Roads and Maritime Services in Sydney
## Contents

**Introduction** 2  
Message from the Hon. Melinda Pavey, MP Minister for Roads, Maritime and Freight 2  
Message from John Hardwick, Executive Director Sydney 3  

**Roads and Maritime Services: Who we are and what we do** 4  
Our strategic priorities 5  
Who we serve 6  

**Sydney division** 7  
Who we are and what we do 7  
Who we serve 7  
Sydney’s operating model 8  
Our network 9  

**Strategic priorities** 10  
Increase customer value 10  
Get more out of the network 12  
Keep safety at the heart 14  
Respect our community and the environment 16  
Deliver the Government’s program 18  
Partner to improve services 20  

**Enablers** 22  
Capable people. Great culture. Strong values. 22  
Innovation in technology 24  

**Our project portfolio** 27  
Infrastructure projects in Sydney 28  
North West precinct 30  
South East precinct 32
This will help to create a more connected Sydney and facilitate easier and faster travel to regional NSW.

The planned key road projects in Western and South Western Sydney including Bringelly Road, The Northern Road and the future M12 Motorway are clear examples of how we are investing $2.6 billion to boost the economy, support jobs and connect Sydney’s residents.

Meanwhile, the upgrades set to take place at major intersections across Sydney will substantially reduce journey time and improve safety, which is paramount to making our customer journeys more efficient. These investments, like the $300 million Gateway to the South Pinch Point Program, will enable people to spend less time travelling and more time at home with their families.

The NSW Government is also reducing travel times on main arterial routes through widening roads such as King Georges Road, Henry Lawson Drive and Heathcote Road, as well as improving traffic flow on the M4 from Parramatta through to the Blue Mountains with the M4 Smart Motorway upgrade.

While we tackle issues like congestion through improvements to our road network we are also supporting local communities through a legacy of jobs and highly trained workers.

With this historic investment in infrastructure, it’s critical a pipeline of skilled people is created to supply current projects while leaving a legacy of capable workers ready to tackle future projects. These jobs will support our communities to ensure there are economic benefits in everything that we do, with both regional and urban areas able to reap the benefits of our investment to make NSW a better place to live and work.

With population growth predicted to continue to rise, our roads and waterways need to be ready to meet this increased demand.

I am honoured to be leading the improvements we are delivering to provide a safer and more efficient commute on our roads and waterways, and delivering infrastructure to facilitate better living conditions for the people of NSW.

The Hon. Melinda Pavey MP Minister for Roads, Maritime and Freight
Message from John Hardwick
Executive Director Sydney

Our understanding of customers’ travel needs and choices is deepening through the extraction, analysis and leverage of data from our network. This information enables us to better understand, on a day to day level, how and when people move on the road network to help us manage our existing assets. It also allows us to prepare for the future with technological advancements such as connected and autonomous vehicles.

We truly believe that every journey matters, which is why we are focused on creating new clearways and developing solutions to congestion pinch points. To date, Roads and Maritime has installed 89 new and extended clearways covering over 410 kilometres. Our Clearways Program is extending across Sydney’s road network and in doing so is helping enhance journey reliability, giving people more time to spend on the things that matter to them.

Our commitment to deliver seamless customer experiences demands us to be innovative about how we respond to Sydney’s growth.

Our customers in Sydney travel on over 2590 kilometres of state roads, through 22 tunnels, over 878 bridges, aided by 195 variable message signs and 3200 traffic control signals – all of which are owned and maintained by Roads and Maritime Services.

Ensuring the safety, efficiency and reliability of this network is at the heart of this task and governs how we plan and manage the road network and monitor the delivery of projects and programs by delivery partners.

Overlaying our transport portfolio is an unwavering focus on safety for everyone – including those building and using the network. Our industry partners now voluntarily share work, health and safety data on active road construction projects as part of a commitment to eliminate high-risk issues. Meanwhile, emerging vehicle technologies and wearable technology are being used to reduce deaths and injuries on and around work sites.

We are stepping up to meet the challenge of managing today’s unprecedented $37.5 billion investment in the NSW road network and I’m proud of the ways in which we are leveraging innovative technology, new safety practices and remaining focused on our customers to guide what our road network will look like in the years to come.

John Hardwick
Executive Director Sydney
Roads and Maritime Services

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John Hardwick
Executive Director Sydney
Roads and Maritime Services
Roads and Maritime Services: Who we are and what we do

Roads and Maritime Services, as part of the Transport cluster, exists to make NSW a better place to live. The agency works to enable safe, efficient and reliable journeys on road and maritime networks to connect people to economic opportunities and vibrant, liveable communities while delivering on NSW Government transport system priorities.
Our strategic priorities

Outlined in the 2018–2021 Roads and Maritime Corporate Plan, the following six strategic priorities capture the agency’s commitment to the Government and to the people of NSW over the next four years.

<table>
<thead>
<tr>
<th>Motorway road users</th>
<th>Maritime network users</th>
<th>Regulated parties</th>
</tr>
</thead>
</table>

Access to road and maritime transport

the Transport cluster

4. Respect our community and the environment
5. Deliver the Government’s program
6. Partner to improve services

Technically excellent, ready for the future, diverse, and reflective of the community we serve

Supporting delivery of business plans
Who we serve

The OneRMS operating model places our customers at the centre of everything we do and ensures we have clear accountabilities and deliver value for every dollar that we spend. Our structure is made up of five customer-focused divisions and four support-focused divisions. Each division is aligned to focus on customer needs, to deliver better customer outcomes sustainably.

Customers at the heart of everything we do

Industry trends continue to create opportunities for us to improve what we do for customers:

| Feature                                                                 | Description                                                                 |
|------------------------------------------------------------------------|                                                                            |
| The NSW Government is continuing its customer focus, to help build a granular understanding of our customers so we can make better decisions based on what they value |                                                                            |
| We are working to meet rising community expectations regarding transparency and reliability, demonstrating respect for our community and environment |                                                                            |
| We are working with our Transport colleagues to better integrate and provide seamless journeys for customers across transport modes |                                                                            |
| New transport technology and intelligent transport systems are enabling us to improve how we use existing transport networks |                                                                            |
| Innovative services for transport customers are becoming the norm as we work with industry to integrate emerging transport and mobility services |                                                                            |
| Our delivery of the Government’s growing infrastructure investment is supporting NSW’s growing population and sustaining a strong economy |                                                                            |
| Leveraging the shift towards commercial infrastructure ownership is enabling us to implement best practice from commercial infrastructure owners and asset managers |                                                                            |
| New industrial technology is helping to make our work safer and more productive |                                                                            |
Who we are and what we do

Sydney division operates and maintains NSW state roads across the North West and South East Precincts. The division’s core business involves the effective and efficient management of the Sydney road network (planning, enhancing, operating and maintaining) and its integration into the broader transport system.

Who we serve

Customer expectations and community sentiment shape our business operations so we can focus our attention on managing increasing demands on the network and ensuring road safety and transport efficiency.

Key needs of our customers in Sydney

<table>
<thead>
<tr>
<th>Factors</th>
<th>Road network operations</th>
<th>Customer outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer expectations and community sentiment</td>
<td>Community engagement, asset quality and real time information</td>
<td>Informed travel choices</td>
</tr>
<tr>
<td>Increasing demand on network</td>
<td>Network monitoring, demand management and operational partnership</td>
<td>Reliable journeys</td>
</tr>
<tr>
<td>Road safety</td>
<td>Design, traffic worksite, traffic and incident management</td>
<td>Safer journeys</td>
</tr>
<tr>
<td>Transport efficiency</td>
<td>Planning, journey reliability, intelligent transport systems and innovation</td>
<td>Congestion relief</td>
</tr>
</tbody>
</table>
Sydney division’s operating model

Sydney division’s purpose is to make Sydney road transport safe, efficient, reliable, sustainable and better integrated with the overall transport system for our customers and communities.

The division has ultimate accountability for customer outcomes and is responsible for short and long term planning, articulating customer needs and developing solutions that best meet those needs.

Sydney division brings together Sydney Planning, Sydney Maintenance, Easing Sydney’s Congestion, North West Precinct, South East Precinct and Program Controls branches. Each branch has clear accountabilities to facilitate the improved efficiency of the division. The key functions of each branch support Sydney division to deliver better customer outcomes sustainably:

- The North West and South East precincts are accountable for the Sydney road network performance, network development, safety services, land use assessments, Road Network Action Plans, as well as communications and stakeholder relations. The North West precinct covers Sydney’s northern and western suburbs, spanning from the Hawkesbury/Blue Mountains down to Campbelltown in the south. The South East precinct covers Sydney’s CBD, southern and eastern suburbs, the inner west to the southern harbour foreshore and from the Sutherland Shire Council in the south continuing up to Parramatta in the north-west corner.

- Sydney Planning is responsible for the future pipeline of projects and programs, with a clear focus on asset management and the long term planning of Sydney’s road network.

- Easing Sydney’s Congestion Program Office has been established to deliver low cost, high impact and smart technology projects to better manage congestion.

- The Sydney Maintenance Branch is responsible for the procurement and delivery of road asset maintenance upgrade contracts to ensure that contract outcomes are optimised and aligned with our strategic objectives.

- The Program Controls branch is accountable for portfolio, project and program governance, assurance, reporting and analysis for the Sydney road network.
## Our network

The Sydney road network is comprised of the following assets:\(^1\)

<table>
<thead>
<tr>
<th>Asset</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,591 kilometres of state roads</td>
<td></td>
</tr>
<tr>
<td>Including 196 kilometres of busways</td>
<td></td>
</tr>
<tr>
<td>195 Variable Message Signs</td>
<td></td>
</tr>
<tr>
<td>3,200 traffic control signals</td>
<td></td>
</tr>
<tr>
<td>22 tunnels</td>
<td></td>
</tr>
<tr>
<td>878 bridges</td>
<td></td>
</tr>
<tr>
<td>4,969 street lights</td>
<td></td>
</tr>
<tr>
<td>3,265 school zone systems</td>
<td></td>
</tr>
</tbody>
</table>

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\(^1\) These are the assets Roads and Maritime controls and maintains. It excludes assets as part of the Sydney Road Network that are controlled by other entities (eg private toll roads, Sydney Trains). Street lighting does not include lighting in rest areas, bridges and tunnels. Distances are measured in carriageway kilometres.
Strategic priority

Increase customer value

Sydney Harbour Bridge tender

To increase customer value, we sought innovative, customer focused companies that were willing to challenge the status quo by expanding accessibility and enhancing the affordability of climbing the bridge.

Roads and Maritime is entrusted with the care of one of Australia’s most iconic features – the Sydney Harbour Bridge. The bridge serves over 160,000 motorists, 2000 cyclists, 200 trains and thousands of pedestrians each day.

This year we invited tenders for the new 20 year contract of the Sydney Harbour Bridge tourism activities. To increase customer value, we sought innovative, customer focused companies that were willing to challenge the status quo by expanding accessibility and enhancing the affordability of climbing the bridge. To date approximately four million people have climbed the bridge and we want millions more to have an outstanding memory of their experience.

This was a highly competitive process with responses received from Australian and international tenderers of the highest quality. Hammons Holdings Pty Ltd, the operators of Scenic World in the Blue Mountains, the most-visited privately-owned tourist attraction in Australia, have been awarded the 20 year contract to operate the internationally renowned Sydney Harbour bridge climb attraction. Hammons Holdings’ vision is to open up the Sydney Harbour Bridge to everyone, every day. In the coming years, Sydneysiders and tourists alike will be introduced to innovative new technologies that showcase the bridge in contemporary ways that also pay tribute to and protect its historical structure. Greater affordability for climbers as well as better accessibility and the inclusion of new routes are some of the projected advantages that climbers will experience.

With the introduction of elevators at the Milsons Point and The Rocks access points this year, accessibility will also be increased to support those who have traditionally not been able to use the pedestrian walkways over the bridge. For the first time in its history the bridge will be easily accessible by anyone wishing to cross it, including people with reduced mobility.
We are also maintaining and restoring the Sydney Harbour Bridge’s lost features such as its original bronze lanterns. Restoring and maintaining historical and heritage aspects of the bridge continue to be a focus for the agency, preserving these for future generations.

The Sydney Harbour Bridge is also an iconic working structure that is integral to Sydney’s T1 North Shore rail line and the suburban rail network as a whole. Within the rail corridor, the current timber track support and access walkway is reaching the end of the design life which introduces a number of safety, maintenance and operational risks. The steel railway stringers supporting the timber track is subject to corrosion and predictable service life issues. The proposed project will redress the operational needs of the bridge and the associated rail infrastructure to minimise the painting effort and increase the service life of this asset.

The new 20 year contract of the Sydney Harbour Bridge tourism activities is just one example of how the OneRMS program is working to examine how we can get more value from assets managed and maintained by the agency to drive increased customer value. Restoration of the bridge and changes to the bridge climb will ensure the icon meets the needs of Sydney’s expanding tourist base, while also maintaining its value and accessibility for the people of NSW.

The new contract term will start from 1 October 2018. For more information visit hammonsholdings.com.au or for stakeholder and ticketing enquiries please contact the Hammons Holdings enquiry line on 1800 955 000.
Get more out of the network

Clearways

Our work on the Clearways Program is enabling people and goods to get to destinations sooner with greater efficiency, safety and reliability.

Congestion costs Sydney around $6 billion each year and with the city’s population forecast to grow by 1.3 million people by 2031, the existing road network will be stretched due to increased demand from motorists, public transport and freight.

In December 2013, the NSW Government announced the Sydney Clearways Strategy as a key initiative and committed $121 million to reduce congestion on the city’s roads. The Strategy identified over 100 kilometres of state roads which may benefit from new and extended clearways by removing kerbside parking and making an additional lane available to road users at peak travel times. We work with the community to provide alternate business parking as part of this program.

At Roads and Maritime, we have implemented an integrated Clearways Program into our activities to improve safety and efficiency on our roads in line with Government objectives.

Through targeted and extensive stakeholder engagement, we have:

• Connected with MPs, councils, businesses, local communities and road users to listen and gather a better understanding of community requirements

• Demonstrated a transparent and evidence-based decision-making process to determine specific locations and achieved meaningful two-way dialogue and agreement in response

• Maximised the use of existing road infrastructure, eased congestion and improved safety to realise the best value and outcomes for our customers.

Critical to progress so far has been our early and transparent engagement to balance competing stakeholder needs and mitigate impacts on businesses.
To date, we have installed 93 new and extended clearways, amounting to over 450 kilometres, across some of Sydney’s busiest corridors on both weekdays and weekends.

The clearway installed recently in the stretch on Mona Vale Road through the St Ives shops has already reduced weekday travel times by up to 46 per cent, equating to around two minutes for every road and public transport user. Over the course of a year, a commuter using this thoroughfare daily will save around eight hours in travel time, resulting in increased employee productivity and decreased business costs. Multiply all this by the number of people on the road, and you can quickly see how only one clearway as part of the Program can positively impact the NSW economy.

Early data is pointing to a 30 per cent reduction in casualty crashes in some locations, such as Victoria Road from the Iron Cove Bridge to the western end of Anzac Bridge, highlighting the positive and tangible impact clearways have on safety.

Our work on the Clearways Program is enabling people and goods to get to destinations sooner with greater efficiency, safety and reliability.

Our Clearways Program has so far delivered a benefit-to-cost ratio of up to 53.9 for individual projects as part of the broader NSW Government Sydney Clearways Strategy to ease congestion.

Our success presents opportunities for further expansion across Sydney, Newcastle, Wollongong and NSW as a whole to ensure we continue to deliver as circumstances change, expectations shift and demand increases.

We will continue to investigate pain points and gather suggestions from communities through initiatives such as ‘Nominate a Clearway’ that could benefit from the Program. The aim is to maximise valuable road space and truly unlock the potential of Sydney’s existing transport corridors for the benefit of tomorrow’s NSW.
Keep safety at the heart

On-site remediation of asbestos

We are committed to the health and wellbeing of all workers at Roads and Maritime worksites, including all staff, contractors and the surrounding community.

Managing the risk of public and worker exposure to asbestos in its various forms is a significant focus for Roads and Maritime.

Asbestos containing materials (ACM) can be found in older buildings, infrastructure and plant items which our workers interact with while undertaking their day to day work activities, posing both safety and environmental hazards that require careful consideration and long term management strategies.

With large volumes of ACM uncovered across projects in Western Sydney, collaboration between our work, health and safety and environment teams recognised the need to deliver a more strategic approach to ACM management. In 2018, the team developed an innovative approach to safely and sustainably manage ACM, encountered through construction of road projects in consultation with industry specialists and the Environmental Protection Agency (EPA). The new approach, undertaken in accordance with EPA and Safework NSW guidelines, involves on-site remediation of ACM through encapsulation below the road pavement and suitable locations within road projects.

On-site remediation of ACM not only minimises project costs, it also significantly reduces the exposure risk to workers and local communities by eliminating the need to further disturb and transport impacted materials to licenced waste management facilities. On-site remediation of ACM was trialled on the Bringelly Road Stage 1 upgrade project, reaping a saving of $8.5 million and netting significant environmental and economic benefits.
This safe and sustainable approach is accepted industry practice and has continued to be successfully implemented on other projects in the Western Sydney Project Office, including along the Northern Road corridor. Its application is expected to expand across projects throughout Sydney, where economic and environmental benefits can be achieved. We are committed to the health and wellbeing of all workers at Roads and Maritime worksites, including all staff, contractors and the surrounding community who may be directly or indirectly impacted by work being conducted. We are making strong advancements by minimising and mitigating risk in the road industry and will continue driving initiatives such as the on-site remediation of ACM to provide a safe and sustainable future for people across NSW.
Strategic priority

Respect our community and the environment

Advancing Aboriginal Participation in Construction (APiC)

We take our social responsibility of delivering APiC seriously and want our projects and those of our partners to reflect the communities we serve.

Roads and Maritime believes having a diverse workforce increases innovation and productivity, and ultimately delivers better outcomes for customers.

In July 2016 the NSW Government Procurement Board introduced the Aboriginal Participation in Construction (APiC) Policy with mandated targets to support Aboriginal employment opportunities and the participation and growth of Aboriginal-owned businesses. Contract targets included a 1.5 per cent of total project spend related to planning, design or delivery costs when the contract exceeds $1 million or is primarily directed to an Aboriginal community.

A revised Policy was released on 1 July 2018 to amplify accountability and the APiC agenda across industry. Through a new mandatory contract performance reporting process, partners must demonstrate APiC spend and tangible results using a central portal. New guidelines now state unspent funds must be allocated to approved bodies, like the Masters Builders Association NSW and Literacy for Life Foundation.

The first Aboriginal employment and business targets for the construction industry were set in the revised Policy and the Aboriginal Procurement Policy respectively. The aim is for Government to use its purchasing power through construction and general procurement initiatives to create an estimated 3000 full-time equivalent Aboriginal employment opportunities and to award at least three per cent of domestic contracts to Aboriginal owned businesses by 2021. While the construction industry is one of the primary employers of Aboriginal people in NSW, particularly in the regions, less than half of the Aboriginal adult population across NSW aged 15 years and above was employed in 2016. We are making progress in Sydney to increase the number of Aboriginal workers and existing Aboriginal businesses, but more urgency is needed to keep building on our social responsibility commitment and prepare our future pipeline.
On our Narellan Road Upgrade Stage 2 project in Western Sydney completed in July 2018, industry partners engaged 28 Aboriginal workers and a 100 per cent indigenous-owned and-operated company to supply civil transport and plant hire for road widening and expanding. Six Aboriginal workers were also employed on traineeships and apprenticeships to undertake environment, asphalting and traffic control activities, resulting in an APiC spend of over $880,000. This amount equated to 1.5 per cent of the total spent on the project.

Critical to the success of projects, such as the Narellan Road Upgrade, is the social consciousness and organisational agility of our partners to award small procurement packages to specialised Aboriginal small to medium enterprises. To support this approach, we will now be assessing tenders by considering previous performance outcomes and the demonstrated capacity of industry partners through project reporting, dashboards and audits.

Supplier diversity is critical in creating a more inclusive economy. For every $1 of revenue, certified suppliers generate $4.41 of social return, equating to each dollar working four times harder when spent with Aboriginal businesses.³

At Roads and Maritime, we take our social responsibility of delivering APiC seriously and want our projects and those of our partners to reflect the communities we serve. The more skilled and qualified Aboriginal people and businesses delivering projects are, the better the social and economic growth and sustainability for NSW as a whole.

APiC is an opportunity for NSW Government and businesses to create a legacy for diversity and inclusion by growing Aboriginal participation through increased education and construction work opportunities.

Industry partners are advised to contact the NSW Indigenous Chamber of Commerce (NSWICC) or Supply Nation for more information on prequalified NSWICC Assured and Contract Ready Aboriginal businesses in Sydney and NSW.

3 https://supplynation.org.au, viewed 26 July 2018
Deliver the Government’s program

Journey time reliability

As we manage and build on the State’s infrastructure across the network, a key focus for Roads and Maritime is to enhance journey time reliability for customers.

Delivering the Government’s program involves meeting our commitment to manage over $16.1 billion of investment across the State by 2021 to support the sustained economic growth of NSW. As we manage and build on the State’s infrastructure across the network, a key focus for Roads and Maritime is to enhance journey time reliability for customers.

From a customer perspective, journey time reliability is about the ability for people to have certainty in travel times between where they live, work and play. From an agency perspective, supporting road users’ travel time and reliability is the product of substantial road network analysis and effective network optimisation planning. This assists to identify network pinch points, hot spots and enables the development of solutions that improve people’s journeys and inform the future pipeline of network enhancement projects.

The advent of connected vehicles and people is facilitating a more sophisticated method of understanding our customer needs. From map data on hand-held devices to GPS technology in vehicles, our insights into customers based on their daily travel experiences are invaluable.

This data has been leveraged to inform 20 new Road Network Plans covering 400 kilometres of Sydney’s state road network. These plans identify changes in land use, travel behaviour, employment and population growth trends to guide and prioritise network development on 69 state road corridors.

Across the Sydney network, journey time reliability has improved from 89.7 per cent in 2017 to 91 per cent in 2018, with up to 26 per cent improvements found at some intersections during traffic hour peaks. This translates to around 200,000 annual vehicle hours saved, benefiting over 21 million customer trips per year. We are delivering on our commitments and ensuring that our road network and waterway infrastructure provides capacity and options for road users now and into the future.
We will commit to delivering our strategic priorities over 2018–21
Partner to improve services

Bus Programs: Bus Priority Infrastructure and B-Line Programs

All these improvements make public transport a more flexible and sustainable option and improve the quality of our core services.

Buses are a key part of Sydney’s growing and evolving public transport network, providing more than 220 million trips a year across the city. As Sydney grows the bus system needs to meet the challenge this growth brings and the NSW Government is delivering a range of programs to invest in bus infrastructure and improve bus efficiency.

The Bus Priority Infrastructure Program (BPIP) is one of the initiatives Roads and Maritime is delivering with Transport for NSW (TfNSW) to improve public transport. We are working across the Transport cluster and with industry stakeholders – partnering with bus companies, councils, contractors and Sydney Metro – to improve services and ensure an integrated transport system.

BPIP has been delivering to Sydney’s bus future and will play a critical role in delivering Sydney’s public transport network in the Future Transport Strategy 2056 – the NSW Government’s strategy to achieve a 40-year vision for our transport system. To support the strategy, BPIP is delivering projects to improve bus travel times and reliability. This includes the provision of new bus lanes, bus priority at intersections, better bus stop placement and works to support the introduction of double decker buses. We have also created a more seamless customer experience through improvements to bus stop facilities and wayfinding signage.

On Route T65 Rouse Hill Town Centre to Parramatta Station, BPIP has made positive changes for customers by enabling safe passage of double decker buses. A typical double decker bus corridor delivery cycle takes one and a half years, but the BPIP team delivered this corridor in six months. The team – consisting of Roads and Maritime, TfNSW and CDC NSW – took the test ride together in June this year and demonstrated how, by working together, we are staying ahead of the curve to ensure customers have sufficient levels of service. As a 10 year rolling program, Roads and Maritime is continuing to deliver these improvements to 2024.
The Bus Priority Improvement Program Team and project partners taking a test ride of the new double decker bus on route T65 in June 2018

The Bus Priority Improvement Program has completed work on the Charles Street Parramatta layover

B-line is another bus program, being delivered by TfNSW and Roads and Maritime, which is improving bus efficiency and creating a more integrated transport system resulting in increased patronage. Improvement to the road corridor between Mona Vale and Sydney CBD have benefited customers by providing increased services, better access and the ability to transfer seamlessly between local services. Other improvements included bus priority measures, a new state-of-the-art fleet of double decker buses and turn-up-and-go services.

All these improvements make public transport a more flexible and sustainable option and improve the quality of our core services. By working collaboratively across the Transport cluster we are realising the objectives of Future Transport and supporting Sydney’s growth.

We will commit to delivering our strategic priorities over 2018–21
People in Western Sydney facing barriers to employment are being linked with training and job opportunities in the construction industry thanks to The Northern Road Employment and Training Hub (Hub). This Roads and Maritime initiative is being delivered in partnership with industry, vocational education and training providers and non-government organisations.

The Hub, based on site as part of The Northern Road upgrade between Glenmore Parkway, Glenmore Park and Jamison Road, South Penrith, is training and upskilling a new generation of Western Sydney workers. The Hub is also helping to resource one of NSW’s biggest road infrastructure programs – the 10-year, $3.6 billion Western Sydney Infrastructure Plan.

The employment and training facility was set up in the heart of Western Sydney to provide pre-vocational skills and trade qualifications to support the long term unemployed, young people, refugees, Aboriginal and Torres Strait Islanders and women in construction. These groups are provided with on-the-job training and employment opportunities to help build life long careers and create pathways that support their future.

For skilled migrant and civil construction apprentice Casidhe Lee from Lalor Park, the Hub has given her a foot in the door to the construction industry, providing an opportunity to gain formal civil construction qualifications and an apprenticeship with Lendlease, a delivery partner for The Northern Road upgrade.

“I had been trying to get into the industry for a number of years and had completed formal vocational training in carpentry and other building related skills, but I found that what I was promised and the support that I had when working, were two different things.”
Since it opened in July 2017, 10 women have completed a six week, pre-employment training course through the Hub and now seven of them work full-time on The Northern Road upgrade project.

Around 30 other participants have completed training programs at the Hub so far and have gained long term employment on The Northern Road upgrade.
Innovation in technology

Spatial technology

We are working to provide better value for people journeying across our network by generating greater network efficiencies that contribute to better safety outcomes.

We are investing in a technology-led future by focusing on opportunities arising at the intersection of big data – increasingly obtainable from connected people and vehicles – and emerging technologies.

From developing new insights into the way customers travel and plan journeys, to the delivery of cutting-edge services, data is revolutionising the way we do business.

Tackling congestion with contemporary technology is a key focus for the agency. This is evidenced by the 2018 three month freight priority trial, where more than 100 trucks were equipped with technology that communicated with traffic lights controlled under the Sydney Coordinated Adaptive Traffic System (SCATS). The aim was to reduce the number of times heavy vehicles need to stop and start to improve traffic flows.

The trial also complements current technology to grant priority to late-running buses along key corridors and presents further opportunities down the line to prioritise emergency vehicles, easing delays for all motorists in the process.

Trial outcomes will be used to inform the development of a strategy for prioritisation and usability on the road network, underpinning further investment in improvements to be incorporated into the next generation of transport systems.
Similarly, the performance of SCATS technology is being enhanced through trials involving additional sensors and improved software algorithms that will increase efficiency for motorists at intersections. The focus on building spatial awareness and location intelligence on our roads is critical for enabling connected and automated vehicles (CAVs) and moves us closer to a safer future on our roads, and one with the capacity to embrace driverless vehicles.

We are also collaborating with key stakeholders including the Centre for Road Safety, CrashLab, Safety and Innovation Research teams and Intelligent Transport Systems (ITS) providers. Collectively this group is working to provide better value for people journeying across our network by generating greater network efficiencies that contribute to better safety outcomes.
Keeping our roads moving efficiently and effectively as the population grows, is one of the principal infrastructure challenges facing Sydney.
Our project portfolio

Infrastructure projects in Sydney 28

North West precinct 30

South East precinct 32

Reserve Road exit, Lane Cove Tunnel, Artarmon

Roads and Maritime Services in Sydney
Infrastructure projects in Sydney

**In construction**

1. Nepean River Bridge
2. The Northern Road upgrade – Glenmore Parkway to Jamison Road
3. The Northern Road upgrade – Peter Brock Drive to Mersey Road
4. Bringelly Road upgrade stages 1 and 2
5. Airport East Precinct upgrade
6. Northern Beaches Hospital road upgrade
7. Ross Street/Great Western Highway intersection upgrade
8. Argyle Street/Camden Valley Way corridor upgrade
9. Windsor Bridge replacement project
10. M4 Smart Motorway
11. Belmore Road Ramps
12. Campbelltown Road upgrade stage 1
13. Sydney Harbour Bridge Access Lifts
14. Airport North Precinct upgrade

**In planning**

15. Mulgoa Road, Jamisontown – Jeanette Street to Blakie Road including M4 Motorway
16. The Northern Road upgrade – Mersey Road to Glenmore Parkway
17. Mulgoa Road/Castlereagh Road Corridor
18. Jane Street, Penrith – Union Road to Museum Drive including Railway Bridge
19. The Northern Road intersections upgrade
20. M12 Motorway
21. Mamre Road upgrade
22. Erskine Park Road upgrade of intersections
23. Archbold Road upgrade
24. Denmark Link Road
25. Bandon Road upgrade
26. Pitt Town Bypass
27. Bungarribee Road and Flushcombe Road traffic lights
28. The Horsley Drive upgrade
29. Smithfield Road upgrade
30. Badgally Road upgrade
Key
- In construction
- In planning
- Recently completed
- Sydney Clearways Program (installed or in planning)
- Wharf Upgrade Program
- Cronulla Congestion Projects
- Gateway to the South Program
- Parramatta Congestion Improvement Program
- Sydney Pinch Points 2 Program
- Sydney Pinch Points 3 Program

In planning
31. Appin Road safety improvement
32. Memorial Avenue upgrade
33. Heathcote Road upgrade – Holsworthy to Voyager Point
34. M4 to Hill Road off ramp
35. Sydney Harbour Bridge Northern Cycle Ramp
36. Sydney Harbour Bridge Northern Toll Plaza precinct upgrade
37. Sydney Harbour Bridge Southern cycleway
38. Alexandria to Moore Park connectivity upgrade
39. Mona Vale Road West upgrade
40. Mona Vale Road East upgrade
41. Richmond Bridge and Approaches project
42. Prospect Highway
43. M1 North Smart Motorways project (Western Distributor and Cahill Expressway)

Some recently completed projects
44. Werrington Arterial Road
45. Eagle Vale Drive upgrade
46. Richmond Road upgrade
47. Railway Terrace/Westminster Street traffic lights
48. Old Wallgrove Road upgrade
49. Wetherill Street upgrade
50. Cumberland Highway intersection upgrades
51. WestConnex M5/King Georges Road interchange
52. Bells Line Of Road overtaking lanes and safety work
53. WestConnex New M4
54. The Northern Road upgrade – The Old Northern Road to Peter Brock Drive
55. Narellan Road upgrade
56. Schofields Road corridor upgrade and extension stages 1, 2 and 3
57. Airport West Precinct upgrade
58. Sydney Harbour Bridge Southern Toll Plaza precinct upgrade
59. Starkey Street pedestrian bridge
60. Showground Road upgrade
61. Alfords Point Road upgrade

Locations on map are a guide only. Drawing not to scale.
North West precinct

Locations on map are a guide only. Drawing not to scale.

Key
- In construction
- In planning
- Completed
- Sydney Clearways Program (installed or in planning)
- Wharf Upgrade Program (completed)
- Parramatta Congestion Improvement Program
- Sydney Pinch Points 2 Program
- Sydney Pinch Points 3 Program

Roads and Maritime Services in Sydney
<table>
<thead>
<tr>
<th>In construction</th>
<th>In planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Nepean River Bridge</td>
<td>29 Richmond Bridge and Approaches project</td>
</tr>
<tr>
<td>2 The Northern Road upgrade – Glenmore Parkway to Jamison Road</td>
<td>30 Prospect Highway</td>
</tr>
<tr>
<td>3 The Northern Road upgrade – Peter Brock Drive to Mersey Road</td>
<td>31 Mona Vale Road West upgrade</td>
</tr>
<tr>
<td>4 Bringelly Road upgrade stages 1 and 2</td>
<td>32 Mona Vale Road East upgrade</td>
</tr>
<tr>
<td>5 Showground Road upgrade</td>
<td>33 Sydney Harbour Bridge Northern Toll Plaza upgrade</td>
</tr>
<tr>
<td>6 M4 Smart Motorway</td>
<td>34 Sydney Harbour Bridge Northern Cycle Ramp</td>
</tr>
<tr>
<td>7 Northern Beaches Hospital road upgrade</td>
<td>35 Badgally Road upgrade</td>
</tr>
<tr>
<td>8 Sydney Harbour Bridge Access Lifts</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Some recently completed projects</td>
</tr>
<tr>
<td></td>
<td>36 The Northern Road upgrade – The Old Northern Road to Peter Brock Drive</td>
</tr>
<tr>
<td></td>
<td>37 Narellan Road upgrade</td>
</tr>
<tr>
<td></td>
<td>38 Schofields Road upgrade and extension stages 2 and 3</td>
</tr>
<tr>
<td></td>
<td>39 Starkey Street pedestrian bridge</td>
</tr>
<tr>
<td>9 Ross Street/Great Western Highway intersection upgrade</td>
<td>10 Mulgoa Road, Jamisontown – Jeanette Street to Blaikie Road including M4 Motorway</td>
</tr>
<tr>
<td>11 The Northern Road upgrade – Mersey Road to Glenmore Parkway</td>
<td>12 Mulgoa Road/Castlereagh Road Corridor</td>
</tr>
<tr>
<td>13 Jane Street, Penrith – Union Road to Museum Drive including Railway Bridge</td>
<td>14 The Northern Road intersections upgrade</td>
</tr>
<tr>
<td>15 Argyle Street/Camden Valley Way corridor upgrade</td>
<td>16 M12 Motorway</td>
</tr>
<tr>
<td>17 Mamre Road upgrade</td>
<td>18 Erskine Park Road upgrade of intersections</td>
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<td>20 Denmark Link Road</td>
</tr>
<tr>
<td>21 Bandon Road upgrade</td>
<td>22 Windsor Bridge replacement project</td>
</tr>
<tr>
<td>23 Pitt Town Bypass</td>
<td>24 Bungarribee Road and Flushcombe Road traffic lights</td>
</tr>
<tr>
<td>25 The Horsley Drive upgrade</td>
<td>26 Smithfield Road upgrade</td>
</tr>
<tr>
<td>27 Campbelltown Road upgrade stage 1</td>
<td>28 Memorial Avenue upgrade</td>
</tr>
<tr>
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<td>29 Richmond Bridge and Approaches project</td>
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</tbody>
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Roads and Maritime Services in Sydney
## In construction

1. Belmore Road ramps
2. M4 Smart Motorway
3. Airport East Precinct upgrade
4. Sydney Harbour Bridge Access Lifts
5. Airport North Precinct upgrade

## In planning

6. Appin Road safety improvement
7. Heathcote Road upgrade - Holsworthy to Voyager Point
8. M4 to Hill Road off ramp
9. Appin Road/Mt Gilead upgrade
10. M5/Moorebank intermodal upgrade
11. Springfarm Parkway upgrade
12. Sydney Harbour Bridge Northern cycle ramp
13. Sydney Harbour Bridge Northern Toll Plaza upgrade
14. Sydney Harbour Bridge Southern cycleway
15. Alexandria to Moore Park connectivity upgrade
16. M1 North Smart Motorways project (Western Distributor and Cahill Expressway)

## Some recently completed projects

17. Airport West Precinct upgrade
18. Sydney Harbour Bridge Southern Toll Plaza upgrade
19. Alfords Point Road upgrade