

Port Stephens Road Futures Strategy

2026



This Road Futures Strategy sets out a practical plan to optimise how we plan, maintain, construct and fund our roads to ensure the best value and outcomes for our community.



PORT STEPHENS
COUNCIL

GUUDJI YIIGU

(GOO-JEE IK-KOO)

We welcome you to Port Stephens – part of the Worimi Aboriginal Nation. Port Stephens Council acknowledges the Worimi people as traditional owners and custodians of the lands and waterways on which we all live, learn, work and play.

We value and respect the Worimi people and the legacy 60,000 years of Aboriginal Nation traditions and culture brings with it. As part of Council's culture of acceptance, diversification and harmony we walk alongside the Worimi people on a journey of listening and learning.

Together we will strive to make this a better place for all peoples. As guardians of these lands, we ask that you tread lightly to help preserve the biodiversity and respect those who came before as well as those who will follow.

Artwork by Regan Lilley.





A message from the Mayor

Safe and reliable roads are a key priority for Council and our community. The Port Stephens road network covers more than 790kms and includes regional roads, local sealed and unsealed roads, and gravel roads. Maintaining this extensive network is becoming increasingly challenging as assets age, costs rise, and weather events place additional pressure on our roads.

In many locations across Port Stephens, the road network was constructed many decades ago and in some cases, built in ways that would not meet today's engineering standards or planning practices. Parts of our network are located on sandy soils and flood prone land creating ongoing challenges for maintenance and renewal.

At the same time, the condition of our roads has become an even greater challenge in recent years. Severe rainfall events and natural disasters have caused widespread damage to our road network. These events accelerated pavement deterioration, increased maintenance and have added increasing costs to already limited budgets.

Since the Council election in September 2024, improving the Port Stephens road network has been a clear priority. Community surveys, engagement activities and election feedback has consistently identified road condition and maintenance as one of the most important issues for Port Stephens residents. The feedback from our community is clear – residents want safer and more reliable roads.

We've developed a Roads Futures Strategy to help guide our roads maintenance and renewal into the future. It highlights current initiatives that are working well and also opportunities for improvement. This is a long term strategy to expand our road maintenance and focuses on improvement over a longer period of time. Although impacts won't be visible immediately, it will guide us to deliver the greatest benefit to residents, business and visitors, improving the liveability of our place in the future.

A handwritten signature in black ink that reads "Leah Anderson". The script is fluid and cursive.

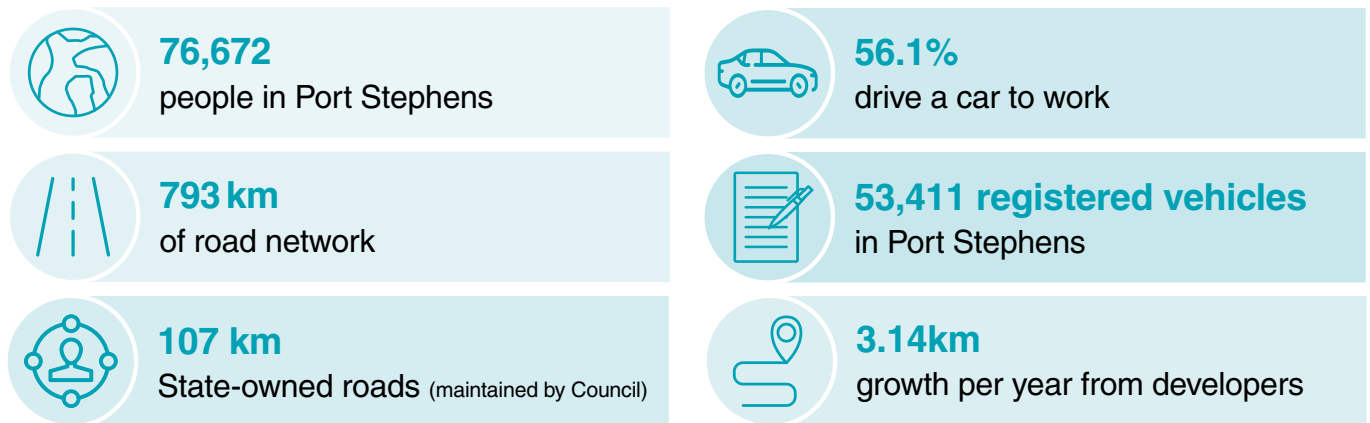
Leah Anderson
Mayor of Port Stephens

Introduction

The Road Futures Strategy is designed to create the direction for a practical and sustainable approach to how we plan, maintain, renew and fund road infrastructure across Port Stephens. It provides a practical and sustainable framework for decision making ensuring available resources are invested where they deliver the greatest benefit to the community.

By aligning asset management, service delivery and funding priorities, the strategy aims to improve the condition, reliability and resilience of the road network while supporting the long term needs of our growing community.

Our road snapshot





What we've heard

Our annual Community Satisfaction Survey aims to understand how satisfied our residents are with the services, facilities and infrastructure provided by Council. Like many Councils across Australia, road condition is the greatest area of dissatisfaction.

Dissatisfaction in the community about roads



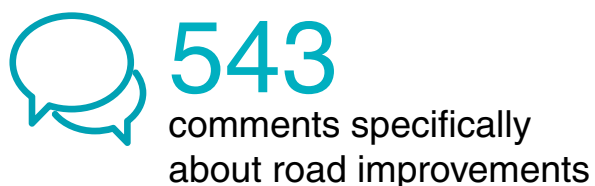
Liveability Index

The Port Stephens Liveability Index measures the quality of life experienced by residents and visitors. It provides insights into the community priorities and perceptions of a place.

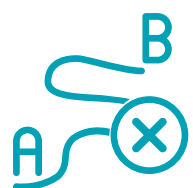
One of the key factors influencing liveability is evidence of public investment, particularly in infrastructure that people use every day. The conditions of our roads contribute significantly to how people experience Port Stephens and their overall satisfaction with their place.



- **Lowest** performance across all 50 attributes
- **Lower** than the NSW performance average
- **Lower** than the National performance average



Our challenges



\$100m +
Over \$100 million of natural
disaster damage to our
road network

Our objectives

We're committed to improving the way we manage our roads. The Roads Futures Strategy aims to:

01

Improve how we respond to community requests.

02

Increase funding and improve how it is allocated.

03

Optimise how we undertake road maintenance and construction.

04

Maximise allocation of funds for road construction.

05

Align the organisational structure and resources to effectively manage our roads.

06

Improve community communication about upcoming and ongoing road works.





How we manage our roads



We plan for
our roads



We maintain
our roads



We renew
our roads

We plan for our roads

When planning road improvements, Council assesses the condition of the road network to determine the most appropriate treatment within available funding.

Road conditions are monitored using a combination of visual inspections, specialised equipment, laser-based condition assessments and emerging technologies such as artificial intelligence. These assessments identify issues, including pavement roughness, rutting, cracking, surface condition, seal performance, and other defects that affect the safety, performance, and lifespan of the road.

The results are used to calculate a Pavement Condition Index (PCI), which provides a consistent measure of road condition across the network. PCI data helps Council understand both current and projected road conditions, identify renewal priorities and make informed decisions about future investment in the road network.

Once a road has been assessed, a range of treatment options is considered. Each option is evaluated based on cost, expected performance, asset life and the condition of the underlying pavement. This process helps determine the most effective use of available funding and ensures the right treatment is applied at the right time.

We maintain our roads

We maintain our roads by pothole patching, heavy patching, grading our gravel roads and making sure our road shoulders and table drains are clean.

Pothole patching

A temporary repair to fill a hole to reduce the risk for road users and stop them from getting larger. Patching keeps our roads safer until a permanent repair can be scheduled.

43,894

potholes repaired in 2024/25



We use a cold mix or hot mix to fill potholes.

When it's raining, a cold mix is the best option. It's a surface-level fix and less effective than hot mix, in dry conditions, but if it's raining, hot mix won't set properly. When it's wet we need to fill as many holes as we can to avoid risk to our community.

We use hot mix to repair substantial potholes in dry weather when we know the repair will last. The pavement around the pothole is excavated, then filled and sealed with hot asphalt.

Heavy patching

We remove failed sections of pavement and replace them to repair the road surface and reduce damage spreading.

13,520m²

of heavy patching repairs in 2024/25

Gravel road grading

We use machinery to smooth the existing gravel on unsealed roads after wear or rain damage.

93,320m

graded in 2024/25

Sealed road shoulder and table drain clearing

We mechanically remove debris and vegetation from road edges and drains so stormwater can flow away and won't pond on the pavement.

10,500m

completed in 2023/2024

We construct roads

We build and maintain roads in several ways, including resealing surfaces, repairing or rebuilding damaged pavement, upgrading roads, re sheeting gravel roads, and designing and managing these projects.

Resealing roads

We recoat existing sealed roads to protect them from wear and rain damage and extend their life. Sealing can be done as a two coat seal, an asphalt seal, or a rejuvenation coat.

17km

resealed in 2025/26

Rehabilitation

We repair the road by fixing and rebuilding the existing pavement using mechanical and binding treatments, to make it perform like new.

3.59km

rehabilitated in 2024/25

Reconstruction

We rebuild the road, adding new materials to ensure it meets current standards for traffic, safety and drainage.

1.35km

reconstructed in 2024/25

Gravel road re-sheeting

We add fresh gravel to an unsealed road to improve the ride and make future maintenance easier.

3.98km

completed in 2024/2025



For all construction projects, we provide engineering design and project management to ensure works meet modern standards, are fit for purpose, and are delivered with appropriate quality.

Our current approach

Our road network is 793km long including both sealed and unsealed roads. This figure includes other government owned roads that Council maintains on their behalf..

Service levels

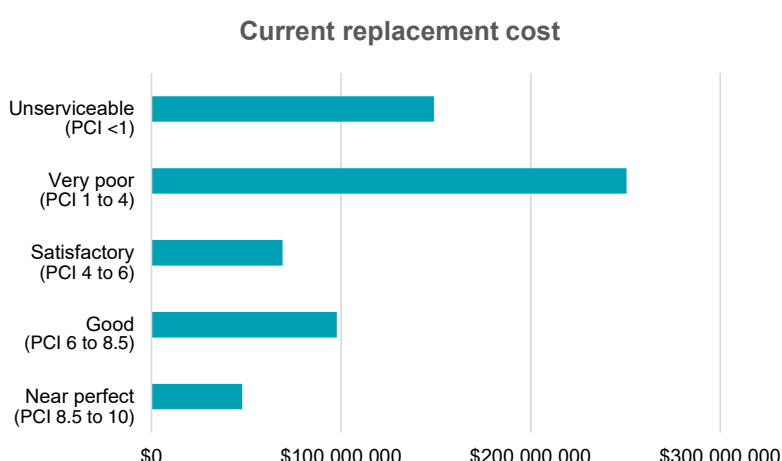
Our Strategic Asset Management Plan (SAMP) sets out how we manage and maintain our assets, including the road network over the next 10 years. Developed in line with industry best practice, the plan establishes the desired levels of service required to maintain a safe, reliable and sustainable road network for our community.

The SAMP identifies the investment needed to achieve and maintain these services levels. Currently, funding for road maintenance is below the level required to meet these targets. As a result, many of our roads are being managed below the desired levels of service.

Without additional investment or changes to how we plan, prioritise and deliver road works, the condition of the road network is expected to continue to deteriorate over time.

	Desired annual service levels		Current annual service levels	
	Years	% of total road network	Years	% of total road network
Gravel re-sheeting	every 8 yrs	12.5%	every 18 yrs	5.7%
Resealing:				
– Two coat	every 15 yrs	7%	every 55 yrs	1.8%
– Asphalt	every 35 yrs	3%	every 121 yrs	0.9%
– Asphalt rejuvenation	every 10 yrs	10%	every 24 yrs	4.3%
Heavy patching	20% every 30 yrs	0.7%	7% every 30 yrs	0.2%
Pavement rehabilitation	every 50 yrs	2%	every 100–150 yrs	0.8%

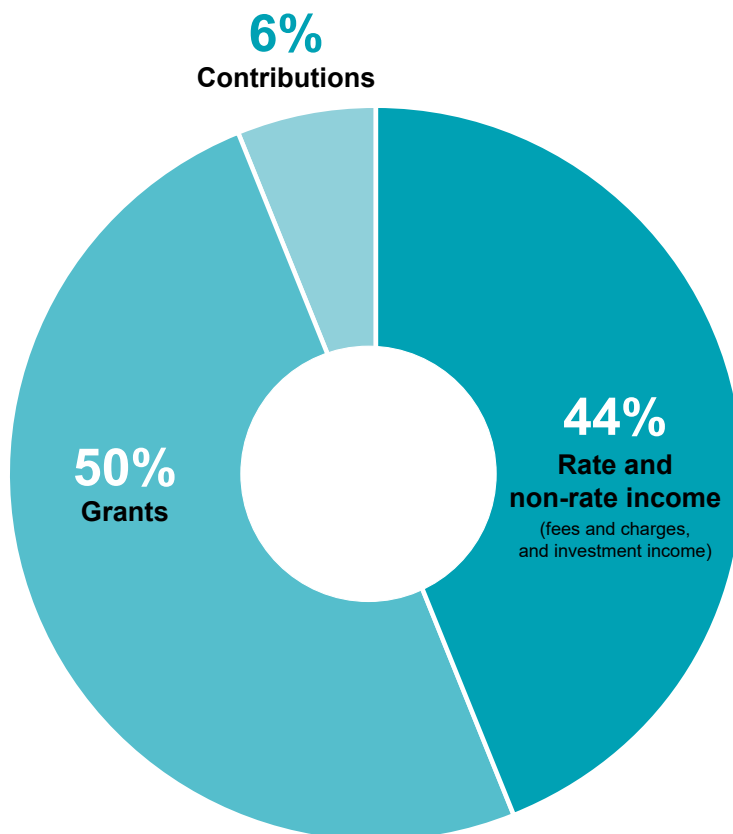
The current condition of our road seal network is shown in the chart to the right. The road condition is shown as a PCI (Pavement Condition Index). The higher the PCI, the better the road seal condition. The deterioration of our road network has been accelerated by Natural Disasters over the past 5 years.



With limited funds available, we prioritise road repairs based on speed and most frequently used, focusing first on the roads that have the greatest impact on safety and the community. Roads are assessed according to their condition, age and how heavily they are used, with busier roads a priority.

Funding approach

Our road network is primarily funded through external grants, rates revenue and other income generated from investments, returns, and fees and charges, including paid parking. To maximise value and make faster repairs and improvements, we heavily leverage external funding opportunities, including developer contributions and State and Australian Government grants. By using this funding to support co-contributions with road projects ready to commence, we're able to attract additional investment, accelerate work and make our road network safer for our community.

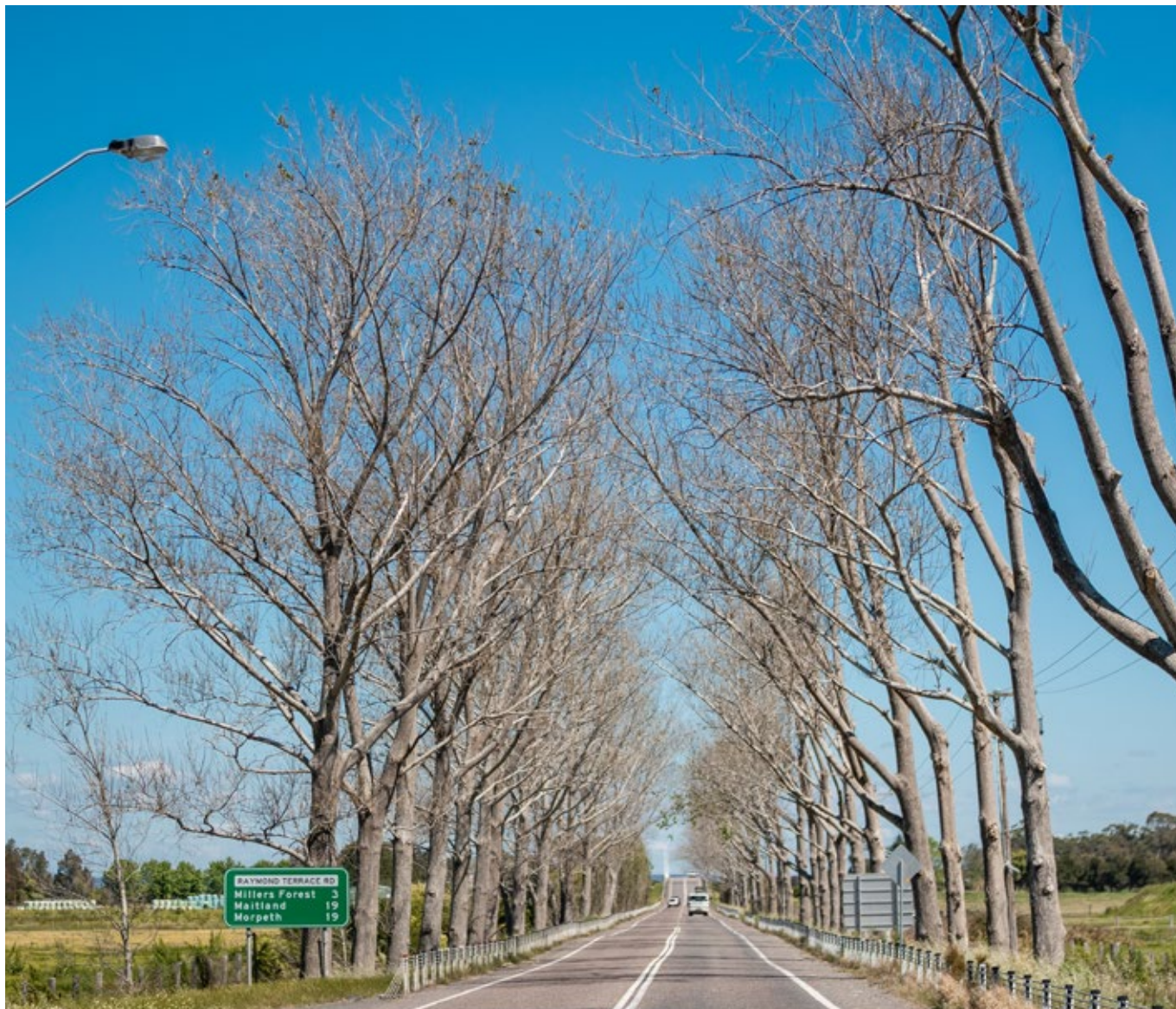


Our road construction program is directly supported by available grants. Grant conditions can determine which projects proceed and when, and these works aren't always additions to our normal program.



Roads Acceleration Program (RAP)

The Roads Acceleration Program represents a significant increase in investment in the Port Stephens road network. Since its commencement, Council has increased road funding by more than \$20 million through a combination of the Special Rate Variation and State and Australian government grant funding. This commitment has been further strengthened through an additional \$9 million investment over three years, with the first year funded through the reallocation of the Natural Disaster Reserve. To sustain this investment beyond existing funding sources, we're reviewing our Council owned road reserves that are no longer needed for road purposes. This would provide us with extra funding to repair roads more quickly and all proceeds would be reinvested into making our road network safer and more reliable across Port Stephens.



Our Strategic Asset Management Plan (SAMP) includes an Asset Funding Strategy to prioritise funding for the renewal and maintenance of existing assets.

The Asset Funding Strategy identifies the following potential funding sources for further exploration:

- Sales of commercial or Council land
- Returns from investments
- Loans
- Operational savings
- Government grants
- Contributions from other organisations and committees
- Reallocating funds from new assets to renewal
- Developer contributions
- Voluntary Planning Agreements (VPA) and Works In-Kind Agreements (WIKAs).

While these funding sources can contribute to road maintenance and renewal, Council is governed by legislation, policies and funding conditions that determine how specific income sources, such as grants, contributions and reserve funds, can be used. As a result, not all available funds can be automatically redirected to roads.

Reviewing our road management

The review of our road management has looked at how we plan, maintain, construct and fund our roads.

Reviewing how we plan and maintain our roads

What we reviewed:

How we plan our roads

- Artificial Intelligence (AI) camera hardware and software to collect road defect data.
- Checking the data and assumptions we use to select the best option to repair roads.
- Examined future road conditions under different funding scenarios.
- Showing how different funding would be used for different types of road pavement types.
- Setting service levels for roads based on their role such as busier roads getting higher priority.

How we maintain our roads

Potholes and heavy patching:

- How we find defects and the data we need to repair them.
- How our current system acknowledges and records defects.
- Repair methods and materials for dry and wet conditions.
- How our practices compare with other councils.
- How customer requests are closed.
- How insurance claims are handled.
- The machinery we use and how quickly we can mobilise crews.
- Safety when working on busy roads.

Gravel road grading, sealed road shoulder and table drain clearing:

- Machinery and equipment used.
- How crews are mobilised.
- Current work frequency and the frequency we would like to achieve.

Our key findings:

- Inspections are mostly manual, and we're trialing AI inspections as part of an NSW Government trial with industry leaders.
 - AI inspection trials are helping target maintenance work more effectively.
 - Our road management meets the safety and risk standards required by our insurance providers.
 - Benchmarking shows that the way we manage, repair and renew our roads is similar to other Councils.
 - Updated maintenance specifications help us achieve more predictable and repeatable results.
 - Hot mix pothole patching is confirmed as effective for reducing risks and pavement protection.
 - Crews respond quickly but are stretched during extreme weather events.
 - Extra resources, including contractors, are used at peak times.
 - Crew safety in wet conditions remains a priority and can reduce productivity.
 - Our current investment in levels of service is insufficient, so we are not achieving the desired service standards.
- We will continue using:
- The jet patcher truck improving frequency of repairs and preventative maintenance for regional areas.
 - Small trucks for quick responses to small pot hole repairs.
 - Specialised pot hole material for high wet weather periods given the success of the pothole trial.

Reviewing how we construct our roads

What we reviewed:

- How we manage projects from start to finish.
- How we manage contracts with builders and suppliers.
- How we check and assure quality work.
- Roles and responsibilities at each stage of work, including identifying a need to handing over finished work.
- Current construction staff and their capacity.
- How we build and repair roads.
- Sharing equipment and crews across Council and with industry partners.
- Condition assessments of road rehabilitation work completed in the last 10 years.

Our key findings:

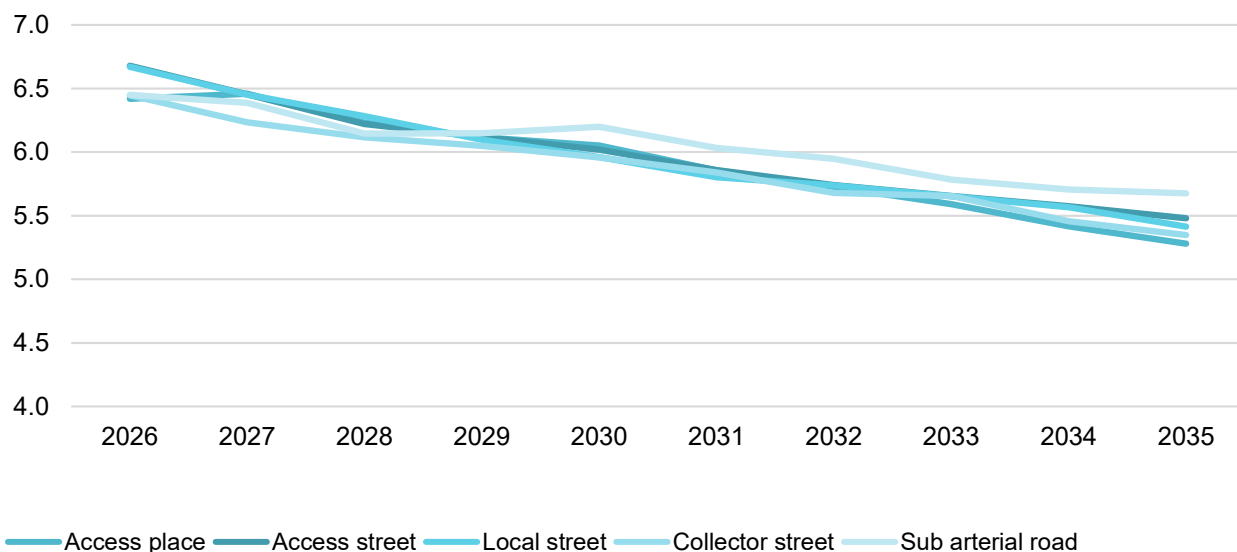
- We have a clear, well documented process for delivering projects from start to finish, with templates and guides to keep work consistent and on track.
- Our quality approach is practical and focused on getting the best outcomes for our community within available funds. It includes many industry best practice elements and is sufficient to deliver State road works under contract.
- Our construction teams, structure and equipment are flexible, letting us respond quickly when priorities change, especially when work depends on grant timing.
- A review of major road projects over \$500k from the last 10 years shows pavements are deteriorating as expected under their designs.
- Benchmarking shows our construction methods, quality and costs are similar to those of other councils.
- Recent improvements include new specific roles focused on quality, consistent procedures, scheduling and budget estimating, a review of plant and equipment use, and stronger contract management documentation for time, cost and quality.

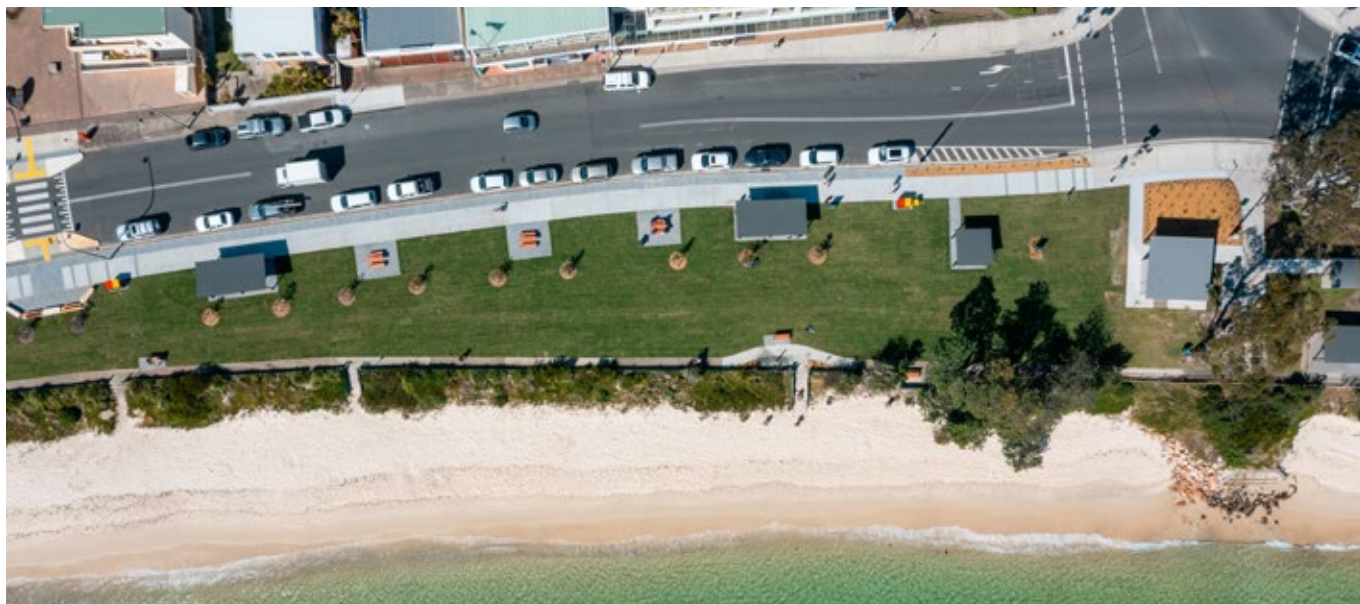
Reviewing our current funding

If we keep funding our roads at current levels, they will continue to deteriorate, significantly lowering the Pavement Condition Index (PCI) over the next 10 years.

Average road network Pavement Condition Index (PCI)

Current funding model





Funding our roads' future

Two funding options can improve our road network and deliver the greatest benefit to residents, businesses, and visitors. Both prioritise sub-arterial and collector roads, which are the main links connecting towns and villages across Port Stephens and connecting to Maitland and Newcastle. Both options aim to raise the Pavement Condition Index (PCI) for these roads, improving liveability in Port Stephens.

Under either option, local roads will continue to receive current service levels. Local roads will be prioritised by risk, with busier and higher risk routes addressed first.

Road hierarchy

A road hierarchy helps to guide how we plan, maintain and construct roads in our network. The hierarchy groups roads by their function, traffic volumes, connections, and role in the community. Roads that connect homes to places or have higher traffic are likely to receive more frequent maintenance, and lower volume roads are maintained to a level appropriate to their use. This ensures limited funding delivers the greatest overall community benefit. Our road hierarchy is outlined below.

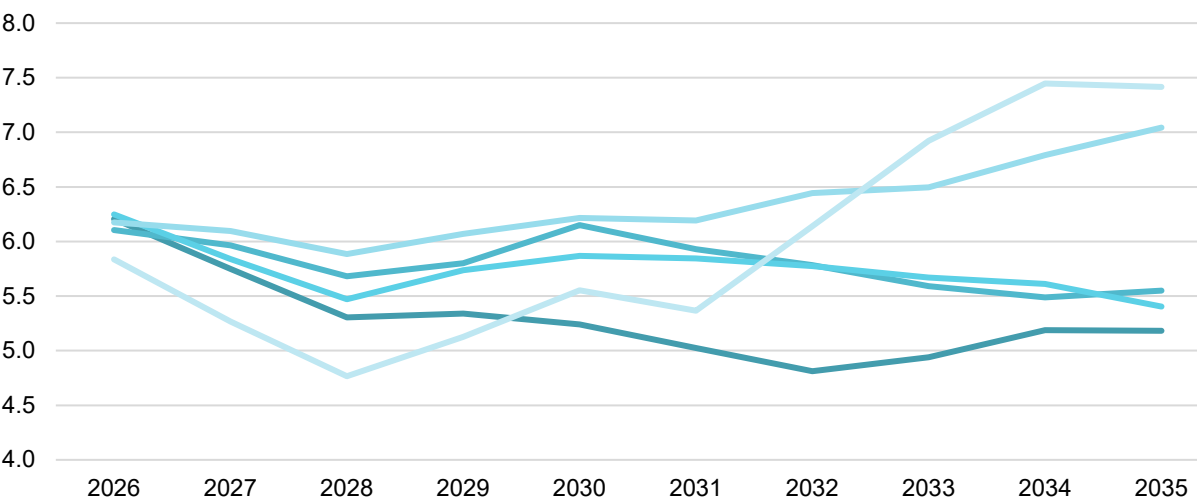
- **Access place** – The lowest level road with the primary purpose of providing local access to residential areas.
- **Access street** – Low traffic streets that connects residential areas that support pedestrian and cyclist movement with low vehicle speeds.
- **Local street** – Moderate traffic street that connect our homes to nearby shops, public transport, parks or services. Local streets are the key link between access streets to collector streets.
- **Collector street** – Busier streets that gather traffic from local streets and safely directs it onto larger capacity roads.
- **Sub arterial road** – The highest level of Council road with a primary purpose of conveying higher traffic volumes at higher speeds, or connect to larger highways.

Funding options

Proposed funding model

Under this model we would maintain current funding levels over the first 2 years of the 10 year period. From year 3, additional investment would be allocated to road maintenance and renewal through the Long Term Financial Plan using road reserve sales, property investments and the Newcastle Airport dividends.

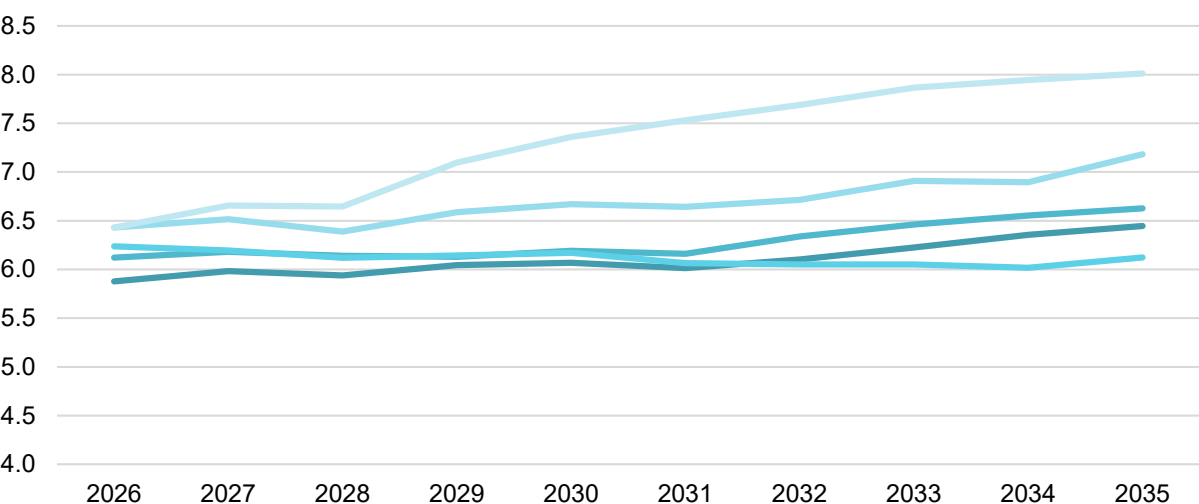
Average road network Pavement Condition Index (PCI)



Enhanced funding model

This model includes an additional investment, increasing road maintenance and renewal funding by an additional \$1 million per year until the annual extra reaches \$10 million per year.

Average road network Pavement Condition Index (PCI)



Access place Access street Local street Collector street Sub arterial road

Allowances have been made in both models for projects already committed in Councils SAMP for 2026-2027 and 2027-2028.

Our Roads Future Action Plan

This plan sets out the actions we will take to improve our road network. The actions come from our review of how we plan, maintain, construct, and fund our roads. By adopting these steps, we can reallocate funds and resources to improve how we manage roads and deliver better outcomes for the community.

Time frames for implementation are based on:

- 0-3 years (short term)
- 3-5 years (medium term)
- 5-10 years (long term)

Grouping	Option	Action	Timeframe	Our objectives					
				1	2	3	4	5	6
Planning	Defect Detection	Implement the automated Artificial Intelligence (AI) defect detection system after the completion of current trial.	Short - Medium	✓		✓		✓	
	Levels of Service	Document service levels in the SAMP based on road hierarchy	Short - Medium			✓		✓	
Maintenance	Material Trials	Complete the premium cold mix trials and implement the findings into operational standards and specifications.	Short			✓			
		Continue assessing the various materials used in heavy patching trials. This includes the re-introduction of gravel for heavy patches in certain locations.	Short - Medium			✓			
	Fleet	Introduce procedures to bring in additional and different equipment (Jet Patcher) during prolonged rain.	Short			✓			
		Review the fleet and crew required to undertake safe works in areas of high and low traffic scenarios.	Short - Medium			✓		✓	
	Crack Sealing	Increase crack sealing program beyond reseal preparation works.	Short			✓			
	Shoulder and table drain cleaning	Investigate cost-effective places to place removed materials from the shoulder and table drain cleaning to allow more frequent clearing.	Short			✓			

Grouping	Option	Action	Timeframe	Our objectives					
				1	2	3	4	5	6
Construction	Resources	Modify the existing structure to allow for smaller projects to be undertaken efficiently with fewer inputs and resources.	Short					✓	
		Continue to allow for fluctuations in required resources when the program changes.	Short - Long				✓		
Funds	Income	Implement Council's Long Term Financial Plan to gradually increase funds for road maintenance and construction	Short - Long		✓				
		Continue with Council's adopted Road Acceleration Program (RAP)	Short - Medium		✓				
		Continue to actively source additional funding through the Asset Funding Strategy	Short - Long		✓				
	Advocacy	Continue to advocate for ongoing, reliable, and direct financial support that doesn't rely on complicated grant applications.	Short - Long		✓				
		Continue to advocate to the State Government for the reclassification of Medowie Road and Lemon Tree Passage Road	Short		✓				
Overall	Organisational Structure	Modify the existing structure to allow sharing of resources across maintenance and construction for better efficiency.	Short					✓	
		Modify the existing structure to strengthen contract management, quality assurance and project management.	Short					✓	
	Customer Request System (CRM)	Review how the community's pavement defect information is addressed.	Short	✓					✓
	Reporting	Continue to report progress and outcomes in the SAMP.	Long-Short			✓			✓
	Communications	Continue communication campaigns to raise community awareness about upcoming and ongoing road works.	Long-Short						✓



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