Road Network Plan

2027-2032

DRAFT

CITY OF ONKAPARINGA

CONTENTS

Acknowledgement of Country 4

Mayor's Foreword 4

1. Introduction 5

2. Strategic Alignment and Advocacy Opportunities 7

Australian (Federal) Government 7

South Australian (State) Government 7

National and State Road Safety Strategies and Action Plans 9

City of Onkaparinga Strategies 10

Advocacy Opportunities 11

Core Foundations 13

3. Our Road Network 16

Recent Network Improvements and Trends 16

The Road Corridor 21

What we Deliver 21

How our Roads are Performing 21

State Roads 22

Unsealed Roads 22

Our Rural Network 28

Road Safety 29

Traffic Monitoring and Performance 31

4. Road Classifications 36

Onkaparinga Movement and Place Framework 36

Typical Cross Sections 42

Traffic Volumes Exceeding Road Classification 49

Reclassifying Roads 49

5. Movement Demands 51

Freight and Industrial Destinations 51

Tourist Destinations 52

Destinations Requiring Special Consideration for Access 54

Public Transport 54

Active Transport 55

Schools 57

6. Network Pressures 60

Growth and Development 60

Journeys to Work 65

DRAFT

Traffic Management 66
Emerging Technology 67
7. Improvement Plan 69
Updates to the Plan 69
Next Steps and Continuous Improvement 69

DRAFT

Acknowledgement of Country

We acknowledge the Kaurna Nation and its people as the traditional owners and custodians of the land in the area now known as the City of Onkaparinga.

We recognise that this local living culture has developed over tens of thousands of years and that in today's contemporary context, Kaurna and other Aboriginal people are actively engaged in community life and bring their rich cultural heritage to the connected community and sustainable future to which we aspire.

We are mindful of Kaurna people's spiritual relationship with country when we make decisions about this region and that protecting places of importance to Kaurna culture has an impact on the wellbeing and prosperity of Kaurna and other Aboriginal people.

We recognise our important opportunity to facilitate positive change in the way the community works together across Aboriginal communities, non Aboriginal communities, local businesses, and service agencies, by actively engaging in a shared journey towards reconciliation.

Mayor's Foreword

[to be completed before final draft]

DRAFT

1. Introduction

The Road Network Plan (RNP) is the City of Onkaparinga's leading road management document which outlines our road hierarchy and functional road networks.

The ultimate aim of the RNP is to ensure the optimal functionality and performance of the City of Onkaparinga's road network. It is important that we have a road network that operates effectively, safely and sustainably and that the vision and operational maintenance of our network aligns with our Community Vision 2034.

The Movement and Place classifications defined in the RNP reinforce a road's dual purpose as a public asset that allows for the movement of people and goods from one place to another, along with its function as a public space that interacts with the adjoining land located alongside the road. The RNP is used to inform service standards and service levels for our road infrastructure assets through the application of road hierarchy cross sections. It also includes an overview of current network pressures, strategic advocacy opportunities, and a continuous improvement plan focused on proactive risk management. The RNP was last reviewed in 2016 and has now been revised to ensure it is relevant, reflects current best practice, and refers to current policies, strategies and guidelines.

Since 2016, transport planning has evolved towards a more proactive, systemic response to modern challenges such as rising car dependency, micromobility growth, freight demands, and the limitations of legacy road design. To address these systemic pressures, this updated plan integrates contemporary transport planning frameworks, specifically the Safe System approach and the Movement and Place framework. While the integration of these modern frameworks means this updated plan looks substantially different from previous iterations, its core intent remains unchanged. It preserves the operational foundation of our established practices, ensuring we continue to responsibly manage our $1.2 billion road asset portfolio.

The RNP has the following objectives:

- **Provide strategic, network-wide guidance:** To act as a high-level strategic document that guides coordinated network decision-making, rather than serving as a mechanism for individual, street-level requests.
- **Embed contemporary planning frameworks:** To apply Safe System principles and the Movement and Place framework to safely balance the competing needs of commuters, freight, active transport users, and local community spaces.
- **Support financial sustainability:** To guide lifecycle-based asset management and ensure the long-term financial sustainability of our road network.
- **Support consistent decision-making:** To provide an accessible framework that supports council staff in negotiating with developers, responding consistently to customer requests, and informing Elected Members on road network queries.
- **Prioritise investment and advocacy:** To proactively prioritise infrastructure upgrades based on systemic risk and clearly define our strategic advocacy priorities for state and federal investment

Road assets referred to in the RNP, represent community investment and provide community services and benefits. City of Onkaparinga's role is to maintain, operate and renew road assets so they continue to provide the same level of service as described in the RNP to their community. Our road network is comprised of a combination of Council owned and State owned and managed

DRAFT

roads – State roads within our city include arterial routes such as The Southern Expressway, Main South Road and the coastal Dyson Road to Commercial Road corridor.

The long term costs of owning and operating road assets is a financial challenge to local government. The City of Onkaparinga embraces the principles of sustainability to ensure the long term viability of serving the community through the Road Asset Management Plan.

This plan is based on a whole-of-life or “lifecycle management” approach that manages road assets from planning, upgrading, ongoing maintenance and eventually renewal. This will enable decisions to be made based on providing the required services efficiently and effectively, recognising all costs throughout the life of the road asset. When building additional or upgrading existing assets, the ongoing cost of maintaining and operating the asset must be identified. The RNP is informed and supported and by the City of Onkaparinga’s Road Asset Management Plan in managing the road assets.

Through the RNP, we also try to consider the road corridor as a whole incorporating not only the road pavement, seal and traffic control devices but also the corresponding cycling, path, public transport, lighting and verge infrastructure.

DRAFT

2. Strategic Alignment and Advocacy Opportunities

Australian (Federal) Government

The Australian (Federal) Government exists at the highest level of authority, although its influence on councils is mainly limited to the provision of funding as there is no recognition of local government in the Australian Constitution, which operate instead under the legislation of their respective state or territory jurisdictions. Funding programs provided by the federal government include “untied” schemes such as Financial Assistance Grants and Roads to Recovery, which have minimal conditions for how funding is spent. Much of this untied funding typically goes towards operational spending on existing road assets, such as maintenance and renewal.

Conversely, “tied” federal schemes such as the Black Spots Program, Safer Local Roads and Infrastructure Program and the Active Transport Fund typically involve a competitive grant submission process for the provision of new capital infrastructure. South Australia also has the Special Local Roads Program which distributes a separate allocation of federal funding through a competitive process for provision of new capital infrastructure and is administered by the SA Local Government Association. Most of these “tied” funding schemes also require a significant funding co-contribution from council which is usually a minimum of 50%, although the Black Spots Program does allow up to 100% funding for road safety projects.

Beyond funding, the Federal Government provides some overarching strategic directions, such as:

- Model transport laws and rules overseen by the National Transport Commission, such as the Australian Road Rules.
- The National Road Safety Strategy and its supporting Action Plan.
- The Australian Transport Assessment and Planning (ATAP) Guidelines which provide a framework for planning, assessing and developing transport systems and related initiatives.

There are other bodies at the national level that provide key guidance such as **Austroads** who provide practical advice on the design, management and operation of road transport networks, and **Standards Australia** who publish documents that set out specifications, procedures and guidelines that aim to ensure products, services, and systems are safe, consistent, and reliable. The **Australian Local Government Association** (ALGA) is also the peak body that represents all councils in Australia to influence national priorities and public policy.

South Australian (State) Government

The state government has a much more active role in defining and supporting how councils undertake their duties as a road authority. This framework is primarily established through the “Manual of Legal Responsibilities and Technical Requirements for Traffic Control Devices” (The Manual), which operates under the *Road Traffic Act 1961*.

The Manual outlines the council's role through two distinct but interrelated parts:

Part 1: Legal Responsibilities (The Delegation), which establishes the legal authority for councils to manage the road network. It is operationalised through the “Instrument of General Approval and Delegation to Council” issued by the Minister for Transport and Infrastructure.

- Empowerment: It formally delegates the Minister's powers to the council, authorising them to install, operate, and maintain traffic control devices (such as signs, lines, and traffic signals) on local roads.

DRAFT

- Responsibility: This delegation shifts the primary duty of care to the council, requiring them to act as the responsible road authority. However, this power is not absolute; it is conditional upon strict adherence to the technical constraints set out in Part 2.

Part 2: Code of Technical Requirements (The Standards), often referred to as "The Code", provides the mandatory technical standards that councils must follow when exercising the powers granted in Part 1.

- Uniformity: It dictates the specific design, placement, and operation of traffic control devices to ensure they are consistent across the entire South Australian road network, regardless of the council area.
- Safety and Compliance: It ensures that all devices installed by a council – from a simple "Give Way" sign to complex pavement markings – meet state-wide safety objectives. Any deviation from these standards generally requires specific, case-by-case approval from the Department for Infrastructure and Transport (DIT).

By binding the legal delegation (Part 1) to the technical standards (Part 2), the state government fosters local-level responsiveness and operational efficiency while maintaining regulatory consistency. This ensures that while councils have the autonomy to make local traffic management decisions, those decisions align with broader state safety strategies and the uniform expectations of road users.

To ensure that the powers delegated in Part 1 are exercised responsibly, councils are generally required to prepare a **Traffic Impact Statement (TIS)** whenever they propose to install, alter or remove a traffic control device. This process applies to all changes to the road network, whether they are straightforward adjustments or complex projects. The TIS serves as a critical safety check and a transparent record of the decision-making process. It confirms that the council has assessed the impact on all road users—including pedestrians and cyclists—and that the proposal complies with the mandatory standards in Part 2.

While councils have the autonomy to approve most standard devices themselves, they must seek separate approval from the Commissioner of Highways if a proposal varies from the mandatory requirements in The Code. In these "non-standard" cases, the TIS must provide a detailed assessment justifying why the variation is necessary and how it will operate safely.

In addition to The Code, DIT have other standards, guidelines and strategies that councils are required to adhere to or be guided by, including:

- Speed Limit Guideline for South Australia
- Pavement Marking Manual
- Operational Instructions
- Australian Standards Supplements
- South Australia's Active Travel Design Guide
- South Australia's Road Safety Strategy to 2031 and its supporting Action Plan
- South Australia's Transport Strategy

Other South Australian government departments can also have a notable influence on the planning, management and operation of council road networks such as:

- Department of Housing and Urban Development, which manages the state's planning system and has a role in the way infrastructure is provided to support new development

DRAFT

through instruments such as the Planning and Design Code and Greater Adelaide Regional Plan.
- Department of Environment and Water, which oversees the way we manage, conserve and sustain our environmental and cultural resources through requirements such as the *Native Vegetation Act 1991* which protects areas of high conservation value.

The Local Government Association of South Australia is the peak body representing the 68 councils across South Australia by leading advocacy efforts and engagement with state and federal government stakeholders and decision makers.

National and State Road Safety Strategies and Action Plans

Our *Road Network Plan* does not exist in isolation. It aligns with, and supports, the strategic direction set by the Australian and South Australian governments to reduce road trauma.

National Road Safety Strategy 2021–30

The *National Road Safety Strategy 2021–30* sets the direction for road safety across Australia for the next decade. Its primary goal is to provide a path towards "Vision Zero" – zero lives lost and zero serious injuries on our roads by 2050.

To measure progress towards this vision, the strategy sets targets for the decade to 2030:

- a reduction in lives lost of at least 50 per cent
- a reduction in serious injuries of at least 30 per cent.

The strategy is underpinned by the Safe System approach, which is discussed further in the Core Foundations Section.

National Road Safety Action Plan 2023–25

This strategy is delivered through rolling action plans which sets out specific priorities for the immediate term. It focuses on delivering safety infrastructure, improving data quality and enabling the uptake of safer vehicles. It specifically highlights the role of local government in maintaining and upgrading local road infrastructure to reduce the risk of crashes and in collecting data to better understand network performance. An updated strategy beyond 2025 is yet to have been released at the time of preparing this version of the RNP.

South Australia's Road Safety Strategy to 2031

At the state level, *South Australia's Road Safety Strategy to 2031* adopts the national targets and principles but tailors them to our local context.

Key focus areas relevant to our region include:

- Regional roads: addressing the over-representation of crash casualties in regional and remote areas.
- Vulnerable road users: improving safety for people who walk, cycle and use public transport.
- Age-specific risks: targeting younger drivers (particularly in regional areas) and road users aged 70+.
- Movement and Place: explicitly adopting the Movement and Place approach for planning road safety treatments and setting speed limits.

DRAFT

South Australia's Road Safety Action Plan 2025–2027

While primarily focused on state government initiatives, this document includes specific actions for local network planning. Key commitments include integrating the Movement and Place approach into an updated *Speed Limit Guideline for South Australia* and establishing a revised functional hierarchy for roads. The plan further seeks to align strategic network planning between state and local government and improve data sharing.

To support safer infrastructure, the plan points to continued funding through the *Way2Go* program, which partners with councils to promote safer active travel for school students. It identifies the vulnerability of people walking and cycling as a priority, advocating for infrastructure that separates them from motor vehicles. Additionally, the plan commits to trials of innovative technologies, such as low-cost infrastructure solutions for regional roads.

Implications for the City of Onkaparinga

As a council, we play a critical role in translating these high-level strategies into on-ground outcomes. We manage the local road network where many journeys begin and end, and we are often the closest level of government to the community.

To support the national and state targets, this update to the RNP will:

- Embed the **Safe System** approach into our road design, maintenance and renewal programs.
- Apply the **Movement and Place** framework to ensure safety treatments are appropriate for the function and activity of each street.
- Continue to partner with the state government on programs like Way2Go and infrastructure upgrades.
- Advocate for funding to address high-risk locations on our rural and urban network.

City of Onkaparinga Strategies

To ensure our resources are focused on community goals, we align our strategic plans with the goals of the Community Vision.

Community Vision 2034

All of council's strategies and plans are guided by the Community Vision 2034 so that they contribute to achieving its goals.

With a 10-year horizon, the Community Vision 2034 sits at the top of a planning framework that sets our vision of connected community, sustainable future.

Specifically within the Community Vision, goals include:

- Inspire more healthy and active lifestyle choices
- Expand opportunities for safe, accessible travel by paths, roads, rail and trails
- Support integrated, sustainable and climate resilient approaches to developing well planned and safe places

Successful delivery of the RNP, directly supports the above listed goals of the Community Plan.

Long Term Financial Plan and the Strategic Asset Management Plan

Investment decisions are guided by the Long Term Financial Plan (LTFP) and the Strategic Asset Management Plan (SAMP). Along with the Community Vision 2034, these three plans comprise our

DRAFT

suite of Strategic Management Plans as required under section 122 of the Local Government Act 1999.

The Roads and Traffic categories within the SAMP directly correlate with the RNP. Through the SAMP, we report on the condition of our assets, forecasted expenditure and asset inventory. The RNP directly feeds into the SAMP by informing more network level pressures and trends.

Roads Asset Management Plan

We also use the Roads Asset Management Plan, which focuses more on the operational work associated with managing the road asset itself. The Roads Asset Management Plan covers items such as asset inventory, forecasted expenditure, details on seal and pavement types, maintenance works, intervention levels etc.

Other Strategies

There are other strategies written and managed by The City of Onkaparinga, which inform the RNP. Similarly, the RNP is also used to inform these strategies:

- Advocacy Plan 2025-26
- Coastal Adaptation Plan
- Climate Change Response Plan 2022-2027
- Onkaparinga Local Area Plan
- Trails and Cycling Strategic Management Plan
- Tourism Strategic Plan
- Waste and Recycling Strategic Plan

Advocacy Opportunities

The Council managed road network interacts heavily with the State network managed through DIT. In most cases, changes to the DIT network, have flow on effects to the Council network – this could be with regards to the type of traffic using our roads, traffic volumes or congestion levels.

There are a number of sites where we advocate for change on the DIT network within our City, or for expansion or alteration of other State managed assets. These have been agreed through our 2025-26 Advocacy Plan and include items such as:

- *Gateway to the South:* As the key entrance to the South used by tens of thousands of commuters every day, it is vital that there is appropriate infrastructure for seamless traffic flows from the Southern Expressway to Main South and Victor Harbor roads. The current bottleneck at Seaford Road to get motorists on and off the Expressway impacts travel time, and even minor accidents at this location result in a complete gridlock of the road network.
- *Extension of Seaford Rail line to Aldinga and Sellicks Beach:* We note that the Greater Adelaide Regional Plan has identified a corridor to cater for future extension of the Seaford rail line to Aldinga and potentially Sellicks Beach. We are strongly supportive of the train line being extended to Sellicks Beach as soon as is achievable, as an important aspect of connectivity to social connection, community services and employment opportunities in areas north of Sellicks Beach.
- *Port Noarlunga Traffic and Pedestrian Movement Improvements*: We seek government funding for improved pedestrian safety and traffic management within this highly popular precinct.
- *Roundabout Upgrade for Improved Safety in the North*: We ask the state government to invest in improved road safety outcomes in our northern suburbs by installing a roundabout at the intersection of Glenloth Drive and Chandlers Hill Road, Happy Valley

DRAFT

- *Safety Upgrades Main Road, Coromandel Valley:* We ask that state government improve the safety of this much used road, including safety barriers, road widening, pathways and safe crossing.
- *Seaford Road, Seaford:* We seek to transfer control for Seaford Road, Seaford to the state government. As population densifies in this growing suburb, traffic on this road is now at a level requiring state government responsibility.

We note through the recent State Government elections, that a commitment has been made for the installation of a roundabout at the intersection of Windebanks Road with Happy Valley Drive, and for the upgrade of the existing Chandlers Hill Road and Happy Valley Drive roundabout, both of which were included in our Advocacy Plan for the 2026 South Australian state election.

Though not specifically referenced in the Advocacy Plan, we have also raised concerns with DIT about the capacity of the Saltfleet Street Bridge in Port Noarlunga. The Dyson Road to Commercial Road corridor, which is a state arterial route that includes Murray Road and the Saltfleet Street bridge over the Onkaparinga River, is a busy commuter route used by motorists travelling between Adelaide and the urban area south of the river. This corridor often becomes heavily congested following any disruptive incident that occurs during peak periods on the Southern Expressway and particularly the section of Main South Road between the Southern Expressway and Seaford Road. In addition to this, the Saltfleet Street bridge has had to be closed on occasions due to abnormally high tides associated with storm events, which have caused water levels to rise over the carriageway. We have previously noted the community's concerns regarding the network link between the north-south route provided on Main South Road and the same north-south route provided via Saltfleet Street with DIT.

Doctors Road to Panalatinga Road Extension

A longstanding council advocacy initiative is for the state government to construct the extension of Panalatinga Road to connect with Doctors Road, providing an effective bypass for longer-distance traffic. The South Australian government determined in recent years that this new link is not required for the strategic management of the state road network and is not progressing the project.

While the new Majors Road interchange on the Southern Expressway will likely divert some vehicle trips away from Panalatinga Road, council's position to advocate for the extension remains unchanged. The impending Onkaparinga Heights urban release area will generate significant new traffic volumes throughout the surrounding area, and council will seek to ensure future state investment attracts this traffic directly onto the state road network, rather than displacing it through adjacent suburban streets and potentially via Panalatinga Road. Council will continue to monitor local congestion and emergency vehicle access, maintaining our advocacy for the extension to ensure the broader transport network can safely accommodate this future residential growth.

Broader Policy and Funding Advocacy

Beyond site-specific infrastructure requests, council's advocacy initiatives can potentially expand to seek meaningful state and national policy reform. Key thematic priorities could include:

- **School Transport and Safety Funding:** While council values the collaboration provided through the state government's Way2Go program, South Australia currently receives lower levels of dedicated state infrastructure funding for school safety compared to other jurisdictions. Council advocates for the state government to consider adopting interstate best practices by providing increased funding and capacity for both physical infrastructure upgrades and non-infrastructure community education initiatives. This increased investment is essential to meet community expectations and protect vulnerable younger road users.

DRAFT

- **Public Transport Viability:** Council advocates for policy and funding models that deliver safe, convenient, and practical public transport networks to actively reduce the city's entrenched reliance on private vehicles. Providing highly viable alternatives to car travel is necessary to manage network congestion, support urban densification around transit nodes, and achieve sustainable mode shift targets.

Core Foundations

Safe System Approach

The Safe System approach is our guiding philosophy for designing, maintaining and managing the local road network under our care and control, and is considered in terms of four interacting "pillars": safe roads, safe speed, safe vehicles and safe people. Built on two simple facts – people make mistakes, and the human body is fragile – this approach recognises that road safety is a shared responsibility. It is not just up to the driver to avoid a crash; it is also our responsibility to build a forgiving environment that protects people when mistakes happen. Applying this kind of proactive thinking is the only way we can build a realistic pathway towards achieving "Vision Zero".

This philosophy represents a major shift from how roads were managed in the past. Historically, road safety relied on the "Three Es" (engineering, enforcement and education) and reactive "Black Spot" treatments, where authorities waited for a pattern of crashes to occur before fixing a dangerous location. We also used to place most of the blame on bad driving behaviour, without fully understanding that even careful drivers make simple errors that can have tragic results. We now proactively design roads, wherever possible, to anticipate that mistakes will happen and reduce crash severity. This presents a significant challenge in managing legacy roads which were built using these older principles and in retrofitting them to meet modern Safe System standards.



Figure 1: The four pillars of the Safe System approach (Source: Austroads Guide to Road Safety Part 1: Introduction & The Safe System, adapted from Queensland's Road Safety Strategy 2015-21)

As a road manager, council's primary influence in achieving these standards involves the "Safe Roads" and "Safe Speeds" pillars. While retrofitting physical infrastructure is a core function, speed management provides an immediate and highly effective mechanism to mitigate risk on the legacy network and has the potential to deliver the highest injury reductions at the lowest cost. Speed limit

reductions remain one of the most effective countermeasures available to reduce death and serious injury, as impact speed is the primary determinant of crash outcomes.

To demonstrate how the probability of a fatality increases significantly with impact speed, Internationally recognised models illustrate survivable thresholds for different crash type as shown in Figure 2. These curves help establish Safe System performance targets by identifying a 10% risk of a fatal outcome as the upper limit for a survivable crash.

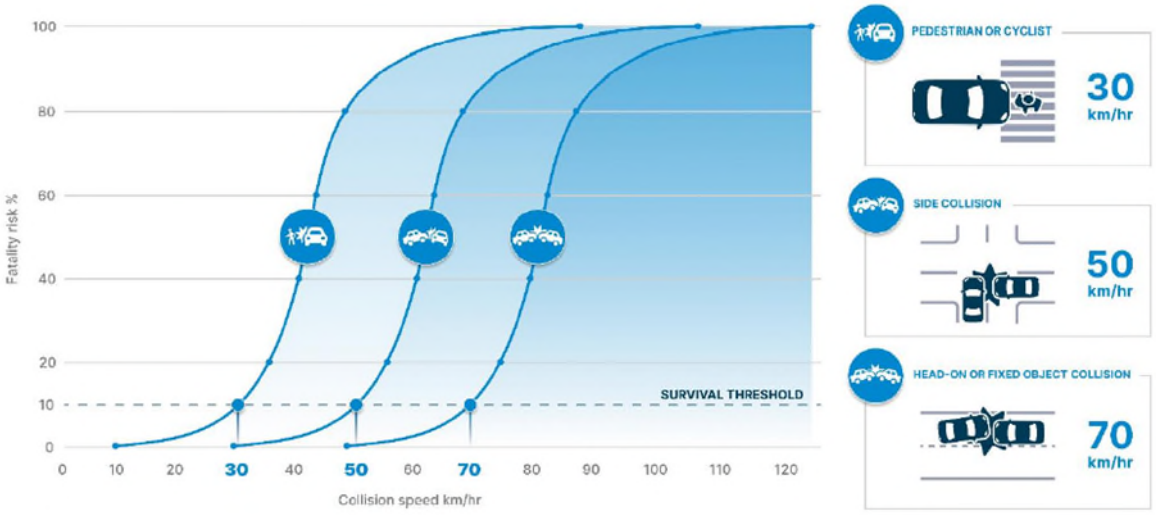


Figure 2: Probability of a fatal injury based on collision speed (Source: Austroads AP-R743-25 Charting a Path to Eliminating Road Death and Serious Injury Stream 2: Developing Pathways to Zero and Comprehensive Support Materials)

Movement and Place Framework

This version of the RNP introduces the "Movement and Place" approach which is a nationally recognised and widely adopted concept. The approach recognises the dual role that roads and streets perform on a network:

- **Movement:** supporting the transport network operations for people and goods.
- **Place:** functioning as public spaces with their own activity, built form and meaning.

The scale and balance of these roles can change on different segments of street, at different times of the day, week or season. By understanding these separate roles, we can better plan a network that serves both the journeys people need to take and the places they want to be.

Roads and streets make up a significant portion of our open public space. Balancing the competing demands of movement and place is fundamental to integrated transport planning.

There is a natural tension between these two functions:

- As a movement corridor, a road aims to provide a convenient connection between one place to another, and keep people and goods moving.
- As a destination, a place aims to increase visitor dwell time or serve the adjoining activity next to a road such as schools, shops and houses.

DRAFT

Not all streets can be popular destinations, just as not all streets can prioritise vehicle movement. Our planning approach requires us to consider the breadth of community needs, expectations and aspirations for the places people live and the roads they pass through.

DRAFT

3. Our Road Network

Recent Network Improvements and Trends

Across Local and State Governments in Australia, we are noticing a gradual shift towards a decrease in car reliance, promotion of public transport use, integration of active transport opportunities such as cycling and walking and more holistic street design. There is also demand for additional housing and we are noticing the incremental and cumulative impact of developments.

Congestion Levels

We are fortunate that within the Onkaparinga's local road network, congestion levels are relatively low. There may notable periods of congestion during AM or PM peak commuter travel and short periods of congestion associated with school pick up and drop off but these events are generally short lasting and usually catered for adequately by the existing road network.



Figure 3: Traffic volumes of major roads at Onkaparinga River crossing (source: LocationSA Map Viewer, data obtained 21 September 2026 from LocationSA MapViewer)

Conversely, there are parts of the state-controlled arterial road network that can suffer from regular and extensive congestion, particularly the section Main South Road south of the Southern Expressway, where several major roads that extend either side of the Onkaparinga River converge at a bridge crossing that provides only two traffic lanes in each direction. This bridge crossing

carries an average of almost 60,000 vehicles per day, making this the equal-busiest section of road within the City of Onkaparinga's boundaries along with a section of the high-speed, high-capacity Southern Expressway between Beach Road and Sherriffs Road which carries similar volumes.

As noted in the Advocacy Opportunities section, we are advocating to the State Government for upgrade of this portion of Main South Road.

Housing Development

In March 2025, the State Government released the Greater Adelaide Regional Plan (GARP) which complements their Housing Roadmap and identifies "*where 315,000 new homes will be built over the next 30 years and preserves important land for future infrastructure requirements*".

GARP has a target for the Onkaparinga Council area to accommodate 24,300 new homes over the period 2021-2051, primarily dispersed throughout several master-planned sites such as Onkaparinga Heights, Noarlunga Downs, Aldinga, South Beach (former Port Stanvac refinery at Lonsdale) and Sellicks Beach. This growth will also be supported by smaller developments, subdivisions and urban renewal.

With greenfield development considered cumulatively alongside infill development within existing suburban areas, there will be a substantial increase in the number of new homes within our city and beyond our border into the Fleurieu Peninsula.

With the demand for more housing, and typically smaller allotment sizes, we are noticing an increase in on-street parking concerns and the importance of our advocacy items noted in the Advocacy Opportunities section, as strain with additional traffic is put on known "hotspot" locations.

Active Transport, Public Transport and Streets for People

The State Government have recently released their Transport Strategy, Active Travel Design Guide and have consulted on their Public Transport Strategy. The themes of these documents include enhancing public transport use, sustainable transport options, safe and efficient transport systems which support wellbeing, inclusivity and quality of life, shared streets and the importance of active travel.

Though these themes have been underlying for some time, they are becoming more prevalent, with the community generally not just considering their streets for car use, but instead valuing how we can incorporate sustainable elements which support wellbeing, encourage alternate transport modes and community connection and use vegetation to cool our streets. This theme has been reflected through comprehensive engagements such as the Community Vision.

This is consistent with other bodies of work and measures such as Healthy Streets which considers factors such as how welcoming the place is, whether it is easy to cross, if shade is provided, whether there are places to stop and rest, noise, level of walking and cycling, safety, visual appeal, relaxed feel of the street and air quality to assess how "healthy" a street is. It is also consistent with the *Streets for People Compendium for South Australian Practice* and the Movement and Place Approach.

Traffic Data

Practitioners are researching ways to better use traffic data to inform road network decisions. The emergence of platforms which utilise anonymised, location-based information transmitted from modern vehicles, can provide detailed vehicle movement and speed data across our entire road network. While this data does not substitute more traditional data-gathering methods, such as

DRAFT

rubber tube counts, it provides an immediate indication of vehicle speeds on most public roads quickly and in a cost effective manner.

Whilst good quality vehicle data is readily accessible, the same can't be said for data on the movement of people walking or cycling. New technology that uses advanced analytics of video footage to classify and count all road users including pedestrians, cyclists and vehicles is becoming more prevalent. This type of data gathering must have strong provisions to protect privacy and the de-identification of any individuals. With sound privacy provisions in place, there may be an opportunity to explore use of this technology.

School Road Safety

We pursue external partnerships with bodies such as the Little Blue Dinosaur Foundation and RAA to support improving road safety around schools. Many schools participate in DITs Way2Go program which encourages safer, greener and more active travel to and from schools. Routine short-term pick up and drop off congestion and localised issues such as student and staff parking and operation of kiss and drop zones are still experienced at most of the 60 schools within our City.

The South Australian Government has recently announced an initiative involving the provision of 40km/h time-based School Precinct Speed Limits to be installed on South Australian roads near schools on roads that have existing speed limits of 50km/h or higher. This does not impact any current 25km/h school zones. The initiative has been actively advocated for by the City of Onkaparinga, noting that we hosted an early trial site of a timed 40km/h speed zone on Flaxmill Road outside of Flaxmill School P-6 at Morphett Vale in October 2022. This was one of two trial sites in South Australia that contributed towards the development of DIT's new Operational Instruction 4.13 on 40km/h School Precinct Speed Limits which was published in September 2025.

South Australia's 25km/h school zone speed limits are nation-leading in terms of providing the most survivable target speeds for protecting vulnerable road users including school children. All other states typically have 40km/h school zone speed limits with some rare instances of 30km/h zones.

Where South Australia has differed from the other states is that the application of 25km/h has not generally been applied to arterial roads or at Pedestrian Actuated Crossings (PACs). Until this announcement, South Australia was the only remaining jurisdiction in Australia where reduced speed limits were not applied to all roads outside, or near to, schools.

Whilst any initiative that improves safety around schools should be welcomed, it is acknowledged that the new 40km/h zones add another layer of complexity school speed zones. Whilst other states typically have one type of school speed zone involving a 40km/h speed limit operating at certain times of day, in South Australia we now have:

- 25km/h school zones "when children present" that are enforceable at any time of the day on all days of the year regardless of whether it is a school day
- 25km/h school zones "when lights flashing" where there is a koala crossing, which is enforceable when the flashing lights are activated and typically programmed to operate during busy school drop off and pick up times
- 40km/h school precinct speed limits that will be enforceable on school days between the hours of 8:00-9:30am and 2:00-4:00pm

This is a lot of information for drivers to process, as schools can already be a busy environment with many potential distractions both inside and outside of vehicles during peak school times.

DRAFT

Regardless of these concerns, we welcome the announcement and are working on a rollout of updated signage where applicable.

Speed Limit Setting

The Safe System Approach is discussed throughout this Plan, and more detail is provided in the Core Foundations section. In summary the approach adopts a holistic view of the road transport system and the interactions between people, vehicles, and the road environment. It recognises that people will always make mistakes and may have road crashes – but those crashes should not result in death or serious injury.

Industry commonly recognises that consideration of appropriate speed limit setting should be prioritised to ensure that appropriate speeds are set for roads in an efficient and cost-effective way to improve safety of the network, consistent with the Safe System Approach. We are identifying more instances of the community raising concerns about speed limits being too high on both urban and rural roads throughout our network. Engagement on speed limit reductions continues to be contentious across many communities, with motorists often misinformed about the safety benefits and expressing concerns regarding travel time impacts. Ongoing research and updated guidance on this issue continues to be led by Austroads who provide the most comprehensive information in their *Guide to Road Safety Part 3: Safe Speed Management*.

Micro-mobility, e-scooters and e-bikes

The rapid emergence of micro-mobility, including e-bikes and personal mobility devices (PMDs) such as e-scooters, presents a significant opportunity. These devices play a crucial role in unlocking greater public transport use by solving the “first and last-mile” connectivity challenge. With electric assistance, riders can easily overcome local geographical challenges like hilly topography, as well as the physical barriers that often force circuitous routes – such as bridging the rail line, major roads and our river and creek networks. While we do not currently have a prescribed mode shift target, our overarching goal is to encourage an uptake in active and public transport. Furthermore, micro-mobility offers potential economic and recreational benefits, with our established and growing off-road shared trail network, making these devices highly attractive for both residents and tourists when accessing our wine and coastal regions.

However, the growing popularity of these devices has introduced complex safety and regulatory challenges. We are hearing increasing community concern regarding safety on our shared pathways, particularly on the Esplanade. Excessive speeds and the threat of collisions are creating environments that feel intimidating and unsafe for vulnerable users.

A major source of these safety issues is the use of non-compliant, high-powered devices operating in pedestrian-focused areas. The council is actively advocating to the state government, LGA and SAPOL for stronger regulatory controls. Current gaps in the legislative framework – such as the lack of rider licensing, mandatory device identification or registration – severely limit effective enforcement. To ensure our paths, trails and local roads remain safe and welcoming for everyone, we continue to call for clearer regulatory definitions and stronger national importation controls to prevent illegal high-powered devices from entering the market.

Network Improvements

Some notable improvements which have recently been made to our network include:

Onkaparinga Hills Road Safety Upgrades and Speed Limit Review

Three intersections along Piggott Range Road have been upgraded through funding made available by the Australian Government:

- Easton Road, including realignment of the two curves on Piggott Range Road either side of this intersection (Black Spot Program)
- Bains Road (Local Roads and Community Infrastructure Program)
- Upper Penneys Hill Road (Black Spot Program)

In addition to this, the speed limit on eight rural roads within the Onkaparinga Hills network was reduced in 2023. These works were initiated following a series of crashes involving fatalities and serious injuries, along with concerns expressed by residents regarding speed and road safety.

The improved road geometry, reduced roadside hazards, improved linemarking schemes and installation of guardrail paired with lowered speeds have greatly improved the safety of the periurban road network throughout the Onkaparinga Hills.

Old Noarlunga 40 AREA
In January 2025, the City of Onkaparinga implemented its first 40 AREA throughout the township of Old Noarlunga. The township previously had a speed limit of 50km/h, however after receiving a number of requests from the community regarding speed and pedestrian safety, the speed limit was reduced to 40km/hr. The 40km/hr speed limit area includes the bridge over the Onkaparinga River, pedestrian refuge near Main South Road and all roads within the Old Noarlunga township, so provides a consistent speed limit for all road users and improved road safety.

McLaren Vale 21 Intersections
In 2021 an audit of the intersections on Main Road between the McLaren Vale and Willunga townships was completed, following a series of fatal and serious injury crashes. On completion of the audit, a broader assessment was undertaken across the McLaren Vale Wine Region, identifying 21 intersections with an elevated risk of crashes and road trauma. We have been working with DIT to upgrade these 21 intersections through a project supported by a $4.2million State Government funding commitment. The upgrades include a range of treatments such as enhanced warning signage, Rural Junction Active Warning Signage (RJAWS) and improved intersection geometry through the installation of a roundabout and an intersection upgrade.

Fleurieu Connections
The Fleurieu Connections project involved the duplication of Main South Road from Griffiths Drive to Sellicks Beach, and Victor Harbor Road from Main South Road to the Main Road interchange at McLaren Vale, to improve safety and connectivity to the Fleurieu Peninsula. Delivered by the South Australian Government, the completed project was supported by substantial co-funding from the Australian Government, with a total joint budget of $810.4 million. As these are state-managed arterial roads, the City of Onkaparinga's role in the project was limited to contributing in the design process to manage the interface between the newly upgraded roads and the various transport, drainage and landscaping assets under council's care and control.

State Government Advocacy
As discussed in the Advocacy Opportunities section, we are advocating to the State Government for improvement on their network which directly impacts Council roads. Advocacy items include Gateway to the South, Port Noarlunga Traffic and Pedestrian Movement Improvements, Roundabout Upgrades in the North, Safety Upgrades on Main Road Coromandel Valley and transfer control of Seaford Road.

McLaren Vale and Southern Suburbs Speed Limit Review
Following numerous requests from the community for reduced speed around McLaren Vale and our southern coastal suburbs, we are working with DIT and undertaking a network level speed limit

DRAFT

review. The roads under review are higher order sealed roads in suburbs such as McLaren Vale, Willunga, Aldinga Beach, Sellicks Beach and McLaren Flat.

Grants Gully Road Clarendon
Following activity and petitions from the local Clarendon community group, we are working with DIT to suggest improvements to Grants Gully Road and the Clarendon township. The proposed solutions are a combination of works which would be delivered by Council and DIT and aim to improve driver awareness of the township, driver safety and pedestrian safety and accessibility.

The Road Corridor

In managing our network, through operational maintenance and capital works upgrades, we consider the best outcomes for the entire road corridor which usually spans boundary to boundary. Typical features of a road corridor include the road pavement and seal, kerbing, drainage infrastructure, verge, footpath, vegetation and street lighting. Some corridors also contain cycling or public transport infrastructure and most contain below-ground services such as power, water, electricity and gas.

It is important that we cater for different road user types, as well as understand the primary function of our roads. We must consider private vehicle and public transport users, cyclists and pedestrians, including those with accessibility needs. As well as this, we must understand what the primary function of the road is and how those user types interact with the corridor – some streets for example form the backbone of a township and are designed to facilitate and encourage a high number of pedestrians, others are largely residential with a mix of user types, some are industrial and accommodate a large amount of heavy vehicles and others contain pedestrian generators such as parks, schools, shops and community facilities. This is discussed further in the Movement and Place section of the Plan.

In addition to the above, other factors such as the speed of traffic, traffic volume and noise can influence how people experience the road corridor.

What we Deliver

Works within our road corridors include operational maintenance and capital renewal or upgrade of our assets. We also build new, and expand existing, assets. Capital works are generally identified through a condition assessment, notification through a customer request or in recognising a gap in our network. Projects are prioritised citywide considering a number of factors such as the condition of the asset, traffic volume, associated risk and traffic composition (i.e. is the road a bus, heavy vehicle or cycling route). This prioritisation strategy is detailed in our endorsed Resource Prioritisation Documents and detailed further in our Strategic Asset Management Plan.

Most capital works are funded through our Roadworks or Traffic category budgets, where we deliver works like the annual reseal program, road reconstructions, intersection upgrades, road safety upgrades and traffic calming schemes.

How our Roads are Performing

In 2025 we completed a condition assessment of our sealed road assets and have used that data to inform our recent works programs. We are now comparing this data set to previous condition data to better understand how our roads are performing and the projected long-term expenditure to inform the LTFP.

DRAFT

The previous audit was undertaken in 2019 and showed that our roads were overall performing in a fair condition. We used the road data at the time to model the long-term performance of our roads and reduced the capital roads budget based on that modelling.

State Roads

The State Road Network

State roads form the primary corridors for through traffic, heavy freight and inter-regional connections. The state government retains care, control and management of these arterial roads through DIT, as part of an integrated “one network” transport system that considers the interaction between multiple transport modes, like cars, rail, bus, bikes and walking as outlined in *South Australia’s Transport Strategy*.

Working within this framework provides significant benefits at the interface between the state and local networks. By treating the road network as a single integrated system, we can better coordinate upgrades and ensure that state-led projects complement the amenity of our neighbourhoods.

Maintenance and Operational Responsibilities

The legal classification of a state road does not mean the council has no role along that corridor. The operational boundaries between the state government and the council are defined by DIT’s *Operational Instruction 20.1*. Under these guidelines, the council retains critical day-to-day responsibilities along state roads, including:

- maintaining footpaths and service roads
- managing dedicated on-street parking areas
- maintaining the kerbing
- undertaking vegetation clearance outside the immediate travel envelope
- managing private driveway access

These standard operational rules are not blanket conditions. The council actively negotiates agreements with DIT to manage specific infrastructure that provides high value to our community, particularly active travel corridors.

Road Reclassification

As our city grows and travel patterns shift, the function of a street can change over time. The *Road Classification Guidelines in South Australia* provide a formal assessment process to determine whether a road should be legally classified as arterial or local. Where a road's function has fundamentally changed, this process allows for the physical transfer of road ownership and responsibility between the state government and the council and ensures the managing authority correctly aligns with the road's strategic movement function and place intensity.

Unsealed Roads

Unsealed Roads Framework

There is continuing pressure to develop and upgrade the road network to meet increasing traffic demand and user expectations. Requests to seal a road are often generated by our community in response to road safety concerns, minimising dust, surrounding growth impacting traffic patterns, undulating surfaces or traffic volumes.

In considering the most appropriate material for a road, a number of factors need to be considered such as the road setting, surrounding road materials, traffic composition, speed and volume, road hierarchy, maintenance and capital costs and environmental considerations.

DRAFT

In most cases, the sealing of an unsealed road is likely to generate additional traffic at higher speeds in settings on the network where that may not be desired. This can subsequently create new safety and network use issues.

When consideration is being given towards sealing of an unsealed road, a network-level assessment is necessary to determine whether an upgraded road may attract more traffic and how this could affect the amenity of adjoining land uses such as residents and recreational activity, along with creating new safety issues. The design process should consider inclusion of complimentary measures to deter rat-running and limit travel speeds to Safe System aligned levels, such as a series of rural slow-points with appropriate lighting.

It is also critical to ensure that any process to seal an unsealed road includes the setting of an appropriate speed limit, as leaving a sealed rural road unsignposted means that it legally operates under the default speed limit of 100km/h. This speed is often inappropriate for local, rural roads which can have narrow formations and a significant level of roadside hazards.

The Unsealed Roads Strategy (2009) was based on a decision process that identified the common reasons to seal a road and included an extended range of considerations that need to be worked through on a case-by-case basis to determine the best treatment option. This included the application of a sprayed bitumen surface to reduce dust, referred to as a “dust seal”. Dust seal considerations included traffic volumes, speed environment, types of vehicles, number of properties fronting the road, distance of dwellings from the road and any other relevant factors.

Following an internal workshop in March 2009, Council resolved to:

- Acknowledge unique unsealed roads within the network.
- Accept that decisions regarding sealing cannot be resolved by a pre-determined set of criteria.
- The traffic impacts of sealing unique unsealed roads would be reviewed on a case-by-case basis.
- The following roads were identified as unique unsealed roads:
    - Pine Road, Woodcroft
    - Piggott Range Road, Onkaparinga Hills
    - Quarry Road, Old Noarlunga
    - Recreation Road, Kangarilla
    - Colville Road, Aldinga
    - Range Road West, Willunga South
    - Rogers Road, Sellicks Hill
    - Unsealed roads in the vicinity of Aldinga Beach Scrub

Supplementary guidelines: setting project priorities - assessment of unsealed roads

The National Transport Research Organisation (formerly the Australian Roads Research Board or ARRB) provides key principles in applying economic evaluations as a method to justify the sealing of a road in their Unsealed Roads Best Practice Guide (Edition 2, published October 2020). The principles when applied, generally demonstrate that it may be difficult to justify sealing a road carrying less than 250 vehicles per day.

The following assessment criteria, providing for social and economic values, should be considered when setting priorities for road improvements to unsealed roads.

DRAFT

- Significance of the road in forming part of a strategic connecting route and/or commodity route.
- Number of properties serviced by the road.
- Significant tourist, community or commercial feature which creates increased seasonal traffic demands.
- Number of commercial vehicles using the road (i.e. farming, winery, quarrying vehicles).

Based on the above approach, the previous RNP listed multiple roads which required review, detailed below:

Pine Road, Woodcroft
2016-2021 RNP Recommendation: It was recommended that this road be reclassified to a rural collector road and sealed from Pimpala Road to Reynell Road. In 2009 Pine Road was carrying an estimated 326 number of vehicles per day. The substantial community support for sealing of this road, ongoing maintenance costs and the current traffic volumes on this road provided justification that it should be included for constructing and sealing.

The configuration (or layout) of this road was to include a review of the intersection treatments at each end of the road and was to be subject to further technical assessment and engagement with the local community. The sealing of Pine Road to a rural collector standard required a speed limit assessment and initial advice indicated that it was highly likely the posted speed limit would be reduced from the default limit of 100km/h to 80km/h.

A review of previous traffic studies undertaken on Pine Road had discounted the option of closing the road.

2026 Update: When Pine Road was previously unsealed it was subject to the default rural speed limit of 100km/h. In 2018, Pine Road was sealed between Reynell Road and Pimpala Road, however no signposted speed limit was initially provided. In response to community concerns about vehicle speeds, council requested DIT to undertake a speed limit review, resulting in authorisation for an 80km/h speed limit which was installed in April 2023. Due to the lack of general awareness about speed limit rules in South Australia, some members of the public incorrectly assumed that the introduction of the 80km/h speed limit represented an increase. Following a community petition and discussion with DIT based on their updated Speed Limit Guideline which was released in August 2023, the speed limit was subsequently lowered to 70km/h in 2024.

Since the sealing of the road, traffic volumes on this portion of Pine Road increased from around 400 vehicles per day in 2017 (just prior to the upgrade), to around 900 vehicles per day in 2023, as well as 85th percentile vehicle speeds increasing from 68 km/h in 2017 to 75 km/h in 2023. Since the upgrade a number of reported crashes have now occurred at the intersection of Pine Road, Reynell Road and Mark Street. The predominant cause of the crashes involves motorists losing control as they turn right from Pine Road onto Mark Street.

To provide advanced warning of the intersection and encourage slower speeds, linemarking and signage upgrades were undertaken in 2024, however crashes at this site continue. We have also discussed the site with SAPOL and requested an increased police presence.

We are now designing a project for the installation of traffic calming devices on the approach to the intersection, to physically slow vehicle speeds and hopefully reduce the number of crashes at the intersection and decrease the severity of the crash in the instance that a collision occurs.

DRAFT

Quarry Road, Old Noarlunga

2016-2021 RNP Recommendation: A road safety audit for Quarry Road recommended a half road closure (left in movements only) be implemented at the intersection of Victor Harbor Road and Quarry Road in order to address the significant safety risks that currently exist at this location. In 2009 Quarry Road was carrying an estimated 423 number of vehicles per day.

This intersection is under the care and control of DIT and as such, any consideration of a half road closure would require approval and funding through DIT as the relevant authority, given the impact on Victor Harbor Road and Seaview Road.

At the time, it was not a priority to seal Quarry Road given the recommendation to implement a half road closure would likely reduce traffic volumes, reduce ongoing maintenance and provide a road safety benefit.

2026 Update: The intersection of Quarry Road, Victor Harbor Road and Robinson Road was upgraded in 2024 by DIT as part of the Victor Harbor Road Duplication works, which included duplicating 4km of road between Main South Road Old Noarlunga and Main Road McLaren Vale. The project included the upgrade and seal of the full length of Quarry Road, between Victor Harbor Road and Seaview Road.

Prior to the upgrade, the only opportunity for vehicles in the northern McLaren Vale area to turn right onto Victor Harbor Road were unsafe and had often had long queues of vehicles waiting for gaps especially during peak conditions. The direct connection of Quarry Road into a new roundabout on Victor Harbor Road now provides a safe and convenient access, however this has now resulted in a substantial increase in traffic volumes on the network of roads connecting into Quarry Road, indicating a potential shift of traffic away from DIT's arterial road network. We are discussing the impact of this upgrade on council's local, rural road network with DIT and this may lead to new advocacy items seeking improved accessibility on DIT's road network to encourage longer distance through trips to stay on the primary network and avoid rat running through our local, rural roads.

Piggott Range Road, Onkaparinga Hills

2016-2021 RNP Recommendation: At the time, traffic volumes were not sufficient to warrant further assessment of this road for sealing, with the road carrying an estimated average of 167 vehicles per day in 2009.

2026 Update: We continue to receive requests regarding the unsealed portion of Piggott Range Road between Hepenstal Road and Coxs Hill Road. The requests received from the community are to either upgrade and seal the road or to close the road to restrict through movements.

The concerns expressed in the requests predominantly relate to speeding traffic and an increase in traffic volumes, with motorists using this segment as a "rat-run". The unsealed portion of Piggott Range Road does not meet the threshold for applying a seal, and we are concerned that upgrade of this road would likely increase the average vehicle speed and attract more traffic. In addition to this, any upgrade work would likely be of significant cost due to the site constraints and would impact native vegetation. Traffic volumes on this road segment are also likely to increase as the housing development at Onkaparinga Heights commences.

In 2024 we completed a feasibility study which analysed existing conditions, traffic patterns, crash data and identified traffic impacts and potential closure locations. The study supported the notion

DRAFT

of a closure as opposed to a road upgrade. We are now preparing an engagement plan to hear the community views on the road closure, and inform Council of a recommendation.

Other roads that were raised during the RNP consultation in 2016, that were considered for sealing included:

Brodie Road, Huntfield Heights (southern end)
2016-2021 RNP Recommendation: At the time, this section of road had a local road classification. However, as the adjacent development reached completion there was potential for this road link to behave as a collector road within the local area. Consideration was to be given to closure of Brodie Road at the creek crossing (reducing future maintenance costs of this culvert), once future adjacent development provided a connection via Yeltana Avenue.

2026 Update: The future connection via and extension of Yeltana Avenue is still being considered. The proposal to close Brodie Road at the creek crossing remains our ultimate preferred solution once a more suitable alternative through route becomes available via Yeltana Avenue. There is potential that the Onkaparinga Heights development to the south of Main South Road may generate more traffic travelling along Brodie Road, and other measures may be required to ensure that this does not become a convenient rat-running route for future residents as they move into the new dwellings being constructed.

Culley Road, Sellicks Hill (Aldinga Road to Colville Road)
2016-2021 RNP Recommendation: At the time, this road was listed as an "unsealed road - not to be sealed". Although this road could be used as an alternative access to the airfield, this was not thought to be supported due to the condition of the road. To ensure that traffic volumes on this section of road remained below the threshold for sealing treatment consideration, this road was to continue to remain closed at Aldinga Road.

2026 Update: Adjacent land owners were previously approached by Council's Property Transactions Team in 2012 to enquire if any adjoining land owners were interested in closure and purchasing the unmade road due to damage caused to the unmade road and dangers from access by 4WD and motorbike users. As no adjoining land owners were interested in purchase at the time, Council's operational staff placed mounds of dirt and rocks at each end of the unmade road in an attempt to mitigate issues with erosion and damage to the unmade road due to use by 4WD and motorbike use and to minimise council's public liability risk.

Since then council has considered two separate applications to close this section of road, the first being considered at the Council meeting held on 16 July 2019, where Council endorsed the commencement of the process. That applicant withdrew their request to purchase on the basis that the market value sought by Council was not financially achievable. The second application was considered at the Council meeting held on 14 November 2023, with the road being referred to as "Paddys Row" which is the official name of the formed, public road continuing along the same alignment north of Aldinga Road.

During the subsequent negotiations with adjoining landowners, the interest of one of two property owners party to the process has been withdrawn, and the other property owner has remained as a sole applicant. Should the remaining applicant wish to progress, this matter will need to be presented to Council to seek a further resolution.

Hunt Road, McLaren Flat (between Conte and Sand Roads)
2016-2021 RNP Recommendation: Hunt Road was a local road in a rural environment; however, bitumen profiling was applied, giving the road the impression of a sealed road. At the time, this

DRAFT

road was classed as an “unsealed road - not to be sealed”. Traffic counts conducted in August 2016 showed 370 vehicles per day. This was a minimal change in usage patterns when compared to 2010 traffic counts, which were 307 vehicles per day. An evaluation was also undertaken, considering traffic amenity, community benefit and financial benefit there was insufficient reasoning to seal Hunt Road. Further technical assessment was to be performed to determine any appropriate treatments that may be warranted to address any possible road safety issues.

2026 Update: It has been found that the use of bitumen profiling material has been challenging to maintain due to its thin nature, especially on busier roads such as Hunt Road. Whilst one option was revert this road back to an unsealed (limestone) formation, it was determined to upgrade the road to a sealed surface following complaints regarding the deterioration of the bitumen profiling surface. This upgrade was completed in February 2022.

Isolated seal considerations

Upon written request by a property owner, occupier, or at the discretion of relevant council officer, council will undertake a sealing of an isolated section of an unsealed road subject to the following conditions:

- The location of the dwelling is sufficiently close to the road that passing traffic is causing dust to disturb the quality of life of the property owner or occupier.
- The length of the isolated section sealed under this policy shall be limited to a maximum of 200m.
- The works are to be undertaken only if budgetary constraints allow
- The timing of the works will be such that the works are completed efficiently without major disruption to council’s works program.
- Where topography and gradient issues present a maintenance need to manage the road in isolation.

Unmade Roads

Public roads may be formally closed by council as a through road for motor vehicles under Section 32 of the *Road Traffic Act 1961*. This usually requires the installation of physical infrastructure to prevent access, or approved traffic control devices to legally regulate the movement traffic, or a combination of both. Any road that has been closed under this provision should not be considered as an unmade road. Examples of such roads include Beltunga Close in Blewitt Springs as a rural example, and Anderson Avenue immediately east of Witton Road in Port Noarlunga.

A number of roads, or sections of road, are unmade due to their difficult terrain or being located in remote areas. Some of these unmade roads are incorporated into adjoining properties, used for emergency access, leased to other users or used as informal trails, including:

- Roads or sections of road that are used for emergency vehicle access such as the pathway between McHarg Road and Education Road.
- Roads or sections of road that need to remain unmade to ensure the network is not impacted by their opening. That is, if these roads were to be formed/constructed/sealed they would have undesirable impacts on the function of the road network. An example of such a location is the unmade road between the southern end of Pine Road and Bains Road.

DRAFT

- Roads or sections of road that need to be constructed/sealed to provide links in the network that are desirable. An example of these locations is the Doctors Road extension to Panalatinga Road.
- Roads or sections of road that are required in the future for all weather access roads to private properties or as a connection to a new land division. An example of these locations includes the unmade portions of Hepenstal Road and Gates Road at Onkaparinga Heights, which currently provide access to private properties but may also host future urban road segments as residential development progresses in this area.

Our Rural Network

The rural road network plays a critical role in supporting the region's economy, social connectivity and tourism. These roads are particularly vital for food, wine and agribusiness. Local workforce conditions and movement demands are increasingly shaped by the economic cycles that affect the wine industry and the integration of tourism, hospitality, and value-added production. This diversification is altering workforce demand and generating more varied traffic patterns, such as increased visitor and staff movements outside of traditional business hours.

To manage the unique demands of agricultural transport, our aim is to be able accommodate the movement of heavy vehicles on as much of our rural road network as possible for operators to access existing productive sites, as well as unlocking opportunities to expand operations in areas that aren't currently meeting their potential for production or economic activity.

It is not always possible to provide adequate road space for heavy vehicles, especially where there are roadside constraints such as sensitive vegetation and topography issues. Bridges and culverts can also limit the size and weight of heavy vehicles that can travel along a road, noting that the area around Willunga hosts several load-sensitive slate culverts with heritage value. The strength of the road is also critical, as pavement life is directly affected by the number of heavy vehicles it carries over its lifetime, and how the weight of these vehicles is distributed throughout its axles.

The dispersed road network throughout the McLaren Vale wine region also means that it is challenging to concentrate heavy vehicle movements along strategically identified routes, as drivers will typically take the shortest route possible to minimise vehicle operating costs. The well-connected, grid-based network throughout this region also means that there are often many different route options available. The growing nature of agribusiness operations that can result in new operational sites emerging, combined with the seasonal demands of a winemaking region, also reinforces the need to provide a network that supports the convenient movement of heavy vehicles wherever possible.

In addition to agricultural freight, the rural road network must support a geographically dispersed agribusiness, food, and wine workforce. Statewide consultation and recent economic analyses highlight that regional infrastructure gaps are significant barriers to workforce attraction and retention. Employment across viticulture, horticulture, food processing, and hospitality is widely dispersed and frequently involves non-standard hours. Because existing public transport coverage is limited and poorly aligned with these work patterns, there is a heavy reliance on the local rural road network for daily staff commuting. While regional transport services sit largely outside the direct control of local government, enhancing transport connectivity across these dispersed employment areas remains a key advocacy position to support a sustainable and competitive local workforce.

DRAFT

A defining feature of our rural areas is the strong local character and environmental value provided by heavily vegetated country roads. Our rural roadsides, in many places, host the only remnant native vegetation next to private land that has previously been cleared, further reinforcing the need to preserve the valuable ecology that is present alongside our roads. This presents as a challenge when balancing the need for safety upgrades with the preservation of biodiversity. Where traditional road improvements threaten native vegetation, we prioritise alternative approaches. This can include exploring altered alignments, implementing alternative engineering treatments or accepting reduced service levels to ensure our natural environment is protected whilst safe roads are also provided.

Furthermore, the physical constraints and topography of the rural network necessitate different service levels compared to our urban streets. Street lighting, for instance, is typically only provided at major intersections rather than as continuous corridor illumination. Providing dedicated cycling infrastructure is also frequently difficult due to steep terrain and constrained roadsides.

Road Safety

The current overarching direction for road safety in our region is established by the *National Road Safety Strategy 2021–30* and *South Australia's Road Safety Strategy to 2031*, along with their respective action plans. These strategies are underpinned by the Safe System approach and share a unified, long-term aspiration of "Vision Zero" – the elimination of all road deaths and serious injuries by 2050. To drive progress towards this goal, both national and state strategies have set interim targets for the current decade, seeking a 50 per cent reduction in fatalities and a 30 per cent reduction in serious injuries. These frameworks emphasise that road trauma is preventable and that we require a shift towards proactive, systemic interventions rather than simply reacting to crash history.

Within this national and state context, local government is a critical delivery partner. Nationally, local governments manage approximately 82 per cent of the road network by length. While these roads carry a smaller proportion of overall traffic than state-managed roads, they account for more than half of all fatal and serious injury crashes. Despite this, the specific role, governance structures and expectations of councils within national and state frameworks are not always clearly defined. Local governments are frequently expected to implement transformational road safety changes but are often under-resourced, underfunded and reliant on grant funding to deliver substantial upgrades.

Recent guidance from Austroads highlights that while councils operate within the broader jurisdictional contexts set by state governments, they play an essential role in applying strategic safety frameworks at the local level. This role is particularly important in the areas of network safety planning, infrastructure delivery and engagement, where councils have the advantage of close links to community. To effectively reduce trauma, local governments are encouraged to move away from reactive "business as usual" approaches and instead adopt fit-for-purpose risk assessment tools. The development of Network Safety Plans is recognised as a vital method for councils to proactively identify systemic risks across their networks and prioritise investment based on the locations where interventions will have the most impact. This is discussed further in Section 7.

As South Australia's largest council by population, the City of Onkaparinga recognises our unique capacity to drive meaningful change. We embrace this potential to shape and inform improved road safety practices across the local government sector, aspiring to be a recognised leader in this field at both a state and national level. By embedding Safe System principles into our network and

DRAFT

pioneering proactive risk assessments, we aim to not only deliver essential infrastructure improvements for our own community but also demonstrate a clear, proactive pathway towards "Vision Zero" that other councils can follow.

Managing our existing road network can be a challenge as most of it was designed based on older principles that often prioritised car travel over everything. To overcome these challenges and protect our community, the RNP focuses our efforts on the two Safe System pillars where local government has the greatest public influence: safe roads and safe speeds. In practice, this means we look for risks before crashes happen, design forgiving roadsides wherever possible, build safer intersections, provide better infrastructure for vulnerable users and aspire for speed environments to match the function of a street. By embedding this proactive approach into areas we control, we can steadily transform our network and help put an end to serious road trauma.

Road Safety Treatments

When designing and implementing safety treatments, we must cater for all road users. By applying Safe System and Universal Design principles, our goal is to create an inclusive network that protects pedestrians, cyclists, people using mobility devices and vehicle occupants. We also specifically consider the needs of motorcyclists, who unfortunately experience trauma rates much higher than all other travel modes per kilometre travelled. Where vehicle speeds are higher, we aim to physically separate vulnerable road users from motorised traffic.

We acknowledge the reality of managing a vast local network. With modest funding and resources, we must be practical and opportunistic, prioritising interventions at the most critical locations. Ideally, we aim to install "primary" Safe System treatments that incorporate features to reduce travel speeds to survivable levels at all times, such as wombat crossings, that effectively eliminate the potential for high-severity trauma. However, where site or funding constraints make this unfeasible, we also utilise "supporting" treatments to reduce crash risks towards achieving Safe System alignment that ideally provide an opportunity to be upgraded into a primary treatment in the future.

The selection of appropriate safety treatments is heavily dependent on the road environment. In urban areas, we typically rely on traffic calming, street narrowing, raised platforms, and speed limit reductions to manage interactions between vehicles and people walking or riding. Our rural roads present different challenges where typical urban treatments are often not appropriate. To overcome these limitations, we focus on innovative, context-specific solutions, such as our McLaren Vale intersection safety initiative, to effectively reduce trauma on country roads.

To manage immediate safety concerns responsibly, we adopt an incremental approach to road safety treatments. This tested method often begins with the installation of lower-cost, rapid "supporting" treatments – such as improved signage, line marking, or speed cushions – to mitigate immediate risks. The supporting treatment is designed, where possible, to be easily incorporated into a more substantial upgrade in the future if required. The effectiveness of the supporting treatment is monitored and evaluated over time, and feedback from stakeholders such as nearby residents is often provided, to inform whether additional works are required at the site. Importantly, we explain our incremental approach to, so that they can provide feedback on the effectiveness of the scheme and then contribute to the development of the next phase of interventions if required.

This ensures a measured, financially responsible, and effective pathway towards a Safe System network, allowing us to treat a greater number of priority sites within the available budget.

DRAFT

Roadside Memorials

The City of Onkaparinga recognises that family and friends sometimes choose to honour a road crash victim's memory by erecting a roadside memorial. While these are not formally authorised under the City of Onkaparinga's *Plaques, Memorials and Military Memorials Procedure*, we respect the grieving process and accommodate their placement, provided they are placed in an appropriate location that does not impact road safety or council operations.

When placing a memorial, it is critical that the safety of all road users and visitors is maintained. To achieve this, we ask for people to be guided by the principles outlined in DIT's *Operational Instruction 19.15 – Roadside Memorials*. Generally, this means ensuring memorials are not made of rigid materials or concreted into the ground, and are placed in locations that do not distract drivers or block access for pedestrians, cyclists, or roadside workers. We also encourage people to securely attach contact details to the memorial so we can easily reach out if required.

We do not impose a strict timeframe on how long a memorial can remain, instead opting to manage them respectfully on a case-by-case basis. However, there are instances where an existing memorial may need to be temporarily or permanently relocated to allow for roadworks, or where a memorial has deteriorated over time and become a safety or maintenance issue. In these situations, council will attempt to contact family members or friends of the victim to ensure they are included in the consultation process and to discuss available options. If we do not have contact details on record, we may place respectful temporary signage at the site requesting the family to get in touch with us before any action is taken. If we do not hear from representatives of the victim prior to construction commencing or the required action taking place, we will carefully remove the memorial and store this for a period of 12 months.

Traffic Monitoring and Performance

Traffic Data

Accurate and up-to-date traffic data is fundamental to the effective management of our local road network. We proactively collect data to monitor long-term changes in traffic patterns, understand network performance, and guide planning. Additionally, data collection is a vital tool for investigating specific road safety or traffic amenity concerns raised by our community, along with informing our investigations for proposed changes to road infrastructure. By basing our decisions on evidence, we can ensure that our interventions and investments are targeted where they are most needed and will have the greatest positive impact.

The City of Onkaparinga employs a mix of traditional and emerging technologies to gather traffic data. Further details on specific survey methodologies are available in *Austroads Guide to Traffic Management Part 3: Transport Study and Analysis Methods*. Our primary approaches include:

- **Volume, speed and classification:** We primarily use pneumatic tube counters to collect this data. In this context, "classification" refers to categorising the types of vehicles using a road (such as passenger cars, motorcycles, light commercial vehicles or heavy vehicles). To supplement these physical counts, we also utilise modern software platforms that aggregate connected vehicle data. This provides a fast and cost effective sample of vehicle speeds and movement analytics across our full network.
- **Intersection and pedestrian counts:** We typically engage contractors to undertake turning movement and pedestrian crossing counts. These surveys are predominantly conducted manually by on-site surveyors, sometimes supplemented with temporary cameras. As

DRAFT

technology evolves, we will continue to explore opportunities to utilise advanced video analytics to streamline this process.

- **Advisory speeds on curves:** Council staff manually collect ball bank indicator data within a moving vehicle to determine safe advisory speeds for negotiating horizontal curves. In accordance with Australian Standard AS 1742.2 and the DIT Operational Instruction 2.1, this task is only undertaken by experienced engineering or technical staff.

The traffic data we collect is directly applied to the Safe System approach to assess risk and network performance. Each dataset serves a specific purpose in helping us understand the potential for road trauma:

- **Volume:** Measures the “exposure” to the potential of a crash occurring.
- **Speed:** Indicates both the “likelihood” of a crash occurring and the potential “severity” of the outcome.
- **Classification:** Highlights the presence of different road users, helping to identify varying levels of vulnerability and the specific risks introduced by certain vehicle types.

This data also directly feeds into our Resource Prioritisation Documents, used to determine the viability and prioritisation of capital works projects. By linking traffic data to our funding mechanisms, we aim to ensure that our resources are targeted strategically to address our highest-risk locations, and achieve effective safety improvements.

Speed Management

Speed management is a fundamental priority in local government road management, as the speeds at which vehicles travel directly dictate the likelihood and severity of crashes. Councils are responsible for managing 77% of South Australia's entire road network, accounting for 36% of all travel. According to *South Australia's Road Safety Strategy to 2031*, these roads are where 32% of people are killed and 39% of people are seriously injured. Addressing these unacceptable levels of trauma requires a steadfast commitment to implementing safer, more appropriate speeds across our urban streets and rural roads.

DIT holds the exclusive legal authority to set and approve speed limits across the South Australian road network. The only exception to this, is the implementation of 25 km/h school speed zones, which council has the delegated authority to install if done so within DIT’s requirements. For all other speed limits, councils act as an investigator and advocate, collecting traffic data, assessing the road environment against state guidelines, and submitting evidence-based proposals to DIT for review.

At the heart of our approach to speed management is a fundamental commitment to Vision Zero. There is unequivocal, physics-based evidence, demonstrating that even minor speed reductions drastically cut road trauma. The human body has a limited physical tolerance to impact forces – while 30 km/h is often cited as a target impact threshold for vulnerable road users, even at this speed there is a distinct risk of fatal or severe injury that rises sharply as speeds increase.

The adoption of a 10% fatality threshold still results in a proportion of people potentially being killed or seriously injured. Recognising this limitation reinforces the need to consider the role of speed and its relationship with safety. As shown in Figure 4, pedestrians impacted by a vehicle at 30km/h still have a 15% chance of being seriously injured in addition to the 10% chance of being killed.

DRAFT

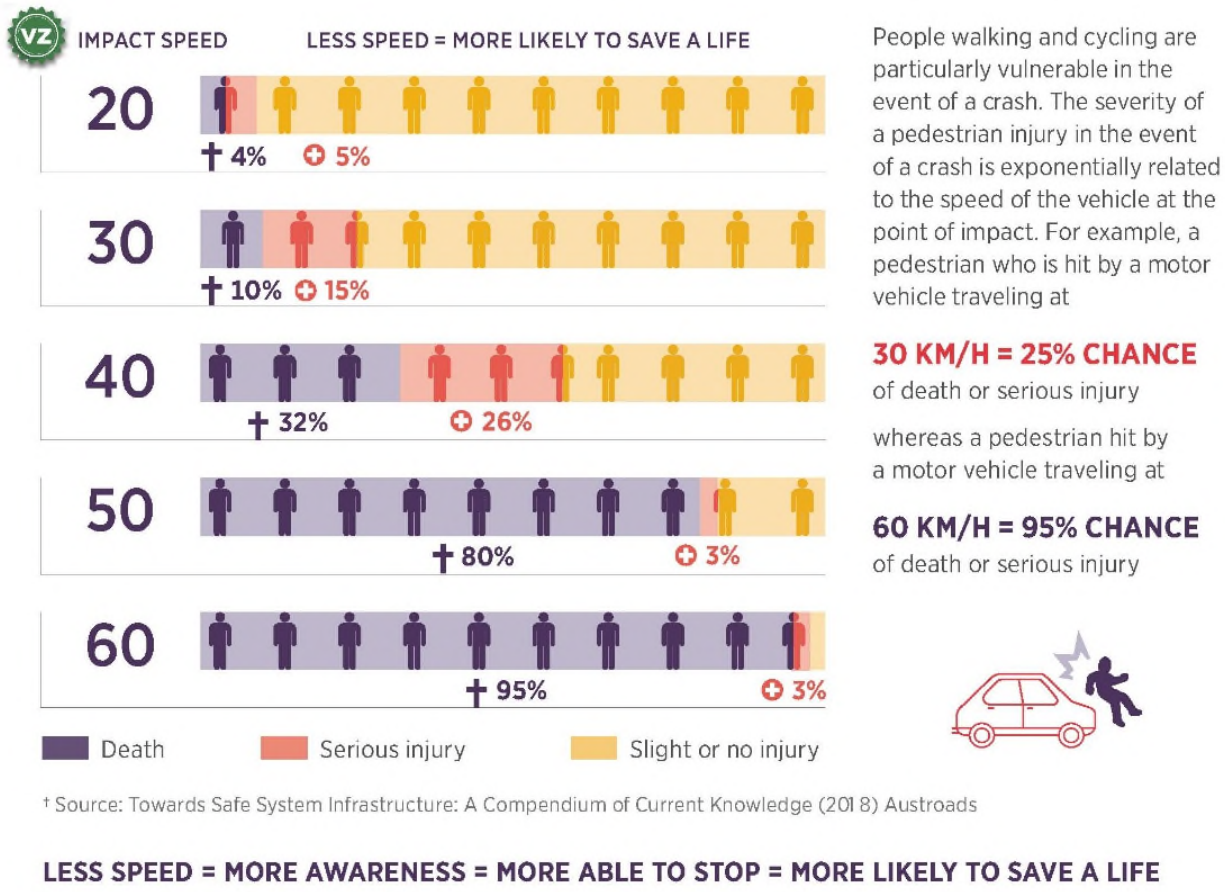


Figure 4: Probability of a fatal or serious injury for people walking or cycling based on collision speed (Source: Auckland Transport. (2020). Urban Street and Road Design Guide. In Auckland Transport Design Manual. Auckland, New Zealand: Auckland Transport)

Traditional speed limit setting conventions have created a legacy where the community has been conditioned to accept travel speeds that are inherently unsafe. Overcoming this disconnect, along with the persistent community belief that reducing speeds is a lazy substitute for upgrading road infrastructure, is a major behavioural and political challenge.

Our speed limit reviews are typically initiated in response to specific community concerns. Navigating the required state assessment and community engagement processes, requires significant time and resources. When assessing these requests, DIT advises that changing the speed limit on a single road may not always be supported if it creates an inconsistent speed environment with the adjoining network. Therefore, unless a road has unique circumstances, we group requests together to undertake coordinated, network-level assessments – such as our ongoing review of higher-order roads across McLaren Vale and our southern coastal suburbs.

Speed Management – Community Engagement

Because the scientific evidence linking lower travel speeds to crash survival is indisputable, we generally approach community engagement for speed limit reviews on an "inform-only" basis. Rather than consulting on whether a proven safety measure should be adopted, we focus on transparently explaining the reasoning. We share crash data, highlight the minimal impact on travel times, and demonstrate the profound road safety benefits to the community before new limits are implemented.

Achieving Vision Zero requires us to look beyond legally posted limits and actively consider the physical "speed environment" – how the design of a road naturally influences driver behaviour. In urban areas with residential and commercial activity, our Safe System target is a maximum 30 km/h speed environment. While DIT guidelines only allow the legal posting of 30 km/h in limited circumstances, we strive to achieve this physical environment on streets where people walking, cycling or riding may interact with moving vehicles. On existing streets, this often requires the installation of traffic calming devices. Given the significant costs and varying levels of community acceptance, these physical treatments cannot be applied universally. Instead, we investigate traffic calming on a priority basis, typically in response to specific safety concerns raised by residents. Viable interventions are then assessed using our Resource Prioritisation Document and ranked against other citywide priorities for potential inclusion in our Capital Works program.

Speed Management – New Developments

For new residential developments, it is council's position that future road networks are designed to naturally enforce a maximum 30 km/h speed environment, unless people who are walking or riding can be completely segregated from moving vehicles. This approach provides significant benefits for developers as it facilitates improved liveability through shared environments, reduces sight distance requirements at intersections, and allows for smaller hard infrastructure footprints, which can potentially increase lot yields and open space provisions. A 30 km/h environment also provides greater flexibility for planting a higher number of street trees, or larger tree species, as sight distance requirements are considerably lower and the hazard potential is reduced.

Speed Management – Rural Networks

Our rural network presents a different set of challenges. While council implemented a major initiative in 2008 to reduce the speed limit on the majority of our sealed rural roads from the default 100 km/h to 80 km/h, contemporary risk-based assessments show that 80 km/h remains too high for many of these complex country roads. This issue is reflected in the multiple petitions we have received from residents living along these roads, requesting lower speed limits.

Upgrading these roads is frequently constrained by steep topography, private land boundaries, and sensitive roadside vegetation. A common misconception is that local government should upgrade roads or install traffic calming to make existing legacy speed limits safe. Relying solely on physical infrastructure to resolve the dangers of outdated speed limit conventions is both physically and financially impossible.

Because we cannot simply build our way out of this problem, systemic policy change is essential. We rely on the State and Federal governments to set overarching road rules and policies that are firmly rooted in scientific evidence to support our shared Vision Zero commitments. Council will continue to fulfil its obligation to represent the best interests of our community by strongly advocating to the state government for evidence-based reform, striving for safer and more liveable streets for all road users.

Speed Management – Urban Networks

Community feedback highlights concerns regarding inconsistent application of speed zones on some of our urban road network. Resolving these inconsistencies requires an approach guided by Safe System principles and the Movement and Place framework.

Where an urban road undertakes a significant "Place" function, the physical speed environment should ideally be appropriate for the type of activity occurring to protect vulnerable road users. Conversely, M3 Distributor roads with a minimal "Place" function may safely sustain higher speeds

DRAFT

to facilitate efficient vehicle movement. Council does not define prescriptive speed environments across all urban roads. The ultimate aspiration is to achieve a Safe System aligned network, noting that the Department for Infrastructure and Transport (DIT) holds the exclusive legal authority to set and approve speed limits, guided by the *Speed Limit Guideline for South Australia*.

Friction often arises on the state-managed network where M4 State roads are located along areas of high community activity, falling into the “Main Streets” quadrant of the Movement and Place matrix. To resolve this conflict, council and DIT are required to collaborate to balance the urban realm and roadside environment against the speed limit and function of the state road. This can potentially involve targeted streetscape upgrades to influence driver behaviour and improve pedestrian accessibility, however these arrangements often require high levels of investment.

DRAFT

4. Road Classifications

Onkaparinga Movement and Place Framework

This section outlines how the Movement and Place has been adapted to our existing hierarchy of council-managed roads.

Classifying our Network

To apply this approach strategically, we use a two-dimensional matrix to classify our street environments. This matrix maps the **strategic movement function** (the volume and mix of journey types) against the **place intensity** (the mix of local activity, meaning and physical form).

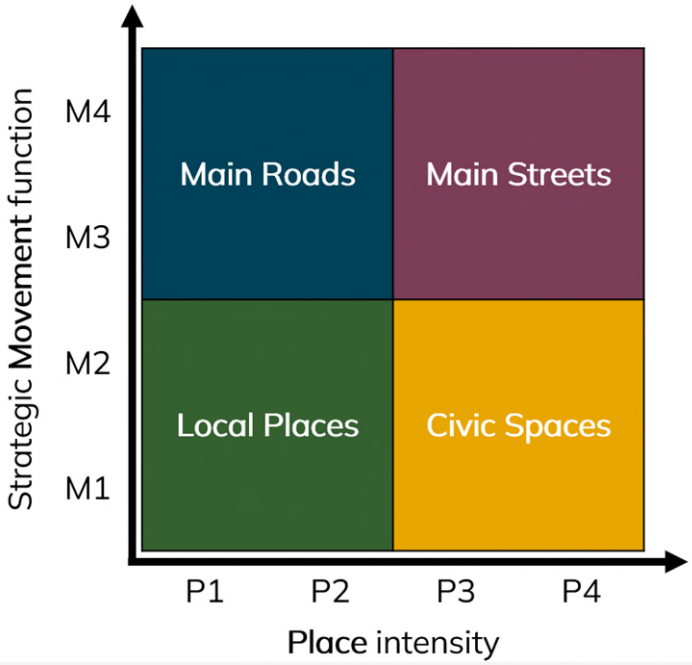


Figure 5: Onkaparinga Movement and Place Matrix

This classification allows us to group our network into 4 distinct street or road environments:

- **Main roads** These have a relatively high strategic movement function and low place intensity. They are core to the efficient movement of people and goods on the network, typically accommodating higher traffic speeds and volumes, and little interaction with roadside development.
- **Main streets** These have a relatively high strategic movement function and high place intensity. These are commonly at the heart of a community. Balancing the conflicting functions of these streets is often a significant challenge, and trade-offs or compromises may be required. High-quality infrastructure is essential to address the competing demands, where vulnerable road users need to be safety segregated from vehicles whilst facilitating safe and convenient opportunities for people walking and cycling to cross these busy roads, so that they don't become a barrier to movement.
- **Civic spaces** These have a relatively low strategic movement function and high place intensity. These are places for people in our community hubs, tourist and leisure destinations, prioritising access and high-quality placemaking. High-quality infrastructure to segregate vulnerable road users from moving traffic may be warranted however due to the

lower movement demands, managing vehicle speeds to align with Safe System thresholds can be a cost-effective approach.

- **Local places** These have a relatively low strategic movement function and low place intensity. While activity and movement levels are less intense, these form the largest group of roads and streets in our network where most people live and play. Road design should ideally be self-enforcing and aligned with Safe System thresholds, avoiding features that can result in undesirable activity such as rat running or inappropriate speeds due to long, straight alignments.

Strategic Movement Function

The strategic movement function of a road or street is determined by the volume and mix of journey types it accommodates, including the movement of people and goods.

To transition from our previous functional hierarchy to the Movement and Place framework, we have classified our network into 4 distinct movement levels (M1–M4). This transformation ensures our strategic planning aligns with the dual role of our streets.

Strategic Movement Levels	Urban Volumes	Rural Volumes
M4: State roads These roads function as the primary corridors for through traffic across the region. They are classified as "state" roads that are under the care, control and management of the South Australian Government, and range from high-capacity, high-speed, multilane roads such as Southern Expressway to lower-volume regional connectors with a single lane in each direction such as Kangarilla Road.	Generally greater than 15,000 veh/day	Generally greater than 1,500 veh/day, although some roads can have lower volumes but still retain a high strategic function
M3: Distributor roads These are major corridors managed by the council that facilitate movement between suburbs and connect to the state road network. They carry higher volumes of traffic and public transport than other local streets.	Generally 2,000 to 20,000 veh/day	Generally 2,000 to 4,000 veh/day
M2: Collector roads These roads collect traffic from local streets, distributing it to higher order roads on the arterial or distributor network. They balance the need for movement with providing access to local properties and community facilities.	Generally 800 to 3,000 veh/day	Generally less than 2,000 veh/day
M1: Local roads These streets provide direct access to properties and are the most common street type in our network. Their primary focus is on local access rather than through movement, often supporting high levels of community activity.	Generally less than 1,000 veh/day	Generally less than 1,000 veh/day

The current road hierarchy for the City of Onkaparinga is shown in Figure 6.

DRAFT

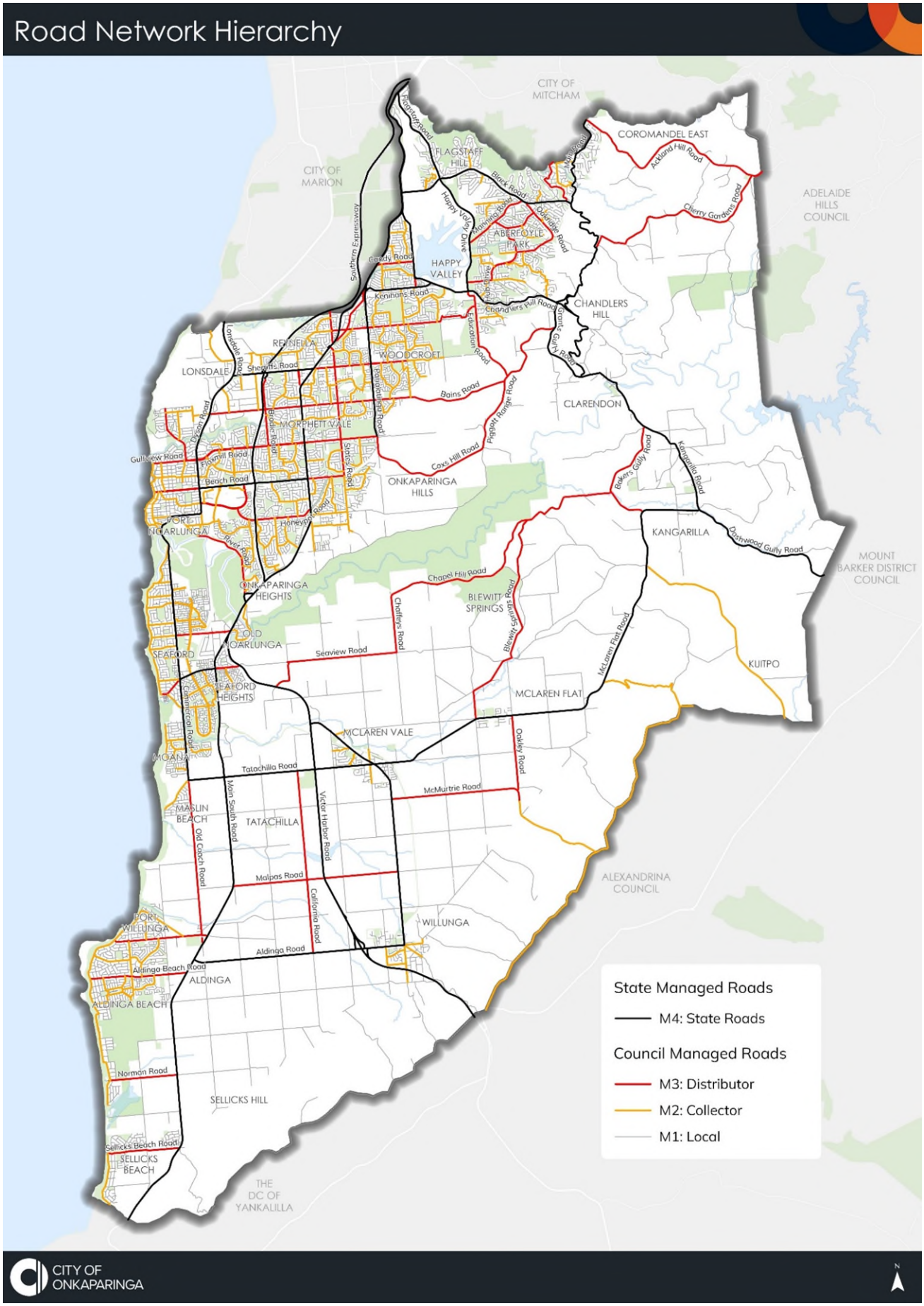


Figure 6: Onkaparinga Road Network Hierarchy

Place Intensity

Place intensity measures the significance of a road or street as a destination in its own right, rather than just a thoroughfare. It is determined by the strategic mix of local activity, the meaning and use of the space, and the physical form of the street and adjacent land uses.

The overall place intensity is not simply a sum of these individual elements, but rather the interaction between them. For example, a street might have high place intensity because it combines active shopfronts (physical form) with high pedestrian volumes (activity) and significant cultural landmarks (meaning).

Place Levels	Urban Examples	Rural Examples
P4: Major attractions This involves high-profile destinations for dining, entertainment, retail and recreational activities that tend to attract people from outside of the Onkaparinga local government area. These areas typically involve street frontages extending over 500m.	Port Noarlunga township, McLaren Vale main street, Colonnades shopping centre	Major venues (e.g. wineries, hotels, function centres) that can attract more than 500 people
P3: Regional attractions These are generally lower-order destinations for dining, entertainment, retail and recreational activities that tend to attract people from the surrounding suburbs and typically involve street frontages extending over 200m. They can also include community facilities such libraries, large schools and recreational attractions.	Libraries, Hopgood Theatre, regional shopping centres, large R-12 schools, beaches with adjoining attractions such as cafes, multi-use sports fields	Venues that can attract 250-500 people, concentration of sites (including dwellings) with more than 20 accesses per km
P2: Local attractions These areas represent areas comprising of lower general activity such as residential suburbs, low-density employment such as manufacturing, and peri-urban areas where the rural landscape transitions into urban. Dining, retail and recreational activities tend to attract people from the immediate nearby neighbourhood.	Residential areas, neighbourhood shops, smaller schools, light industrial parks, local playgrounds	Peri-urban transition areas, or rural areas with a concentration of sites (including dwellings) with 10-20 accesses per km
P1: Low intensity This category is for areas with low levels of roadside activity, attracting little to no people. Whilst these areas are more likely to be found in rural settings, urban examples include industrial areas involving large land holdings, or locations with large private facilities surrounded by security fencing such as golf courses or the Pimpala Transmission Station next to Sherriffs Road in Reynella.	Large areas of undeveloped land, major industrial sites comprising of large land holdings	Minimal roadside development such as agricultural land or National Park, with less than 10 accesses per km

DRAFT

Applying Movement and Place to New Developments

Most of the new roads constructed in our city are associated with urban development, typically comprising of residential, commercial or industrial land uses, or a combination of these in mixed-use developments.

Developers and their transport consultants should be guided by the Onkaparinga Movement and Place Framework in how they design new road networks that will eventually be handed over to council's care and control. This should be considered at all stages of the process, from initial site master planning to detailed engineering designs of staged land releases.

For every new road, its Strategic Movement level should be considered alongside the Place Intensity of the adjoining landuse. This can then be cross-referenced against the Movement and Place matrix provided in Figure 5, indicating the relevant street or road environment and the corresponding attributes optimise its function including speed environment and provision of adequate infrastructure for all road users, not just those travelling inside of vehicles.

On-road cycle lane provision

Whilst separating vulnerable road users higher speed motorised traffic remains the ultimate priority, the reality of our extensive legacy road network means that cyclists currently share road space with vehicles moving at high speed across much of the city. Consequently, our approach must be highly pragmatic where our roads provide the best available environment for all road users. Any practical measure we can implement to better facilitate cyclists, increase their visibility, and provide dedicated space will result in a better, safer overall outcome.

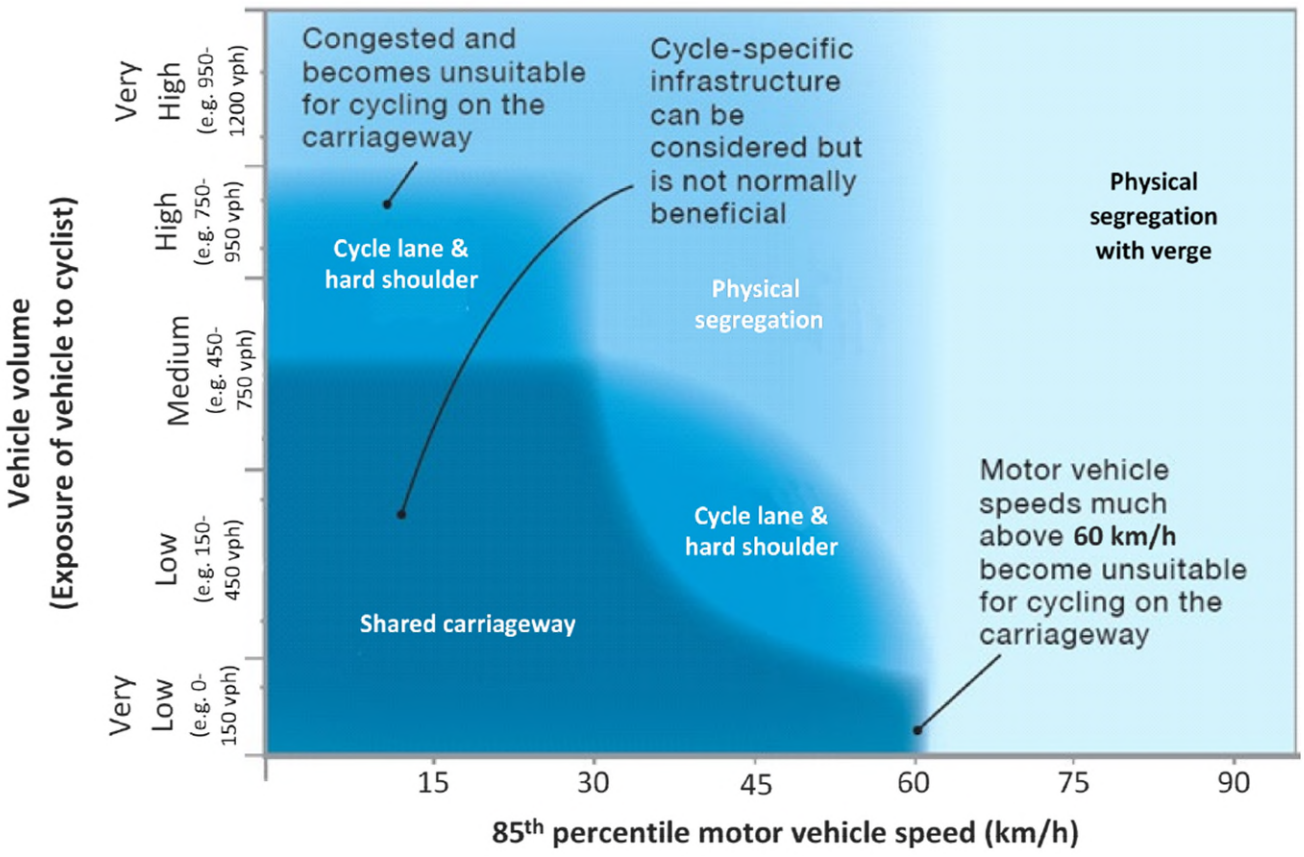


Figure 7: Guidance on the separation of cyclists and motor vehicles for the preferred bicycle rote (Source: Austroads AGTM05-20 Guide to Traffic Management Part 5: Link Management)

Further information regarding off-road trails for cyclists is available in Onkaparinga's *Trails and Cycling Strategic Management Plan 2016-21*, which is planned to be replaced soon with a new *Walking, Cycling and Trails Strategy* that is currently under development. This will outline a goal to provide a network of major off-road cycling routes to move people walking and cycling between our major centres in along safe trails that are separated from moving vehicles.

This shift towards separated facilities is strongly supported by local data. The 2018 Onkaparinga Cycling Survey demonstrated a clear community demand for safer off-road options, revealing that 27.4% of respondents are not confident riding on roads and 25% consider cycling unsafe. Furthermore, 35% stated that the provision of more off-road bike paths would encourage them to cycle more frequently. These findings highlight that safety concerns, rather than a lack of interest, are the primary barrier limiting active transport participation.

Figure 7 provides the foundational framework for determining the desirable level of separation based on vehicle exposure and speed. While physical segregation is the target for high-speed environments, where this cannot be achieved, we must optimise on-road provisions to mitigate risk as effectively as possible.

Where off-road separated paths are not feasible due to spatial, environmental, or financial constraints, on-road facilities must be carefully designed to facilitate cyclists and minimise conflict.

The City of Onkaparinga classifies on-road cycling facilities into the following primary categories:

On-road cycling facility	Application	Design Considerations
Protected Cycle Lanes: Where space and resources permit, protected cycle lanes provide a dedicated on-road space physically separated from traffic lanes by kerbing, landscaping, or flexi-poles.	Highly desirable on M4 Arterial Roads and M3 Distributor Roads where vehicle speeds and volumes are high.	Physical buffers protect cyclists from both moving traffic and the "dooring" zone adjacent to parked cars. Consideration also needs to be given towards managing potential conflict with vehicles moving in and out of driveways and side streets.
Painted Cycle Lanes and Sealed Shoulders: Where physical separation is unfeasible, painted cycle lanes or sealed shoulders offer a vital dedicated space, acknowledging that they provide a lower level of physical protection from encroaching vehicles.	Applied in constrained urban environments or on rural roads where off-road paths cannot be achieved.	In urban settings, implementing a painted safety strip (buffer) between the cycle lane and parked cars is strongly recommended to mitigate the risk of car doors opening into the cyclist's path. On rural roads, providing a sealed shoulder width of 1.5 m to 2.0 m offers significant safety benefits, allowing cyclists essential clearance from high-speed vehicles.
Shared Carriageways (Mixed Traffic): On roads lacking designated cycle lanes, cyclists are required share the	Sharing the carriageway is most appropriate on M1 Local Roads with low traffic volumes	In calm environments where 85th percentile speeds are 30 km/h or less, cyclists are encouraged to "take the lane" to avoid the door zone of parked cars. Pavement markings such as "sharrows" can be used to explicitly alert motorists to the presence of

DRAFT

lane space with motor vehicles.	and low operating speeds.	cyclists and reinforce the shared nature of the street. Where speeds are higher, traffic calming devices can be introduced to lower speeds to 30 km/h or less.

Design parameters for on-road cycling lanes should be obtained from primary guiding material, such as *South Australia's Active Travel Design Guide* or from Austroads.

General Configuration Attributes

The below table identifies some attributes which are typically considered applicable for each road hierarchy under council's care and control in terms of driveway accessibility, on-street parking, and provisions for people cycling and walking:

Attribute	Road Classification		
	M1 Local Roads	M2 Collector Roads	M3 Distributor Roads
Provision of Driveways for Access to Adjacent Land	Primary function of road is to facilitate access to adjoining land	Road function balances provision of access against facilitating vehicle movement	Primary function of road is to facilitate vehicle movement, with property access limited where possible
On-Street Parking	Generally provided on both sides of the road, allowing one traffic lane shared by opposing vehicles	Generally provided on both sides of the road	Generally provided in separate parking lanes
Cycling	Shared use of street with cyclists	On road cycle lanes Option for off road shared use path where identified in our Trails and Cycling Strategic Management Plan	
Pedestrian Access	Paths provided as per Service Level attachment of the SAMP. The 2026 iteration notes a 1.2m wide path to be installed on one side of the street.	Paths provided as per Service Level attachment of the SAMP. The 2026 iteration notes a 1.5m wide path to be installed on one side of the street.	

Typical Cross Sections

Cross Section Terminology

Roads contain a number of different elements, such as:

- Road reserve is the land set aside by authorities for a roadway, footpaths, infrastructure and landscaping. The road reserve is generally the whole area between the property boundaries.

DRAFT

- Carriageway is the area of the street reserve designated for the movement and parking of vehicles, typically kerb to kerb.
- Lanes are the area of the carriageway designated for vehicle travel. Lanes may also be specifically defined for bicycle travel.
- Verge is the area of the street reserve between the kerb and the front property boundary. Typically, this is an area where trees are planted and may have grass, gravel or hard surface.
- Footpath is primarily a pedestrian path along the street, connecting adjacent properties. Wider paths can also accommodate shared use with cyclists.
- Bin placement is an important consideration to ensure that adequate space is provided for waste collection activities so that bins do not obstruct or impact the safety of people walking and cycling. For specific design guidance on integrating bins and waste collection into the streetscape readers should refer to Section 8 of *South Australia's Active Travel Design Guide*.
- Services such as telecommunication, water sewage, stormwater and gas are usually under the verge or the footpath. Lighting is located with the verge often with power poles and overhead power lines. In new streets, services are consolidated into common service trenches.

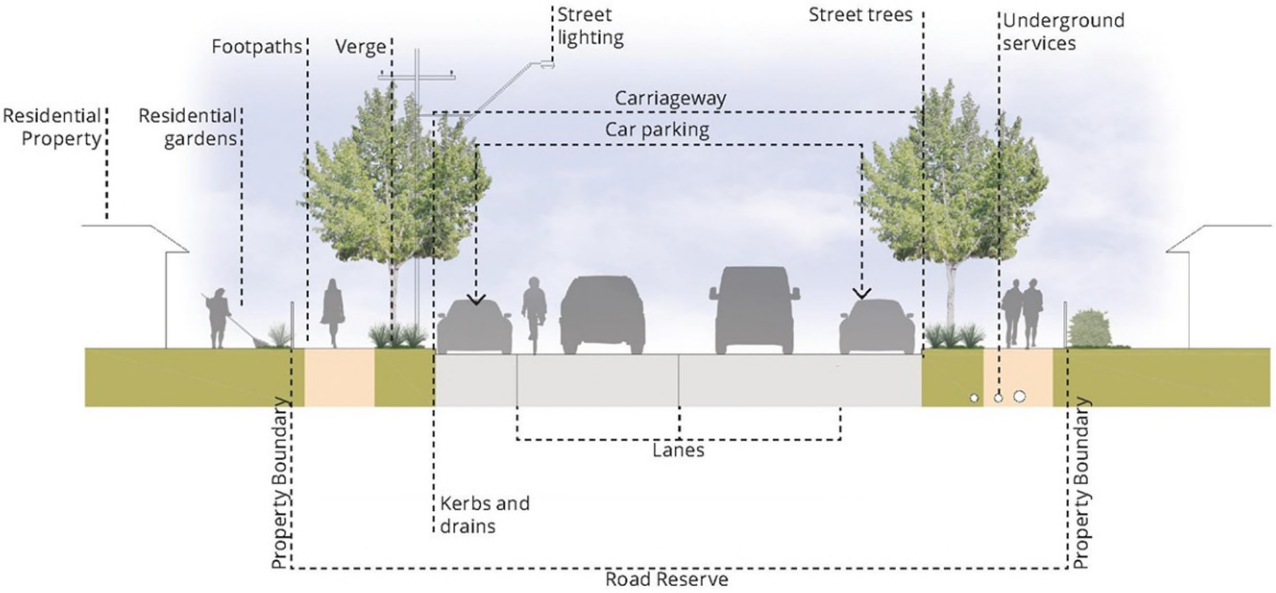


Figure 8 Anatomy of a street

Urban Traffic Lane Widths

Austroads *Guide to Road Design Part 3: Geometric Design* specifies that the current Australian practice is to provide standard traffic lane widths of 3.5 metres, however this typically applies to roads that prioritise the movement of vehicles, such as M4 Arterial Roads. The same guide further specifies that lane widths for residential, commercial and industrial areas are typically determined by the local municipality, and for these such roads within the City of Onkaparinga the Road Network Plan is the primary guiding resource.

For local urban roads, Austroads *Guide to Traffic Management Part 8: Local Street Management* is a more appropriate resource, which generally recommends lane widths of 3.0 metres for low-speed urban streets as narrower roadways typically encourage lower vehicle speeds. The Movement and Place framework can help inform the intended role of a road and its subsequent lane width requirements, along with other factors such as the likely presence of larger heavy vehicles in

commercial and industrial areas. For bus routes, DIT's Master Specification *RD-PT-D1 Bus Infrastructure Design* requires minimum lane widths of at least 3.2 metres, with 3.5 metres preferred.

Rural Traffic Lane Widths

Whilst narrower traffic lanes on urban roads tend to provide better safety by encouraging lower speeds, wider lanes are more preferable for safety on rural roads as this reduces the potential for crashes by providing more room between opposing vehicles. Austroads *Guide to Road Design Part 3: Geometric Design* recommends traffic lane widths of 3.1 metres for roads with less than 500 vehicles per day, ranging between 3.1-3.5 metres for roads with 500-1,000 vehicles per day, and 3.5 metres for roads with more than 1,000 vehicles per day.

In addition to traffic lane widths, the provision of shoulders is also an important consideration for rural roads. The Austroads research report *AP-R700-23 Practical Approaches for Managing Regional Road Safety Priorities: Practitioner Resources* states that "it is good practice to provide a sealed shoulder to all sealed roads, regardless of traffic volumes". Not only do sealed shoulders provide additional room for recovery should a vehicle travelling at speed drift out of its lane, they also provide space for a vehicle to pull over as well as reduce the need for pavement maintenance due to a reduction in edge breakage.

On this basis, it is preferable to provide at least 1.0m wide sealed shoulders on both sides of rural roads, noting that evidence indicates that safety does not improve significantly for shoulder widths over 1.5-2.0 metres. In many cases on our rural road network, providing additional shoulder width may be highly challenging or unfeasible due to the presence of constraints such as sensitive roadside vegetation, services, embankments, culverts and private property. In some cases where road widening is not possible, there may be merit in narrowing existing travel lane widths down to a minimum of 3.1 metres in order to provide more room in the shoulders.

The additional cost associated with widening of roads also multiplies very quickly along linear sections of road. If widening a road is not feasible, other factors may need to be considered such as speed management in conjunction with the Movement and Place framework.

Typical Cross Sections

The following typical cross sections provide an overview of the minimum cross section requirements for each category of road. There may be an opportunity to vary the widths shown in particular circumstances considering topography, user group requirements (for example cyclists), existing built form, etc.

M1 Local Roads

Managing Urban Local Road Widths

For urban local roads a preferred minimum carriageway width of 7.2 m is specified. This dimension is based on providing 2.1 metres for parking on both sides of the road, leaving a central 3.0 m lane for vehicle travel. This 3.0 m clearance aligns with Australian Road Rule 208, which legally requires motorists to leave at least 3 metres of clear road alongside their parked vehicle to allow other traffic to pass. On these lower volume streets, opposing vehicles typically negotiate past each other by pulling into available gaps between parked vehicles to allow the approaching vehicle through. A 3.0 m travel lane is a widely accepted

DRAFT

industry standard, accommodating standard road vehicles up to 2.5 metres wide, including fire appliances and garbage trucks.

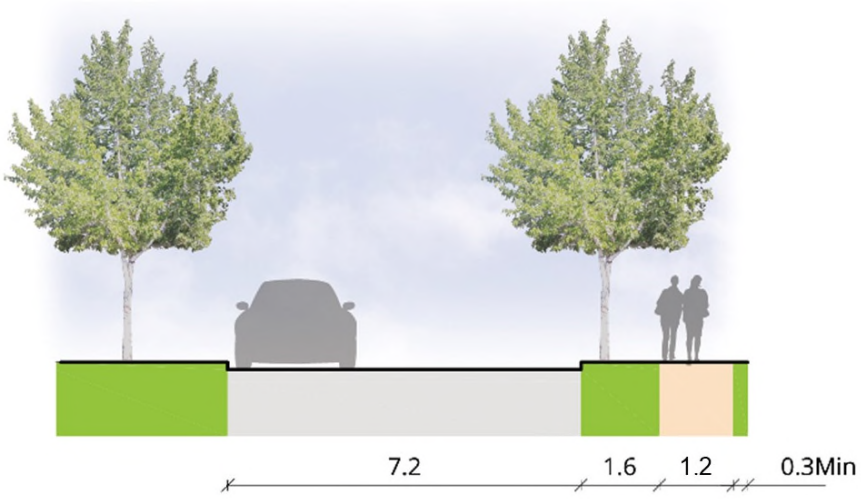


Figure 9 M1 Local Road minimum requirements - urban

While the 7.2 m width performs adequately across much of the established city, it is experiencing increasing operational tension in recent residential developments. This is driven by the following trends:

- **Smaller Lot Sizes:** New developments frequently feature narrower lot frontages. This reduces the capacity for off-street parking and limits kerbside space for on-street parking due to the reduced space between driveways.
- **Larger Private Vehicles:** The growing market preference for larger private vehicles such as SUVs further impacts the 7.2 m cross-section. These vehicles take up more physical space along the kerb, encroach further into the central travel lane, and make it more challenging for drivers to negotiate around parked vehicles or swing into tight driveways.

Increasing the standard urban local road width beyond 7.2 m to alleviate this tension introduces other network-wide implications. Wider streets intuitively encourage higher vehicle travel speeds, compounding an already widespread problem across the residential network. Wider roads also consume space that could otherwise be allocated to street trees and pathways, while increasing the area of impermeable surfaces that contribute to stormwater runoff and the urban heat island effect. Furthermore, increasing the pavement width across the local network would substantially elevate construction, maintenance, and renewal costs, adding to council's long-term depreciation expense and funding obligations.

Rather than defaulting to wider carriageways, road space tensions in new developments can be mitigated through targeted planning and design mechanisms that optimise the 7.2 m cross-section:

- **Lot Configuration:** Encouraging subdivisions with wider but shallower lot frontages to increase the availability of continuous kerbside parking space.

DRAFT

- **Driveway Coordination:** Pairing driveways side-by-side on shared property boundaries to consolidate on-street parking pockets and reduce fragmented kerb space.
- **Access Design:** Mandating wider driveway crossovers for narrow allotments to provide residents with increased swept-path clearance, allowing vehicles to swing in and out of properties more easily without conflict with vehicles parked on the opposite side of the street.

M1 Rear Access Laneways

Rear access laneways are a subset of local streets, often provided within new urban development areas with areas of higher residential densities. Our experience with recent developments indicates that rear access lanes can be a minimum of 8.0 metres wide between property lines, which allows for 1.0 metres of verge on either side and a roadway width of 6.0 metres.

Provision of a 1.0 metre wide verge provides room for street trees, and potentially waste bins if required. This space also provides additional buffer for vehicles to turn into and out of narrow driveways or garages.

It is important that all laneways be designed to achieve a very low vehicle speed environment, avoiding long, straight and unencumbered alignments. The inclusion of street trees is highly beneficial to the streetscape and reduces the potential for urban heat island effect.

On-street parking along one side of a laneway may be possible, although only where it can be demonstrated that a parked vehicle would not impact on manoeuvrability of other vehicles travelling along the lane or turning into and out of driveways or garages.

It is important to note that rear access laneways are not to be used for allotments that do not have front access to public space with provision for pedestrian access.

Laneways shall not be provided where they can become a convenient rat-run that attracts through vehicle trips that are not accessing the properties fronting the lane.

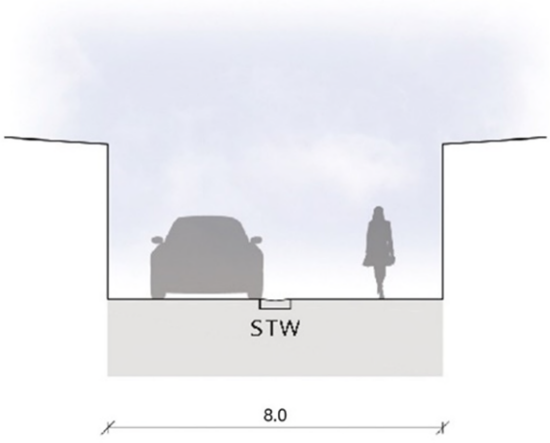


Figure 10 M1 Rear Access Laneway minimum requirements [note – diagram to be replaced with one showing 8.0m width with 1m wide verges]

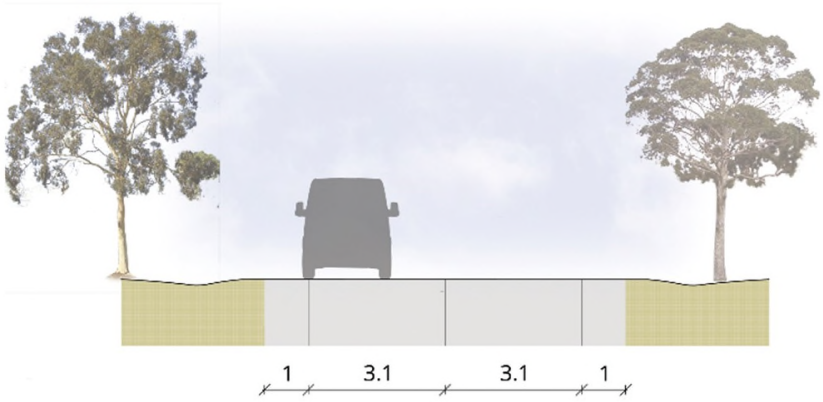


Figure 11 M1 Local Road minimum requirements - rural

M2 Collector Roads

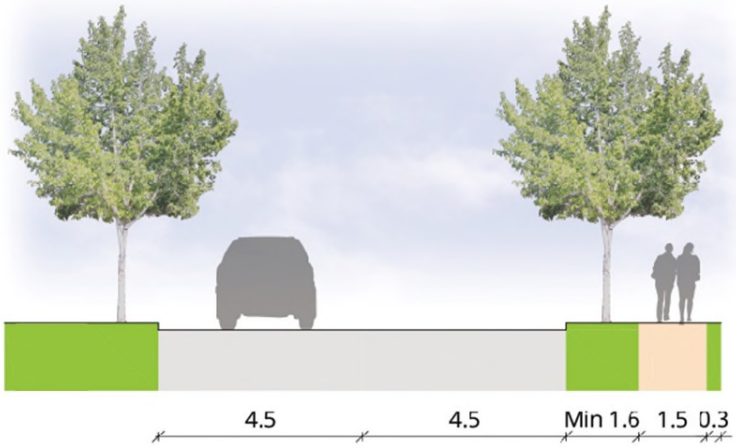


Figure 12 M2 Collector Road minimum requirements - urban

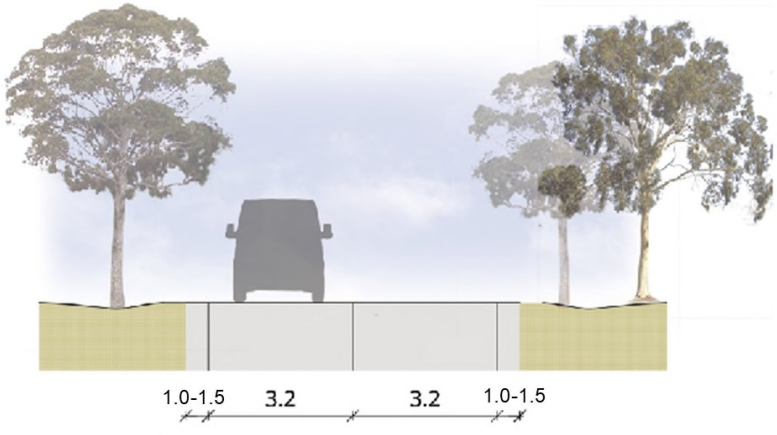


Figure 13 M2 Collector Road minimum requirements - rural

All rural roads to have preferred 1.5-2.0 m sealed shoulders on designated cycling routes.

M3 Distributor Roads



Figure 14 M3 Distributor Road minimum requirements - urban

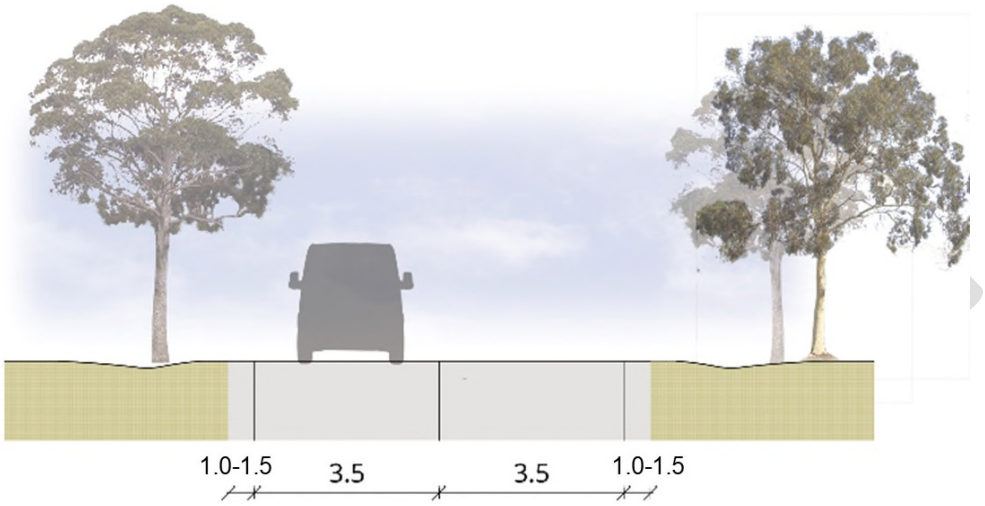


Figure 15 M3 Distributor Road minimum requirements - rural

All rural roads to have preferred 1.0 to 1.5 metre sealed shoulder on designated cycling routes.

Industrial Roads

A critical design feature for roads that carry heavy vehicles is to ensure that sight distance requirements are considered for both light and heavy vehicles where this is a critical safety factor, including intersections and sag curves with overhanging obstructions. This includes assessing driver's eye height, which is specified below.

- Passenger vehicles: 1.5 metres at public road intersections (as per Austroads Guide to Road Design Part 4A, and 1.15 metres at driveways (as per Australian Standard AS2890.1).
- Trucks and other commercial vehicles: 2.4 metres at public road intersections (as per Austroads Guide to Road Design Part 4A, and any height ranging between 1.15 to 2.5 metres at driveways (as per Australian Standard AS2890.2).

As most of our industrial road network is already established, no specific cross section dimensions are provided in this section, with existing road widths to typically be maintained as they are renewed. Local widening may be considered where appropriate to unlock potential productivity gains by allowing larger vehicle combinations such as B-doubles.

For any new roads being constructed that serves industrial landuse, the width should be determined by all relevant factors such as road hierarchy, room for on-street parking demand, and manoeuvring space for large heavy vehicles to negotiate intersections and driveways.

Traffic Volumes Exceeding Road Classification

Traffic volumes on the City of Onkaparinga's road network can be affected by a variety of factors, including the release of new housing areas, infill development and renewal in existing suburbs, and changes to the traffic network and movement demands.

In many cases this has resulted in traffic volumes increasing on some of our roads, although these are usually modest and remain within the expected maximum traffic volumes for the type of road designated under our road hierarchy. However, there are instances where traffic volumes routinely exceed the expected maximum level and operate as a higher order road. This can result in undesirable issues such as residents conflicting with impatient through traffic when trying to enter or exit their driveways, requests to ban on-street parking on residential streets that aren't wide enough for two clear opposing travel lanes and higher potential for crashes on rural roads.

Addressing this problem does not necessarily require the road to be reclassified, with other potential approaches available including:

- Installation of traffic calming devices or a Local Area Traffic Management scheme to either lower vehicle speeds on the road and/or deter through vehicle volumes.
- Modification of the road network to remove opportunities for motorists to cut through areas, such as physically restricting the opportunity for vehicles to turn into, and out of, lower-order side roads from a higher-order main road, or closing access if a suitable alternative route exists that does not encourage rat running.
- Working with DIT to ensure that the arterial road network has sufficient operational capacity to attract and carry all longer-distance, regional trips which usually involve motorists wishing to travel to their destinations with the least amount of delay as possible.
- Providing improved infrastructure to encourage and support active travel modes to reduce the reliance on people to travel by car.

Reclassifying Roads

Reclassifying a road needs to involve more than simply recategorising a road on a map, as it is important to reflect the desired network function of that road, and whether that function is compatible with the road's current geometry and its adjoining landuse. As outlined in the Typical Cross Sections section, higher order roads generally require wider cross sections to accommodate their expected function.

If a road is to be reclassified, the decision-making process should be documented using DIT's Traffic Impact Statement template as a framework to consider the traffic management aspects of a proposal in parallel with social, economic, technical and other factors. This assessment will then be saved in council's records system against the road asset that has been changed.

In most cases, reclassifying a road will usually need to involve some kind of complimentary works or mitigating actions. For example, if issues are being caused by the volume of a Local Road consistently exceeding the typical threshold of 1,000 vehicles per day, measures may be required such as banning parking on one side of the road to allow more room for opposing vehicles to pass each other. Another example could be a section of a Collector Road experiencing traffic volumes more consistent with what would be expected on a Distributor Road. Reclassifying the road may

DRAFT

require a commitment through our Capital Works program to widen the road formation so that it matches our preferred width dimensions.

It is important to appreciate that any such changes could result in significant impact to the properties adjoining the subject road. Therefore, any proposals would need to be supported by a suitable level of engagement with all affected stakeholders, particularly any residents, property owners and/or business operators located alongside the road.

DRAFT

5. Movement Demands

Freight and Industrial Destinations

Our city hosts several “employment land” precincts, encompassing agriculture, manufacturing, warehousing, and commercial services. While activity centres and commercial corridors are usually well served by higher-order roads, our dedicated industrial estates rely on a network of lower-order local roads. Because these areas attract a high proportion of commercial and heavy vehicles, the supporting roads require specific construction standards. This includes increased pavement strength to withstand high heavy vehicle volumes, and generous geometric designs to accommodate the manoeuvring requirements of larger vehicle combinations. To best serve our business community, attract investment, and support industrial diversity, our foundational position is to provide a road network that facilitates appropriate and effective access while minimising operational constraints. This directly supports Action 3.2.1 of our *Economic Growth and Tourism Strategic Plan 2025–30*, which commits council to encourage investment and improvements across industrial areas to ensure they remain accessible and fit-for-purpose.

The Greater Adelaide Regional Plan (GARP) formally recognises Lonsdale and Seaford as our two “Prime Industrial Employment Precincts”. These are the major manufacturing and logistics hubs for the city, linking directly to broader state and national freight corridors. The upcoming Port Stanvac redevelopment will serve as a future catalyst, unlocking approximately 64 hectares of dedicated employment land adjacent to major transport routes. We also support standard “Employment Precincts” throughout the city in areas such as Hackham, Aldinga, and McLaren Vale, which cater to lighter industry and local services.

Beyond these urban precincts, heavy vehicle movement is driven by other areas of concentrated activity, including two waste management facilities in McLaren Vale, and major resource extraction sites in Reynella, McLaren Vale, Maslin Beach and Sellicks Beach. Furthermore, the McLaren Vale region and surrounding rural areas host a broad, dispersed agribusiness footprint that generates highly seasonal, heavy commodity freight comprising both standard heavy vehicle combinations along with farm machinery such as tractors and harvesters.

Crucially, because the passenger rail network servicing our city is broad-gauge and incompatible with the national standard-gauge freight network, there are no current viable rail freight opportunities within the City of Onkaparinga. The local road network must therefore bear the entirety of our freight movement.

South Australia's freight task is projected to grow significantly in the coming decades. To manage this growth efficiently and sustainably, there is a strategic state-wide transition towards large heavy vehicles such as 25-metre-long B-doubles or 30-metre-long A-doubles. While these larger vehicle combinations offer substantial economic and environmental benefits by moving more freight with fewer trips, their size and mass dictate which roads they can safely use, not only on the major arterial road network but also for accessing local sites on council’s road network.

Managing the interface between these freight demands and other elements of our community is a complex challenge that varies across four distinct environments:

- **Lonsdale:** As a standalone hub well-connected to the state arterial network, the focus here is on ensuring our local roads have the structural capacity and geometric space to support large heavy vehicles. We must also retrofit these historically hostile environments to safely integrate active transport for people walking and cycling.
- **Mixed urban footprints:** In areas like Seaford and Hackham, industrial traffic often mixes with residential commuters. This creates friction on busier roads and introduces safety issues on quieter mixed-use streets. Because generous road dimensions are required for heavy vehicles, light vehicle motorists are often inclined to travel faster. Installing standard

DRAFT

traffic calming devices in these locations is also generally not possible, as they are incompatible with heavy vehicle movements.

- **The McLaren Vale Wine Region:** This area benefits from a grid-based, relatively flat road network, which disperses travel but makes it challenging to prioritise specific strategic upgrades. The primary network impact is the conflict between slow-moving agricultural machinery, high-speed tourist and commuter traffic, and high volumes of cyclists, all sharing a road environment with limited carriageway widths.
- **The rural Adelaide Hills:** Freight movement in our remaining rural footprint can be constrained by undulating topography, limited sight distances, and narrow carriageways. Consequently, large heavy vehicles such as B-doubles are often not permitted to travel on these roads. However, this less dispersed network makes it easier to focus investment on upgrading key strategic routes.

These varying environments highlight a persistent tension in network design. In urban areas, narrower lanes are generally preferred to reduce vehicle travel speeds. Conversely, on rural roads, wide lanes and sealed shoulders directly correlate with improved safety.

Balancing these competing needs requires close collaboration with the road freight industry through the National Heavy Vehicle Regulator (NHVR). Under the Heavy Vehicle National Law, council acts as the “Road Manager”, responsible for consenting to RAV access on our local network. We aim to streamline this process by gazetting “authorised networks” for various vehicle categories where appropriate, reducing the permit application burden on both transport operators and council staff. This approach allows us to fulfil our obligations: maximising network access to support economic prosperity and productivity, while carefully restricting access where our road assets have structural limitations or where heavy vehicle movements would create unacceptable safety or amenity impacts for our community.

Managing Heavy Vehicle Impacts

While facilitating freight access is critical for local economic productivity, the physical mass and movement of large heavy vehicles accelerate wear and structural damage to council's local road pavements. To manage these ongoing maintenance liabilities and preserve local amenity, council's strategy is to actively direct heavy vehicle through-traffic onto the M4 state-managed arterial road network wherever appropriate. Council roads should primarily facilitate the first and last mile of the freight task, ensuring the high-capacity, state-maintained network carries the majority of heavy vehicle activity.

Tourist Destinations

The City of Onkaparinga offers a diverse geographic tourism footprint. Key hubs include the McLaren Vale wine region, heritage townships, rural retreats, and eco-tourism sites such as the Onkaparinga River National Park and the Aldinga Conservation Park (incorporating the Aldinga Scrub and Washpool). Our 31 kilometres of coastline features patrolled beaches, the O'Sullivan Beach boat launching facility, and four designated “cars on beaches” access points.

While designated “tourist drives” remain an important navigational and marketing tool for industry stakeholders such as the South Australian Tourism Commission and the local wine industry, their presence does not rigidly dictate our road network infrastructure planning. Because tourist traffic demands are dynamic and evolve over time, our network increasingly supports a flexible, multi-modal approach. This includes accommodating active transport, such as the famous on-road cycling routes associated with the Tour Down Under stages, which are increasingly supported by our growing network of off-road recreational paths, guided by our Trails and Cycling Strategic Management Plan. For overnight visitors, the network must service a highly diverse accommodation sector. This ranges from established traditional sites (such as existing hotels,

motels, and private caravan parks) and high-profile hotels currently proposed or under construction in the McLaren Vale wine region, to purpose-built visitor infrastructure including the council-owned Moana and Christies Beach Tourist Parks, the future Willunga Golf Course multi-use hub, and townships equipped with dedicated RV parking and layover facilities. Concurrently, the transport network must also manage the parking and access impacts of a highly disaggregated footprint of short-stay holiday rentals scattered throughout the coast and McLaren Vale.

Tourism is a vital economic pillar for the city. As noted in the *Economic Growth and Tourism Strategic Plan 2025–30*, the region attracts approximately 1.2 million visitors annually. From a transport perspective, these destinations serve several distinct functions. First, they are significant generators of unfamiliar traffic (including interstate and international drivers), necessitating highly legible, intuitive, and safe wayfinding. Second, they function as complex mixed-mode environments where high volumes of pedestrians, cyclists, and light vehicles interact. Finally, aligning with the sustainable tourism objectives of the *SA Tourism Plan 2030*, these areas must act as catalysts for mode shift. The transport network must actively support opportunities that reduce tourist reliance on cars, integrating seamlessly with public transport (such as the Seaford rail corridor) and providing high-quality active transport links.

This visitor influx impacts both state and local networks. On the state-controlled arterial network, seasonal surges exacerbate the Main South Road bottleneck at the Onkaparinga River bridges, reinforcing our “Gateway to the South” advocacy. Locally, the primary transport challenge is increased car parking demand. Short-stay rentals have dispersed this demand into residential areas, whereas coastal parking remains highly concentrated. Although our “cars on beaches” access points present environmental and safety complexities, they provide significant parking capacity. Any reduction in beach vehicle access would severely increase on-street parking demand across the adjacent coastal road network.

To manage the safety complexities created by this vehicle access, strict speed controls are enforced across these shared coastal spaces. In December 2023, the South Australian Government introduced a new default speed limit for vehicles on beaches across the state, setting a maximum speed of 40 km/h, which reduces to 25 km/h when travelling within 50 metres of a pedestrian. However, because this state-wide policy applies only where beaches are not otherwise signposted, it does not alter the arrangements for the City of Onkaparinga's vehicle-accessible beaches. To prioritise the safety of vulnerable beachgoers in these highly popular shared spaces, Moana, Aldinga, and Sellicks Beach remain formally signposted with a strict 10 km/h speed limit, originally approved by the state government in 2009.

Elsewhere, the visitor mix inherently includes a higher proportion of larger recreational vehicles (RVs) and vehicles towing caravans or boats. The network impact involves ensuring that appropriate, legible routes and dedicated layover facilities (such as long-vehicle parking and dump points for waste) are accessible for these visitors, without needing to over-engineer the broader local road network to accommodate their swept paths. Furthermore, our rural and scenic routes can experience major seasonal spikes in on-road cyclists, creating significant network friction and safety challenges when vulnerable active transport users mix with high-speed commuter and agricultural traffic on narrow carriageways.

To manage these demands, the RNP shifts its level of service focus away from rigid geometric dimensions for designated vehicle “routes” and towards high-value “places”. In alignment with Movement and Place and Safe System principles, priority in high-activity tourism nodes shifts from vehicle throughput to pedestrian safety, active transport, and placemaking. The level of service is defined by how safely pedestrians, cyclists, and light vehicles can integrate, often resulting in engineered traffic calming and reduced speed environments.

DRAFT

We are actively delivering this revised level of service across several of our key tourist destinations to create safe, accessible, and attractive streetscapes. Notable examples include the major streetscape upgrades to Old Coach Road in the Aldinga Township (completed in 2017) which enabled the introduction of a 30 km/h speed limit in 2022, the Esplanade traffic calming project completed between Christies Beach and Port Noarlunga to manage vehicle speeds along our premier coastal frontage, and the Port Noarlunga pedestrian safety project which is currently in the design phase.

Destinations Requiring Special Consideration for Access

Whilst most tourism destinations are accessed by passenger cars, consideration should be given to locations that visitors access with more restrictive vehicle configurations. This includes vehicles towing caravans or camper trailers, boats on trailers and large camper vans. Many towns and suburbs throughout Australia are advocating to be “RV” friendly. Access to cater for these travelers should be provided to caravan/tourist parks throughout the City of Onkaparinga as well as the boat launching facilities at O’Sullivan Beach which is the only such facility on the coast, between West Beach and Wirrina Cove.

Public Transport

According to the 2021 Census, public transport accounted for only 4.1 per cent of journeys to work for City of Onkaparinga residents, compared to 6.1 per cent across Greater Adelaide. Guided by *South Australia's Transport Strategy,* the *20-Year State Infrastructure Strategy*, and the draft *South Australia’s Public Transport Strategy*, the RNP recognises that the city cannot rely solely on increasing road capacity to manage projected population growth. While not opposed to private vehicle capacity, to maintain liveability and support the state's targets of a 60% reduction in emissions by 2030 and net zero by 2050, the local road network must prioritise effective public transport, accepting that this may occasionally result in minor inconveniences or reduced capacity for car-based travel to ensure active travel becomes a more attractive and competitive option.

The region's public transport network relies heavily on the Seaford passenger rail line as the primary high-capacity, north-south movement corridor to and from the Adelaide CBD. For Onkaparinga’s north-western metropolitan footprint, this is supplemented by strong secondary trunk bus linkages anchored by major interchanges at Old Reynella and Aberfoyle Park. While these corridors cater well to CBD-bound commuting, there remains a significant service gap for local, cross-suburban travel across the balance of the local government area.

Council strongly advocates for the southern extension of the rail corridor. This includes the longstanding corridor to Aldinga Beach, which DIT has indicated will be pursued in the 2030s, alongside the indicative extension to Sellicks Beach identified in the *Greater Adelaide Regional Plan*. The Adelaide Regional Rail Extensions Planning Study currently being prepared by DIT, coupled with the project's recent inclusion on Infrastructure Australia's Priority List, signals a strong pathway for future state and federal co-funding.

To make public transport viable, the road network must seamlessly integrate with walking, cycling, and e-mobility to solve the first and last-mile challenge. In anticipation of the state government's upcoming *Active Transport and Personal Mobility Strategy*, the road network must support micro-mobility integration, requiring advocacy for state investment in secure lockers and charging infrastructure at transit hubs. This directly aligns with the draft Public Transport Strategy's focus on integrating first and last-mile solutions, such as e-scooters, bike-sharing, and park and ride facilities, to enhance customer convenience.

While park and ride facilities remain a necessary provision for our highly car-dependent peri-urban areas, active transport integration is the ultimate priority. The local network impact of commuter car parking spilling into residential streets adjacent to major transit hubs must be managed

DRAFT

carefully, ensuring parking controls do not inadvertently make public transport access less desirable.

In alignment with both the *Greater Adelaide Regional Plan* and the draft *Public Transport Strategy's* objective to enhance liveability through placemaking around transport hubs and corridors, the road network will proactively respond to state investment by supporting the concentration of higher densities and mixed-use activities around high-capacity transit nodes, facilitating the “Living Locally” aspiration.

Rather than applying rigid “Public Transport Route” classifications to our network, the foundational approach of the RNP is an aspiration to optimise all Distributor and Collector roads to safely accommodate bus services. While acknowledging that existing physical constraints means this is not always feasible, this flexibility ensures the network remains agile and able to adapt to evolving service demands and suburban densification. Furthermore, council supports the expansion of on-demand public transport models to address service gaps in under-serviced metropolitan areas and regional tourism hubs like the McLaren Vale wine region.

A primary barrier to public transport participation is the condition of the connecting road and pedestrian network. To improve accessibility, council advocates for the re-establishment of state government funding for foundational street-level infrastructure, such as bus shelters and concrete boarding pads. Furthermore, connecting pedestrian networks must move beyond basic compliance to embed Universal Design principles, ensuring continuous and safe paths of travel.

Participation barriers extend beyond physical mobility. Recognising that approximately 15 to 20 per cent of the population is neurodivergent, the network surrounding transit nodes must mitigate high sensory loads and unpredictability. Aligning with the state's *Autism Strategy 2024–2029*, this requires the provision of clear and consistent wayfinding, intuitive spatial layouts, and calm environments to reduce the cognitive burden of navigating transit hubs.

Finally, transit nodes and their connecting routes must embed Crime Prevention Through Environmental Design principles, ensuring consistent lighting, clear sightlines, and passive surveillance. Crucially, the network must address gender-based barriers to access. Acknowledging principles within the *South Australian Women's Equality Blueprint 2023*, public transport is not experienced neutrally given women and gender-diverse individuals face heightened personal safety concerns and undertake complex travel patterns, such as trip chaining for caregiving. Designing highly visible and secure transport environments is therefore essential for equitable access and broader economic participation.

Active Transport

The road network must safely and equitably accommodate people walking and cycling, who have historically been forgotten through legacy car-centric design. While the upcoming Trails and Cycling Strategic Management Plan review dictates specific active transport routes and network hierarchies, the RNP serves as the mechanism to physically allocate space within the road reserve. It provides the framework for the cross-sections, intersection designs, and traffic calming necessary to safely integrate these strategic routes into the broader transport network, ensuring active travel users are considered as legitimate and prioritised users of our roads.

Creating a safe environment for active transport is underpinned by the Safe System approach and the Movement and Place framework. The ultimate goal is a harm-free network achieved either through the physical separation of vulnerable users from moving vehicles, or the establishment of survivable speed environments. Achieving this on existing networks, particularly on rural roads, presents significant challenges. Broadly rolling out wider, sealed shoulders to physically separate high-speed traffic from people walking and riding is often financially and physically unfeasible due to highly constrained roadside features. Conversely, reducing speed limits to survivable levels offers

a highly effective safety intervention that has negligible impacts on overall travel times, yet this approach frequently encounters strong community resistance. The management of the road network must continually navigate these tensions to improve active transport safety.

At the street level, footpaths are increasingly operating as complex shared environments. Specific service levels for pedestrian infrastructure are detailed in council's Strategic Asset Management Plan, which broadly dictates the provision of footpaths on both sides of major roads and within centres, and on at least one side of minor local streets, positioned away from the back of the kerb wherever possible. The demand on these spaces has intensified following changes to South Australian legislation allowing people of all ages to ride bicycles on footpaths.

Pedestrian crossing selection framework

Providing safe and accessible places for people to cross the street is one of our most important responsibilities as a road authority. Historically, guidelines often required a certain number of pedestrians to be already crossing a road before a dedicated facility could be justified, however, this approach failed to recognise that many people – particularly children, older people, and people living with a disability – will simply avoid making a trip if they feel the road is too dangerous to cross.

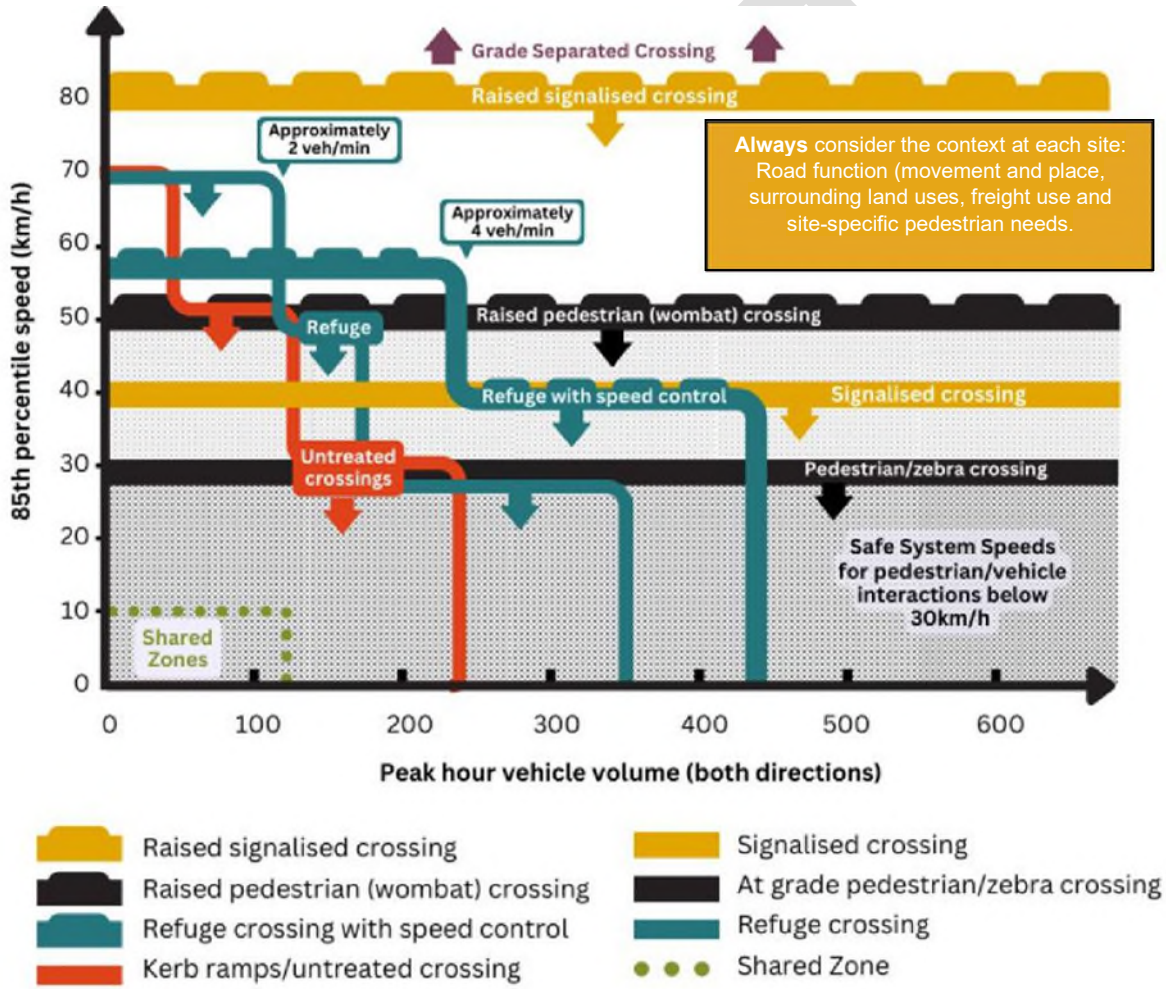


Figure 16: Model for choosing potential pedestrian crossing types based on vehicle operating speed and volume (Source: Austroads Strategic Review of Pedestrian Planning Guidance Research Report AP-R749-26)

To ensure we are designing an inclusive network, the City of Onkaparinga has adopted the latest best practice crossing selection framework from Austroads. This framework removes the reliance on pedestrian counts, and instead focuses on the two biggest risk factors: how fast vehicles are travelling, and how many vehicles are using the road.

As shown in in Figure 16, the safest environment for a pedestrian interacting with a vehicle is when traffic speeds are below 30 km/h. In these low-speed, low-volume environments, simple untreated crossings or shared zones are often safe and appropriate.

However, as vehicle speeds and traffic volumes increase, the range of safe crossing options decreases. On busier local roads, we should aim for “primary” Safe System treatments. For example, if a street has operating speeds of 50 km/h and carries moderate traffic, the framework indicates that an at-grade zebra crossing or a simple pedestrian refuge is no longer sufficient to protect vulnerable users. Instead, a raised pedestrian crossing (wombat crossing) or a raised signalised crossing is required to physically force vehicle speeds down to survivable limits.

In situations where a street's existing speed environment does not support a safe crossing, simply dropping the posted speed limit is rarely enough to change driver behaviour. In these cases, we must prioritise self-enforcing design – such as installing traffic calming, road narrowing or gateway treatments – to physically reduce the operating speed of the street before a crossing can be safely installed.

Schools

The Scale, the “Place”, and Car Dependency

The City of Onkaparinga manages the traffic footprint of 60 school sites and 37 preschools. It is important to distinguish the lower-intensity, parent-supervised traffic generated by preschools, from the concentrated congestion peaks of primary and secondary schools. However, establishing safe road environments around all educational sites remains a critical priority. Schools are highly valued community “places”, meaning the safety of vulnerable road users must be prioritised over the movement and efficiency of private vehicles. Safety must also permeate the entire local street network – if the route to school is unsafe, interventions strictly at the gate are ineffective.

For many families, driving children to school is currently unavoidable. Beyond road safety, other systemic barriers including the perceived threat of crime or violence in certain neighbourhoods, understandably prevent parents from allowing children to walk or cycle independently. The road network must acknowledge these broader societal challenges without penalising families for prioritising their children's immediate safety. Furthermore, the high proportion of students attending non-government schools impacts network congestion. Without strict residential zoning, these schools draw students from wider catchments, generating longer, cross-suburban trips that enforce car dependency and disproportionately contribute to peak-hour traffic and the associated congestion.

Consequently, schools consistently generate some of the highest volumes of customer enquiries received by council. This creates a substantial workload responding to queries regarding parking, congestion, and a lack of safe pedestrian infrastructure.

Boundaries and Shared Responsibility

Successfully managing school traffic is a shared responsibility between local government, DIT, the Department for Education, independent and Catholic school boards, parents, and students.

DRAFT

Council's specific role is to manage the public road reserve to facilitate safe, equitable access and install appropriate roadside infrastructure.

Whilst vehicle activity around schools is concentrated at start and end times, they can also generate increased daytime parking demand associated with school employees, volunteers and visitors. High school students who are old enough to drive can also generate additional parking pressures, noting that the longstanding departmental policy for state managed schools is that parking for students is not to facilitated on a school site. These pressures generate a high volume of customer enquiries, including requests for council to construct parking spaces near schools, including on community land that is not located within the road reserve.

It is not council's responsibility to supply unrestricted proximate parking to meet infinite driving demand, nor is it responsible for funding external infrastructure required to support a school's internal enrolment growth. Schools are welcome to discuss opportunities to modify council's road network to facilitate their access needs, but works will only typically occur if fully funded by the school or the education department.

Rethinking the School Gate and Demand Dispersal

Traditional, high-turnover "drop-off and pick-up" zones directly outside school gates are increasingly recognised as exacerbating safety issues. By drawing vehicles to the most concentrated pedestrian point, they introduce unacceptable levels of conflict. Despite clear signage, driver non-compliance in these zones is systemic, and relying on enforcement is an unsustainable solution.

The ultimate aspiration for the road network is the "open streets" or "school streets" model, which advocates for moving vehicle drop-off zones away from the immediate school frontage to establish a "no cars" proximity around the gate. Whilst this is still a relatively new concept in Australia, council may investigate the potential for viable trial sites in consultation with schools and nearby neighbouring properties. To support the investigation and potential delivery of these trials, council can refer to the *School Open Streets Guide and Toolkit*, published in August 2026 by the Victorian councils of Merri-bek and Kingston. This resource currently serves as the only dedicated Australian guidance for implementing this type of initiative. Because this proactive approach to school traffic management is still highly novel within Australia, consistent terminology has not yet been firmly established. As a result, the terms "school streets" and "open streets" are frequently used interchangeably to describe the temporary restriction of through-traffic to prioritise active travel outside school gates.

To effectively disperse vehicle demand, council also aims to actively support "park and walk" initiatives by providing the targeted infrastructure – such as safe road crossings and continuous paths – that makes parking further away and walking the final 500 metres a safe and viable option.

Speed Environments and the Safe System

Interventions are fundamentally grounded in the Safe System approach, which recognises that speed dictates crash severity. Any minor inconvenience to driver travel times is entirely justified by the safety benefits of survivable speed environments. In South Australia, drivers currently navigate a complex regulatory environment of varying school speed zones, including 25 km/h "when children present", 25 km/h "when lights flashing", and new 40 km/h time-based precincts. Council has demonstrated proactive leadership by undertaking an early trial of the new 40 km/h zones on Flaxmill Road to inform the new policy. However, jurisdictional realities remain and council requires

DRAFT

DIT approval for implementation of 40km/h precincts on local roads, and relies entirely on DIT for installations on the arterial network.

Beyond Engineering: Education and Advocacy

Physical infrastructure must be paired with education to achieve meaningful behavioural change. Council will actively connect educational sites with established programs, such as DIT's “Way2Go” active travel program and the RAA's “Street Smart” initiatives.

Child road safety also extends beyond the school term and into recreational spaces. Through a partnership with the Little Blue Dinosaur Foundation, council has rolled out early childhood road safety initiatives – including “Hold my hand” and “Slow down, kids around” signage – at regional playgrounds and beaches. Finally, acknowledging a service gap across the 97 educational sites, council will foster local collaboration and use state road safety strategies to advocate for resources that empower local government to deliver dedicated community engagement directly to school communities.

School Travel Planning Frameworks

To support broad school travel planning concepts and encourage active travel, council utilises contemporary industry resources to guide network interventions. This includes the Austroads *Travel to School* Guideline and the *School Precinct Safety Framework* developed by the City of Casey. These resources provide best-practice methodologies to assist in transitioning away from car-dependent, high-turnover drop-off models toward systemic, network-wide safety improvements that protect children across their entire journey to school.

DRAFT

6. Network Pressures

Growth and Development

The Greater Adelaide Regional Plan (GARP) outlines a sustained growth trajectory for the City of Onkaparinga. From a 2021 population of 177,968, GARP projects the region to reach 214,318 under a medium-growth scenario, or up to 231,668 under a high-growth scenario by 2051. To accommodate this increase of between 36,350 and 53,700 new residents, GARP establishes a target to deliver 910 new dwellings per year until 2031, tapering down to 760 new dwellings per year from 2031-2041 and 670 new dwellings per year from 2041-2051, amounting to roughly 23,400 new homes over the 30-year horizon.

Within this significant growth context, 2021 Census data reveals that 57 per cent of Onkaparinga households currently own two or more vehicles. This entrenched car dependency means that every new subdivision or infill project has a high probability of introducing multiple new vehicles per household, placing compounding pressure on the existing transport network. Managing this requires a strategic approach to the design and integration of both greenfield expansion and urban consolidation to ensure that viable travel modes are available beyond the private vehicle.

Council's Role in Supporting Developments

The RNP operates as a critical communication document that establishes clear expectations for developers and traffic consultants. It provides guidance on the design, safety, and functionality of transport networks that will ultimately be handed over to council for ongoing management and maintenance upon completion of new developments.

To prevent the creation of legacy issues and the transfer of long-term safety and financial risks to ratepayers, council cannot accept future road networks with embedded legacy deficiencies. Whilst this means that we expect future roads to be designed beyond the minimum allowable standards, that does not translate to more complex designs or costlier works. Instead, these requirements are simple to incorporate, provide higher-quality neighbourhoods for future residents, and can potentially increase lot yields. This includes:

- **30 km/h Speed Environments:** Low-volume, lower order local roads make up the majority of new residential streets by length. Though these roads are subject to the default urban speed limit of 50 km/h, they must be geometrically designed to self-enforce 30 km/h vehicle speeds. This is the target speed threshold for vulnerable road users such as people walking or cycling in accordance with the Safe System approach, and also significantly lowers sight distance requirements, reducing the necessary footprint for impervious infrastructure. This facilitates smaller corner truncations, and allows for cyclists to travel on-road, safely mixing with vehicles. Higher order local streets, such as Collector and Distributor roads, may be able to accommodate higher speed environments, subject to appropriate separation between vulnerable road users and moving traffic along with the provision of convenient and well-connected road crossing opportunities, such as wombat crossings.
- **Prohibition of Modified T-intersections:** Council actively discourages the use of modified T-intersections. These counter-intuitive designs violate the principle of "self-explaining roads," consistently generating driver confusion, conflict, and severe hazards for vulnerable road users. They will only be considered in extremely low-volume environments (such as minor cul-de-sacs) and will be refused on roads facilitating through-traffic. Council will not compromise network intuitiveness and safety by accepting compromised intersection designs as a substitute for genuine traffic calming, particularly when safe, established alternatives are readily available.
- **Parking and Driveway Spacing:** Driveway spacing must be deliberate to eliminate ambiguous kerbside parking zones. Providing gaps between driveways that are longer than

DRAFT

a single space but less than the room required for two vehicles often results in driveway encroachment and subsequent neighbourhood disputes that council are then expected to resolve. Driveway gaps must align with the Australian Standard for on-street parking (AS2890.5) and either be in the range of 5.4-6.0 metres to provide room for exactly one vehicle, or 10.8 metres and greater for two or more vehicles. Where developments involving narrow allotments result in the space between driveways being less than 5.4 metres, developers will be required to install a yellow edgeline between the driveways to ensure that vehicles don't attempt to park in this area and block the adjacent driveways.

[insert diagram showing why gaps of 6.0-10.8m between driveways is problematic]

In addition to standard development considerations, consideration also needs to be given towards the potential implementation of the South Australian Government's *Design Standard 1 – Engineering Requirements for Land Division*. Whilst not yet adopted at the time of drafting this version of the Road Network Plan, multiple rounds of consultation have been undertaken over 2025 and 2026 towards the development of universal engineering specifications to be applied to land divisions for large residential developments in Master Planned Zones throughout South Australia.

The purpose of this new planning instrument is to support the Planning and Design Code by promoting good design in our streets, parks and other public places, help manage the interface between public and private realms and contribute to delivering high-quality infrastructure as part of new developments.

Beyond urban environments where occasional on-street overflow parking is often tolerated, developments on higher-speed rural roads that attract high visitor volumes such as winery cellar doors, hospitality venues, and function centres must contain all overflow parking entirely within the site boundaries. On-street parking on these rural corridors is unacceptable due to constrained roadside space, narrow shoulder widths, and the severe safety risks associated with pedestrians walking adjacent to high-speed traffic. Consequently, council requires these development proposals to demonstrate sufficient on-site overflow parking capacity (such as an adjoining paddock) to ensure no vehicle overspill occurs onto the rural road network.

Major Development Sites and Network Impacts

Major land use changes cannot be approved or managed in isolation from the surrounding network. The following key developments illustrate the complex intersection of land use planning and transport network integrity.

[insert map showing all major development sites]

South Beach Redevelopment (former Port Stanvac refinery at Lonsdale)

The transformation of the 230-hectare former oil refinery into a master-planned community is one of the largest infill projects in southern Adelaide. Yielding up to 3,600 dwellings and 64 hectares of employment land, the precinct is forecast to generate up to 2,700 additional peak hour vehicle trips.

- **Arterial Upgrades and Safe System Alignment:** Safely managing this volume requires significant upgrades to state-managed arterial roads, including a new overpass of the rail-line at Sherriffs Road West and capacity improvements on Dyson Road. We are advocating for Safe System aligned intersection designs that minimise the risk of high severity, side-impact crashes, which will be critical at the 80 km/h intersection of Refinery Road and Dyson Road.
- **Public and Active Transport Integration:** High-quality public transport must be established through development. Considerations should include how the Lonsdale Railway Station location can be optimised for integration with the new development, the Coast Park shared

user trail and dedicated infrastructure for on-road recreational bunch rides that will divert through the precinct to avoid Dyson Road.

- **Local Network Hierarchy and Rat-Running:** The integration of this development into O'Sullivan Beach's residential area highlights vulnerability in the surrounding local network due to the lack of a clearly defined, higher-order road network connecting Dyson Road to Galloway Road. Motorists currently rat-run through lower-order residential streets of O'Sullivan Beach, such as Brown Road. To safely absorb the substantial influx of traffic from Port Stanvac, council must proactively investigate the provision of a designated Distributor road connection, likely Baden Terrace. Establishing this clear hierarchy is critical to protect local residential streets from escalating rat-running and to avoid piecemeal traffic calming.

Noarlunga Housing Development

This 22-hectare infill project between Noarlunga Centre and the Onkaparinga River will deliver over 600 homes. Situated within walking distance of the Noarlunga Railway Station, Colonnades Shopping Centre, and other local services, it offers genuine opportunities for active transport and mode shift. However, this density is being introduced into a road network that is struggling to cater for current traffic volumes.

- **Cascading Regional Gridlock:** The road network around Noarlunga Centre is fundamentally vulnerable to the Main South Road bottleneck at the Onkaparinga River bridges. Frequent traffic incidents here force motorists to divert to the secondary Port Noarlunga river crossing. This pushes heavy arterial traffic along Beach Road, Goldsmith Drive and Dyson Road, resulting in widespread, prolonged gridlock across the local network.
- **Beach Road Duplication:** Because the state-managed Beach Road frequently reaches capacity, Goldsmith Drive is forced to perform an arterial road function as a parallel bypass route. Carrying approximately 16,000 vehicles per day, this council-managed local road creates significant transport severance during peak times. The high volume of traffic makes it unsafe for pedestrians and cyclists travelling along or across the road, actively discouraging active transport, entrenching car dependency, and isolating the very amenities the development seeks to leverage. We note that DIT are currently undertaking a Planning Study into the duplication of Beach Road between Dyson Road and Main South Road, which also includes investigating the section of Dyson Road between Beach Road and Goldsmith Drive.
- **Strategic Advocacy:** Council's strategy avoids reactive, expensive local capital expenditure to fix state-level traffic displacement. Our advocacy to the state government focuses on the "Gateway to the South" (upgrading the Main South Road bridges) and the duplication of Beach Road. Returning through-traffic to the state-managed arterial network is the only sustainable method to downgrade Goldsmith Drive to its appropriate road function.

Onkaparinga Heights

Formally proclaimed in 2023 following the rezoning of the southern portion of Hackham, this 235-hectare master-planned growth area will deliver approximately 2,000 new homes. The precinct comprises three distinct development fronts subject to Infrastructure Deeds to ensure the coordinated delivery of essential roads, stormwater management, and active transport networks. Renewal SA has partnered with Lanser to deliver 1,000 homes across 68 hectares, with civil works anticipated to commence by 2027. An adjacent parcel managed by YAS Property & Development will yield a further 1,000 homes.

As part of the rezoning process, the Minister required infrastructure deeds to ensure the provision of appropriate infrastructure to support the future growth. The deeds seek to manage development in an orderly and equitable manner, given multiple landowners. Specific provisions for transport

DRAFT

include several prescribed interventions that are subject to development triggers for the delivery of works as new stages are rolled out.

Immediately adjoining the rezoned area and not party to the infrastructure deeds, Peet Limited is developing over 300 homes across 17.8 hectares of existing residential-zoned land, which critically incorporates the precinct's commercial activity centre and local amenities.

- **Arterial Interface and Expressway Integration:** The current configuration of the intersection at Main South Road and the Southern Expressway provides poor integration for northbound traffic departing the site during the morning peak. The Department for Infrastructure and Transport's Planning Study for Main South Road (between the Southern Expressway and Griffiths Drive) is vital to resolve these access constraints and determine appropriate intersection layouts. Without adequate capacity and integration on the state-managed network, traffic generated by this development risks rat-running through the local council road network. Consequently, retaining the Doctors Road to Panalatinga Road extension remains a key strategic advocacy opportunity to ensure long-term network capacity.
- **Protecting the Rural Road Network:** It is vital to ensure development traffic is not attracted to the adjoining lower-order rural road network. Roads such as the unsealed section of Piggott Range Road already experience high crash rates despite lower traffic volumes, as noted in the Unsealed Roads section of the Road Network Plan. Even a minor diversion of traffic from Onkaparinga Heights onto these rural roads, which are not designed to accommodate through vehicle traffic, would significantly elevate the risk of road trauma. Internal road layouts and external access points must be designed to safely channel vehicle movements toward the arterial network and actively deter access to the vulnerable rural periphery.

Aldinga

This 45-hectare master-planned community is planned to deliver 800 new homes. Situated on the southern fringe, the new population will likely be highly reliant on private motor vehicles for commuting and daily needs, until the eventual extension of the Seaford rail line is realised.

- **Active Transport and Corridor Preservation:** A 60-metre-wide corridor has been preserved through the site to accommodate the future rail extension. The development proposes to utilise this corridor to provide a comprehensive network of shared use paths, integrating with council's existing active transport network. This path infrastructure will need to be retained permanently to provide ongoing active transport benefits.
- **External Network Interface:** The State Government's design for the grade-separated interchange on Main South Road at Aldinga Beach Road effectively removed the Villawood site's opportunity for direct access to Main South Road. Consequently, site access is heavily concentrated onto major east-west aligned M3 Distributor Roads, primarily Quinliven Road, Port Road and Aldinga Beach Road. Additional traffic loads are also projected to affect How Road, which runs north-south along the western boarder of the site. Whilst currently designated as a lower-order M1 Local Road, it will not be effectively relieved by a parallel north-south route through the development site as previously anticipated due to the changes made on Main South Road. How Road will therefore need to be upgraded to a higher order road in order to adequately carry the area's projected traffic volumes.
- **Capacity Constraints and Diversion Risks:** While Aldinga Beach Road possesses the spatial potential to be widened to four lanes, Port Road is constrained by roadside development in the Aldinga village. Council expects developers to fund and construct safe intersection treatments with sufficient capacity to manage the projected volumes. If congestion is permitted to overwhelm these local connectors, traffic will inevitably divert onto low-quality

DRAFT

rural roads to the north – including Old Coach Road, Tuit Road, and Bowering Hill Road – which lack the geometry to carry high traffic volumes.

Sellicks Beach

Adopted through the state government's Sellicks Beach Growth Area Joint Amendment, this 134-hectare master-planned precinct aims to deliver up to 1,700 new homes, an activity centre, and dedicated open space. The Department for Housing and Urban Development with advice from the Department for Infrastructure and Transport have identified a “mass transit investigation area” and applied it through the Planning and Design Code Concept Plan 163 Sellicks Beach Land Use in order to set land aside for future public transport infrastructure.

- **Coordinated Development Overlay and Infrastructure Constraints:** To manage the complex environmental and logistical factors affecting the site, the Minister for Planning applied a Coordinated Development Overlay. This explicitly defers any urban development until the finalisation of a binding Infrastructure Scheme. This scheme is vital to guarantee that roads, utilities, and essential services are funded and delivered in sync with housing growth.
- **Arterial Interface and Protecting the Local Network:** The site benefits from the recently completed Stage 2 duplication of Main South Road, delivered as part of the Fleurieu Connections project. This state-managed arterial corridor provides the primary, high-capacity access required to support the new population. It is critical that future internal road layouts actively channel development traffic toward Main South Road. Traffic must not be displaced onto Norman Road, a lower-order, rural road that is not designed to accommodate high volumes of through traffic.
- **Active Transport Connectivity:** Establishing comprehensive east-west active transport links is a key priority for this development. The internal active transport network must integrate effectively with the broader coastal and regional networks, specifically providing safe connections to the premier Coast Park path along the coastline and the new shared-use paths constructed alongside the Main South Road duplication.

Future Local Road Widening Overlay

The Future Local Road Widening overlay is a legacy provision originating from the former Onkaparinga Development Plan, subsequently carried over into the South Australian Planning and Design Code in March 2021. It applies specific setback requirements – typically 5 metres – to allotments fronting various roads across the local government area for the provision of future widening.

- **Strategic Application:** While historical reasoning for these widening requirements may have been rooted in prior car-centric capacity design, the overlay remains a highly valuable strategic tool. Council retains this provision to safeguard spatial opportunities within the public corridor for future active transport links, Safe System intersection upgrades, and the integration of green infrastructure, such as street trees.
- **Development Assessment Default:** Council's default approach is to strictly enforce these setbacks during the development assessment process to protect the long-term integrity of the road corridor. Deviations into this setback will only be considered on a case-by-case basis if a highly compelling reason is demonstrated. This strict enforcement applies regardless of whether an active funding program for land acquisition currently exists for that specific road.
- **Code Amendments:** Altering the application of this overlay – whether adding it to new roads or removing it from existing allotments – requires a formal Code Amendment. This is a significant statutory process involving comprehensive investigations, strategic planning, and

DRAFT

broad community engagement. Council has no plans to pursue Code Amendments to alter or remove the current application of this overlay in the foreseeable future.

Journeys to Work

The City of Onkaparinga's road network is heavily influenced by a structural imbalance between the residential workforce and local employment opportunities. The *Economic Growth and Tourism Strategic Plan 2025–30* identifies that while the city is home to 90,837 employed residents, there are only 51,323 local jobs. This results in a jobs-to-workers ratio of 0.57, indicating a significant net outflow of workers.

This imbalance creates distinct location and time-based pressures across the road network, driven by the entrenched car dependency experienced in the City of Onkaparinga.

Spatial Movement Patterns

- **Outbound Commuting:** While 2021 Census data recorded approximately 45,000 outbound commuters, the *Economic Growth and Tourism Strategic Plan 2025–30* estimates this figure now approaches 50,000 residents travelling outside the local government area for employment. The majority of these journeys are directed towards the Adelaide CBD and northern employment hubs, placing directional pressure on the primary north-south arterial corridors, such as the Southern Expressway, Dyson Road to Commercial Road corridor, and Main South Road.
- **Internal Commuting:** Conversely, nearly 32,000 residents both live and work within Onkaparinga. While they represent a smaller portion of the resident workforce, they constitute the majority (71.9 per cent) of the local workforce. These internal journeys generate cross-suburban and east-west movement demands, utilising local connector roads as well as the major north-south corridors.

Time-Based Network Pressures

Network capacity concerns are most apparent during times of peak activity, particularly when commuting coincides with other movement demands. While off-peak industrial and commercial transport activities are generally absorbed by the network, overlapping peaks create localised congestion:

- **The AM Peak Compression:** The primary pressure occurs during the morning peak, where the outbound and internal journey-to-work commute coincides with the morning school drop-off period. This increases volume on both the state-managed network and local streets surrounding educational precincts.
- **The PM Peak Dispersion and Coastal Routing:** The afternoon network pressure is marginally less compressed, as school finishing times typically occur prior to the onset of the main home-bound commuter peak, allowing for spreading of traffic volumes. Additionally, this home-bound commute exhibits a unique spatial pattern, where our higher-order coastal roads consistently carry a higher proportion of southbound traffic. This indicates a local preference to utilise the efficiency of major inland arterial corridors for the morning outbound trip, while opting for coastal routes for the return journey later in the day.
- **The "Weekender" Clash:** A distinct peak occurs on Friday afternoons. The *Economic Growth and Tourism Strategic Plan 2025–30* notes the region attracts 1.2 million visitors annually, with 84 per cent being domestic day-trippers. When the standard home-bound commuter traffic combines with inbound tourism and "weekender" travel heading to the McLaren Vale

DRAFT

and Fleurieu Peninsula, network capacity is tested. This is further compounded during school holidays and public holiday long weekends when visitation typically increases.

The Shift in Working Models

The standard commuting baseline has been altered by the COVID-19 pandemic, which acted as a catalyst for changes to routine movement patterns. Census data indicates the proportion of residents working from home increased from 3.5 per cent in 2016 to 9.0 per cent in 2021 as a direct result of this shift, with the upcoming 2026 Census to provide further insight into whether this trend has continued. While the resulting structured hybrid work model (typically one to two days per week at home, or on an ad hoc basis) softens the total volume of peak arterial trips, it displaces traffic locally. Traditional commutes are increasingly replaced by midday suburban movements, transferring operational demands onto the local residential road network.

Traffic Management

Traffic management within the City of Onkaparinga requires balancing the movement of vehicles with the safety and amenity of local neighbourhoods. The road network contains legacy designs that historically prioritised vehicle movement, often resulting in wide, straight local collector and distributor roads that inadvertently encourage inappropriate travel speeds.

Due to the scale of the road network and modest council resources, it is not always possible to implement ideal, best-practice infrastructure upgrades to completely address these legacy deficiencies. However, traffic issues can still be managed holistically through feasible, network-wide interventions. This may include the implementation of precinct-wide speed limit reductions, along with low-cost traffic calming treatments to address speeding issues on problematic urban roads with long, straight sections that encourage higher speeds.

Strategic Displacement and Rural Rat-running When local urban roads are treated to manage speed and volume, traffic is often displaced. This is a deliberate strategy when it encourages vehicles back onto the state-managed arterial road network, which is designed to carry higher volumes over greater distances, or higher order council roads. A well-designed local urban road ensures travel speeds and vehicle volumes remain appropriate while facilitating local movement.

Traffic displacement presents a more complex challenge in rural areas, where state-led infrastructure projects can inadvertently attract long distance “rat-running” on local roads. For example, the recent duplication of Victor Harbor Road which involved the installation of a new roundabout at Quarry Road, has created an attractive bypass route. Traffic volumes have subsequently increased on Quarry Road, Seaview Road, Kays Road and Whitings Road as motorists seek to avoid travel through the McLaren Vale township. Council continues to investigate options to mitigate these specific rural network pressures and protect the safety and amenity of adjacent residents.

School Zones and Self-explaining Roads Driver behaviour and parking non-compliance around our schools creates persistent, daily network pressures. Rather than relying exclusively on parking enforcement which may only result in short-term behaviour change, there may be opportunities to achieve permanent solutions through infrastructure upgrades. Implementing physical features such as lane narrowing, kerb protuberances and strategic landscaping clearly dictates appropriate driver behaviour and physically prevents vehicles from stopping in unsafe or prohibited locations. As schools routinely generate a large volume of customer enquiries, along with the need to prioritise safety for our most vulnerable road users, provision of upgrades usually represents a good return on investment.

Unmade Roads and Antisocial Behaviour The rural network experiences distinct pressures from hooning and antisocial four-wheel drive access on unmade roads, which creates environmental

damage, noise impacts, maintenance burdens and bushfire risks. To manage this, council actively utilises Section 32 of the *Road Traffic Act 1961* to formally close problematic unmade roads to motor vehicles.

Physical barriers, gates and signage are installed to enforce the closure, while the design ensures the routes remain open and accessible for passive recreational users, including pedestrians, cyclists and horse riders. This statutory process provides a highly effective and flexible traffic management tool, as the closures can be legally reversed if future strategic network demands or adjacent developments require the road to be reopened.

Emerging Technology

The rapid evolution of transport technology is fundamentally changing how the road network operates. Consistent with Austroads guidance, the integration of new vehicle technologies over the coming decades is a key consideration for future network planning. Preparing for these likely scenarios is essential to ensure the network continues to operate safely and efficiently. Managing the local road environment for this transition requires adapting physical infrastructure, addressing new operational risks and building digital capability to support our function as a local road authority.

Micromobility and Active Transport

Following the legalisation of privately owned micromobility devices in 2025, the proliferation of e-bikes and e-scooters presents the most immediate change to daily network operations. These devices alter the speed and spatial requirements of active transport. Safely and efficiently accommodating a wider variety of users requires rethinking traditional road space allocation, updating shared paths and improving crossing facilities to manage interactions between pedestrians, cyclists, micromobility users and motor vehicles in constrained urban environments.

As higher-density developments increasingly reduce off-street car parking to encourage lower car ownership, there is a growing need to accommodate micromobility in areas of our city. This requires consideration for the provision of charging infrastructure and dedicated storage within new buildings, such as end-of-trip facilities at workplaces and within higher-density residential dwellings, as well as at major public transport nodes and other social infrastructure. Proactive planning is necessary not only to prevent these devices from cluttering public footpaths and impeding pedestrian movement, but also to carefully manage the elevated fire risks associated with lithium-ion battery thermal runaway in residential and commercial settings.

Electric Vehicles (EVs)

Council strongly supports the transition to EVs to reduce transport emissions. As outlined in the *Electric Vehicle Charging Infrastructure on Local Government Land* policy, council generally will not own or operate public charging infrastructure. Instead, the approach focuses on facilitating private sector provision on local government land where a clear community benefit can be demonstrated. When facilitating these public facilities, it is critical to ensure they are fully accessible for all users, including people with disability. Consistent with Austroads guidance, this requires charging operators to design infrastructure that removes physical barriers across the entire charging journey and complies with universal access standards.

Beyond charging infrastructure, EVs introduce new operational pressures for traffic incident management.

A further consideration for the road network is the increased mass of battery-electric vehicles, which are typically heavier than their internal combustion engine equivalents. This additional weight generates significantly higher kinetic energy during a collision. Consequently, legacy roadside safety infrastructure, such as standard steel guardrails, may not have the capacity to

DRAFT

safely contain or redirect heavier vehicles. Ongoing network management will need to account for revised standards to reduce the risk of vehicles over-penetrating or under-riding existing barriers.

In addition to safety barriers, the combination of increased vehicle mass and the high initial torque characteristic of electric motors accelerates pavement wear. Heavier electric vehicles increase the structural loading on local road pavements. Furthermore, the use of regenerative braking systems places additional stress on sprayed seal surfaces, particularly during turning movements or on newly laid seals. To manage these impacts, future pavement designs and road maintenance strategies will need to adapt to ensure the ongoing integrity of the local network.

Digital Infrastructure and Connected Vehicles

While fully autonomous vehicles remain a longer-term prospect, the network must be prepared both physically and digitally for Advanced Driver Assistance Systems (ADAS) and connected vehicles. Physically, this places a heightened maintenance priority on clear, continuous line marking and signage, which are identified by Austroads as essential for machine vision to function correctly and keep traffic moving smoothly.

Digitally, the road network is increasingly managed as a data asset. Council is already harnessing this capability to better understand network pressures, identify safety risks and optimise operations. This includes subscribing to a connected vehicle data platform to monitor vehicle speeds and movement analytics across the network. Additionally, council has trialled the capture of point-cloud data from vehicle scanners along 32 kilometres of the network to support an artificial intelligence-assisted road assessment program (Ai-RAP).

Intelligent Transport Systems (ITS) and Local Innovation

While DIT retains primary responsibility for overarching network controls such as speed limit setting and traffic signal phasing, council actively manages local network operations through targeted technology.

Foundational innovations are already being deployed, including the Rural Junction Active Warning System (RJAWS) “Lite” intersections in McLaren Vale and smart parking infrastructure in Port Noarlunga. As Cooperative Intelligent Transport Systems (C-ITS) mature, these local installations present opportunities for future integration. This may eventually allow council infrastructure to communicate directly with connected vehicles, providing automated safety warnings or assisting with emergency braking protocols at critical intersections to reduce the risk of collisions, while simultaneously optimising the flow of traffic through the network.

DRAFT

7. Improvement Plan

Updates to the Plan

The previous Road Network Plan, published in 2016, outlined an Improvement Plan focused on four initiatives: commodity routes investigations, street design guidelines, rear access laneways, and a traffic precinct study. The approach to these initiatives has evolved and is addressed as follows:

- **Commodity Routes:** The 2016 plan proposed investigating and mapping specific commodity routes. This approach has been modified to further support economic activity by providing a road network that facilitates appropriate and effective access while minimising operational constraints, as outlined in Section 5.
- **Street Design Guidelines:** The previously proposed Street Design Guidelines were not formally adopted. Council now prioritises urban design outcomes by utilising our specialist internal landscape and urban design staff to provide input on development proposals on an as-needed basis to compliment our typical civil engineering requirements.
- **Rear Access Laneways:** The required design parameters for rear access laneways are now formally specified within the M1 Local Roads cross-sections of this document.
- **Traffic Precinct Studies:** The proposed precinct-based traffic studies are now streamlined through the application of the Movement and Place framework. This provides a flexible, principles-based approach and removes the need to commission standalone traffic management studies that can quickly become outdated.

With these previous items either being addressed or transforming as transport practice has evolved, the current Improvement Plan focuses on proactive, data-driven methodologies for network management. The initiatives detailed in the following sections address Intelligent Transport Systems (ITS) and traffic signal asset management, spatial mapping of the Movement and Place framework, proactive Network Risk Assessments, safety barrier compliance, and automated rural curve advisory signage assessments.

Next Steps and Continuous Improvement

The initiatives outlined below represent strategic focus areas for the ongoing management of the road network, rather than a prescriptive action plan. Identifying these themes guides council's continuous improvement efforts, providing the flexibility to adapt priorities, allocate resources, and integrate evolving transport methodologies as future opportunities arise.

Capital Works

Our known pressures and upcoming capital works are recorded within the Project and Capital Works (PCW) program, predominantly under the Roadworks and Traffic Management categories. Project priority is regularly reviewed, giving consideration to any changes in the network, surrounding environment, traffic volumes and composition etc.

Many of our significant projects that are within the PCW pipelines are discussed within the body of this document.

Intelligent Transport Systems and Traffic Signals

In November 2020, following the South Australian Government's decision to outsource state road network maintenance to private commercial providers, the Department for Infrastructure and Transport (DIT) ceased providing maintenance services for council-owned traffic signals, pedestrian crossings, and school crossings. This reform required local councils to independently procure and

DRAFT

manage private contractors for specialised electrical assets that had historically sat outside standard municipal operations. This transition represents a direct example of cost-shifting onto local government, transferring long-term financial and operational responsibilities without associated funding or established technical frameworks.

Today, the City of Onkaparinga manages an expanding portfolio of Intelligent Transport Systems (ITS) and traffic control devices across the local network. Our current asset base includes:

- 2 signalised intersections.
- Over 50 signalised pedestrian crossings, which includes Pedestrian Actuated Crossings (PACs), Koala crossings at schools, and wombat crossings supplemented by flashing signals.
- 5 Rural Junction Active Warning Signage (RJAWS) sites in McLaren Vale.
- Smart parking infrastructure in Port Noarlunga, comprising camera detection and electronic wayfinding signage providing real-time parking space availability.

Council currently manages these assets through external service agreements to maintain operational continuity. To date, the management of this infrastructure has been predominantly reactive, focusing on addressing faults and emergency callouts as they arise. As these digital and electrical assets age and expand across our network, relying solely on reactive maintenance presents significant risks regarding equipment failure, technology obsolescence, and unbudgeted capital expenditure. To ensure ongoing network safety and operational reliability, council must transition towards a structured, proactive asset management approach.

Moving forward, council will better utilise contractor condition data and inspection reports to drive forward-looking capital planning. By transferring operational maintenance coordination to the Civil Maintenance team, the Infrastructure Asset Management team can focus specifically on strategic asset planning. This will enable council to accurately identify deteriorating assets, plan for the timely renewal of end-of-life components, and integrate future replacement liabilities into our Strategic Asset Management Plan and Long Term Financial Plan.

Movement and Place Mapping

To support the new Movement and Place framework outlined in Chapter 4, there is strategic value in spatially mapping Place intensities across the city to complement our existing Movement classifications. While the movement function of our roads is clearly established through our existing hierarchy (M1 to M4), place intensity is not yet systematically mapped across the network.

Spatially defining Place intensity presents practical challenges because place characteristics are dynamic, evolving, and difficult to keep continuously updated. While statutory zoning under the South Australian Planning and Design Code offers a high-level baseline, relying solely on zoning can be misleading, as it does not differentiate between established activities, vacant allotments, or under-developed land. A more reliable and responsive approach would be to utilise the South Australian “Land Use Generalised” spatial dataset published via Location SA. Because this dataset is updated annually, it provides a far more accurate representation of actual, on-ground land use activity.

By combining generalised land use data with local pedestrian attractors, active retail frontages, and civic destinations, council could model an indicative Place intensity layer (P1 to P4) across the city. Intersecting this Place mapping with our established Movement hierarchy would enable road

segments and adjacent land parcels to be categorised into the four primary Movement and Place environments: Main Roads, Main Streets, Civic Spaces, and Local Places.

This spatial representation would adopt the standardised colour palette recommended in Austroads guidance (AP-R739-25), utilising contrasting blue, plum, gold, and green palettes to clearly distinguish each street environment. Establishing this spatial mapping would provide an effective visual tool to identify network misalignments, inform local street design priorities, guide speed environment reviews, and support future infrastructure investment decisions.

Network Risk Assessments

Reliance on crash history alone is no longer an acceptable method for planning road safety upgrades. To move towards "Vision Zero", we must shift from a reactive approach to a proactive one. This requires a comprehensive risk assessment to identify inherent safety deficiencies in the road infrastructure before a crash occurs.

The *National Road Safety Strategy 2021–30* establishes a clear national policy position, stating that a key change expected to be seen over the 10 years of the strategy includes that "*road safety is a key objective of local government road network management practices and the majority of councils have network safety plans"*.

The subsequent *National Road Safety Action Plan 2023–25* sought to operationalise this through fit-for-purpose tools. This was delivered through the *Local Government Network Risk Assessment Frameworks* report, which outlines various methods for councils to assess safety risk depending on their available resources and data.

In anticipation of this move towards network-level risk assessments, in 2023 we undertook a trial of Ai-RAP (Accelerated and Intelligent Road Assessment Program) on a 32km network of roads covering both urban and rural areas. This technology involves the capture of detailed point-cloud data along the roadway to automate the assessment process and generate star ratings, making Ai-RAP faster and more affordable than traditional manual assessment methods.

This trial demonstrated that "star rating" our network can be a viable and effective solution, particularly if data collection is coordinated with other asset management projects such as pavement condition audits. We will continue to explore opportunities to undertake more comprehensive network risk assessments as technology continues to improve and become more feasible for councils to invest in.

The primary value of this data is not just the risk rating itself, but the ability to generate safety intervention priority plans. These plans allow us to:

- identify high-risk locations where crashes may not yet have occurred
- model the safety benefit of specific treatments (e.g. safety barriers or shoulder sealing)
- prioritise capital works based on the greatest potential to save lives and prevent serious injuries.

By adopting this proactive approach, we ensure that our investment is directed where it is needed most, rather than simply reacting to sporadic incidents as they occur.

DRAFT

Safety Barriers

The installation of road safety barriers is a primary Safe System treatment to mitigate the severity of run-off-road crashes. While contemporary guidance advocates for maximising safety barrier deployment to reduce road trauma, practical implementation often presents a profound challenge for local government networks.

The rural road network contains severe physical and spatial constraints that often preclude the installation of compliant safety barriers. The frequent spacing of residential driveways and side-road intersections routinely prevents the achievement of the minimum continuous barrier system lengths required by contemporary Manual for Assessing Safety Hardware (MASH) testing protocols. Furthermore, installation is frequently impeded by the proximity of mature trees, which dictate the preservation of structural root zones and tree protection zones. Introducing barriers into constrained verges can also compromise the safety and amenity of other road users by reducing the available roadside width necessary for people walking, cycling or riding horses, as well as eliminating safe pull-over areas for motor vehicles.

The design and specification of safety barrier systems has also increased significantly in complexity. Navigating prescribed MASH performance levels and evaluating site risk against the Network Roadside Risk Intervention Threshold (NRRIT) requires specialised expertise. Due to this complexity and recent industry accreditation requirements, council currently lacks the in-house technical capability to design safety barrier installations and relies on external consultants.

A substantial, though currently unquantified, proportion of council's existing safety barrier portfolio consists of older "legacy" products that do not meet current MASH compliance standards. Upgrading these legacy barriers is rarely a straightforward replacement. Achieving contemporary deflection tolerances and system length requirements typically necessitates major civil works, land acquisition, or vegetation removal, which may be physically impossible in constrained locations.

To address these challenges and guide future investment, council has identified two key strategic objectives:

- **Asset Audit:** A comprehensive audit of all existing safety barrier assets is required to accurately identify the location, type, and condition of all legacy products.
- **NRRIT Assessment:** A network-wide NRRIT assessment can be used to establish target risk levels and proactively prioritise the highest-risk sites across our rural road network. While the NRRIT assessment process is effective at quantifying network risk, detailed design investigations will still be necessary to determine the physical feasibility of installing barriers at any identified locations.

These assessments can then be used to inform the development of a dedicated Project and Capital Works (PCW) sub-category for safety barriers. This program will target the installation of new MASH-compliant barriers at the highest-risk locations where feasible, alongside the progressive upgrade of existing legacy barriers.

Critically, the program may also involve the removal of legacy barriers in locations where engineering assessments determine that the barrier itself, which is a rigid object, presents a greater crash risk than the surrounding roadside environment. Because the community may generally perceive all safety barriers as being inherently protective, any proposed removal of barrier will need

DRAFT

to be supported by a targeted communications approach that clearly explains the Safe System rationale underpinning the decision.

Rural Road Curve Advisory Signage

A fundamental requirement of road network management is ensuring that alignment geometry is suitable for the speeds at which drivers operate their vehicles. Where a horizontal curve is classified as substandard, meaning the safe advisory speed is at least 15 km/h less than the 85th percentile approach speed, it requires specific warning signage, an advisory speed plate, and potentially Curve Alignment Markers. Providing consistent and accurate curve warning signage assists drivers in maintaining control and preventing road departure crashes.

Council technical staff currently assess curve advisory speeds on an as-needed basis using a manual ball bank indicator. This field survey process is labour-intensive, which restricts our ability to assess our entire rural road network. Consequently, council cannot guarantee that all rural curves currently display signage compliant with current technical standards.

The accuracy and presence of existing curve warning signage can be compromised over time by several factors:

- Signs being vandalised or knocked down and either not replaced or replaced incorrectly.
- Changes to posted speed limits, which dictate that a survey should be made of all advisory speed signs within the zone to ensure they remain correct.
- Incremental changes to the road surface, alignment, or pavement superelevation during routine maintenance, which can alter the physical forces exerted on a vehicle and change the curve's actual advisory speed.

To address this network gap, council will investigate the use of automated or spatial assessment techniques, such as desktop road geometry data acquisition methods, to systematically review the rural road network. This approach aims to efficiently produce a comprehensive program of curve signage requirements. Council's in-house Sign Shop can then utilise this data to update existing signage or install missing devices during routine maintenance inspections, ensuring consistent and compliant curve delineation across the network.

Outdoor Dining and Footpath Trading Guidelines Alignment

The City of Onkaparinga's *Outdoor Dining & Footpath Trading Guidelines* regulate the use of public footpaths to encourage vibrant shopfronts while ensuring safety and convenience for patrons and pedestrians. To balance these needs, the guidelines require site-specific risk assessments to address public safety, which may necessitate actions such as the installation of protective bollards.

As a continuous improvement initiative, council may consider exploring the adaptation of the new Onkaparinga Movement and Place framework to these trading guidelines. Integrating the strategic movement and place intensity classifications will allow council to evaluate whether standard kerb setbacks and pedestrian clearances remain universally appropriate, or if they should be tailored to a street's specific function and the adjoining speed environment. For example, high-activity 'Main Streets' or 'Civic Spaces' may require dynamically adjusted functional zones to safely manage the complex interactions between outdoor diners, high pedestrian volumes, and moving traffic, ensuring the streetscape safely balances commercial activation with network movement demands.

DRAFT