strategy 2018
- Cessnock City Wide Settlement Strategy
- Lower Hunter Regional Strategy
- Hunter Regional Transport Plan.

A staged process was adopted to identify, assess, and finalise options for improving traffic performance. The process is illustrated in Figure 5.7.

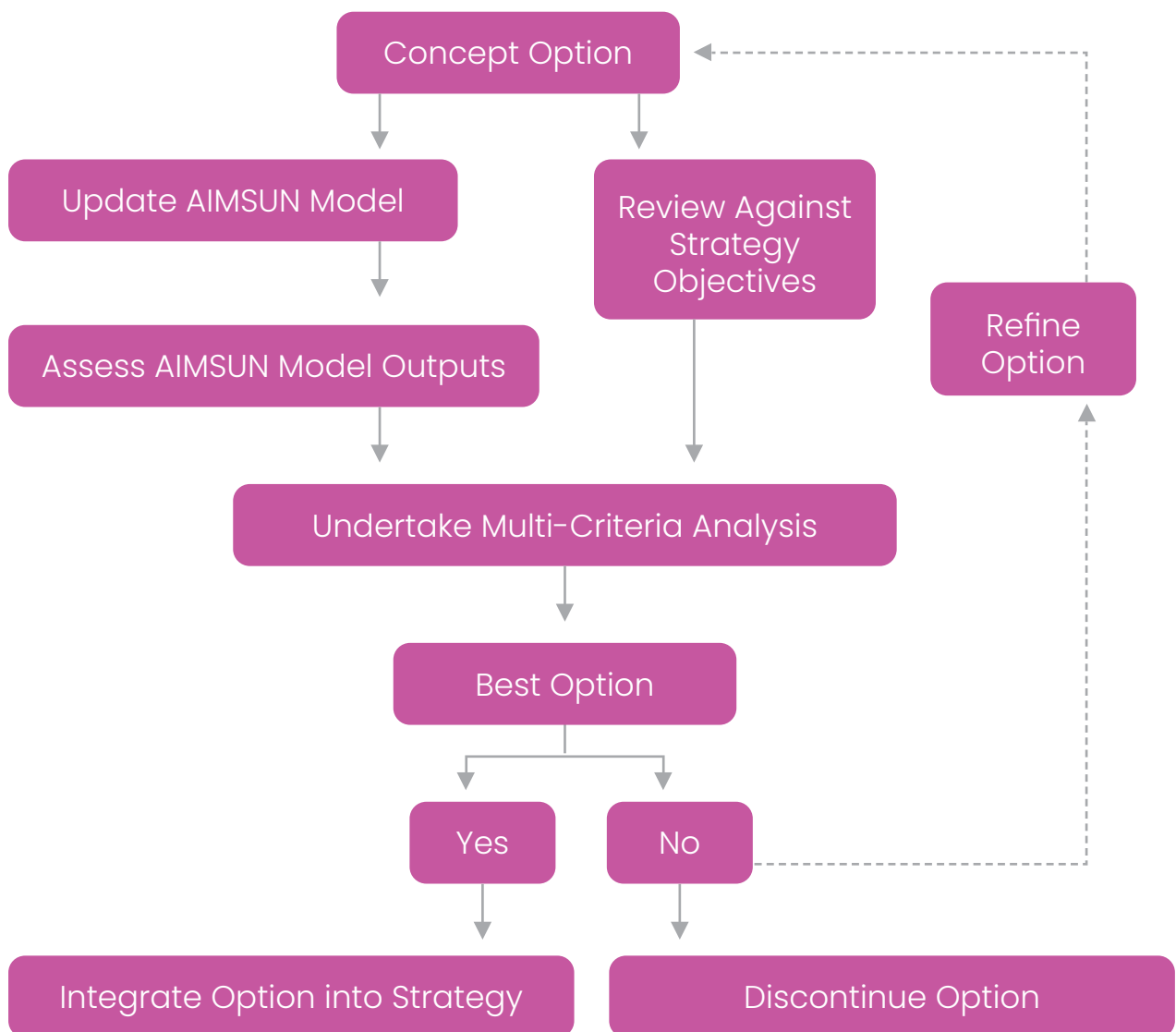


Figure 5.7: Option Development Flowchart



## 5.3.2 Recommended Upgrades

Based on the above process, recommended upgrades were identified which form the “Preferred Road Network Plan”. These actions take into consideration the Strategic Directives and Transport Principles outlined above.

The 2041 Preferred Road Network Plan includes the following recommended upgrades:

### **Lovedale Link**

A new link connecting through Bellbird (from Abbotsford Street to Mount View Road and Oakey Creek Road) and then continuing north and providing a new connection between the Ingles Lane / O’Connor’s Road intersection and the Lovedale Road / Wine Country Drive intersection. This will then include the upgrade of Lovedale Road to an Arterial Road standard and upgrades at the Hunter Expressway interchange. This was identified as a way to transport traffic from Bellbird (and areas to the west of Cessnock) to the Hunter Expressway (via the Lovedale Road interchange) without passing through any urban centres, reducing pressure on Wollombi Road and Wine Country Drive

### **Bellbird–Duffie Drive Connector**

A new link from Wollombi Road along the existing heavy rail corridor, crossing Vincent Street, and connecting to Colliery Street and Greta Street in Aberdare. This would also include a 4-lane layout of Colliery Street and Duffie Drive through to Cessnock Road. This was identified as a way to transport traffic from Bellbird (and areas to the west of Cessnock) to the east of Cessnock utilising the existing rail corridor allowing for connection to the Hunter Expressway via the Loxford Interchange or Main Road Interchange

### **Northcote Street Connector**

Includes the provision of an alternative route around Weston to the south by providing a continuation of Cessnock Road directly into Northcote Street. This will occur via a new at

grade connection with the removal of the First Street Bridge from the travel route. This will reduce the number of vehicles travelling through the existing ‘dog leg’ intersections within Weston, allowing for improved local community and safety

### **Main Road Duplication**

Provide a 4-lane layout from Victoria Street, Kurri Kurri along Main Road and the end of the Cessnock LGA. This improves the connection between Kurri Kurri and Maitland easing pressure on this corridor

### **Old Maitland Road**

Upgrade the length of Old Maitland Road (within the LGA) to a regional road standard, including upgrading the intersection with Maitland Road to include traffic signals controlling all approaches. This improves corridor operation, safety and amenity and ensures that the corridor can accommodate increased usage from motorists travelling between Cessnock and Maitland

### **Cessnock Branch Rail Line**

It is recommended that further investigations are undertaken to determine if the best use for the corridor, either for active transport, or mixed with light rail (see Action 1.6)

### **West Avenue / South Avenue Intersection Upgrades**

Upgrade this intersection to an improved configuration, facilitating more efficient movements east-west to the south of the Cessnock CBD.

The final 2041 Preferred Road Network Plan is shown in Figure 5.8.

### 5.3.3 Predicted Benefits

The AM and PM peak assessment results show that the Preferred Road Network Plan provides the following operational benefits:

- Provides alternate routes for traffic travelling west of Cessnock to Branxton, Kurri Kurri and the Hunter Expressway
- Reducing through traffic levels at villages (such as Weston and Nulkaba) will improve accessibility and amenity within these centres
- Will redistribute traffic within the centre of Cessnock (supplementing the Wollombi Road upgrade) to manage congestion and improve efficiency
- The Lovedale Link (between Wollombi Road and Wine Country Drive) is predicted to carry in the order of 1,000 veh/h in the AM and PM peak hours
- The Bellbird-Duffie Drive Connector is predicted to carry in the order of 1,000 veh/h in the AM and PM peak hours
- Sustained traffic volumes predicted along Wollombi Road – Maitland Road – Cessnock Road corridor between Cessnock and Kurri Kurri compared to options without the recommended upgrades
- Traffic volumes predicted to improve on Wollombi Road between Bellbird and Cessnock by ~30%. It should be noted that Wollombi Road is still predicted to carry 1,000 veh/h eastbound in the AM period, and 1,100 veh/h westbound in the PM period which exceeds the one-way capacity of a single lane (900 veh/h). Therefore, the preferred road network plan must include the committed upgrades on Wollombi Road
- Travel time predicted to improve in other areas compared to options without the recommended upgrades:
  - Wine Country Drive by 10% (Cessnock / Nulkaba)
  - Wine Country Drive by 10% (Huntlee / Lovedale Rd)
  - Through Cessnock City Centre by 10-20%
  - The New England Highway by 30% between Branxton and Greta
  - The New England Hwy by 20-40% south of Greta
- Travel time between the Hunter Expressway and Cessnock is expected to improve. Predicted improvements between:
  - Kurri Kurri and the edge of the LGA (to / from Maitland) by up to 10% during the PM peak period
  - Cessnock and Branxton by up to 10%
  - Cessnock and Bellbird by 25-35%
- Level of Service on key corridors (such as Main Road, Wine Country Drive and Wollombi Road) are predicted to improve
- Improved alternative option between Cessnock and Maitland (Old Maitland Road) to alleviate congestion along existing routes
- Supports the wider community / land use strategy
- Enables new development along the proposed Lovedale Link and Bellbird-Duffie Drive Connectors
- Optimise and improve on-street parking in town centres



## 5.3.4 Staging Considerations

The Preferred Road Network Plan will service the 2041 forecast traffic volumes; however, there are opportunities to implement the proposed upgrades in stages to ensure that planned growth is continually accommodated over future horizons. Further assessment was undertaken to identify potential staging of road network improvements over future years, with modelling undertaken for the interim years of 2026 and 2031 to assess the performance of the network, to identify network deficiencies and to prioritise future road upgrades.

The staging schedule provides a prioritised “needs based” plan to progressively upgrade the road network to support the planned growth in Cessnock LGA as an aspiration target against a set of recommended timeframes (e.g. 2026, 2031 and 2041).

### 2026 Network Improvements

In order to improve traffic performance and to address the above issues, it has been proposed that the following improvements are proposed to be implemented before 2026:

- Northcote Street Connector
- Old Maitland Road / Maitland Road Intersection
- Wollombi Road Upgrade Stages 1 & 2.

The 2026 Preferred Road Network is shown in Figure 5.9.

### 2031 Network Improvements

In order to improve traffic performance and to address the above issues, it has been proposed that the following improvements are proposed to be implemented between 2026 and 2031:

- Main Road Duplication
- Old Maitland Road Upgrade
- Lovedale Link.

The 2031 Preferred Road Network is shown in Figure 5.10.

### 2041 Network Improvements

As noted above, the following improvements are proposed to be implemented between 2031 and 2041 to complete the Preferred Road Network Plan.

- Cessnock Branch Rail Line
- Bellbird-Duffie Drive Connector
- West Avenue / South Avenue Intersection Upgrades.





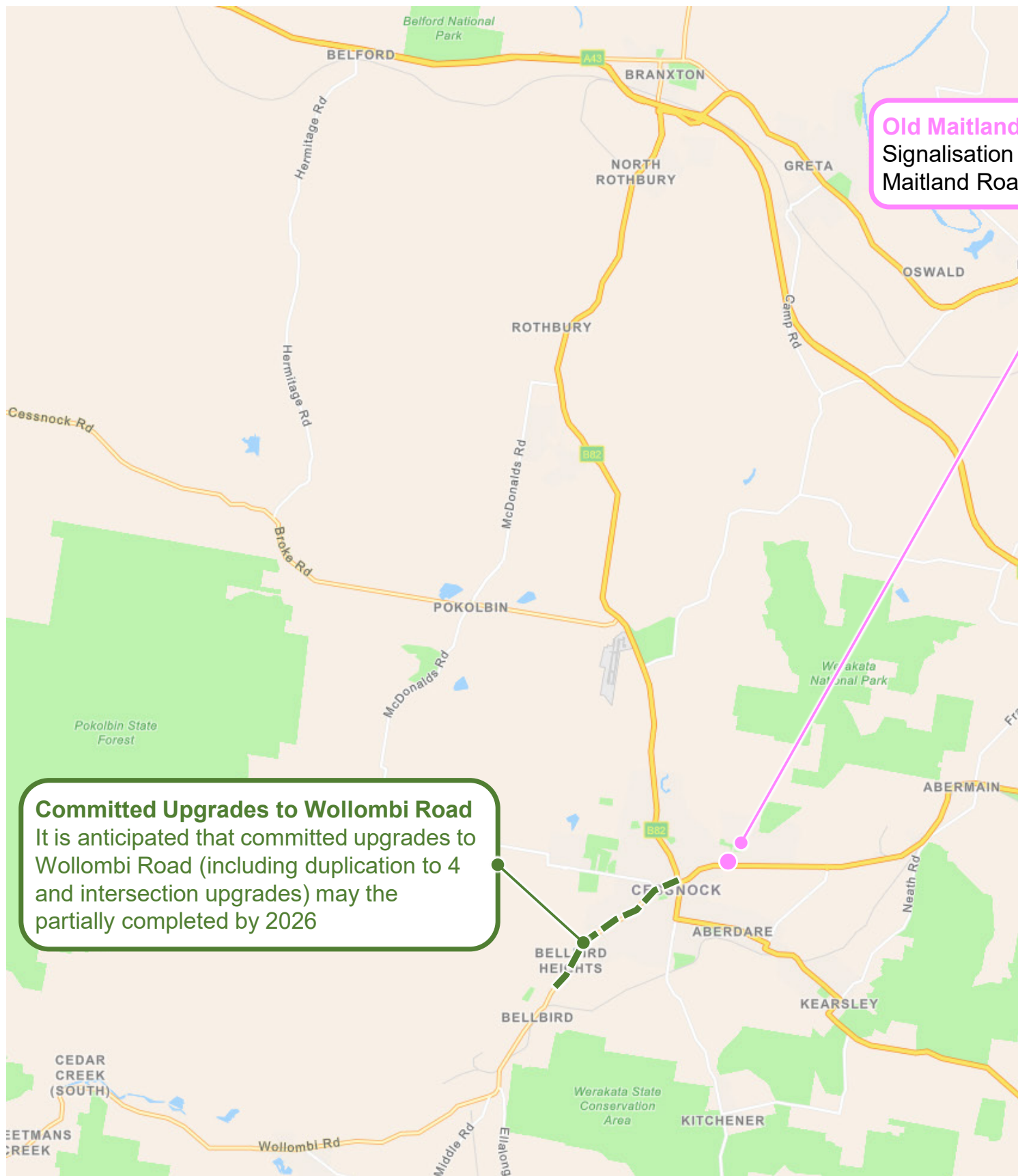
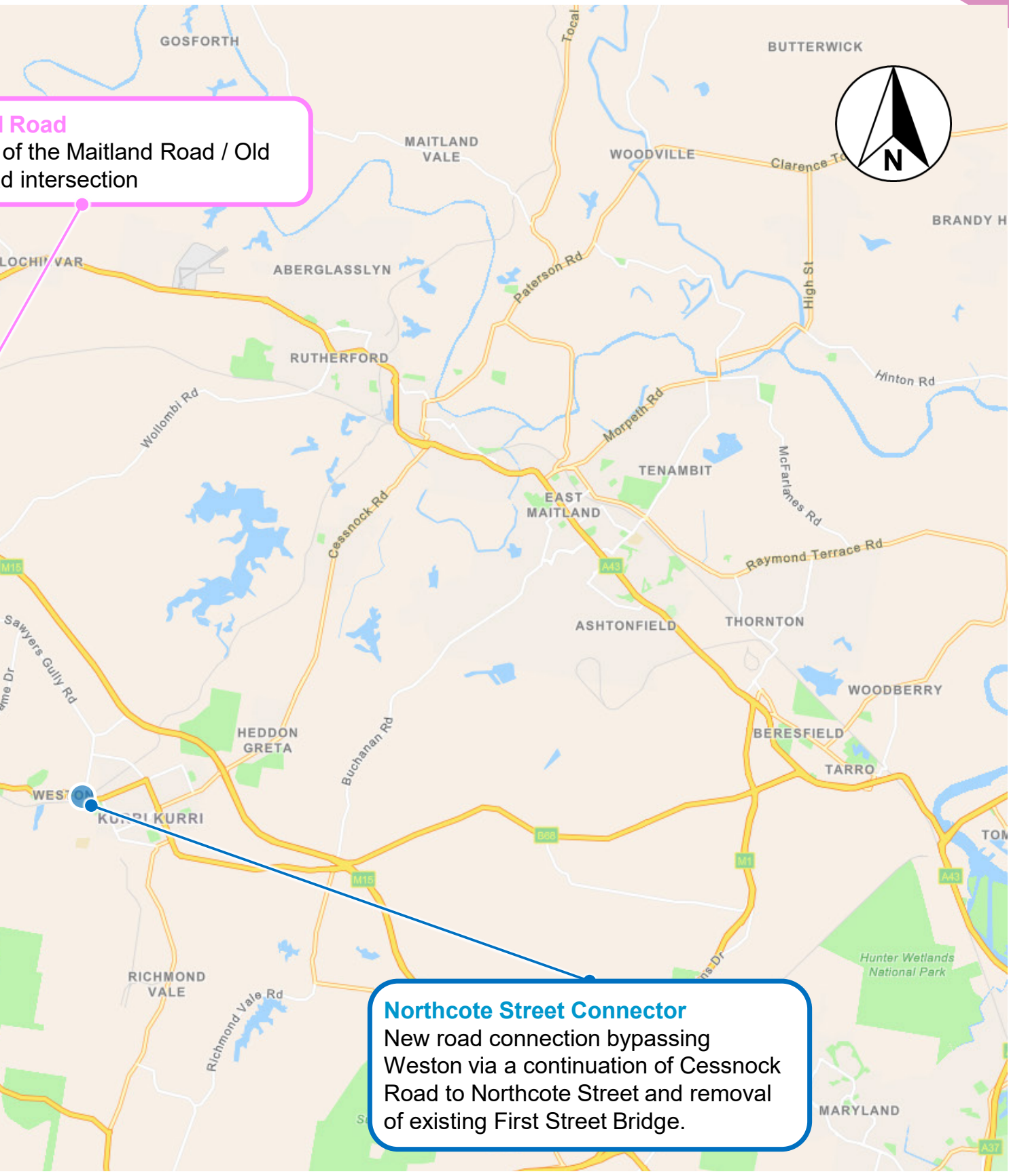


Figure 5.8: 2026 Preferred Road Network Plan



**Old Road**  
of the Maitland Road / Old  
d intersection



**Northcote Street Connector**  
New road connection bypassing  
Weston via a continuation of Cessnock  
Road to Northcote Street and removal  
of existing First Street Bridge.

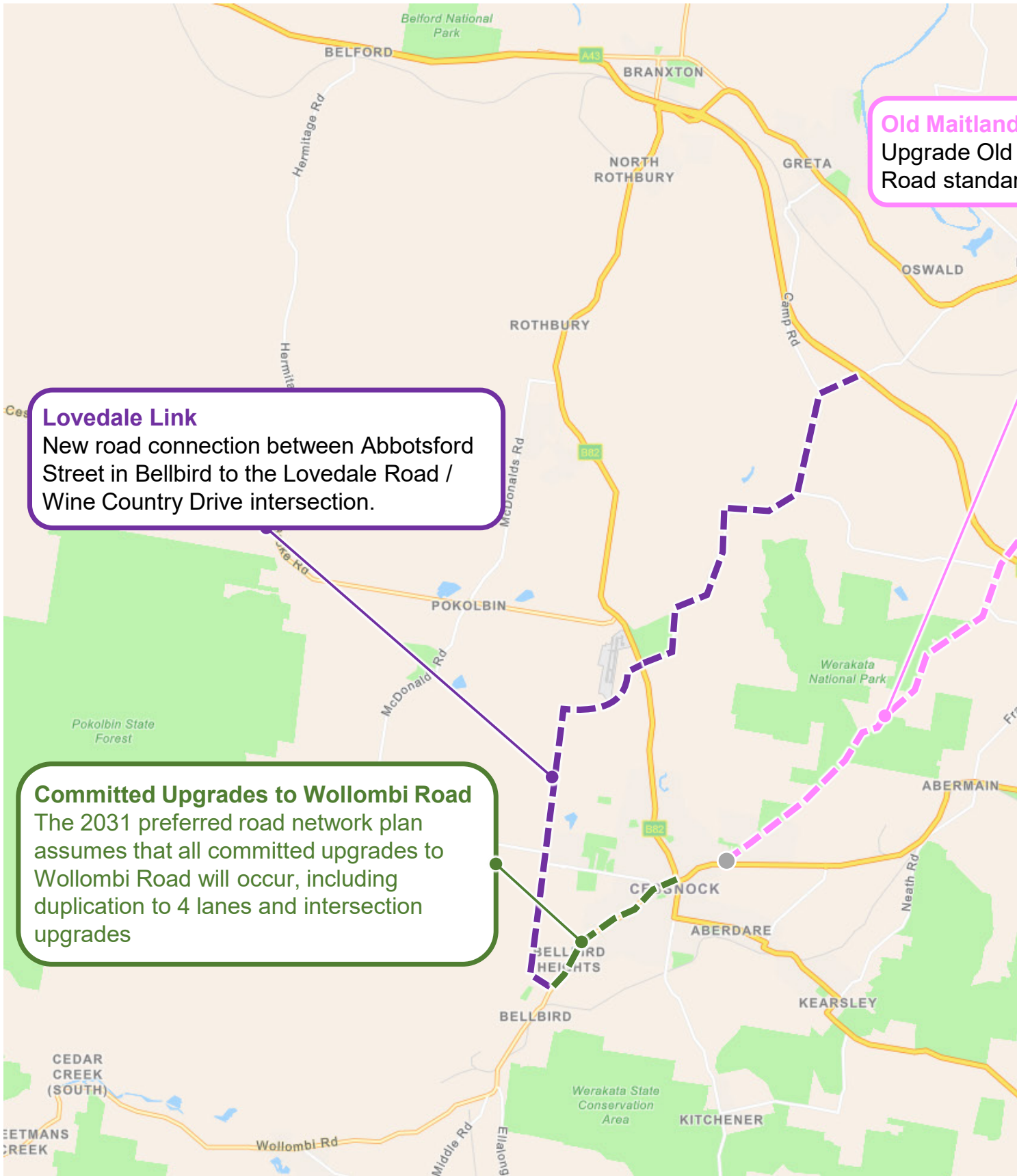
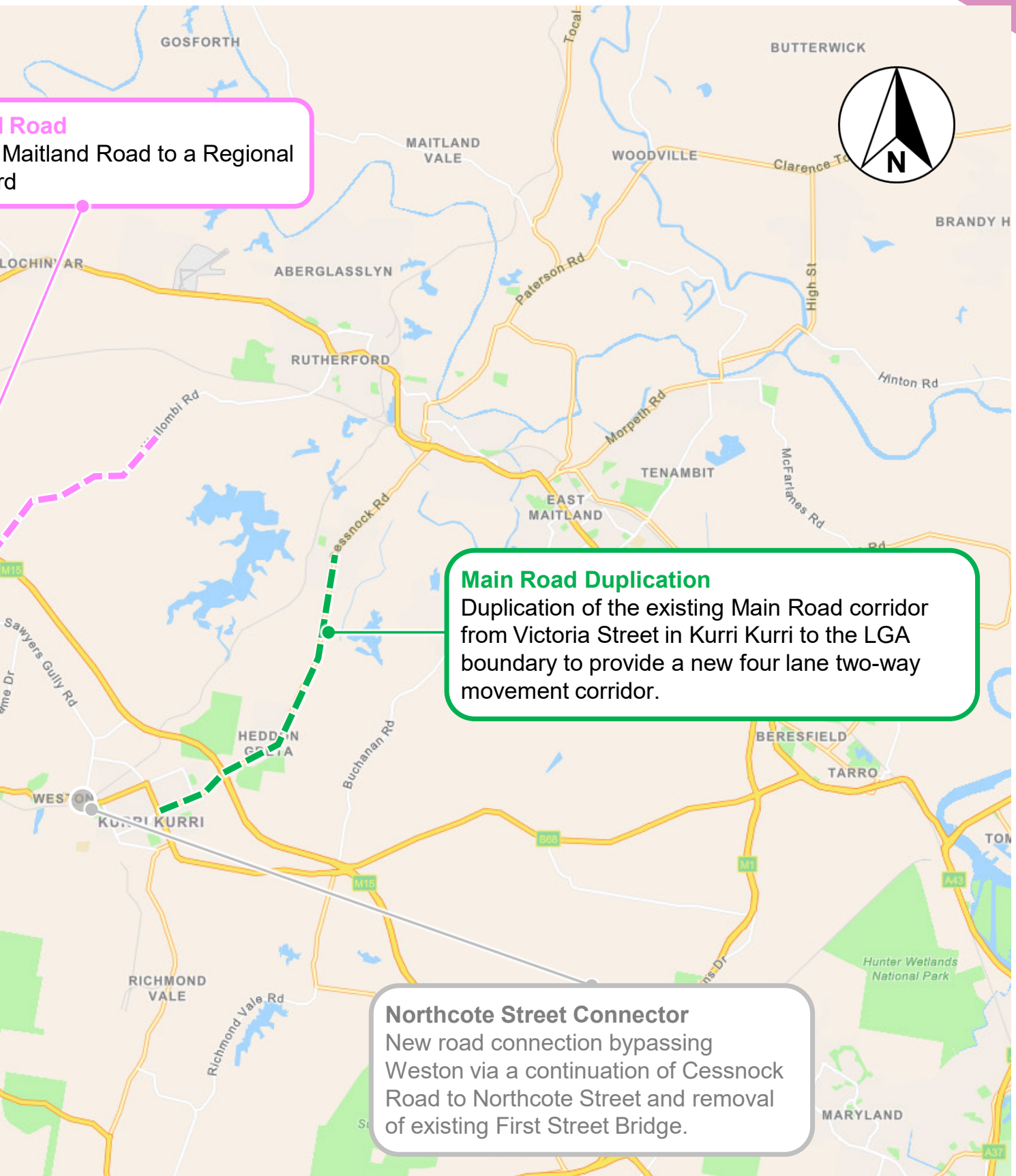


Figure 5.9: 2031 Preferred Road Network Plan



**Project Road**  
 Maitland Road to a Regional Road



**Main Road Duplication**  
 Duplication of the existing Main Road corridor from Victoria Street in Kurri Kurri to the LGA boundary to provide a new four lane two-way movement corridor.

**Northcote Street Connector**  
 New road connection bypassing Weston via a continuation of Cessnock Road to Northcote Street and removal of existing First Street Bridge.

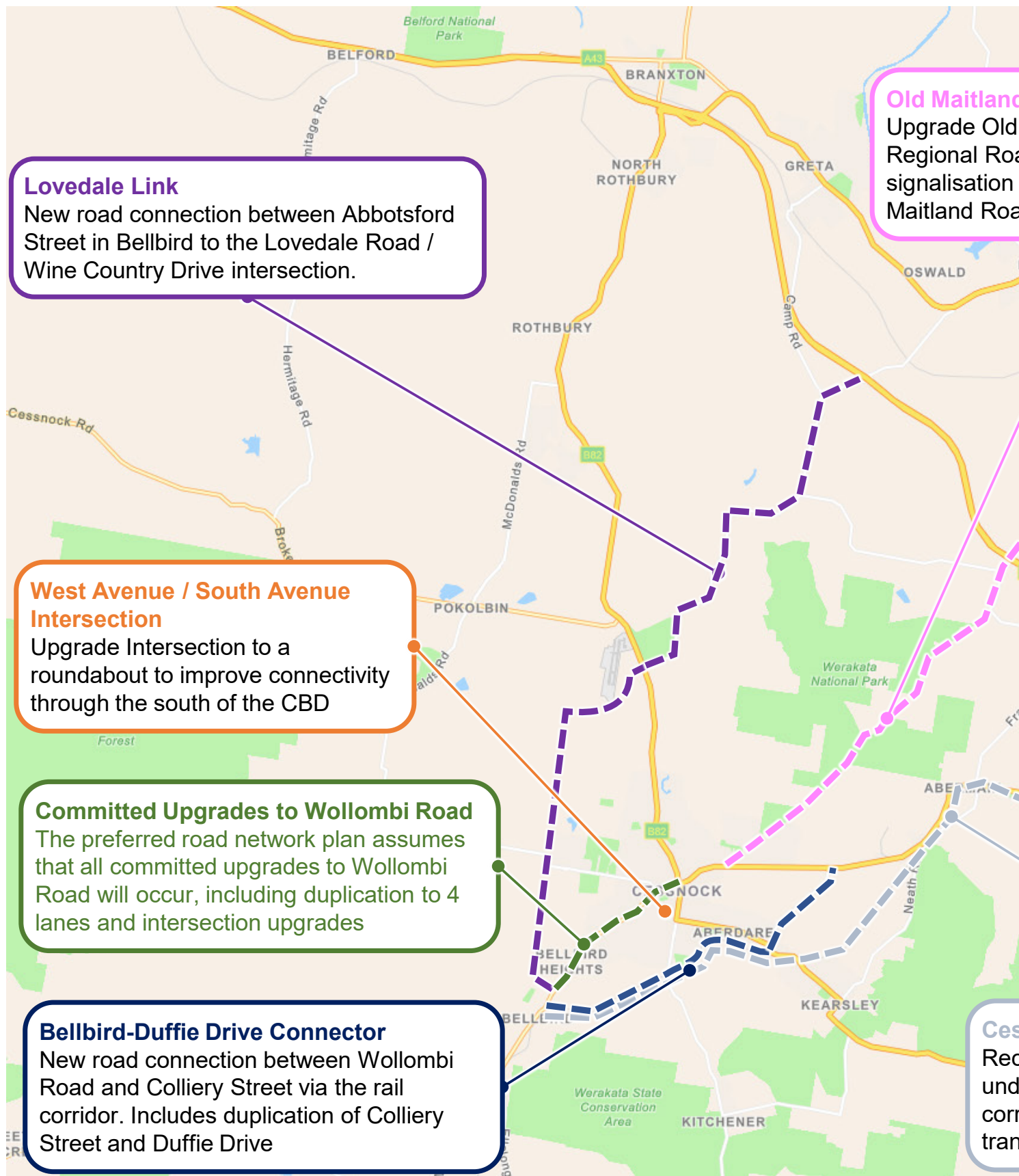


Figure 5.10: Preferred Road Network Plan (2041)

### Maitland Road

Upgrade of Maitland Road to a road standard including duplication of the Maitland Road / Old Maitland intersection



### Main Road Duplication

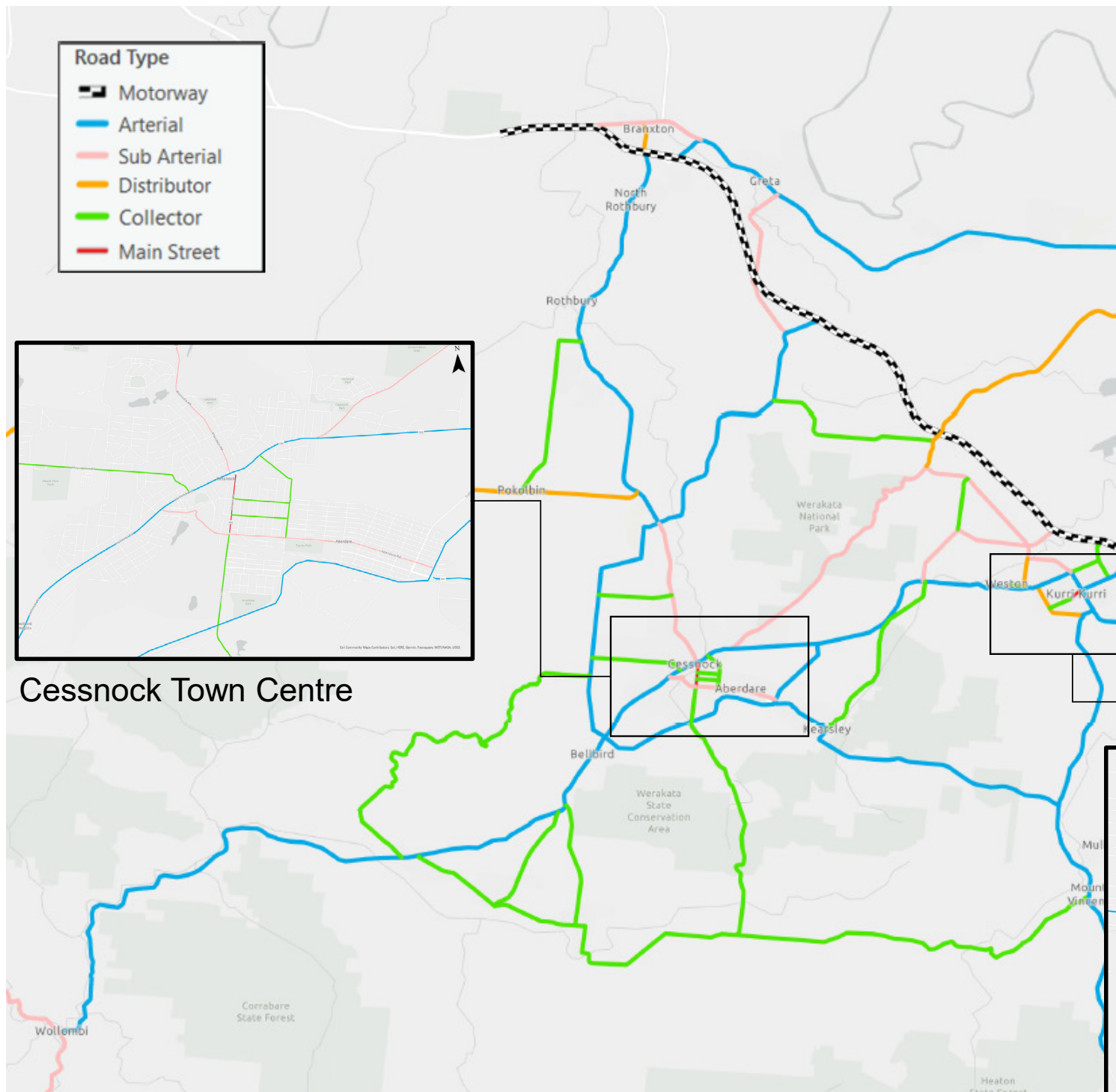
Duplication of the existing Main Road corridor from Victoria Street in Kurri Kurri to the LGA boundary to provide a new four lane two-way movement corridor.

### Cessnock Branch Rail Corridor

It is recommended that further investigations are undertaken to determine if the best use for the corridor (not being used by roads), either for active transport, or mixed with light rail (see Action 1.6)

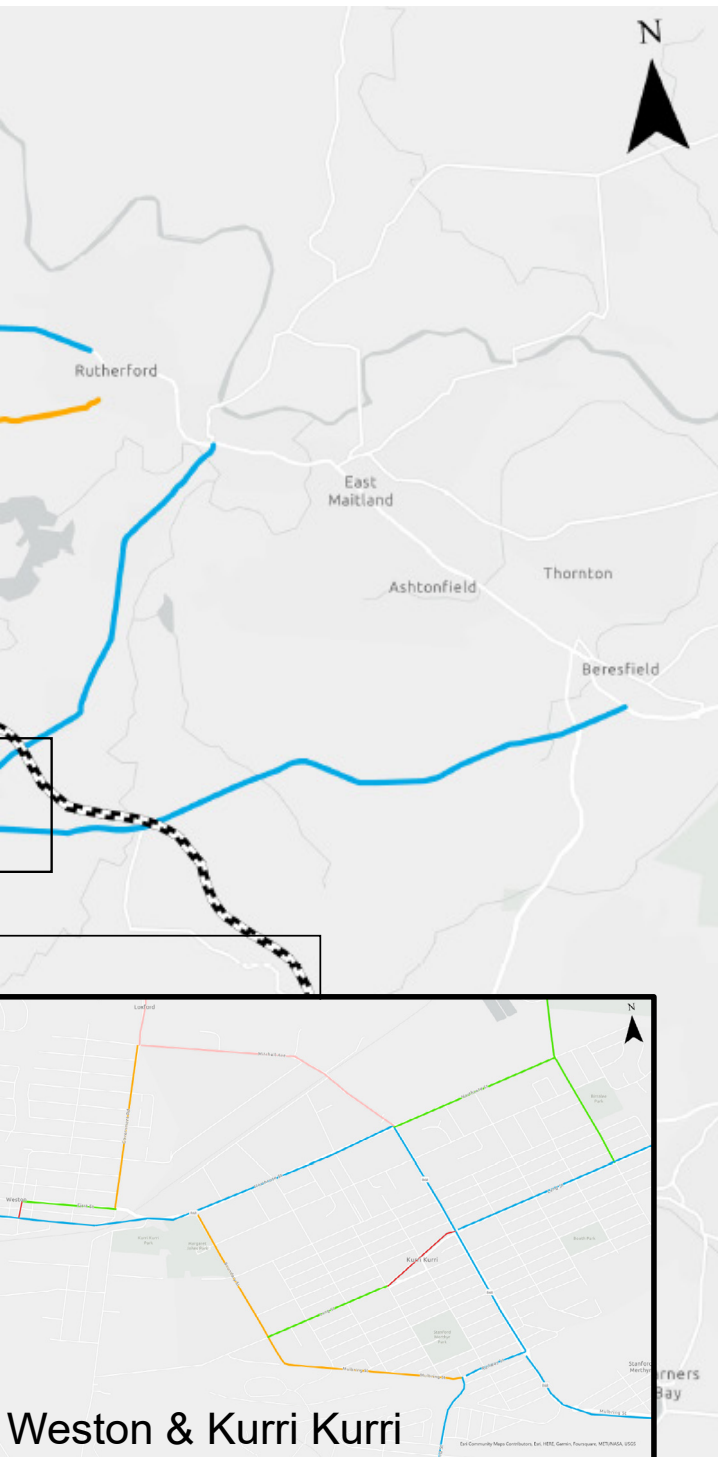
### Northcote Street Connector

New road connection bypassing Weston via a continuation of Cessnock Road to Northcote Street and removal of existing First Street Bridge.



Cessnock Town Centre

Figure 5.11: Recommended Road Hierarchy



## 5.4 Future Road Hierarchy

In addition to the recommended road upgrades the road hierarchy for the existing and proposed roads in Cessnock LGA is recommended to be revised as presented in Figure 5.11.

New link roads such as the proposed Lovedale Link and Bellbird-Duffie Drive Connector will be classified as Arterial Roads with a function to accommodate heavy vehicle and through traffic (i.e. traffic wanting to access the Hunter Expressway and areas outside the LGA). Maitland Road-Cessnock Road will also be classified as an Arterial Road given the east west connection it provides.

Where possible, roads within centres aim to provide lower levels of road hierarchy. This measure will maintain the urban character of the areas while allowing slower speed environments with better pedestrian facilities for users. A lower level road, in terms of hierarchy, would allow more cross road activities for both pedestrians and vehicular movements providing better connectivity for the area in alignment with the Movement and Place Framework.

# ***SUMMARY***



## 6.1 Key Conclusions

The population and residential density of Cessnock LGA is on the rise, with the population expected to increase by 45,300 or approximately 67% by 2041. This results in an average annual growth rate of 3.78%. With this increase in population, comes increased reliance on the transport network to connect residents with key attractors (i.e. work, education, shops, etc).

Cessnock LGA's road network was originally established as a series of connections between its many towns and villages. Residential properties, local shops and businesses front these roads with all requiring driveways, parking, and pedestrian access. As population has increased travels demands for private cars and freight have increased, creating a conflict as roads are attempting to accommodate to both the movement and place framework. These conflicts are expected

to further increase with the population and reliance on vehicle travel, in particular private vehicle travel.

Cessnock has historically lacked suitable funding to promote alternative travel modes such as public transport, cycling, walking and thus these travel modes are significantly underutilised across the LGA.

CTTS 2023 recognises the importance of the transport system on the continued success and prosperity of the LGA and proposes a series of new upgrades and actions to create a more: liveable, sustainable, safe, connected, productive, and resilient network. Considerable investment in the transport system is required over the next 20 years to ensure that Cessnock LGA continues to grow in a way to meet the strategy vision of:

**A people focussed transport network that is safe, sustainable, accessible, and connected which advances economic growth, tourism, and local amenity.**

## 6.2 Investment Framework

The traffic and transport strategy is not intended to be a fully funded strategy. It is a vision to guide transport policy and prioritise investment in the transport network. The strategy will be used to assess funding needs and underpin bids for funding from all levels of government.

Responsibility for funding the major transport improvements should generally be based on similar arrangements to those in the past, however the current administrative arrangements for road funding in the LGA should be reviewed. This could include directing potential future state funds for upgrading sections of state roads to building new road links proposed as part of the strategy.

The projects outlined in this strategy represent an achievable plan for the City's transport future, providing a balance of low cost, short-term actions and major road infrastructure projects that will require investment from all levels of government.





**CESSNOCK**  
CITY COUNCIL

62-78 Vincent Street, Cessnock NSW 2325 | PO Box 152 Cessnock NSW 2325  
02 4993 4100 | [council@cessnock.nsw.gov.au](mailto:council@cessnock.nsw.gov.au) | [www.cessnock.nsw.gov.au](http://www.cessnock.nsw.gov.au)