

The regional cities of Dubbo, Bathurst and Orange and some population centres such as Parkes, Lithgow and Blayney have regular local bus services. In contrast, many other population centres and smaller towns and villages only have regional public transport services to larger centres via the TrainLink coach network or no public transport service provision. Even where public transport services are available, services can be infrequent, indirect or not adequate to meet customer needs. They can fail to provide a competitive alternative to private vehicles. About one per cent of journey-to-work trips are being made by public transport despite about 66 per cent of journey-to-work trips in the region being shorter than 10 kilometres.¹⁷

The nexus between improved public transport coverage, service frequency and patronage growth is not as clear for the region's public transport network as local walking network improvements or urban public transport network improvements. Regional NSW population centres do not have the population densities, settlement patterns, or disincentives for private vehicle travel such as congestion and parking availability that encourage higher levels of mode share on fixed route and timetable public transport services.

Between 2021 and 2023, Transport's 16 Regional Cities Services Improvement Program augmented bus services in Dubbo, Orange and Bathurst. New and improved bus services increased coverage and service frequency. However, the rollout of additional services has had mixed results. Some services experienced notable increases in patronage while others delivered only small increases.

Past trials of on-demand public transport services in the region which focused on providing services for longer-distance trips between under-served regional centres, have been largely unsuccessful. In other regions of NSW, on-demand services that replace or complement existing fixed route and timetable services within a geo-fenced catchment have been far more successful, including the on-demand trials in Moree and Bourke.

Market viability and availability of point-to-point services such as taxis, Uber and community transport, varies across the region but is mainly limited to Dubbo, Orange and Bathurst. This provides inconsistent support for less car dependant lifestyles, including for those communities with less access to private vehicle travel, including elderly, disabled or socio-economically disadvantaged residents. Provision of more customised and flexible on-demand public transport services would help to address shortfalls in the provision of more traditional point-to-point transport services.

Case study: Driving patronage growth and delivering value for regional communities with On Demand

Provision of customised and flexible public transport services in Moree and Bourke generated significant public transport patronage growth and improved residents' transport choice for all trip purposes. Moving from fixed route and timetabled public transport services to on-demand public transport services resulted in public transport patronage increasing by 2400 per cent as well as garnering awards that recognised the social equity benefits they bring, particularly for local aboriginal communities.



On Demand public transport vehicle

¹⁷ ABS, Census, 2021

Opportunities

Transport can improve access within population centres by:

- working with DPHI, service providers and local government to support complementary land use and transport planning that reduces distance and increases transport choice for residents' trips to the destinations and services that they use regularly
- leveraging findings of the Transport for Health final report to inform opportunities to improve local public transport services connecting patients with healthcare
- identifying locations where the delivery of shared walking and bicycle bridges across rivers and rail lines would make walking trips more direct, would improve pedestrian safety and amenity, and would increase the likelihood that residents of poorly connected neighbourhoods will walk to access local destinations and services
- identifying locations where the delivery of formal pedestrian crossings on state and regional roads passing through population centres would improve the safety and amenity of walking trips between less well-connected neighbourhoods and local destinations and services
- identifying locations where replacing angled parking and manoeuvring areas with parallel parking, delivering new build-outs around intersections, and removing pedestrian barrier fencing and centre lines would reduce crossing widths and improve pedestrian safety and amenity on main streets, such as in Orange, Cowra, Narromine, Blayney, Coonabarabran, Gilgandra and Condobolin
- re-prioritising the intersections of existing state roads and population centre bypasses to prioritise use of bypasses by through traffic
- introducing planning controls that protect bypasses from direct connections from greenfield development and minimise conflict and competition between local and regional traffic movements
- delivering a more competitive mix of fixed route, timetable services and on-demand public transport services to encourage mode shift away from private vehicle trips and increase public transport patronage in Central West and Orana centres.



Aerial view of bus on road in regional Dubbo area

5.2.2 Access to regional cities

Longer distance trips between population centres, towns and villages, and the region’s three regional cities are required less frequently than local travel. However, for many residents, they’re necessary for trips to higher order hospital and education services.

The region’s rail network includes both active and non-operational rail lines that are generally less direct than the region’s state and regional road network. This impacts rail-based travel times, which are generally longer than equivalent private vehicle trips. In addition, many rail lines in the region, particularly the Main West Rail Line, accommodate a mix of passenger and freight services. This impacts the flexibility, reliability and amenity of both the passenger and freight services that use these lines.

Legacy rail infrastructure and services, such as the Blue Mountains Line, also suffer from increased vulnerability to environmental shocks and stresses. As a result, the amenity of Blue Mountains passenger rail services – in terms of speed, frequency and reliability – has not improved at the same rate as private vehicle amenity on the Great Western Highway.

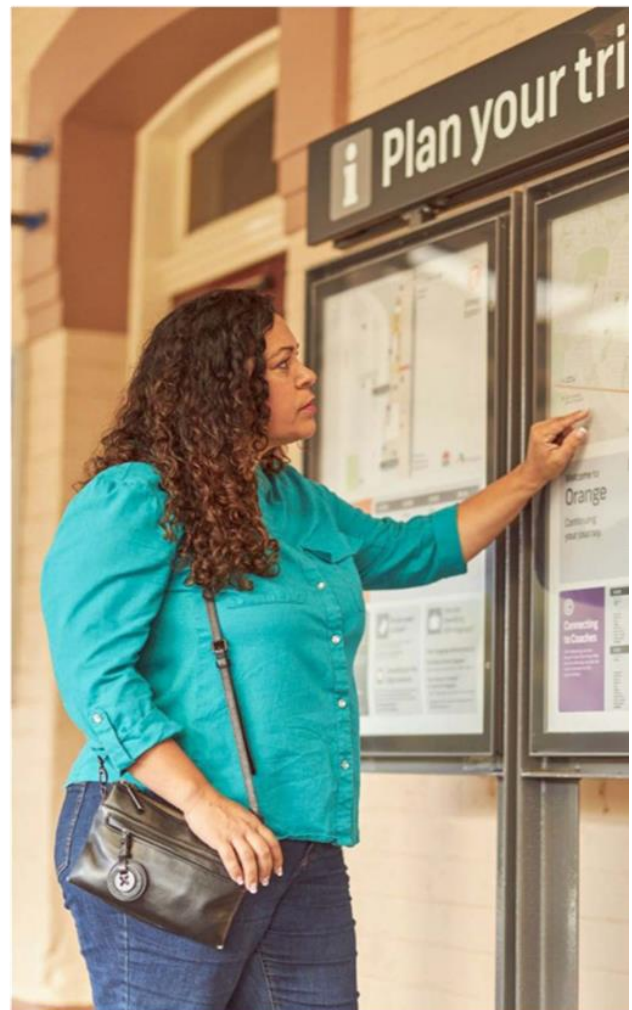
Coach services provide more direct and competitive services between centres but do not offer the same level of onboard amenity as train services or the flexibility of private vehicle travel.

While practical longer distance trips are rarely made by bicycle alone, providing facilities for the easy carriage of bicycles on rail and coach services helps to expand the range of longer distance trips that combine cycling and public transport. Cycling tourism will also benefit from the easier carriage of bicycles on trains and coaches.

Opportunities

Transport can improve access to the region’s cities by:

- leveraging findings of the Transport for Health final report to inform opportunities to improve longer distance public transport services connecting patients with healthcare
- providing more meaningful, fast and reliable day return services between the region’s 18 strategic centres and the region’s three regional cities – Dubbo, Orange and Bathurst – to increase public transport access to higher order services like hospitals that are offered in the region’s cities
- providing meaningful day return services between villages and towns to enable access to higher order services in the region’s 21 population centres.



Passenger looking at the trip planning map on the platform at Orange Station

5.2.3 Access to metropolitan cities

Dedicated Inland Rail and existing ARTC freight rail networks maximise the capacity, flexibility and reliability of NSW’s freight rail network. Introducing passenger services on Inland Rail or existing ARTC lines would reduce incentives for freight to transfer from road and the existing Main West Rail Line onto the Inland Rail Parkes–Port of Newcastle route, limiting opportunities to minimise road-based freight externalities and freight/ passenger rail conflict on the Main West Rail Line. It is unlikely that passenger services on Inland Rail and existing ARTC lines would result in significant patronage growth on these routes as they would be unlikely to be able to provide competitive, fast and reliable passenger rail services compared to road-based transport modes, such as coaches or private vehicles.

Sydney metropolitan rail services are provided using electric trains. The Blue Mountains Rail Line is currently electrified to Bowenfels in Lithgow.

Extending Sydney rail service patterns beyond Lithgow would require significant electrification of the rail line beyond Lithgow.

Travelling by air for inter-regional trips offers superior travel times between Sydney and the region’s airports. This comes at significant cost relative to other modes and is not a viable option for many living in the region. New e-aviation technologies may help to drive down seat costs and increase opportunities for more regular and flexible flights making air travel a better option for longer distance trips.

Private vehicle trips have benefitted from decades of investment in the road network. They offer a high level of service compared to public transport and are more cost effective, available and flexible compared to aviation. Resulting induced demand has caused further growth in the number of longer distance private vehicle trips to and from the region.

Sydney to Central West

Growth in private vehicle trips between Greater Sydney and the Central West have contributed to traffic growth on the Great Western Highway and the Bells Line of Road corridor. However, most traffic growth along the corridor has occurred at its eastern end. This growth in local trips is driven by population growth in Western Sydney and the Blue Mountains LGA, growth in the Blue Mountains and Central West and Orana region’s visitor economies and associated recreational trips from Sydney to the Blue Mountains, which is particularly prevalent on weekends and during holiday periods.

Transport continues to investigate options to improve network reliability and efficiency for this key national road link between large economic regions. The challenge to develop cost-effective improvements requires support at all levels of government to unlock region-shaping benefits. Transport is committed to developing responses to the challenges of the corridor from Sydney to the Central West, particularly along the Great Western Highway between Bathurst and Sydney and the Bells Line of Road between Lithgow and Sydney.



Great Western Highway, Blue Mountains region

Opportunities

Transport can improve access to the metropolitan cities by:

- leveraging findings from the Transport for Health final report to inform opportunities to improve longer distance public transport services connecting patients with healthcare
- increasing the frequency, speed and reliability of passenger rail services connecting the Central West and Orana and Sydney. Consideration should be given to the mode shift and patronage benefits of extending Sydney metropolitan rail service patterns to Lithgow and promoting the interchange at Lithgow to more frequent, reliable and faster shuttle services between Orange, Lithgow, Dubbo and Parkes
- supporting the emerging e-aviation industry, improving the prospect of frequent, reliable and fast air services between Orange, Dubbo, Bathurst and Sydney, reducing the negative externalities of long-distance trips on the region's communities, and reducing demand for private vehicle travel between the region and Sydney.

Aerial of regional road and rail track near Dubbo



5.2.4 Equitable access to transport for people of all ages and abilities

The region's community is forecast to change rapidly in coming decades, including a growing and ageing population and a transforming and diversifying economy. Ageing populations (see Figure 4) in the region and the associated increase in age-related infirmities, such as deteriorating eyesight and reaction times, will result in an increasing proportion of the community having more limited access to private vehicle transport in the future. As such, the future productivity, liveability, health and sustainability of the region depends on a transport network that provides a range of travel choices to people, regardless of where they live or their personal circumstances.

Access and mobility issues are compounded for residents living with a disability such as a visual impairment that limits their access to public transport and private vehicles. The use of tactile indicators and audible pedestrian signals can help visually impaired people use local walking networks. However, these treatments have limited benefit where walking networks are incomplete or provide insufficient width for pedestrian movement and other uses such as for signage, outdoor dining and seating. Footpath networks that lack or have sub-standard pram ramps and non-compliant bus stop infrastructure – even where the bus itself is disability compliant – create barriers for people using wheelchairs and other assisted mobility devices on the walking network and limits their ability to access public transport. Declining taxi service coverage and limited requirements for accessible vehicles for other types of point-to-point services mean people with a disability have limited options for independent and unassisted travel.

The region is home to some of the most disadvantaged communities in New South Wales. Coonamble LGA is the most disadvantaged in the region with a Index of Relative Socio-economic Advantage and Disadvantage (IRSAD) score of 1, followed by the Gilgandra, Warrumbungle, Lithgow and Cowra LGAs with a IRSAD score of 2.¹⁸ Areas with the highest level of disadvantage typically have less access to regionally important destinations and services by public transport than areas with higher levels of advantage. A person's level of socio-economic advantage or disadvantage impacts their mobility options and level of access to the region's transport network and services. People with high levels of socio-economic disadvantage often experience transport disadvantage, which limits their ability to access goods, services and employment opportunities. Transport disadvantage is defined as difficulties accessing both public and private transport or difficulties associated with maintaining private transport.¹⁹

Transport can respond to transport disadvantage in the region by improving people's access to public transport, including on-demand public transport, and, to a lesser extent, improving access to point-to-point services and private vehicles. Transport can improve people's access to public transport by improving public transport network coverage and availability, in terms of service frequency, span of hours and days, and digital access.



¹⁸ ABS, SEIFA 2021

¹⁹ Rosier and McDonald, The relationship between transport and disadvantage in Australia, 2011. https://aifs.gov.au/sites/default/files/publication-documents/rs4_2.pdf

Real and perceived levels of personal security impact people's willingness to travel on the network. For example, women cite personal security and fear of crime as their top reason for not using active and public transport, opting instead to travel using private vehicle or deferring travel entirely. Transport's Safer Cities Survey found that 92 per cent of women and 75 per cent of men surveyed cited a sense of safety as a factor influencing which routes they choose to travel. Availability of lighting was the most common factor influencing sense of safety for all participants.²⁰ The survey also revealed that 42 per cent of women feel unsafe 'most or all of the time' in public spaces after dark compared to 17 per cent of men. This is more pronounced for women living in regional NSW (68 per cent) who are more likely to feel unsafe across all types of public spaces compared to women in metropolitan areas (57 per cent).²¹

Passenger experience, safety and comfort influence a person's ability to use public transport. Some people are unable to use public transport services even when they are available due to personal security concerns accessing and while on board public transport. All people in the region deserve freedom from racism and an equitably safe, secure and comfortable experience using public transport.

Opportunities

Transport can improve equitable access to the transport network for people of all ages and abilities by:

- working with councils and public transport service providers, including on-demand public transport providers, to ensure vehicles and infrastructure are accessible for people of all ages and abilities for the entirety of their trip
- working with councils and public transport service providers, including on-demand public transport providers, to ensure that infrastructure and services address the needs of transport disadvantaged communities
- working with councils to identify opportunities to improve lighting, street activation, passive surveillance and the application of Crime Prevention through Environmental Design (CPTED) principles at rail stations and bus stops as well as on state roads that perform place, local access and regional movement functions in the region's population centres. This will support increased walking activity and public transport use in the evening and at night, reduced crime, and improved perceptions of personal security on roads and public transport services, particularly for the most vulnerable members of the community including children, women and the elderly.

Condo Comes Alive, Lachlan Shire Council, Open Streets Program

Condo Comes Alive ran over one day, transforming the main street of Condobolin with a spectacular array of art and cultural activities, live music, entertainment, market stalls, outdoor dining and child friendly activities, giving residents and visitors a chance to rediscover their local businesses.



Open Streets, Condo Comes Alive © Lachlan Shire Council

²⁰ Transport for NSW, Safer Cities Survey Report, 2023, https://www.transport.nsw.gov.au/system/files/media/documents/2023/Safer-Cities_Survey-Report_0.pdf

²¹ ABS, SEIFA 2021



5.3 Well-located housing and successful places



Well-located housing and successful places will be supported by coordinated delivery of active transport network infrastructure and public transport services

By 2041, Central West and Orana’s population is projected to exceed 323,000 – generating demand for at least 21,000 new homes and increased value for public spaces. The best opportunity to build ‘well-located’ housing – housing that enhances place value – is in or near existing centres. This location ensures efficient access to local and regional destinations, supports new and growing businesses, strengthens government services, reduces travel demand and distances, expands travel options, and lowers transport’s negative impacts.

However, while focusing on centres is ideal, it’s not always feasible within required timeframes. Although housing and associated infrastructure are central to growth, poorly located development can worsen social inequity and external transport costs – often borne by taxpayers, not developers.

What we heard

- Successful places thrive on social interaction, but traffic activity diminishes place value.
- Densification and co-locating housing with key destinations is essential to promote walking and cycling but must be supported by improved walking and cycling infrastructure.
- Communities support medium density development in regional centres where it delivers clear urban renewal benefits including supporting the ongoing viability of local and regional destinations and services.
- Ageing populations face mobility challenges and downsizing barriers, necessitating urban planning that supports ‘ageing in place’ and more equitable housing redistribution.
- Urban renewal and densification are less attractive to developers than greenfield development but provide significant place benefits. Current planning processes fail to accurately represent and mitigate the downstream traffic impacts of greenfield development.
- Local communities expect direct connections between greenfield development and the state road network to mitigate local traffic network impacts. In many cases, direct links to the state road network have limited local benefit and negatively impact the safety and efficiency of the state road network.



5.3.1 Delivering well-located housing supported by transport networks

Well-located housing is defined as being within a 10 minute walk of daily destinations (jobs, school, doctor, sports, cafés) and within a 30 minute public transport ride to less frequent needs (supermarket, TAFE, hospital, stadium, museum). Regional cities – Bathurst, Dubbo, Orange – typically offer this access. Most new ‘well-located’ housing should be infill within these centres, delivering benefits to:

- existing government services and businesses
- provision of more specialised destinations
- active travel and public/shared transport infrastructure and services
- regional places as centres of community life.

New housing in existing centres can be contentious if poorly designed, threatening heritage and character. High costs – and more affordable rural land – encourage developers toward greenfield options, especially where community resistance is low.

Greenfield sites far from destinations require costlier infrastructure, promote car dependency, raise external costs, and reduce demand for fixed-route public transport. Examples: William Maker Drive (Orange) and eastern Kelso/Raglan (Bathurst) show how limited walkability leads to heavy car use.

Over-reliance on cars in greenfield areas increases kilometres travelled – raising risks of fatal and serious crashes – and contributes to pollution, noise, sedentary lifestyles, respiratory illness, and reduced productivity. Increased traffic also makes main streets less appealing, undermining business and social cohesion and stressing road networks when incidents occur.

Sometimes infill is unsuitable, e.g. on floodplains. In these cases, ‘self sufficient’ greenfield communities must include complete local services (businesses, schools, healthcare, recreation, social venues) and high-quality public transport to regional centres to limit demand and externalities.

Opportunities

Transport can support well-located housing by:

- identifying areas in population centres where new walking/cycling links or public transport would enhance such development and support sustainable travel
- leveraging its property, assets, and services to support housing, renewal, and densification
- encouraging local destination and service provision in greenfield areas and improving public transport between greenfield and central areas.



Housing in Orange © Shutterstock



5.3.2 Delivering successful places supported by multimodal transport networks

Land-use and transport planners must balance housing growth and access with preserving the identity and wellbeing of regional centres. Because growth has been slower here than in metropolitan NSW, many centres retain characteristics supporting local access:

- clear land use and service planning, with centralised destinations and services providing the foundations for successful main streets balancing the movement and place needs
- more compact street networks with consistent junction densities, designed to support the use of slower speed modes such as walking
- more complete local walking networks, including pedestrian cut-throughs and green infrastructure
- train stations in the heart of regional centres
- fewer vehicle crossings
- on-site delivery facilities.

These traits support regional values: tight knit communities, secure public spaces, clean and quiet environments, active rural lifestyles, and attractive streetscapes.

However, new residents can lead to car-oriented changes – more traffic and parking – that concern communities about poor development, environmental decline, and loss of local culture. Tensions often arise between those in established centres and those in new greenfield areas when traffic detracts from place quality.

Opportunities

Transport can help reinforce successful places by:

- supporting walking-friendly street design (paths, crossings, trees, lighting) and reducing harmful vehicle crossings
- working with councils and DPHI to manage traffic and parking impacts from new development on main-street safety and amenity.



5.4 A thriving and diversifying economy



Transport infrastructure and services support local business, the visitor economy and improving the productivity of freight movements to support jobs growth, increased regional productivity, and economic diversification

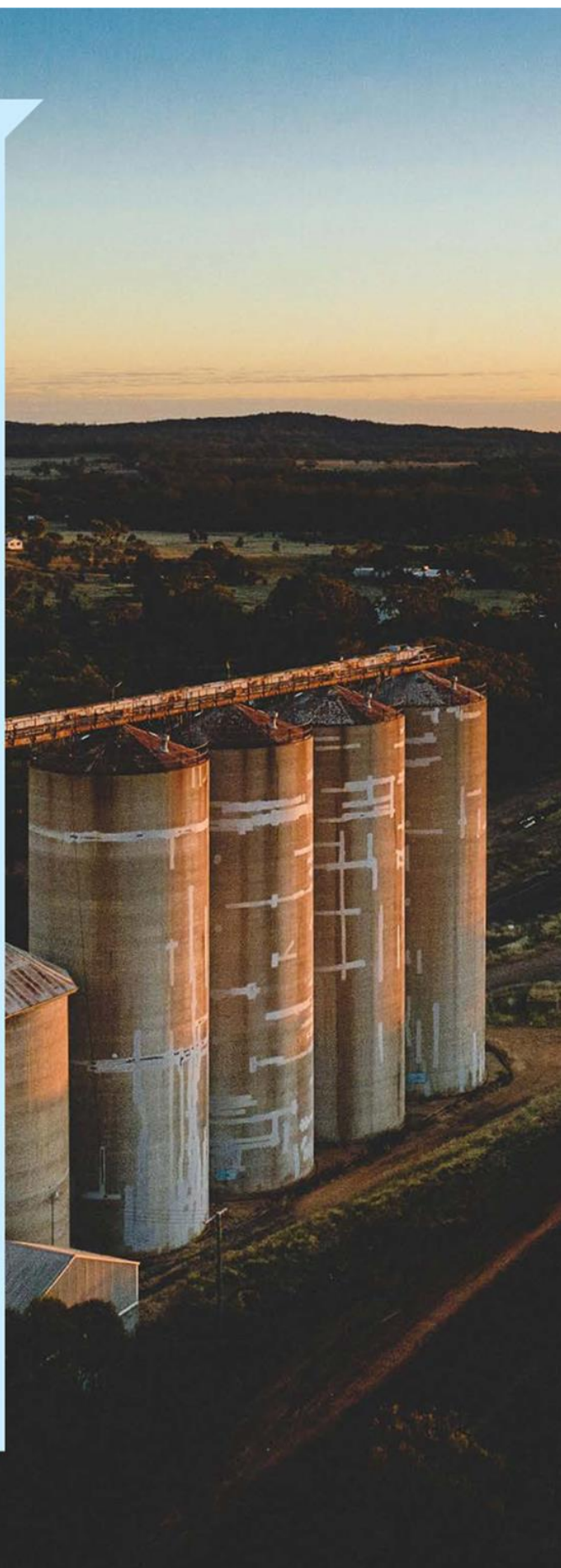
At the same time, the region faces both challenges and opportunities related to evolving freight needs. Key factors include the delivery of transformative infrastructure like Inland Rail and the Parkes Special Activation Precinct, a decline in coal extraction and rail freight movements, and the emergence of the Central-West Orana Renewable Energy Zone (REZ). Ensuring the freight network keeps pace with these changes will be essential to supporting economic diversification. Continued investment in primary industries and the visitor economy will also be important for maintaining regional economic strength.

The Central West and Orana’s economy has historically been driven by primary industries. Today, however, 60 to 70 per cent of the region’s gross regional product comes from service sectors such as healthcare, social assistance, education, and retail. One in five regional workers is employed in healthcare or social assistance, and more than one in ten in education and training. As automation reduces employment in traditional industries, service sectors are expected to remain the region’s largest employers, with growth concentrated in the main population hubs.

Aerial view over Neilson Park, Coonabarabran © Destination NSW

What we heard

- Retaining existing businesses and attracting new businesses, including in advanced transport technology and tourism, and supporting the region’s local economy and jobs, are essential for sustainable economic growth in Central West and Orana, particularly as coal mining jobs decline.
- Freight network capacity needs to be rebalanced to support growth industries such as agriculture, and to counteract declining domestic and international coal demand.
- Central West and Orana’s local road network needs to be re-focused to support improved freight access to intermodal terminals and more inter-regional rail freight.
- Transport should work with the ARTC to increase the percentage of Central West and Orana exports moved via Inland Rail (Stage 1), Dubbo–Muswellbrook dedicated rail lines, and Hunter Valley freight lines to the Port of Newcastle to improve passenger rail performance on the shared network and increase freight rail service frequency.
- Transport should investigate opportunities to transport renewable energy infrastructure components on double-height Inland Rail infrastructure linking Melbourne to Dubbo.
- Alternate freight routes should be monitored for vehicles bypassing enforcement, as larger heavy freight vehicles can cause greater structural damage to regional roads not designed to accommodate their weights, resulting in increased maintenance and funding needs.
- Public private partnership models should be investigated for rest stops and future heavy vehicle chargers on the state road network.



5.4.1 A vibrant local and visitor economy

Main streets are the economic and social hubs of the region’s centres, designed to support local customer access and clustered business activity. However, incremental redesigns that prioritise private vehicles – with expanded on-street parking and increased through-traffic capacity – have come at the expense of plazas, pedestrian crossings, wide footpaths, and other local access features. This shift has led to more traffic, noise, and pollution, making main streets less attractive for residents, visitors, and businesses.

In some centres, these changes have encouraged inward-facing developments like shopping centres, while other businesses have relocated, closed, or left the region. The decline in street-level activity undermines main streets as vibrant economic and community spaces and can lead to increased crime, especially outside business hours. This, in turn, affects the broader visitor economy, even when tourist attractions are located outside of town centres.

In Orange, a distributor road was delivered to divert traffic from the main street, but the lack of complementary place-based improvements has limited its social and economic benefits. Competing traffic flows between new development areas and through-travel have diluted the road’s intended function. Where bypasses are not feasible, prioritising traffic flow over local access makes it harder to create successful, people-friendly centres.

Opportunities

Transport can support the local and visitor economy by:

- reallocating carriageway space to enhance main streets with plazas, wider footpaths, outdoor seating, street trees, and active frontages, making centres more appealing to businesses and workers
- reducing through-traffic in town centres by reallocating road space to improve safety and amenity, while protecting the function of regional bypasses.



Streetscapes, Mudgee © Destination NSW



5.4.2 Supporting primary industries and freight

Freight infrastructure that supports primary industries – such as agriculture, mining, and forestry – differs significantly from that required for service-based economies. These industries rely on the efficient transport of bulk goods to local consolidation centres, domestic markets like Sydney, and international gateways including the ports of Newcastle and Brisbane.

Transport’s 2024 forecasts indicate that 90 per cent of commodities by weight originating in the region are exported. Coal dominates, accounting for 77 per cent of goods originating in the region. Grain is the second largest movement with four per cent, and is seasonal, peaking from September to December during harvest. About 83% of goods originating in the region are transport by rail.

Rail currently carries about 75 per cent of the region’s freight²² – mainly coal, minerals, grain, and timber.

The region’s two largest freight tasks are coal-related: approximately 53,000 kilotonnes from the Ulan area are exported via the Port of Newcastle, and 730 kilotonnes are sent to power stations in the Hunter. However, with Liddell Power Station closed in 2023, Bayswater scheduled for closure by 2033, and coal demand projected to fall by 36 per cent by 2046,²³ freight capacity on the Ulan–Hunter Valley corridor may soon be underused. Demand on the Blue Mountains Line is also expected to decline, though to a lesser extent.

Given coal’s high rail mode share, this decline will significantly affect the current rail-road freight balance. Without efforts to shift more non-coal freight to rail, the viability of regional rail services may be compromised.

This shift, combined with the completion of Inland Rail Stage 1 in 2027 and planned diversification at the Port of Newcastle (including a future deepwater container terminal²⁴), signals the need to reassess NSW’s freight strategy.

Other pressures include container flow imbalances, growing reliability issues through the Great Dividing Range, and increasing frequency of disruptions from bushfires, floods, and crashes.

The Great Dividing Range poses a natural barrier between the region and Greater Sydney, with narrow, steep terrain and sensitive biodiversity. This corridor is particularly vulnerable to delays and closures. As part of the NSW Government’s Freight Policy Reform Program, opportunities are being explored to leverage new ARTC freight rail links²⁵ and improve the resilience of passenger/ freight rail corridors in the Blue Mountains and beyond.

Parkes is well-positioned as a major freight hub, located at the junction of the Main West Rail Line, Inland Rail, and the Trans-Australian Railway. It can support efficient rail-based freight movements across New South Wales, to Sydney and interstate markets, and to international gateways via the North Coast Rail Line.

²² Transport for NSW, Transport Strategic Freight Model (v. 47) forecasts, 2024. Note: There is ongoing work to refine these forecasts through the Consolidated Freight Study project, which was not available at the time of publication.

²³ Transport for NSW, Transport Strategic Freight Model forecast, 2024

²⁴ Port of Newcastle, Newcastle Deepwater Container Terminal. Newcastle Deepwater Container Terminal - Port of Newcastle

²⁵ Either Inland Rail: Stage 1-Narromine-Dubbo-Muswellbrook-Port of Brisbane or Hunter Valley Coal Network-Port of Newcastle

While Inland Rail and the ARTC network may not serve all regional freight tasks, such as forestry exports from Oberon, enabling more freight to shift to these corridors can free capacity on other road and rail routes for emerging industries.

Road freight, which currently carries about 25 per cent of the region’s total freight, remains vital. Heavy vehicles, however, contribute to road safety risks, network wear, and amenity impacts – particularly in townships and population centres. The NSW Heavy Vehicle Access Policy²⁶ outlines a strategic approach to improve safety and productivity on national, state, and local roads. This includes strengthening access for Performance-Based Standards (PBS) vehicles on key north–south and east–west corridors.

The region’s road network connects east–west via the Great Western and Golden Highways to Sydney and Newcastle, and north–south via the Newell Highway. Freight volumes to and from Sydney – including the Western Sydney Airport and intermodal terminal – are expected to increase. Investigations focusing on the corridor between Sydney and the Central West will consider how to improve these key freight routes. Prioritising connections to intermodal terminals could also enhance rail freight use and reduce pressure on major road corridors.

Targeted upgrades to the Golden Highway, including junction widening and new passing lanes, are already supporting the transport of wind turbine components to the Central-West Orana Renewable Energy Zone (REZ) using OSOM vehicles. In the long term, upgrading ARTC rail links, such as the Port of Newcastle to Dubbo corridor, could offer more sustainable alternatives for transporting large components, lowering impacts on regional roads.

Opportunities

Transport can support primary industries and freight by:

- leveraging the completion of Inland Rail and declining coal use to increase rail-based movement of non-coal freight to major ports
- enhancing road connections to Inland Rail, the ARTC network, and intermodal terminals in line with state freight policy reforms
- supporting the construction and maintenance of renewable energy projects, including in the Central-West Orana REZ, by enabling non-road-based transport of key components.



The heritage-listed Mudgee Railway Station © Destination NSW

²⁶ Transport for NSW, Heavy Vehicle Access Policy, 2025, <https://www.transport.nsw.gov.au/operations/freight-hub/heavy-vehicle-access-policy>

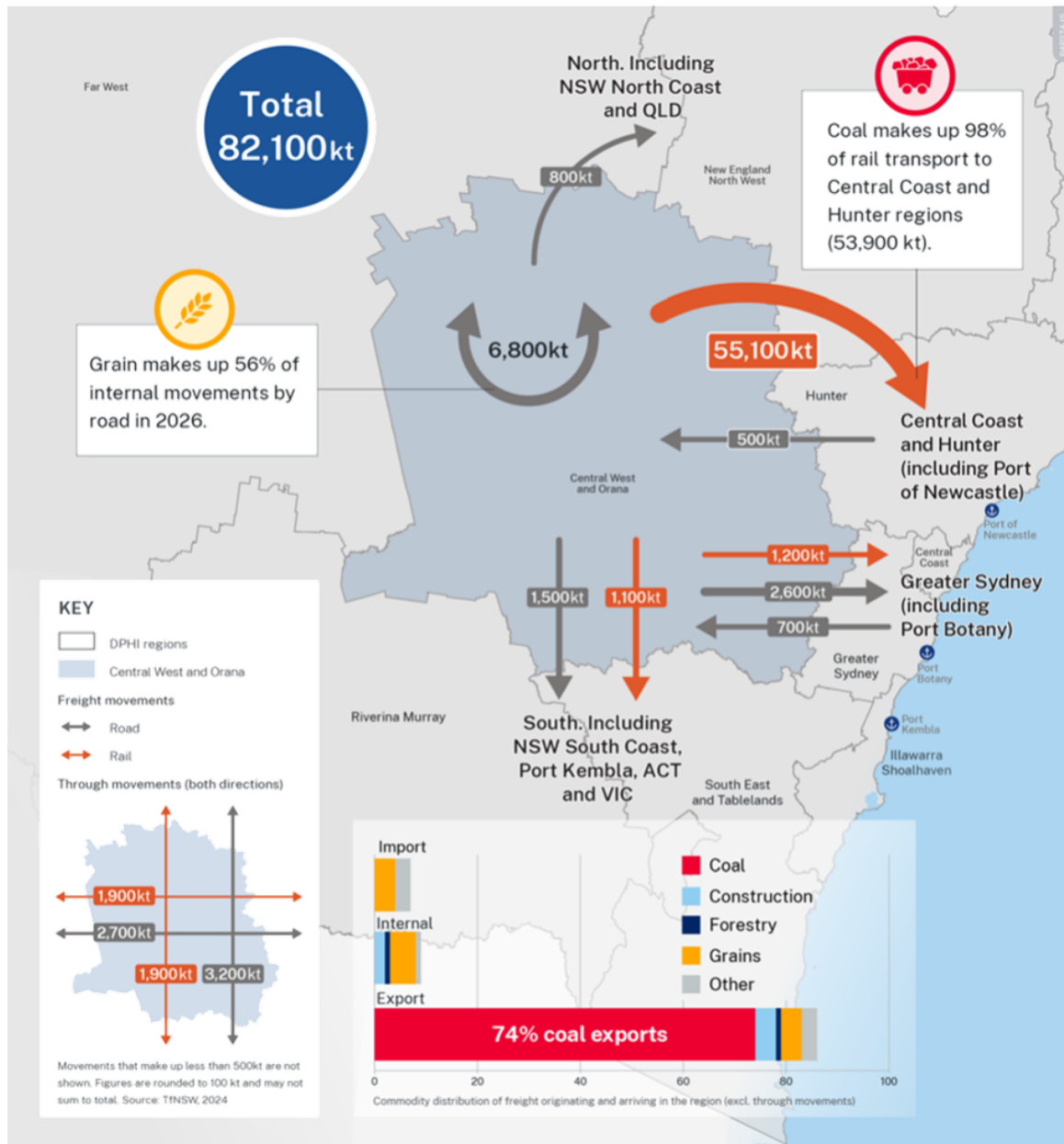


Figure 16. Commodity import and export distributions for 2026²⁷

27 Transport for NSW, Transport Strategic Freight Model forecast, 2024

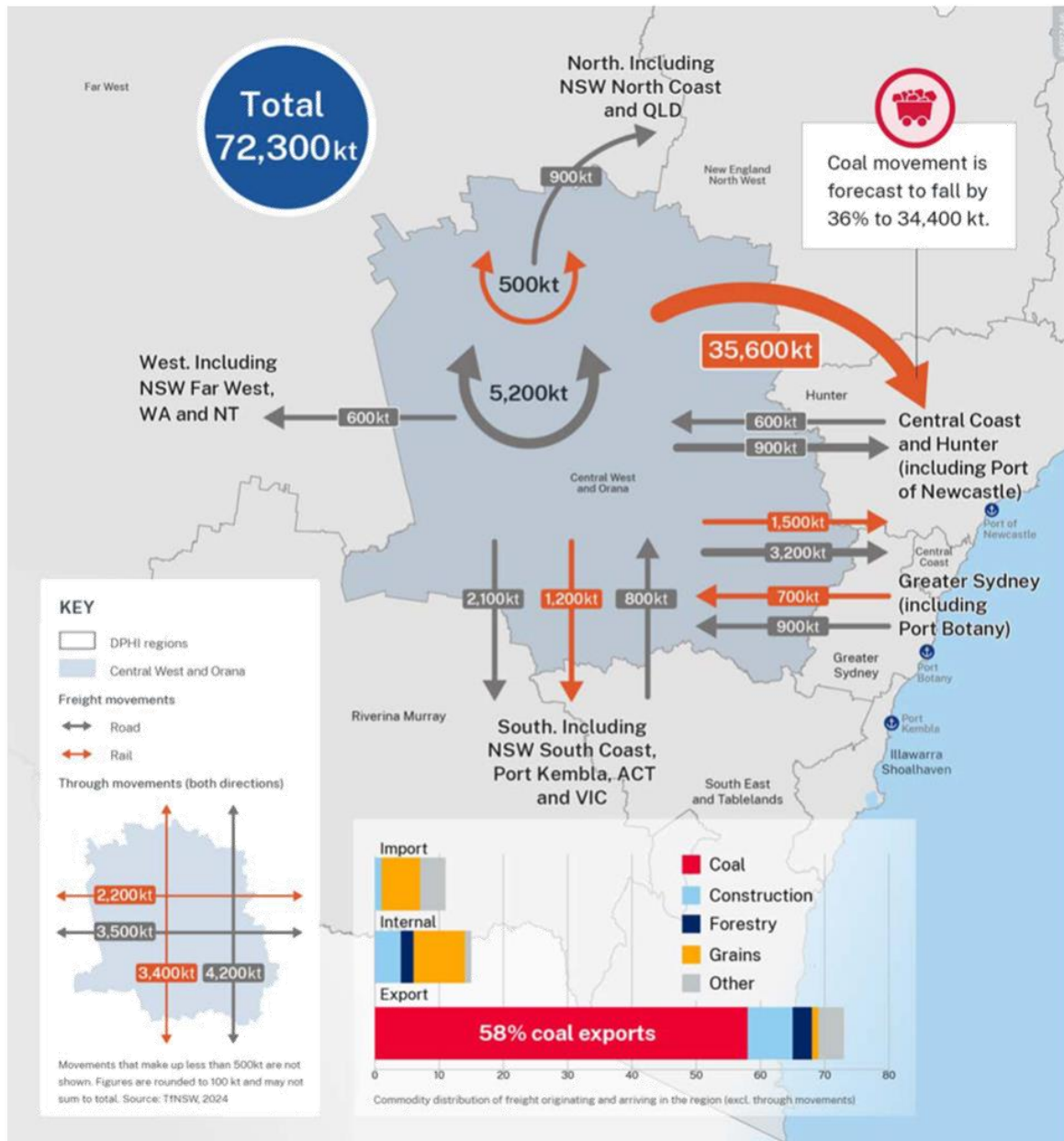


Figure 17. Commodity import and export distributions for 2046²⁸

28 Transport for NSW, Transport Strategic Freight Model forecast, 2024

5.5 A safe transport network



Trauma on the Central West and Orana road network will be in decline and heading towards Transport’s goal of zero fatalities and serious injuries by 2050

Transport’s vision for NSW is to reduce trauma on the road network to zero by 2050. The NSW Government has adopted the internationally recognised Safe Systems approach to transport safety. This approach recognises that: people sometimes make mistakes, but a simple mistake shouldn’t cost someone their life; roads, roadsides and vehicles need to be designed to minimise crashes and reduce forces if a crash happens; and road safety is a shared responsibility ... we can all prevent crashes and save lives when we make safe choices.²⁹

A safe transport network is vital for providing mobility across the region. The NSW Road Safety Action Plan 2026 includes a target to halve deaths and reduce serious injuries by 30 per cent on NSW roads by 2030 as a stepping stone towards zero road trauma by 2050.

Between 2019 and 2023,³⁰ 157 people lost their lives and 1226 people suffered serious injuries on the Central West and Orana region’s road network. At about 11 fatalities per 100,000 population, the region’s crash fatality rate is about three times the rate for all NSW of about four per 100,000 population. It is almost double the rate for regional NSW of about seven per 100,000 population.

What we heard

- Keeping regional cities and centres compact and walkable allows more residents to use lower impact travel modes such as walking, cycling and public transport to access everyday needs.
- Speed zoning needs to align with the network function of local streets, regional roads or highways. Speed zoning should be consistent and intuitive.
- Main and local street environments should be self-explaining and encourage slower driving speeds, while higher speed regional road environments require more separated infrastructure.
- Bypass projects improve safety and amenity in cities and centres.
- Provision of competitive on-demand public transport could provide road safety benefits, particularly by reducing evening and weekend crashes related to fatigue, alcohol and drug use.
- Behaviour change programs and enforcement should include the importance of driving etiquette, towing and vehicle maintenance, in addition to speeding, fatigue and alcohol and drug risk factors.
- Behaviour change programs should address resistance to the adoption of in-vehicle road safety technologies, particularly for heavy vehicle fleet owners and operators.
- Funding for road safety infrastructure could be bundled with disaster recovery and general maintenance.
- Transport safety should include personal security when accessing and riding public transport and injuries sustained while on public transport as well as road trauma.

²⁹ NSW Government, Towards Zero - Safe System <https://www.transport.nsw.gov.au/roadsafety/what-we-do/safe-system>

³⁰ Transport for NSW, Speeding, <https://www.transport.nsw.gov.au/roadsafety/topics-tips/speeding>

5.5.1 Road safety in population centres

About 70 per cent of the region’s population reside in its 21 population centres. While fatal and serious injury (FSI) crashes in population centres comprise 25 per cent of total FSI crashes in the region, with only 2.5 per cent of the region’s road network located in its main population centres, the rate of crashes for all modes is highest on state roads in population centres. With the percentage of the population in centres set to increase due to concentrated population growth in Orange, Bathurst, Dubbo and Mudgee, the number and rate of FSI crashes that occur in centres is also expected to increase. Notably, the share of FSI casualties occurring on roads with speed limits more typically applied in population centres (80 km/h or less) increased from 29 per cent in 2019 to 44 per cent in 2023. This trend highlights the growing need to prioritise road safety in the region’s population centres, towns and villages.

While population centres naturally generate and attract higher volumes of movement across all transport modes, peri-urban areas next to population centres also generate relatively high traffic movements compared to more rural areas of the region due to residents travelling to and from nearby population centres more frequently, thereby increasing interactions and conflict between road users. During the 2019–2023 reference period, 223 FSI crashes occurred on state roads within Central West and Orana population centres and peri-urban areas. This is significant considering these roads comprise only about 900 kilometres or about one per cent of the region’s road network.

Table 2. FSI crashes within population centres, peri-urban areas and rural areas, 2019 to 2023³¹

| | Population centres | Peri-urban areas | Rural areas |
|--------------------------|--------------------|-------------------|-------------------|
| FSI crashes (% of total) | 292 (25%) | 247 (21.1%) | 631 (53.9%) |
| Road length (% of total) | 2,861 km (2.5%) | 13,720 km (11.8%) | 99,757 km (85.7%) |
| FSI crashes (per 100 km) | 10.2 | 1.8 | 0.6 |

Average FSI Crash Rates
by geography and administrative road hierarchy

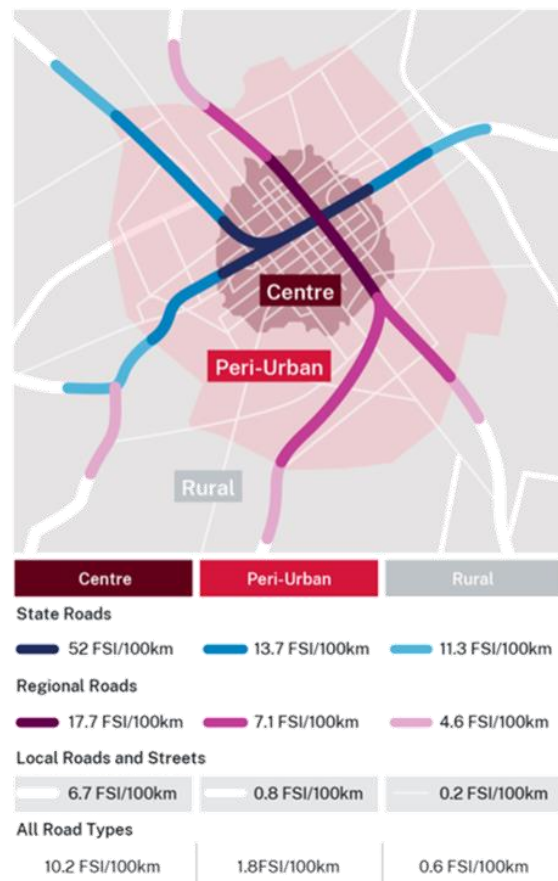


Figure 18. Average FSI crash rates by geography and administrative road hierarchy, 2019–2023³²

³¹ Transport for NSW, Speeding, <https://www.transport.nsw.gov.au/roadsafety/topics-tips/speeding>

³² Transport for NSW, 2024

Many of the state roads in the region's population centres accommodate a mix commercial, social, local access and through traffic functions. This presents challenges for improving safety and amenity due to conflicts between pedestrians, bicycle riders, local traffic, through traffic and heavy vehicles. Pedestrians and bicycle riders are particularly vulnerable in these environments and the risk of crashes is increased by higher traffic volumes, the presence of heavy vehicles and relatively high vehicle speeds. Bypasses provide an opportunity to improve both amenity and safety in population centres by removing significant volumes of through traffic and heavy vehicles from state roads in population centres. Where bypasses are pursued, complementary measures to deprioritise through traffic on state roads through population centres help to maximise road safety benefits.

Opportunities

Transport can improve safety for all road users in population centres and peri-urban areas in the region by:

- delivering cost-effective road safety initiatives, including reducing speed limits, reallocating carriageway space, and delivering high amenity walking infrastructure and separated bicycle facilities on state and regional roads in population centres
- delivering cost-effective and consistent slower speed transition zones around population centres to address crashes in peri-urban areas
- identifying opportunities for population centre bypasses to reduce trauma on state and regional roads in population centres
- including a local benefits program for bypasses that might include re-categorising state roads in centres to help local government prioritise local place and movement functions on these roads, reducing speed limits, reallocating carriageways, providing safer footpath and crossing infrastructure, and separating bicycle facilities.

Road construction worker standing at a construction site near Dubbo

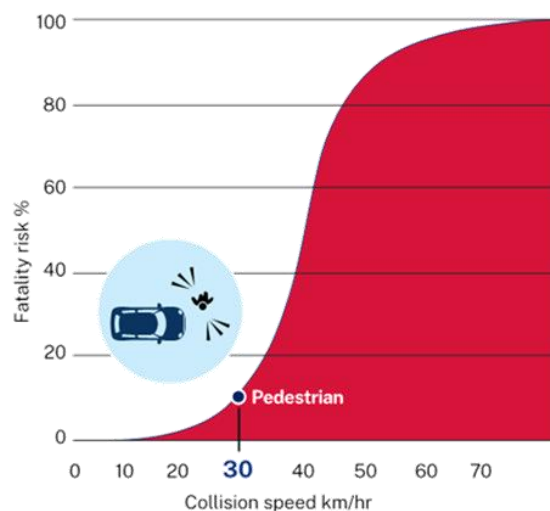


5.5.2 Speed effects the outcomes of all crashes

Speed increases the risk of having a crash and the severity of injuries sustained when crashes occur. Speeding is one of the biggest killers on the region's roads,³³ with 45 per cent of fatal crashes in the region involving speeding. While increased speed limit compliance will reduce the likelihood of crashes occurring and the severity of injuries when crashes occur, it will not eliminate them altogether. This is because the speeds at which vehicles are legally allowed to travel in most speed zones are still incompatible with the physical limitations of the human body.

In a crash between a car and a pedestrian there's a 90 per cent chance a pedestrian will survive if the car was travelling at 30 km/h. There's a 60 per cent chance if the car was travelling at 40 km/h, and a 10 per cent chance at 50 km/h.³⁴

Fatality risk at different travel speeds



Source: Logan et al. 2019. https://link.springer.com/referenceworkentry/10.1007/978-3-030-23176-7_34-1#ref-CR16

Figure 19. Balance between harm reduction and mobility in setting speed limits, 2005³⁵

Slower speed limits, such as the 40 km/h high pedestrian activity area speed limit in Orange's central business district, generally result in improved road safety outcomes with minimal impact on actual travel times. On most roads and particularly in built-up areas, drivers cannot travel at the speed limit for the full journey due to interactions with other traffic, road width, curvature and terrain, surface conditions, and slower travel speeds around intersections. As a result, average vehicle speed is usually less than the speed limit. For example, if the 40 km/h high pedestrian activity area in Orange (on the Mitchell Highway/Summer Street between Peisley Street and Hill Street) was slowed to a 30 km/h high pedestrian activity area, the projected change in travel time to drive the full 900 metres increases by five seconds (six per cent) from one minute 33 seconds to one minute 38 seconds.³⁶

33 P. 25, 2026 Road Safety Action Plan - updated for 2019 to 2023, 41% of fatal crashes on NSW involved speeding (CfRS Crash stats)

34 Austroads Balance between harm reduction and mobility in setting speed limits: a feasibility study (2005)

35 Transport for NSW, Speeding, <https://www.transport.nsw.gov.au/roadsafety/topics-tips/speeding>

36 Average operating speed assumed for this example is 35 km/h.

Inconsistent speed zones, particularly in peri-urban areas of the region may be contributing to the higher concentration of FSI crashes in these areas. State and local roads in peri-urban areas that provide access to population centres often have higher speed limits than the population centres they connect to. They typically have more junctions than in more rural areas, increasing the risk of FSI crashes.

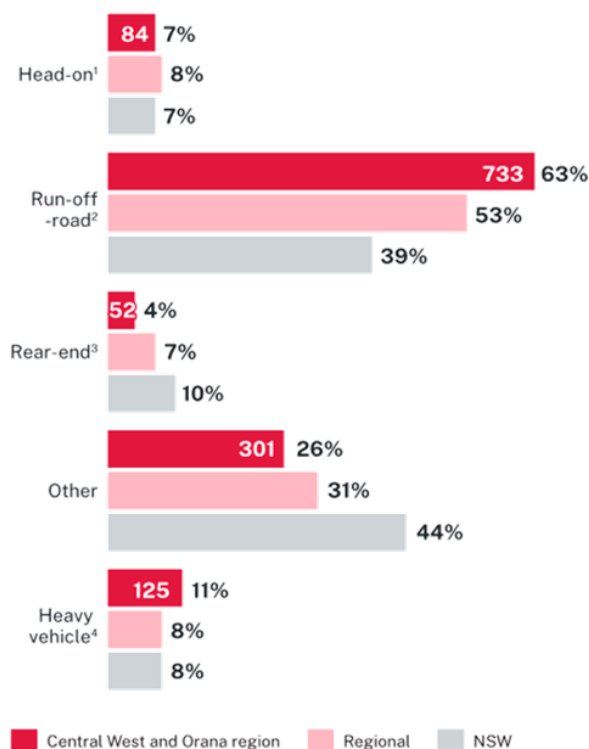
Outside of population centres, reductions in speed limits on higher speed roads can also deliver safety benefits. Single vehicle, lane departure crashes on high-speed (greater than or equal to 90 km/h) rural roads are typical FSI crash types across NSW. In the Central West and Orana region, 63 per cent of FSIs were run-off-road crashes, which is above the benchmark for regional NSW (53 per cent). All were recorded as lane departure type crashes, with 70 per cent on high-speed rural roads. In-vehicle safety technologies, such as lane-keep assist, have the potential to significantly reduce the frequency of run-off-road FSI crashes in line with fleet renewal.

Opportunities

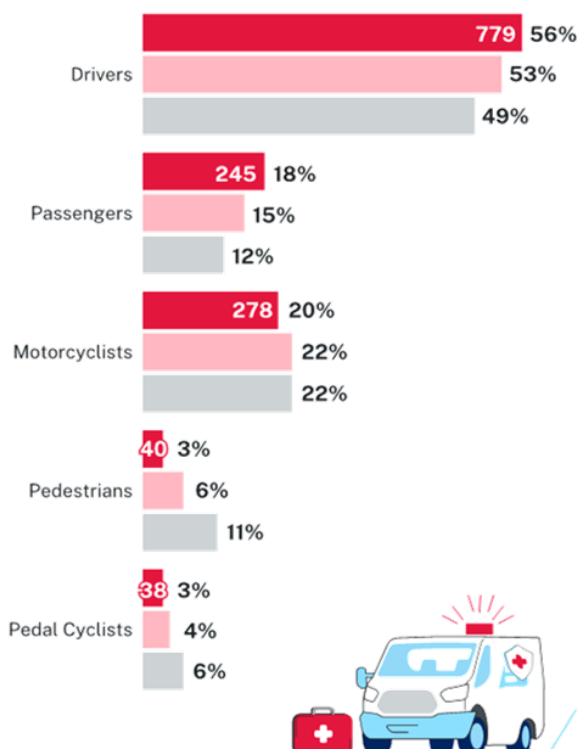
Transport can address speed-related FSIs in the region by:

- implementing consistent transition zone speed limits and supporting infrastructure, such as gateway treatments, between higher speed state and regional roads outside of centres and state and regional roads in population centres
- delivering cost-effective road safety initiatives on higher speed state roads outside population centres
- implementing safer speed settings, supported by clear visual cues, to encourage lower, more appropriate travel speeds.

Central West and Orana fatal and serious injury (FSI) crash types, 2019–2023 (as % of all FSI crashes)



People killed and seriously injured by road user type, 2019–2023 (as % of all FSI casualties)



1 RUM codes 20 & 50
 2 RUM codes 70-73 & 80-87
 3 RUM codes 30-32
 4 The 'heavy vehicle' types of vehicle comprise: Articulated truck; B-double (truck); Heavy bus; Heavy rigid truck; Heavy truck; Heavy vehicle; Road train/B-triple (truck); Semi-trailer.
<https://www.transport.nsw.gov.au/roadsafety/statistics/interactive-crash-statistics/heavy-vehicle-statistics-definitions-and-notes>

Figure 20. Comparison of Central West and Orana crash types to regional NSW and Greater Sydney, 2019–2023³⁷

5.5.3 Heavy vehicles in FSI crashes in the region

Heavy vehicles have a greater impact on road safety outcomes in the region, with about 11 per cent of FSI crashes involving heavy vehicles, compared to between seven and eight per cent for regional NSW, Greater Sydney and NSW. During the reference period, there were 125 FSI crashes involving heavy vehicles on the road network killing 30 and seriously injuring 95. Because of their size and weight, crashes involving heavy vehicles are often very serious, with around one in five people killed in crashes in the region having been involved in a crash involving a heavy vehicle.

About 39 per cent of heavy vehicle crashes in the region were single vehicle crashes, well above the regional NSW benchmark of 29 per cent over the same period. Fatigue is a significant contributing factor in heavy vehicle crashes, attributable to 23 per cent of crashes involving heavy vehicles in the region. Long hours behind the wheel, irregular sleep patterns and demanding schedules often lead to driver exhaustion, reducing alertness, reaction times and decision-making ability.

In-vehicle safety technologies have the potential to significantly reduce the frequency of run-off-road FSI crashes in line with fleet renewal. Slower fleet renewal has been suggested as a factor delaying adoption of heavy vehicle safety technology and associated benefits. However, while commercial freight companies tend to maximise the value of their vehicle fleet by keeping them in active service for as long as possible, this tends to be balanced by the significantly greater number of kilometres freight vehicles travel per year compared to private vehicles. In Australia, the average car travels 12,000 km per year while a freight vehicle travels 80,000 km per year. An alternative suggestion is that rapidly changing freight vehicle technologies such as electrification and autonomous driving assistance³⁷ combined with changing heavy vehicle legislation, such as high productivity vehicle legislation, may be encouraging freight companies to delay fleet renewal, thereby delaying the benefits linked to heavy vehicle safety technologies in the short term.

Transport’s analysis of adoption rates and the potential benefits of existing and future safety technologies will help identify future gaps and overlaps between in-vehicle technology safety benefits and the benefits of other safety initiatives, such as the heavy vehicles rest stops program,³⁸ which is intended to help address heavy vehicle driver fatigue and resultant heavy vehicle and fatigue FSI crashes.

Opportunities

Transport can address heavy vehicle related FSI’s in the region by:

- identifying opportunities to increase the speed of fleet turnover to support the uptake of improved in-vehicle safety technologies for heavy vehicle fleets
- delivering heavy vehicle rest stops across Central West and Orana’s primary freight corridors.



Freight truck on Molong to Orange Road

37 Kodiak, <https://kodiak.ai/>

38 Transport for NSW, Have your say: Improving heavy vehicles rest stops, <https://www.haveyoursay.nsw.gov.au/heavy-vehicle-rest-stops>

5.5.4 Safe people making safe choices

Speeding, driving under the influence of alcohol or drugs, non-seat belt wearing, and driving while fatigued are all behavioural choices that increase the risk of FSI crashes occurring within an unforgiving transport system. Except for fatigue-related crashes, which account for about 25 per cent of FSI crashes, these types of FSI crashes occur at a similar rate as in other parts of regional NSW. Education and advocacy campaigns help to reduce the prevalence of these types of driving choices and trauma on NSW roads.

Supporting a shift to lower impact travel modes by providing real alternatives to driving is an important mechanism through which we can address trauma on the region’s road network.

Table 3. Road users involved in FSI crashes, 2019–2023³⁹

| Road user | % of total FSI crashes | Journey to work mode share |
|--------------------|------------------------|----------------------------|
| (ABS Census 2021*) | 292 (25%) | 247 (21.1%) |
| Pedestrians | 5.5 | 4.6% |
| Pedal cycles | 5.5 | 0.3% |
| Motorcyclists | 29.7 | 0.6% |
| Motor vehicles | 70.9 | 93.1% |

Motor vehicles are involved in the majority of FSI crashes in the region (71 per cent). However, their representation in FSI crashes is far less than the percentage of trips (93 per cent) and relative distance travelled by motor vehicles. This suggests that, while a motor vehicle’s external protection helps to protect drivers and passengers in the event of a crash, this can have the perverse effect of transferring risk to other road users.

FSI crashes involving pedestrians also occur at a rate lower but much closer to percentage of trips – 5.5 per cent of FSI crashes compared to 4.6 per cent of trips. The region’s compact and walkable population centres make walking an attractive travel option, even compared to Greater Sydney.⁴⁰ Walking network improvements that better connect residents, such as new crossings of disused rail lines, or that improve the amenity of walking trips, such as trees that provide shade, can support mode shift to lower impact travel modes. This could provide safety benefits as well as improving local access. However, residents living outside population centres in peri-urban and rural areas of the region are far less likely to walk for daily trips.

Bicycle network infrastructure gaps combined with higher traffic volumes, speed limits and resulting vehicle speeds on state and regional roads in population centres and peri-urban areas result in higher concentrations of pedal cycle FSI crashes on these roads, limiting opportunities for people to ride to meet daily travel needs. Despite the limited uptake of bicycle riding in the region, the rate of bicycle riding involvement in a FSI crashes is almost 20 times greater than the percentage of trips made by bicycle in the region.⁴¹ Targeted investment in separated bicycle infrastructure on these roads would address bicycle riding related road trauma more cost-effectively than equivalent investment in separated infrastructure on the local road network.

Motorcycle FSI crashes occurred over 50 times more frequently than the percentage of trips made by this mode. The rate of motorcycle FSI crashes may be skewed by recreational motorcycling FSI crashes, but it is evident that all motorcycle trips are risky. Best efforts are made to minimise harm when motorcycling crashes occur. However, motorcycle crashes are difficult to address using typical road safety engineering treatments such as superelevation, as these types of treatments can illicit risk-compensating behaviours that offset the benefits of road safety treatments.

³⁹ Transport for NSW, Road user safety data, 2019–2023
⁴⁰ ABS, Census 2021, Journey to Work for NSW Regions=2.9% vs Greater Sydney of 2.5%
⁴¹ ABS, Census 2021, Journey to Work as a proxy for bicycle mode share for all trips

The availability of alternatives to driving is particularly important for younger and older people who face unique challenges that impact their ability to use the transport network safely. Younger road users tend to be less experienced and have a less developed understanding of the balance between risk-taking and reward. About 20 per cent of FSI crashes in the region involved road users in the 20–29-year age cohort, the highest representation of any age group.⁴² People aged 75–85 years are three times as likely to be killed in a crash than people in their 20s. This increases to four times as likely for people over 85.⁴³ Injury severity and the number of fatalities in this age group are likely to increase in line with an ageing regional population.

Rail and air travel operate in a ‘closed’ operating environment and Australia’s aviation industry has an admirable safety record. Potential safety benefits of increasing the proportion of travel by rail and aviation include the reduction in long, fatiguing journeys, particularly for trips to destinations outside the region. Greater use of aviation for long distance regional journeys would require a significant reduction in aviation passenger costs to be realised at scale. Emerging aviation technologies, including electric aircraft, could help deliver this reduction in operating costs over the medium to long term.



Tree lined streetscape in Mudgee’s town centre

⁴² Transport for NSW, road safety data 2019–2023

⁴³ The Road Ahead <https://www.transport.nsw.gov.au/roadsafety/older-road-users>

Opportunities

Transport can support people to make safer choices by:

- extending hours of operation and increasing the flexibility of public transport services' during evenings and weekends to support increased use of public transport during periods when the provision of safer travel choices (Plan B) provides significant opportunities to deliver trauma reduction benefits
- increasing driver awareness of existing risks for all road users through more integrated and slower-speed main street design and wider application of shared zone design principles such as rationalisation and removal of centre lines, road signs and pedestrian barrier fencing
- working with councils to provide more direct walking connections between neighbourhoods and local destinations and supporting urban design that delivers better walking amenity, delivering: active frontages, shared streets, wide footpaths, boundary fence reduction or removal and street tree planting
- delivering separated bicycle paths on all state and regional roads in population centres
- identifying opportunities to accentuate road curvature, remove roadside obstructions, and deliver anti-skid treatments on popular recreational motorcycling routes that have poor motorcycle road safety records
- providing public transport services that provide real travel choice for social groups with underdeveloped and impaired task capabilities
- identifying opportunities to support the emerging e-aviation industry to increase the prospect of frequent, reliable and fast air services that connect Orange, Dubbo and Bathurst with Sydney, Canberra and Newcastle.

Senior couple using Help Point for information on train platform at Orange Station



5.5.5 Public transport safety and rail level crossings

Public transport vehicles, including trains, coaches and buses, have a better safety record relative to other vehicle types through a combination of high levels of external protection, slower operating speeds, more stringent driver training and licensing requirements, and a closed operating system in the case of rail. Road safety benefits associated with increased use of safer public transport services will increase at similar rates to patronage. Providing more competitive public transport choices is required to deliver commensurate reductions in FSI crashes, particularly in population centres where FSI crashes involving vulnerable road users are most likely to be addressed through mode shift to public transport.

Passenger security and the security of people walking and riding on roads and streets is also a primary consideration affecting mode choice, particularly for women and other more vulnerable people (see section 5.2.4). The installation of appropriate street lighting, planning for active and passive surveillance, and the application of Crime Prevention Through Environmental Design principles help to improve actual and perceived security for pedestrians, bicycle riders and public transport customers travelling to local destinations.

Grade separation and modernisation of warning signals and signs around level crossings reduce the chances of catastrophic crashes between trains and other road users. Community support for rail level crossing safety improvements and in-vehicle safety technologies for coaches and buses reflect a shared understanding of the impact of these types of crashes on regional communities.

Opportunities

Transport can support more people to use public transport, improve the safety of public transport networks, and reduce risks where there are interactions between the road and rail networks by:

- improving the competitiveness of public transport services compared private vehicle trips
- working with councils to improve lighting, land use activation, passive surveillance and the application of Crime Prevention through Environmental Design (CPTED) principles at rail stations and bus stops as well as on state roads that perform place, local access and regional movement functions in population centres
- identifying opportunities to grade separate or close level crossings to reduce the likelihood of rail crashes.

Rail level crossings

There are 14 level crossing upgrade projects in the region funded for delivery between 2023–24 and 2026–27. The projects are jointly funded by the Australian Government’s Regional Level Crossing Upgrade Fund and the NSW Government’s Level Crossing Improvement Program. Upgrades include the installation of retro-reflective boom gates, audible warning devices, updated signage and LED flashing lights, which increase the visibility of crossings on both sides of the roadway in response to approaching trains.



Freight truck crossing railway in Central West and Orana region

5.6 Resilient transport networks



Proactively planning for network shocks and stresses will increase the reliability of the transport network

The Central West and Orana region is facing increasing occurrence of natural disasters and severe weather events. Disruptions on the transport network impact how and when customers and passengers can travel, restricting access to health, education and employment as well as interrupting supply chains and connections to ports and airports.

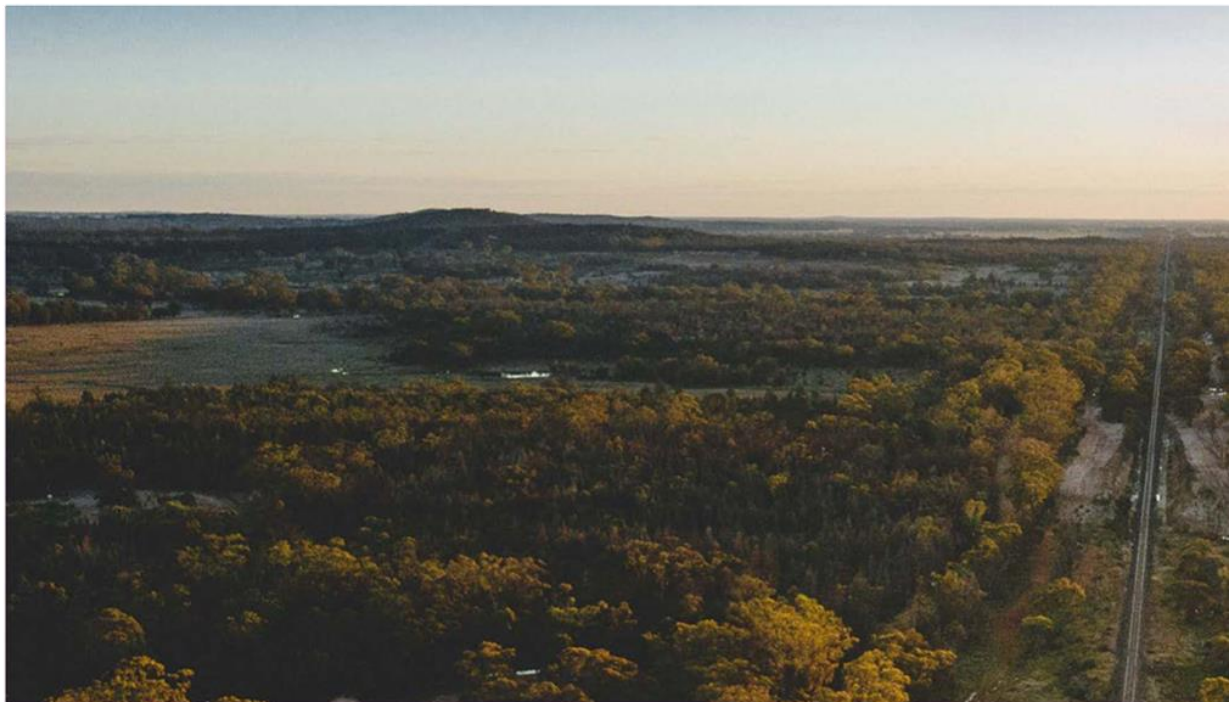
When critical parts of the network are impacted by natural hazards the duration and impacts can be significant, particularly when these are key freight corridors. From late October 2022, the Newell Highway was closed for seven weeks when 20 kilometres of this section was flooded. From September 2016, the highway was closed for six weeks due to flooding.⁴⁴

Increasing seasonal travel demands, population growth and expanding tourism opportunities put additional pressure on the transport network. As the regional transport network continues to grow, there is a greater need for planning to consider its resilience, ensuring the safety and accessibility of the transport network for all our customers.

While planned disruptions can be anticipated and prepared for in advance of an event, unplanned disruptions require a dynamic response in real time. Responding to shocks and stresses and the associated maintenance and network improvements are costly for the community. With travel increasing on the transport network in the region as the population grows and with the cost of maintaining ageing assets increasing, improved resilience of the transport network is critical.

Impacts on local road movements and community access can also be impacted through heavy vehicles and increases in oversize and overmass (OSOM) vehicle movements to support the development of REZs. Planning is required to accommodate these movements on key corridors including the Golden Highway to increase redundancy in the road network by building stopping bays and spreading loads across multiple routes to reduce impacts on communities.

Train track near Dubbo

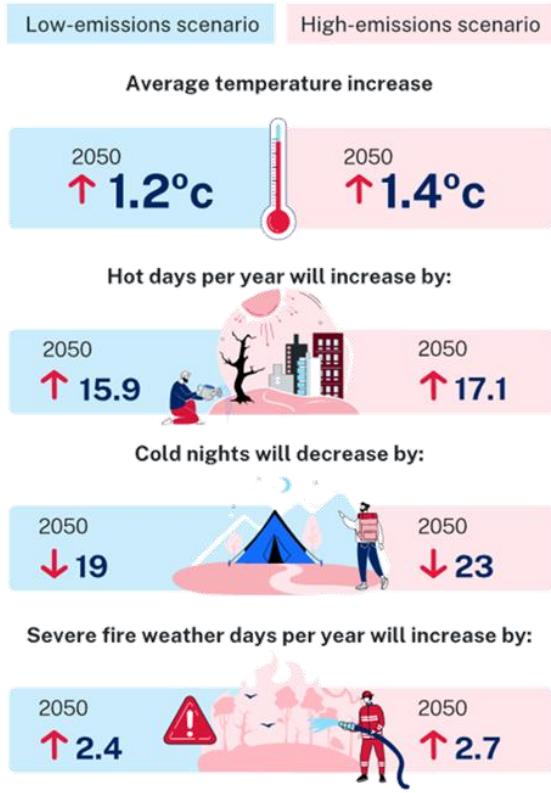


⁴⁴ <https://www.transport.nsw.gov.au/projects/current-projects/newell-highway-flood-mitigation>

By building more resilience into the transport network, it becomes better equipped to successfully manage disruptions and minimise the social, economic and connectivity impacts on regional communities and businesses.

In addition, effective oversight and coordination of operations and response activities must occur across government agencies, local government and community groups.

The Australian and NSW governments are providing funding through the Regional Road and Transport Recovery Package to help communities become more resilient to natural disasters. Funding is available to repair or build back an asset to better withstand future natural disasters.



Source: Data is based on NARCIIM2.0 (2024) projections for SSP1-2.6 (low-emissions) and SSP3-7.0 (high-emissions) and is presented relative to the historical climate baseline of 1990–2009. The projections for 2050 represent averaged data for 2040–2059. Values presented are averages across the NARCIIM2.0 model ensemble, and do not represent the full range of plausible climate futures. Regional climate change impacts are used to highlight how the region is likely to be affected by climate change, and impacts are not limited to the examples provided.

Figure 21. Projected climate changes for the Central West and Orana region⁴⁵



⁴⁵ Department of Climate Change, Energy, the Environment and Water, [NARCIIM2.0 Central West Orana regional climate change snapshot](#)

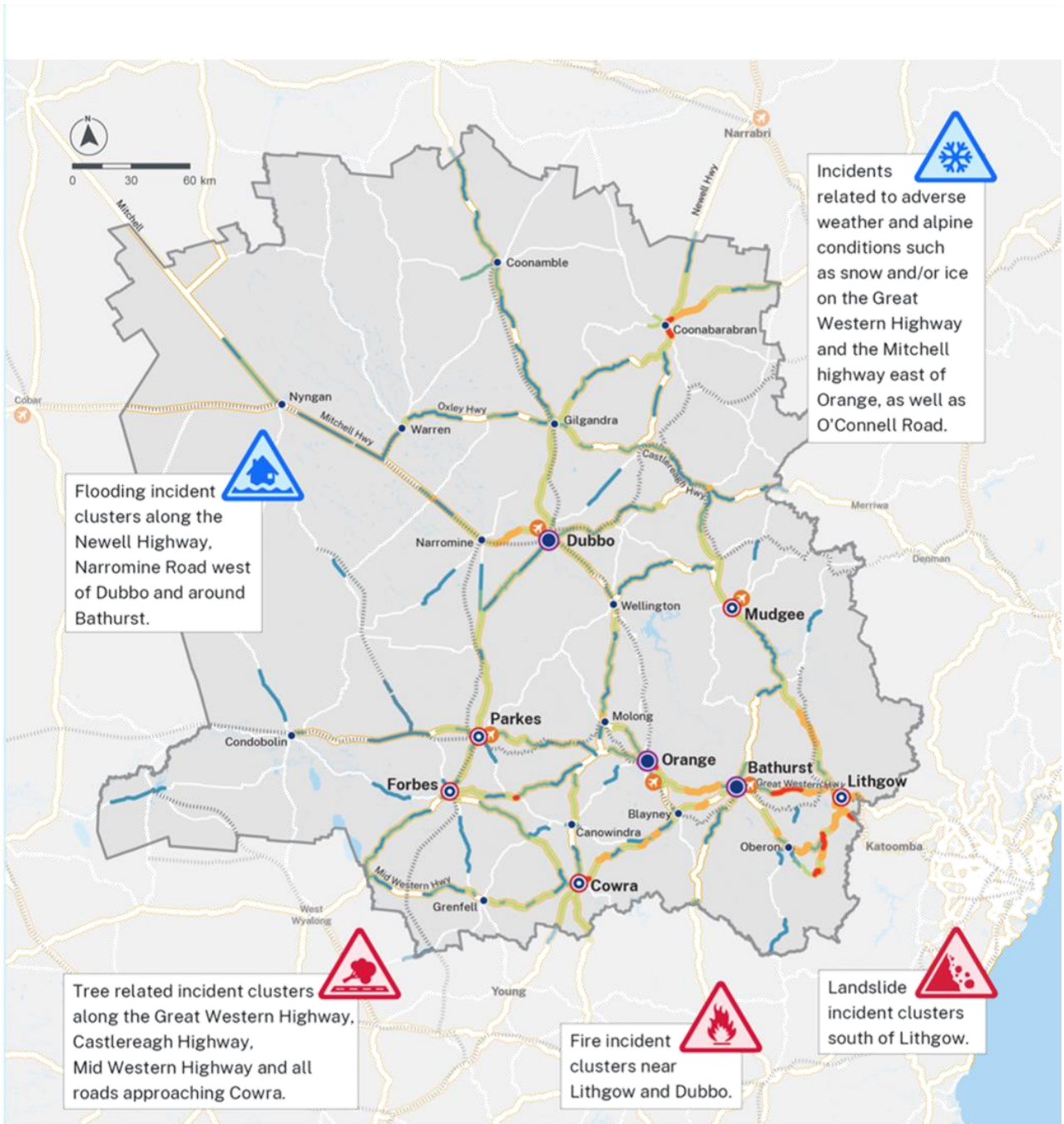


Figure 22. Environmental hazards on the Central West and Orana region's road network 2012-2022

What we heard

- Resilience is a network outcome with transport network reliability as a community outcome.
- We need to talk more about local ‘self-sufficiency’ and ‘independence’ when we talk about resilience.
- Funding programs need to be more legible, accessible and interconnected, particularly for smaller councils with less capacity to progress multiple or any funding applications.
- Communications infrastructure is key to incident management and reducing the impact of network shocks.
- Bridges, culverts and causeways are almost always the critical failure points for both road and rail networks during flooding events.
- Resilience of critical transport links within, to and from the region such as the Newell Highway (north-south) and the Great Western Highway (east-west) among others are vulnerable to natural hazards such as bushfires and floods. Exploration of alternative passenger and freight routes and or investment in improved resilience of these links is critical to ensuring community outcomes and improving business confidence to invest in the region.
- Local roads were not designed to carry modern, large freight vehicles and are being damaged.

5.6.1 Criticality and vulnerability

Most travel in the region is by private vehicle and these trips are predominantly local trips and trips within LGAs. This places pressure on councils to maintain the availability and reliability of local and regional roads to ensure people can access employment and meet daily needs for goods and services. Parts of the state road network are susceptible to disruption, particularly during natural disasters and significant rainfall or bushfire events. For example, the Newell Highway performs a nationally significant freight function between Brisbane and Melbourne but is vulnerable to disruption, with flooding closing part of the highway for several weeks as recently as October 2022. The Great Western Highway also performs a significant freight function between the region and Sydney and is vulnerable to disruption from natural events through the Blue Mountains.

The repair and reopening of state roads is generally funded and prioritised for repair while many regional and local roads are closed for longer periods and or reopen without sufficient time for the road to recover or be adequately repaired following closures, leading to the deterioration of road quality, comfort, safety and accessibility.

Bridges in the region provide critical connections for private and freight vehicles. However, many bridges and adjoining roads are vulnerable to flooding. Even moderate levels of rainfall can impact access to some parts of the region. This can sever communities from destinations and services in the centres and impact the ability of emergency services to respond during emergencies. This is particularly challenging for population centres in the region with singular river crossings. Increased provision of local and more regionally important destinations and services closer to where people live also helps to increase the self-sufficiency of regional communities and reduces the impact of network failures.

Rail freight continues to be a critical component of the region's transport network, currently carrying 75 per cent of the region's export and import commodities, predominantly coal, agricultural and forestry products. Even with the forecast decline in coal, the rail freight network is still expected to carry 46 per cent of the freight by weight moving in and out of the region (incl. internal) by 2061.⁴⁶ Inland Rail could increase the criticality of the rail network, with ARTC forecasting increased container movement by rail from 26 per cent to 62 per cent⁴⁷ between Melbourne and Brisbane. This will help improve rail freight reliability for the region by reducing the importance of vulnerable road and rail freight connections through the Blue Mountains to Sydney and Port Botany.

Opportunities

Transport can address the vulnerability of critical transport network assets and services in the region by:

- increasing support for road network repairs and improvements
- identifying opportunities to deliver transport connections and services that help to reduce the impact of disasters on the transport network
- identifying opportunities to support re-assignment of import and export freight from vulnerable shared road and rail networks to more resilient and dedicated Inland Rail and ARTC freight rail connections linking the region, as well as Western Australia, South Australia, Victoria and Western NSW, with the Port of Newcastle and the North Coast Rail Line.

⁴⁶ Transport for NSW, Transport Strategic Freight Model forecast, 2024
⁴⁷ ARTC, Inland Rail business case, 2015



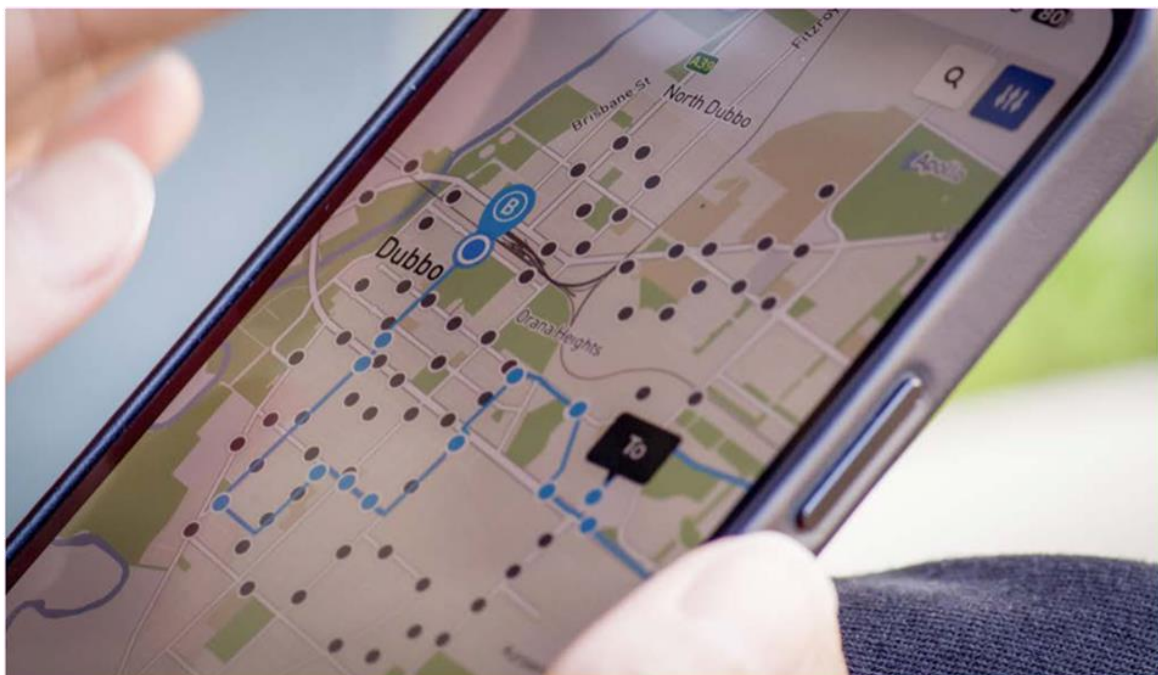
5.6.2 Resilience, communication and technology

Effective communication between state agencies, councils, freight operators, businesses and communities is critical during network disruptions, whether they are region-wide network impacts due to natural disaster events or singular traffic incidents on the road network. The breadth and quality of phone and internet coverage varies across the region. Community awareness coupled with the coordination of information between emergency and traffic disruption channels such as Hazards Near Me NSW and Live Traffic, limit the effectiveness of communication from Transport and emergency management teams and to councils, transport operators, businesses and the community during incidents.

The region’s transport network includes more the 116,300 kilometres of public roads, including state roads (3250 kilometres), regional roads (3750 kilometres) and local roads (109,300 kilometres). There are also several thousand kilometres of private roads accessible to certain users (or when certain conditions are met) in national parks, state forests and on private property, in agricultural land, bushland and mining areas. Monitoring, assessing and recording road conditions and changes in road conditions over time is a monumental task.

Emergency management currently relies heavily on physical presence and visual investigations of network damage. Advances in technology such as satellite imagery, artificial intelligence and drones may be capable of addressing this challenge, improving the ability of Transport, councils and other road authorities to monitor, assess and document network condition. Automation of monitoring and emergency management systems help to reduce the impact of network incidents in the longer term by providing clear records and timelines of network damage, repairs and the overall vulnerability of infrastructure and services.

Publishing alternate routes to the state and regional road network via an online portal or app would enhance transport operator, council and community preparedness, resilience and safety during network disruptions. Advances in power generation, storage and communications technology, such as 5G, create the opportunity for Transport to investigate the feasibility of new systems such as advanced real-time monitoring, detection and adaptive electronic signage to improve Transport’s ability to identify, in near real time, and effectively communicate network disruptions and recommend actions to people on the region’s road network.



Person using Trip Planner app on their mobile phone

Emerging mobility technologies such as e-aviation and the increasing automation of cars and heavy vehicles have the potential to address some of the resilience challenges of the regional network. E-aviation has the potential to significantly reduce per seat costs and make flying a cost-effective, flexible, reliable and fast option for longer journeys, providing alternative means of access and reducing the criticality of local and regional road networks.

Opportunities

Transport can improve the resilience of the region’s transport network by:

- supporting improved digital connectivity and communications using Transport lands and assets as well as improving coordination between transport-related emergency communication channels and other NSW emergency service platforms
- investigating the trial and use of remote monitoring technologies to improve resilience planning and operations
- proactively sharing network disruption information with councils, the community and freight operators.



Case study: Smarter Highways program

The NSW Government launched a new program of low-cost technology trials on highways throughout regional NSW to prompt safer driver behaviour on roads in January 2025. The \$5 million Smarter Highways program will harness emerging and existing technologies in innovative ways to improve journey management, especially when a major disruption occurs. Each trial will feature technology that detects an issue on the network, causing systems to be activated to warn drivers about hazards and, if possible, provide alternative options.⁴⁸



Scenic Drive, Mudgee © Destination NSW

⁴⁸ Transport for NSW, Smart tech trials to drive safer behaviour on the roads, 2025. <https://www.transport.nsw.gov.au/news-and-events/media-releases/smart-tech-trials-to-drive-safer-behaviour-on-roads>

5.6.3 Road network maintenance

The frequency of disruptions caused by climate-related events such as flooding and fires is likely to increase due to climate change. Disruptions on the network caused by vehicles, including crashes and vehicle failure, are likely to increase as traffic movements on the network increase. Foreseeable incidents and network disruptions can be planned for. Proactively planning to reduce exposure to flooding and fires, and increasing the durability of at-risk critical network infrastructure will help to minimise the negative impacts of foreseeable incidents on the region’s transport network and communities.

Planning for the unforeseeable is more problematic. Emergency plans that provide detailed operational responses to incidents on the network and facilitate rapid re-prioritisation of infrastructure and services to ensure continued network operation can increase the region’s ability to adapt and respond during unforeseen events.

Maintenance of the public road network is generally the responsibility of Transport (state roads and some regional roads) and councils (some regional roads and local roads). The scale of the

road maintenance task is significant (see 5.6.2) and increasing due to several factors including:

- the increasing cost of planned road maintenance including the costs of raw materials, labour, transport and complying with revised, more stringent road standards
- the growing road network requiring maintenance because of network duplication, bypasses and the growth in suburbs in and around population centres. New roads generally receive capital funding for construction, but lack commensurate increases in operational funding to maintain new or upgraded assets, which stretches existing maintenance budgets
- the increasing frequency of unplanned maintenance in response to the increasing frequency of climate-related events and the unplanned, and in some instances unauthorised, use of regional and local roads by heavy vehicles
- damage to road network assets caused by a mismatch in maximum design vehicle at time of asset construction and current authorised and unauthorised use of the road network. This is particularly prevalent on regional and local roads.



Heavy machinery parked at a road construction site near Dubbo

Case study: Inland Flat Route

Councils have observed growing traffic volumes – predominately heavy vehicles and tourist caravans – on the ‘Inland Flat Route’, which is being used as an alternative to the primary alternate north–south road corridor, the Newell Highway. The Inland Flat Route extends from Narrabri through Wee Waa, Pilliga, Coonamble, Warren, Tottenham, Fifield and Condobolin to West Wyalong via Lake Cargelligo to Hillston and south.

The Inland Flat Route is longer by distance. However, it may be viewed as an attractive alternative to the Newell Highway by freight operators and tourists, particularly grey nomads, for perceived or actual improvements in efficiency through time savings – there is less traffic through Dubbo, Parkes, Forbes and less hilly topography – and improved fuel economy. Most of the roads and bridges along the route are not built to higher mass limits standards.

Inland Flat Route Key Roads

1. West Wyalong to Condobolin via Wyalong Condobolin Rd and The Gipps Way
2. Condobolin to Fifield via Denison St/Henry Parkes Way and Fifield Rd
3. Fifield to Tottenham via Fifield Rd and The Bogan Way
4. Tottenham to Warren via Tabratong Crossing Rd, Tottenham Rd, Nevertire-Bogan Rd and Oxley Hwy/Warren St
5. Warren to Coonamble via Burton St/Oxley Hwy, Warren Rd, Castlereagh Hwy/B55
6. Coonamble to Pilliga via Baradine Rd/Coonamble Rd and Pilliga Rd
7. Pilliga to Wee Waa via Pilliga Rd
8. Wee Waa to Narrabri via Kamilaroi Hwy/Rose



Figure 23. Inland Flat Route



There are several funding sources for Transport and councils to support the routine maintenance of the road network including funding from the NSW Government, council rates and the Commonwealth Government. These funding streams are typically supplemented by Commonwealth and State governments following natural disaster events to expedite the repair and reopening of the critical road network.

The processes and requirements to access road maintenance funding, particularly bespoke funding to support natural disaster recovery, are onerous and can be challenging for councils to use in a timely and cost-effective manner. This is of particular concern for smaller councils with fewer human and financial resources, who may have to make significant compromises in other areas to access and use funding, even for critical network repairs.

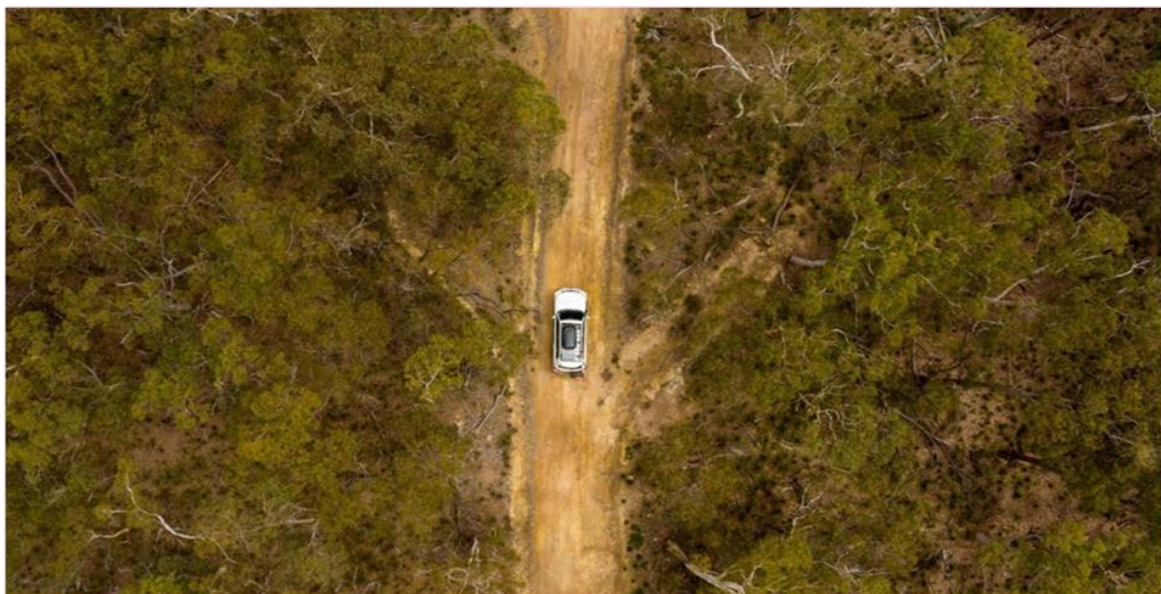
This complexity and challenge increases when multiple funding sources are available or required to deliver projects. Each funding source has its own application process, including providing evidence of an asset's existing and previous condition, its own requirement for the use of funds, including around project management and reporting, and its own timing for funding release, including progress and final payment.

The rigidity of funding sources, such as covering the replacement of like-for-like only, and insufficient integration between resilience, maintenance, safety and other funding sources, often results in councils and Transport providing like-for-like replacement for damaged infrastructure despite the infrastructure standard, design, location or quality no longer being fit for purpose. This is of particular concern for critical infrastructure in vulnerable locations that are regularly repaired or replaced to previous condition only to be damaged again during the next rainfall or other natural hazard event. In some locations, this has created a cycle of ineffective human and financial resource use which is not delivering value for money for government.

Opportunities

Transport can improve road network maintenance outcomes for the region by:

- working with councils and emergency services to prepare risk mitigation plans for critical network infrastructure
- identifying opportunities to proactively manage Transport funding to support the rapid and efficient distribution of road maintenance funding to councils to deliver improved network resilience through rapid identification of preferred 'don't build back' or 'build back better' options and the rapid repair and reopening of local transport networks.



Detour Adventures, Bathurst © Destination NSW

5.7 Net zero emissions



Minimise greenhouse gas emissions and particulate pollution to deliver an environmentally sustainable transport network and healthy natural environments

Transport's Net Zero and Climate Change Policy outlines that climate change risk needs to be considered in all key decisions including how Transport plans, prioritises, designs, constructs, maintains and operates its infrastructure and services. Transport is embedding net zero principles from the outset, designing a transport system that improves access to daily destinations and services, uses less materials and makes sustainable transport modes practical options for most trips.

Transport is committed to achieving net zero emissions consistent with Australia's commitment under the 2016 Paris Agreement. This involves achieving a series of decarbonisation targets, as shown in Figure 24. Transport sector activities account for 19 per cent of NSW's emissions. However, by 2030 it is projected to be the largest single source of emissions.⁴⁹ In 2021, the Central West and Orana region accounted for about 12 per cent of NSW's scope 1 emissions (direct) and about seven per cent of NSW's scope 2 emissions (indirect, electricity generation).⁵⁰ Achieving net zero emissions in the transport sector will require a coordinated and determined change in the way that Transport operates and in the way that customers across NSW carry out their journeys.

Transport Net Zero and Climate Change Policy

The targets are:

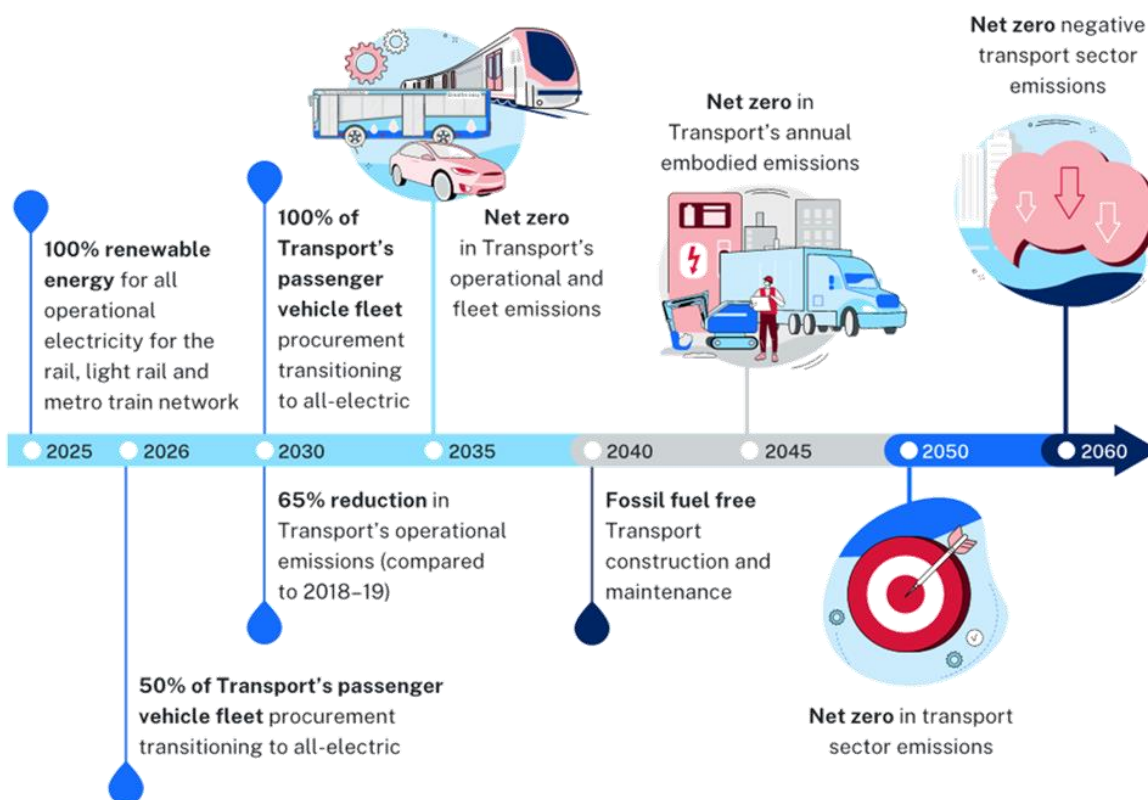


Figure 24. Transport Net Zero and Climate Change Policy targets

49 Future Transport Strategy 2022

50 NSW Net Zero Emissions Dashboard

What we heard

- The unique challenges of freight electrification need to be addressed, including slow fleet turnover and the suitability of existing road infrastructure to accommodate heavier electric freight vehicles.
- Insufficient funding for walking, cycling and public transport infrastructure and services hampers people’s willingness to travel sustainably and reduce emissions. This includes funding for safe crossings to access public transport stops and stations.
- Electric aviation should be considered as a viable opportunity for the medium to long term.
- There is a high demand for more electric vehicle charging stations to improve coverage. There is opportunity to develop charging precincts into places to dwell by including retail and green spaces.
- Lack of collaboration among NSW agencies slows down delivery of emission-reduction initiatives.
- Consideration should be given to safeguarding space for park and ride facilities at regional centre edges to improve local air quality.

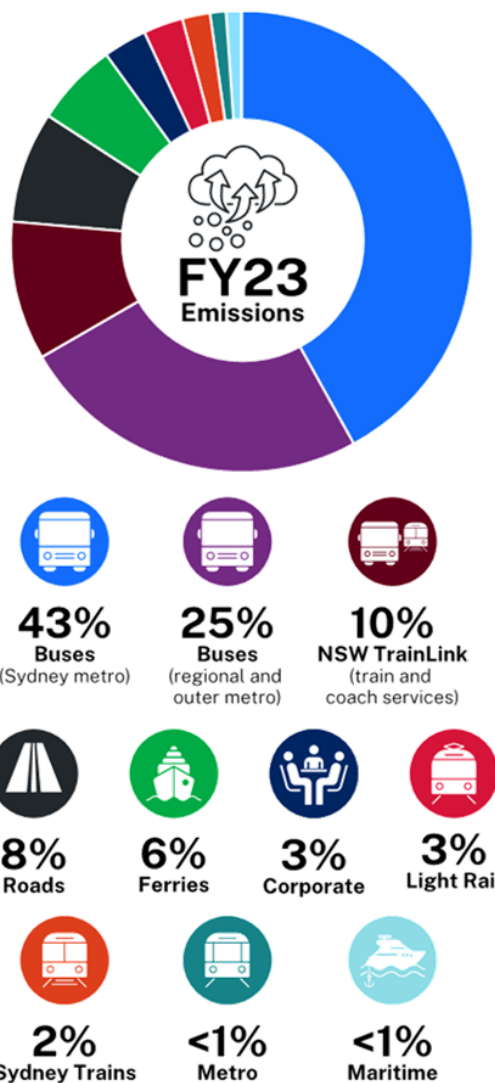


Figure 25. Transport industry emissions, Future Transport Strategy 2022

5.7.1 Transport for NSW operational emissions

Transport’s operational emissions account for three per cent of the transport sector’s emissions. Under the Net Zero and Climate Change Policy, Transport has committed to achieving a 65 per cent reduction in operational emissions by 2030 and net zero operational and fleet emissions by 2035. A breakdown of Transport’s emissions is shown in Figure 24.

Buses currently account for the greatest single source of Transport’s emissions, with buses in regional and outer metropolitan NSW accounting for a quarter of Transport’s total operations emissions. While buses are an efficient transport mode, there is a significant opportunity to reduce their emissions. Under the Zero Emission Buses Transition Plan, Transport is aiming for all buses in the region to be zero emission buses by 2047.⁵¹

⁵¹ https://www.transport.nsw.gov.au/system/files/media/documents/2022/Zero_Emissions_Bus_Fact_Sheet_June_2022-v2.pdf

These buses are likely to use battery electric or fuel-cell electric technology powered by renewable energy. They would also have added benefits including contributing to better air quality, more comfortable journeys and quieter operation.

Aside from buses, a significant challenge for Transport will be to achieve net zero emissions for other modes such as non-electrified trains. Transport is continuing to partner with industry to run trials and prioritise the rollout of zero emissions technology for these operations.

Net zero transport operations also require net zero energy. The NSW Government is investing in REZs which combine renewable energy infrastructure, storage and transmission infrastructure to deliver cheap, reliable and clean electricity for homes and businesses across NSW.

Opportunities

Transport can reduce our operational emissions in the region by ensuring all buses in the region are zero emission buses by 2047.

5.7.2 Enabled emissions

Enabled emissions refer to greenhouse gas emissions produced through private vehicle use, which make up about 97 per cent of transport sector emissions. This includes source energy generation for electric vehicles (EV) as well as tailpipe emissions from internal combustion engine (ICE) vehicles.

In the region, more dispersed populations and longer distances to regional destinations and services increase the distances travelled and enabled emissions compared to Greater Sydney, outer metropolitan areas and coastal regions where denser population and settlement patterns result in shorter trip distances for many activities. Conversion of the privately owned regional fleet to EVs will significantly reduce the region’s operational transport emissions. However, recent modelling by Monash University’s Climateworks Centre suggests that, under current EV adoption rates, an additional 30 per cent reduction in vehicle kilometres is required to meet Australia’s 2050 net zero targets.⁵² This level of travel demand management requires both a reduction in the number and distance of trips and mode shift to more sustainable travel modes.

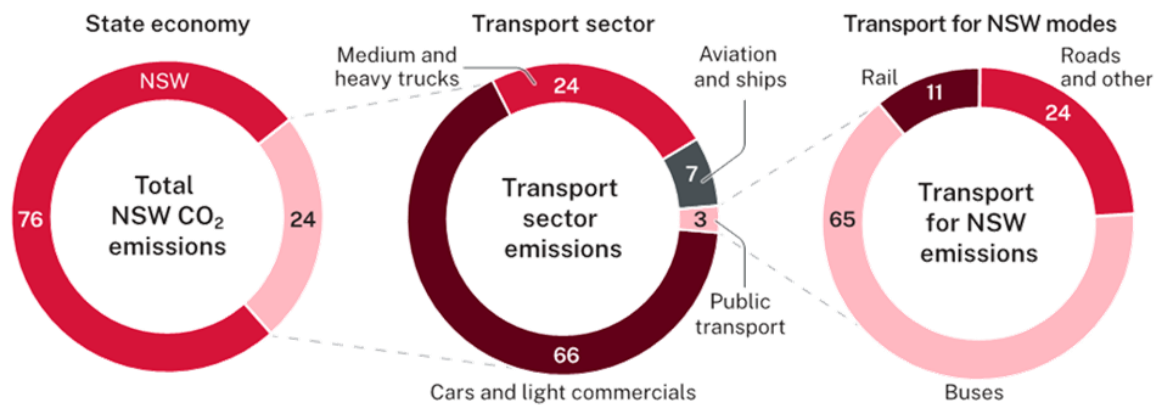
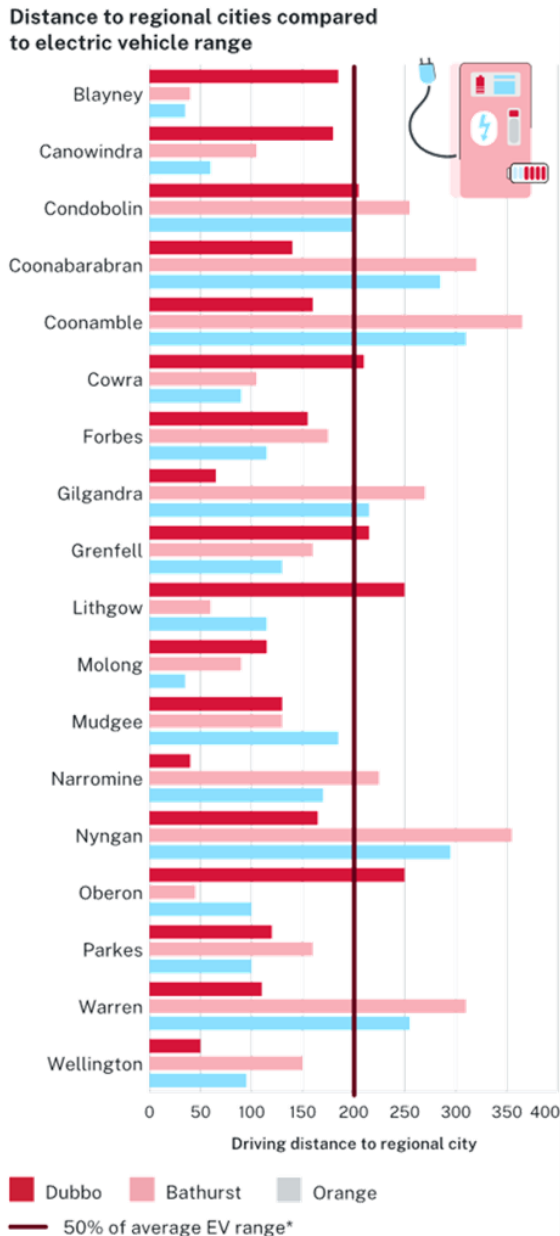


Figure 26. Transport industry emissions, Future Transport Strategy 2022

⁵² Decarbonising Australia’s transport sector: Diverse solutions for a credible emissions reduction plan. Climateworks Centre, 2024



In October 2023, new EV models provided about 450 kilometres range on a full charge. 50 per cent of average EV range is calculated as 450 km minus 50 km buffer divided by two. Battery technology is continuing to develop rapidly.
 Source: <https://www.whichcar.com.au/advice/driving-range-of-all-electric-cars>, October 2023.

Figure 27. Distance to regional cities from strategic centres and centres compared to electric vehicle range

Short local journeys of under 2.5 kilometres present the greatest opportunity for mode shift to active transport. However, the current availability and attractiveness of active transport infrastructure has not resulted in high rates of active transport use in the region. The increasing availability and uptake of e-bikes and electric micromobility modes have helped to reduce physical barriers to active travel and enable faster and longer journeys.

Patterns of settlement, lower population density and longer distances to regional destinations and services make the provision of cost-effective and competitive public transport services challenging in much of the region. The provision of more customised and flexible on-demand public transport services has delivered significant public transport patronage growth and associated reductions in environmental externalities in some NSW regional centres.

Targeted population growth in the region’s population centres will increase demand for both active and public transport, driving down transport-generated greenhouse gas emissions.

There is also an opportunity to support mode shift to public transport for longer journeys to, from and between centres. However, significant improvements to the frequency and speed of longer distance public transport services would be required for them to compete with private vehicles for these trips.

Reduction in emissions for longer journeys will be primarily driven by a gradual adoption of private EV vehicles and of lower and zero emissions heavy vehicles as ICE vehicles reach end of life. Many EV models can travel from a population centre to a regional city without recharging en route.⁵³ Ongoing improvements to battery technology that increase the range and reduce the upfront cost of EVs will improve their value proposition for people living and doing business in the region.

⁵³ Many EV models offer a range of 450 km or better meaning 200 km is half the ‘round-trip’ range with a 50 km buffer

Case study: NSW Electric Vehicle Strategy

The NSW Electric Vehicle Strategy outlines the NSW Government’s commitments to increasing the uptake of EVs and accelerate the State’s vehicle fleet of the future.⁵⁴ As a key action under the strategy, the EV fast charging grants program will add about 280 fast and ultra-fast charging stations across NSW. Investment in these fast-charging stations will stimulate the growth of the EV market by ensuring connectivity between metropolitan and regional areas and future-proofing the EV charging network beyond 2030.

Opportunities

Transport can support a reduction in the region’s enabled emissions by:

- improving walking and bicycle riding networks that support more walkable, bike-able and environmentally sustainable communities, including by retaining or providing new footpaths, bicycle paths, shared paths, cut-throughs and crossings, retaining or providing new street trees, minimising vehicle crossings that negatively impact footpath safety and amenity, and by improving street lighting
- delivering a more competitive and sustainable public transport network that encourages mode shift away from private vehicle trips and increases public transport patronage in the region
- identifying areas of population centres where ‘well-located development’ would provide good access to a range of local and regional jobs, health, education, recreational and social destinations and services using existing walking and public transport networks
- increasing the speed, reliability and availability of meaningful day return public transport services to the region’s population centres and improving connection between the region and Sydney, Canberra and Newcastle
- support the Commonwealth Government and private charge point providers in the delivery of a strategic regional charging network to support longer distance regional EV trips.



⁵⁴ NSW Government, NSW Electric Vehicle Strategy, 2021

NSW Regional Zero Emission Bus trials

5.7.3 Embodied emissions

Embodied emissions encompass greenhouse gases associated with manufacturing and maintenance of infrastructure and fleet as well as fuel production and delivery.⁵⁵ The contribution of embodied emissions as a percentage of lifecycle emissions will increase as the Transport fleet transitions to EV and other low emissions modes. Shared transport modes like on-demand public transport and aviation generally have lower embodied emissions in fleet and infrastructure compared to private vehicles. This efficiency stems from their ability to serve multiple customers, resulting in more efficient use of infrastructure and resources. Consideration should be given to balancing operational emissions benefits against the cost of embodied energy associated with transitioning to a new zero emissions bus fleet.

A 2047 timeframe for this transition⁵⁷ affords the opportunity to maximise fleet asset utility and minimise fleet-related embodied energy costs.

Transport has committed to fossil fuel-free construction and maintenance by 2040 and net zero in Transport’s annual embodied emissions by 2045. This includes emissions embedded during the production and transportation of materials, construction, maintenance and at the end of life of an asset. Transport, in partnership with Infrastructure NSW and Infrastructure Australia, is working to streamline and simplify decarbonisation and the circular economy through the Sustainable Infrastructure Program and the 2026 Decarbonising Infrastructure Delivery Program. As part of sustainable decision making, Transport will need to ensure new infrastructure in the region does not present a risk to biodiversity through habitat fragmentation or destruction. Projects will need to optimise air quality, noise and human health impacts in all stages.

Opportunities

Transport can support a reduction in the region’s enabled emissions by:

- implementing circular design principles in all Transport construction, maintenance and operational work
- prioritising investment in sustainable transport modes and projects that minimise air quality, noise and human health impacts.

Decarbonising Infrastructure Delivery Policy

In April 2024, Infrastructure NSW (INSW) released the Decarbonising Infrastructure Delivery Policy, which applies to all NSW Government building projects valued over \$50 million and linear infrastructure projects valued over \$100 million. It provides guidance to NSW Government infrastructure delivery agencies on expectations for managing upfront carbon in public infrastructure projects, ensuring upfront carbon is a consideration in early project stages. It outlines that agencies must, at a minimum, quantify the impact of carbon in business cases, planning approvals, design, procurement and completion. INSW and Transport have prepared the Decarbonising Infrastructure Delivery Roadmap which sets out initiatives for 2024–2026.



⁵⁵ Department of Climate Change, Energy, the Environment and Water, Net Zero and Circular Economy Guidelines, 2025
⁵⁶ https://www.transport.nsw.gov.au/system/files/media/documents/2022/Zero_Emissions_Bus_Fact_Sheet_June_2022-v2.pdf

06

Realising the vision



Initiatives and longer-term outcomes for the Central West and Orana region have been identified to address the challenges of the region and to leverage current and future opportunities.

The initiatives are organised by short-term (0–5 year), medium-term (5–10 year) and statewide. Transport is the lead for all short and medium term initiatives

This chapter presents a range of initiatives Transport will lead in response to the challenges (as described in Chapter 5) that need to be addressed to meet the Plan’s objectives and achieve the NSW Government’s transport vision for the Central West and Orana region. Some initiatives will require partnership with key stakeholders such as councils and other state agencies. Initiative alignment with objectives and challenges, status and proposed commencement timeframe are as follows.





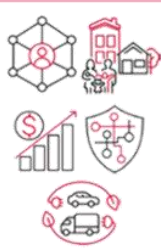
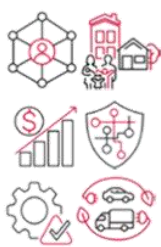
Note: The initiative number does not reflect the order of priority for the start of the described activity.


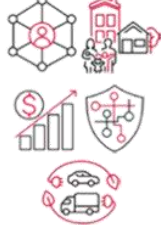
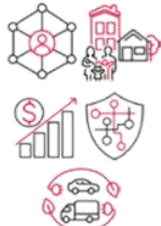
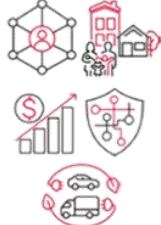
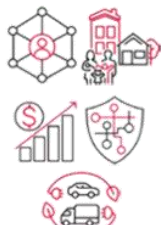
Motorcyclists riding through the Mudgee countryside © Destination NSW
















| | | | |
|--|---|--|--|
|  Starting with Country |  Access to transport for all |  Well-located housing and successful places |  A thriving and diversifying economy |
|  A safe transport network |  Resilient networks |  Net zero emissions | |

6.1 Short-term initiatives (0-5 year timeframe)









| # | LGA | Objective alignment | Action |
|---|---|---|---|
| 1 | All |  | Develop local Aboriginal transport and services plans, co-designed in partnership with Aboriginal community-controlled organisations. |
| 2 | All |  | Deliver regional Aboriginal transport data through open source dashboard sharing to spotlight where transport needs to be improved for our Aboriginal communities. |
| 3 | All |  | Identify gaps in local and regionally important trips to health, education and employment destinations and services in population centres, particularly in areas of greenfield development. |
| 4 | All |  | Identify new and improved walking and bicycle riding links that improve connection between residential precincts and local destinations and services in population centres. |
| 5 | Orange, Cowra, Narromine, Blayney, Warrumbungle, Gilgandra, Lachlan |  | Reallocate road space to improve place outcomes and pedestrian and bicycle rider safety and amenity on state roads that have dual place and movement functions, such as main streets in Orange, Cowra, Narromine, Blayney, Coonabarabran, Gilgandra and Condobolin. |
| 6 | Bathurst, Dubbo, Cowra, Blayney, Warrumbungle, Lachlan |  | Investigate potential bypasses for population centres where state roads have dual place and movement functions such as main streets in Bathurst, Dubbo, Cowra, Blayney, Coonabarabran and Condobolin. |



| # | LGA | Objective alignment | Action |
|----|----------------------------------|---|--|
| 7 | Orange |  | Refine access and signage to ensure the bypass function of the Northern Distributor Road in Orange is used by freight vehicles and traffic. |
| 8 | Dubbo, Orange, Bathurst, Lithgow |  | Investigate a new stabling yard at Orange to facilitate increased rail service frequency linking: Dubbo, Orange, Bathurst, Lithgow, and Sydney. |
| 9 | All |  | Investigate expanding local public transport services for population centres in the region. Examples include Dubbo, Bathurst, Orange, Parkes, Forbes, Lithgow, Mudgee, and Cowra. Solutions may include a range of fixed-route and flexible options. |
| 10 | All |  | Investigate improved day-return connections between centres and villages and their nearest city or strategic centre. These services may connect to, augment or enhance longer distance services, but should be focused on connecting the smaller centres to larger population centres, for example: <ul style="list-style-type: none"> • Kandos-Rylstone-Mudgee • Gulgong- Mudgee • Millthorpe- Orange • Portland-Wallerawang-Lithgow. |
| 11 | All |  | Investigate expanding longer-distance day-return services between population centres and nearest regional centres especially to Dubbo, Bathurst and Orange. Examples include: <ul style="list-style-type: none"> • Nyngan–Dubbo via Warren and Narromine • Coonamble-Dubbo via Gilgandra • Coonabarabran–Dubbo • Mudgee-Dubbo • Oberon–Orange via Bathurst • Grenfell–Orange via Cowra and Canowindra • Forbes–Orange • Condobolin–Orange via Parkes and Molong • Mudgee-Lithgow. |

| # | LGA | Objective alignment | Action |
|----|--|---|---|
| 12 | Dubbo, Orange, Cowra, Warrumbungle |  | <p>Investigate expanding longer-distance services to connect to centres outside of Central West & Orana. Examples include:</p> <ul style="list-style-type: none"> • Dubbo and Newcastle • Orange and Canberra via Cowra • Dubbo and Tamworth via Coonabarabran. |
| 13 | All |  | <p>Deliver the Contactless Ticketing Program for all bus services in the Central West and Orana region.</p> |
| 14 | All |  | <p>Identify Transport land that can support the delivery of well-located housing.</p> |
| 15 | Dubbo, Warrumbungle, Mid-Western, Gilgandra, Coonamble |  | <p>Complete the Regional Network East West (RNEW) Strategy, including the investigation of improvements to the rail network between Dubbo and Newcastle, including:</p> <ul style="list-style-type: none"> • reviewing the viability of a Maryvale–Gulgong freight rail line versus Merrygoen turn-out wye shunt removal • investigating a Dubbo freight rail by-pass – the Macquarie rail bridge replacement/renewal • undertaking a corridor assessment for the Dubbo–Coonamble rail corridor to identify both freight productivity improvements and maintenance priorities, and to inform future proposed upgrades on the corridor. |
| 16 | All |  | <p>Strengthen access for PBS vehicles on north–south and east–west connections within the region identified in the NSW Heavy Vehicle Access Policy including:</p> <ul style="list-style-type: none"> • Newell Highway • Castlereagh Highway • Mitchell Highway • Great Western Highway • Golden Highway • Oxley Highway • Mid Western Highway • Lachlan Valley Way • Olympic Highway. |





| # | LGA | Objective alignment | Action |
|----|---|---|---|
| 17 | Bogan, Warren, Coonamble, Narromine, Dubbo, Parkes, Forbes, Cabonne, Blayney, Bathurst, |  | Develop a freight network plan that prioritises road freight access to intermodal terminals such as the Parkes Activation Precinct and increases the use of Inland Rail and ARTC's Hunter Valley Coal Network to get more freight moving on rail, particularly between the region and Newcastle and Brisbane. |
| 18 | Parkes |  | Deliver grade separation of road and rail interfaces between Inland Rail and the Newell Highway at Tichborne between Parkes and Forbes. |
| 19 | All |  | Investigate targeted investment in crash barriers, wide central medians, and audio-tactile line markings on higher speed state and regional roads outside of regional cities, centres and buffer zones. |
| 20 | All |  | Investigate targeted investment in improved junction design, separated bicycle paths, and legible road design on state and regional roads in peri-urban zones around regional cities and population centres. |
| 21 | Warrumbungle, Oberon, Mid-Western, Blayney, Cowra, Lithgow, Dubbo, Parkes, |  | Develop a plan to deliver town entry gateway treatments across the region at key towns such as Coonabarabran, Oberon, Mudgee, Blayney and Cowra, and villages such as Lucknow, Capertee, Geurie, Peak Hill, Tomingley and Alectown. |
| 22 | All |  | Investigate targeted investment in improved crossings and junction build-outs, wide footpaths and separated cycling infrastructure, protected parking bays and legible road design for state and regional roads and streets in cities and population centres to improve safety for road users. |
| 23 | Bathurst, Lithgow, Blue Mountains, Cabonne, Orange, Dubbo, Weddin, Forbes, Parkes, Narromine, Gilgandra, Warrumbungle |  | Develop and deliver improved rest stop opportunities across the region to support the safe and efficient movement of heavy vehicles, including both heavy vehicle rest areas and green reflector sites (informal rest areas). This includes improvements on: <ul style="list-style-type: none"> • Great Western Highway • Bells Line of Road • Mitchell Highway • Newell Highway. |
| 24 | All |  | Investigate targeted and cost-effective speed management treatments for identified motorcycle crash locations that address the behaviours of recreational motorcyclists. |







| # | LGA | Objective alignment | Action |
|----|--|---------------------|--|
| 25 | All | | Identify critical fail points on the transport network and investigate options to reduce any resulting vulnerability. |
| 26 | All | | Work with councils to investigate options to use technology to monitor, assess and document state and regional road network conditions to support more effective maintenance, grant work and natural disaster assistance. |
| 27 | Dubbo, Gilgandra, Mid-Western, Narromine, Warrumbungle | | Develop alternate route guidance for freight and passenger vehicles that identifies and mitigates the impacts of OSOM movements for the Port to REZ project. |
| 28 | All | | <p>Develop corridor plans to assess asset condition and proactively plan and seek funding for maintenance and upgrades for the next 20 years for:</p> <ul style="list-style-type: none"> • Newell Highway • Castlereagh Highway • Mitchell Highway • Great Western Highway • Golden Highway • Oxley Highway • Mid Western Highway • Henry Parkes Way • Jenolan Caves Road • The Escort Way • Lachlan Valley Way • Chifley Road and the Bells Line of Road. |
| 29 | Lithgow, Blue Mountains | | Investigate providing de-coupling facilities near Blackheath and Wallerawang to reduce the accessibility gap for higher productivity vehicles. |
| 30 | Orange, Bathurst | | Complete investigations for project development at Shadforth, Pretty Plains, Cashens to Callans Lane and Dunkeld as part of the Mitchell Highway safety upgrade from Bathurst to Orange. |
| 31 | Dubbo, Orange, Bathurst | | Partner with local government to deliver place-based integrated transport planning solutions for Bathurst, Dubbo and Orange. |
| 32 | Dubbo | | Investigate options to improve safety at the Newell Highway and Boothenba Road intersection. |

| # | LGA | Objective alignment | Action |
|----|-----------------------------------|---|---|
| 33 | Oberon |  | Work with the Jenolan Caves Trust, National Parks and Wildlife Service and Oberon Council to provide safe and resilient access to the World Heritage Jenolan Caves. |
| 34 | Bathurst, Lithgow, Blue Mountains |  | Work in partnership with federal, State and local government and transport operators to undertake a Sydney to Central West resilience study, leveraging recent investigations, to understand current network vulnerabilities to shock and stresses. |
| 35 | Lithgow |  | Investigate a targeted program of works for the Bells Line of Road based on the recommendations of the Sydney to Central West resilience study to ensure the Bells Line of Road provides a safe alternative during unplanned and planned disruptions on the Great Western Highway. |
| 36 | Lithgow |  | Undertake a trial of a 'Permanent Congestion Management' system, a series of signalised, coordinated traffic control devices to resolve issues caused by vehicles breaking down while queuing on the steep climb up Victoria Pass during peak periods such as holiday and around key events such as the Bathurst 1000. |
| 37 | Lithgow |  | Partner with councils and the NSW Police Force to improve road safety as part of the regional implementation plan, which aims to reduce road trauma by deterring unsafe behaviours across the road network, and support police compliance activities. Include a motorcycle route safety assessment for Chifley Road and the Bells Line of Road as motorcycles are overrepresented in crashes on these roads. |
| 38 | Lithgow |  | Work with Lithgow Council to investigate access opportunities to the Great Western Highway for the Marrangaroo urban release area to support access to housing and employment lands. |
| 39 | Lithgow |  | Support well-located housing and access to health services in Bowenfels by providing safe access for vulnerable road users by: <ul style="list-style-type: none"> • developing improvements to active transport along and across the Great Western Highway at Lithgow • providing signalisation of the Col Drewe Drive and Great Western Highway intersection for safer access to Lithgow Hospital and surrounding education and residential areas. |
| 40 | All |  | Enable and support the implementation of shared micromobility across the region to improve transport choice and reduce car dependence. |

| # | LGA | Objective alignment | Action |
|----|-----|---|---|
| 41 | All |  | Promote Aboriginal language and culture on the NSW State Road network through the delivery of Signposting Country signs. |
| 42 | All |  | Investigate the coach (Trainlink) network for options to improve connections to improved rail services and improve transport choices across the region. |

6.2 Medium term initiatives (5-10 year timeframe)








| # | LGA | Objective alignment | Action |
|---|--|---|---|
| 1 | All |  | Investigate long-term transport solutions to support the ongoing maintenance and management of Central West and Orana REZ infrastructure. |
| 2 | Dubbo, Orange, Bathurst, Parkes, Lithgow |  | Investigate delivering increased daily public transport service frequency between: <ul style="list-style-type: none"> • Dubbo and Orange • Parkes and Orange • Orange, Bathurst and Lithgow. |
| 3 | All |  | Implement ongoing public transport improvements resulting from investigations undertaken in the 0-5 year timeframe (e.g. initiatives 8-11). |
| 4 | Lithgow, Blue Mountains |  | Investigate capacity and infrastructure enhancements to allow rail service frequency improvements on the Blue Mountains Intercity line across the mountains to Lithgow, including integration with local public and active transport connections. |








| # | LGA | Objective alignment | Action |
|----|------------------------------------|---|--|
| 5 | All |  | Investigate integrating emerging aviation services into future long distance transport networks including by improving access to airports. |
| 6 | All |  | Investigate a streamlined funding model for councils that emphasises long-term cost-effectiveness of road network maintenance and upgrades. |
| 7 | Coonabarabran |  | Investigate an upgrade of the Newell and Oxley Highway intersection. |
| 8 | Narromine, Gilgandra, Warrumbungle |  | Investigate grade-separated crossings of Inland Rail to complement the Narromine to Narrabri (Stage 2) construction. |
| 9 | Bathurst. Lithgow |  | Work with Bathurst and Lithgow councils to improve network safety and access between future housing release areas and destinations and services in Bathurst and Lithgow. |
| 10 | Bathurst. Lithgow |  | Investigate options to improve safety on the Great Western Highway between Wallerawang and Raglan. |



6.3 Statewide initiatives

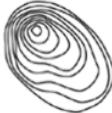

These are statewide priorities for action that will be of benefit to our customers and communities across the Central West and Orana, but do not currently have specifically identified projects within this region so are included as statewide initiatives that will be delivered over the life of the Plan.


| # | Objective alignment | Initiative | Lead | Source |
|-----|---|---|---------------------------------------|---|
| i |  | Work with industry and the public research sector to support the transition of the NSW bus fleet to 100 per cent zero emission buses by 2040 for Outer Metropolitan regions and by 2047 for Regional NSW. | Transport for NSW | Zero Emission Buses Transition Plan |
| ii |  | Deliver on the four priority safety areas of the Maritime Safety Plan to guide the delivery of actions to work towards zero fatalities and serious injuries on NSW waterways by 2056, including reducing conflicts between recreational watercraft and access to ports. | Transport for NSW | Maritime Safety Plan 2056 |
| iii |  | Real time travel information across the state. | Transport for NSW | Transport Connected Buses Program |
| iv |  | Work with industry to increase the number of electric vehicle charging stations within regional areas to reduce the need for the community to purchase long range vehicles. | Transport for NSW EV Industry | Internal Transport investigation |
| v |  | Establish an integrated ticketing solution to provide a consistent public transport payment system across the region. This is likely to require a statewide approach for an integrated system. | Transport for NSW | Internal Transport investigation |
| vi |  | Implement consistent ways of communicating the status of network disruptions during major events and natural disasters, including real time journey information relating to disruptions. | Transport for NSW | Internal Transport investigation Customer Coordination Centre State Disaster Mitigation Plan 2024-2026 Customer Journey Resilience Plans |
| vii |  | Partner with freight companies to support increased uptake of low-emissions freight vehicles. | Transport for NSW Freight Industry | Towards Net Zero Emissions Freight Policy |

| # | Objective alignment | Initiative | Lead | Source |
|------|--|--|---|--|
| viii |  | Support opportunities for Aboriginal organisations to have access, management and use of culturally significant lands and waterways and ensure that transport projects have considered access to cultural sites and lands, for example, provision for cultural burns along transport corridors. | Transport for NSW Councils In consultation with Aboriginal stakeholders and community, Local Aboriginal Land Councils | Internal Transport investigation |
| ix |  | Partner with Councils and the NSW Police Force to deliver road safety programs that aim to reduce road trauma by deterring unsafe behaviours across the road network and support police compliance activities. | Transport for NSW Councils NSW Police Force | 2026 Road Safety Action Plan – Towards Zero |
| x |   | Undertake speed zone reviews and apply safer speed zone settings following the principles and guidance in the NSW Speed Zoning Standard, including for suitable local streets and state road and highway networks, to improve road safety and conditions for walking and cycling on local streets. | Councils Transport for NSW | NSW Speed Zoning Standard Movement and Place Framework |
| xi |  | Identify and address safety issues at existing private and public at-grade rail level crossings through improved management of conflict with pedestrian and motor vehicles. | Transport for NSW Rail operators | Internal Transport investigation Stakeholder engagement |
| xii |   | Work with Councils and State Agencies to improve the perception and safety of people walking, cycling and using public transport, particularly for women, girls and gender diverse people. This includes lighting and visibility improvements, infrastructure improvements, amenity at bus stops and train stations, and activating places to extend the time people spend in a place across different times of the day. | Councils Transport for NSW Other NSW Government agencies | Transport Safer Cities Survey Report July 2023 Stakeholder engagement |






6.4 Longer-term outcomes

| Objective | Longer-term outcomes | How we make it happen | Triggers that would change priority |
|---|---|---|---|
| <p>Starting with Country</p>  <p>All investment in the transport network, services, policy and technology takes a Country-centred approach</p> | <p>Planning with Country practices are embedded at every stage of planning, development and delivery to result in Country-centred design.</p> | <p>Policy</p> <ul style="list-style-type: none"> • Deliver regional Aboriginal transport data through open-source dashboard sharing. • Increase the number of Aboriginal businesses on approved prequalified panels and schemes. <p>Services</p> <ul style="list-style-type: none"> • Improve access to education, health, employment and cultural places for Aboriginal communities. | |
| <p>Access to transport for all</p>  <p>All Central West and Orana residents, workers and visitors will have access to more equitable options for travelling to and from local, regional and metropolitan destinations and services</p> | <ul style="list-style-type: none"> • Transport disadvantage is reduced across the entire Central West and Orana region and people are able to access their regular destinations with a variety of transport choices for all trips purposes. • Public transport and active transport are seen as safe, reliable and convenient transport options for most journeys within as well as outside the region. • There is a significant long-term reduction in private vehicle dependency. • Improved perceived personal security for transport users. | <p>Policy</p> <ul style="list-style-type: none"> • Use the Road User Space Allocation Policy to prioritise more sustainable travel modes. • Public transport station/stop location activation (passive surveillance/activity). <p>Services</p> <ul style="list-style-type: none"> • Support better bus and coach services connecting to education and health throughout the Central West and Orana region • Ensure services support housing development. • Onboard surveillance and safety. <p>Infrastructure</p> <ul style="list-style-type: none"> • Connected active transport network throughout the Central West and Orana region. • Train station and bus stop lighting | <ul style="list-style-type: none"> • New schools • New health services • Development of future housing growth areas. |

| Objective | Longer-term outcomes | How we make it happen | Triggers that would change priority |
|---|---|---|-------------------------------------|
| <p>Well-located housing and successful places</p>  <p>Well-located housing and successful places will be supported by coordinated delivery of transport network infrastructure and services.</p> | <p>An integrated public transport network that achieves a 30-minute city through:</p> <ul style="list-style-type: none"> • frequent and reliable public transport services to health, education, employment and tourism locations • a connected active transport and micromobility network • first and last-mile freight access. | <p>Services</p> <ul style="list-style-type: none"> • Provide better bus services to support university travel. • Increase bus and rail services across the day and week. • Ensure that vehicle travel is stabilised in the Central West and Orana region and that there is sufficient capacity to support travel demand for all trip purposes. <p>Road infrastructure</p> <ul style="list-style-type: none"> • Make local connections part of development. • Connect critical road corridors. • Monitor network capacity change as a result of growth • Provide local cycleways and footpaths to support short trips sustainably. <p>Public transport infrastructure</p> <ul style="list-style-type: none"> • Provide additional stations. • Introduce bus priority measures. • Upgrade train stations and bus stops, including accessibility, information and corridor crossings. | |



| Objective | Longer-term outcomes | How we make it happen | Triggers that would change priority |
|--|---|--|--|
| <p data-bbox="213 277 373 376">A thriving and diversifying economy</p>  <p data-bbox="213 524 454 943">Transport infrastructure and services support local business, the visitor economy and improving the productivity of freight movements to support jobs growth, increased regional productivity, and economic diversification.</p> | <ul data-bbox="464 277 762 1016" style="list-style-type: none"> • Road and rail freight network efficiency is improved to support and enable economic growth • Safe, productive and sustainable freight is enabled through good planning, which incorporates freight movements in and between places. • Transport networks connect visitors and tourism destinations, including: transport that responds to seasonal demands, services and infrastructure that improve the uptake of public transport. | <p data-bbox="772 277 852 309">Policy</p> <ul data-bbox="772 322 1129 898" style="list-style-type: none"> • Support more efficient and safer freight vehicles. • Support the decarbonisation of freight. • Improve freight accessibility (vehicle type and access). • Support agribusiness. • Deliver the Heavy Vehicle Access Policy 2024, enabling high productivity vehicles on critical freight corridors across the Central West and Orana region, ensuring connectivity to points of economic purposes, such as Dubbo and Parkes intermodal terminals. <p data-bbox="772 920 932 952">Infrastructure</p> <ul data-bbox="772 965 1129 1339" style="list-style-type: none"> • Provide infrastructure that enables the diversifying and growing demand for freight and heavy vehicle rest areas. • Protect land for future freight corridors. • Increase network access for high-productivity vehicles. • Introduce network and structure improvements to support this. <p data-bbox="772 1361 868 1393">Services</p> <ul data-bbox="772 1406 1129 1561" style="list-style-type: none"> • Bus connections to support tourism workers to workplaces across the Central West and Orana region. | <ul data-bbox="1139 277 1372 456" style="list-style-type: none"> • Repurposing of power plants • Planning advances faster than anticipated |

| Objective | Longer-term outcomes | How we make it happen | Triggers that would change priority |
|--|---|--|--|
| <p>A safe transport network</p>  <p>Trauma on the Central West and Orana road network will be in decline and heading towards Transport’s goal of zero fatalities and serious injuries by 2050</p> | <ul style="list-style-type: none"> • Safer, more sustainable access to transport networks for safe and productive movement of goods. | <p>Policy</p> <ul style="list-style-type: none"> • Safer vehicles. • Safer drivers. • Lower speed limits in targeted locations. <p>Infrastructure</p> <ul style="list-style-type: none"> • Rail level crossing safety improvements. • Road safety network improvements. | <ul style="list-style-type: none"> • Changes to crash patterns. • New crash clusters. |
| <p>Resilient networks</p>  <p>Proactively planning for network shocks and stresses will increase the reliability of the transport network</p> | <ul style="list-style-type: none"> • Maintaining and improving transport networks in a changing climate. • Continuous improvement of asset management processes. • Journey reliability in response to external events. | <p>Policy</p> <ul style="list-style-type: none"> • Continually review asset management processes. • Review asset problem identification and response procedures. • Provide community information about asset practices. <p>Infrastructure</p> <ul style="list-style-type: none"> • Infrastructure is designed for a changed climate, and more extreme weather and temperatures. • Resilience (alternative routes/paths) is a determinant in prioritising delivery programs. | <ul style="list-style-type: none"> • Extreme weather events occur more frequently than forecast and require a reprioritisation of response. |