

# **Federal Priorities for Western Australia**

**2019**



**For the better**



# About RAC

RAC represents the interests of more than one million Western Australians and is the leading advocate on the mobility issues and challenges facing the State. RAC works collaboratively with all levels of government and other organisations to ensure Western Australians have access to safe, easier, and more sustainable mobility options.

RAC aligns its activities with mobility that is:

- » **Safe:** A safe mobility system can be identified as a system that outperforms national and international safety benchmarks. It encompasses safer drivers in safer cars on safer roads travelling at safer speeds.
- » **Easy:** To have a cost efficient, convenient and reliable commuter network is an essential part of personal mobility.
- » **Sustainable:** Sustainable mobility is broader than the environmental aspects of mobility; it encompasses the mobility needs of current and future generations.

RAC reinvests its profits for the benefit of RAC members by advocating for appropriate transport infrastructure and services, and supporting several major sponsorship programs such as the RAC Rescue helicopters, as well as a range of community projects aligned to safe, easy and sustainable mobility such as the Automated Vehicle Trials, Electric Bike Trials and the RAC Electric Highway®.

# About RAC’s Federal Priorities for Western Australia

In the past two decades, rapid increases in population coupled with an economy driven by the resource sector have been a catalyst for enormous change in Western Australia (WA). Today, despite a more fiscally conservative outlook, WA’s population continues to increase placing added pressure on transport infrastructure and services.

The health and stability of the nation’s economy is inextricably linked to the economic, social and environmental performance of its capital cities and regional areas. Perth and Peel is set to be home to 3.5 million people by 2050 and there will be a need for 800,000 new homes to accommodate the growing population<sup>1</sup>, which will nearly double the number of trips made every day in and around Perth – leading to over 12 million trips daily<sup>2</sup>.

It is therefore critical that the Australian and State governments develop and invest in targeted infrastructure programs that together will deliver liveability and productivity outcomes for

WA and the nation. Investment in safer and more efficient roads will be crucial, as will funding for major public transport projects and strategically important active transport infrastructure to deliver an integrated, reliable and world class transport system. Additionally, funding for the timely implementation of smart transport solutions, and to ensure preparedness for the safe transition of electric, automated and connected vehicles onto our roads, will deliver further benefit from past transport infrastructure investment and future proof new infrastructure.

The following priorities have been identified as urgently requiring Australian Government support:

## Infrastructure priorities

- 1 Rating and improving the safety of roads**
- 2 Automated and connected vehicles**
- 3 Smart transport solutions**
- 4 Perth Light Rail**
- 5 Rail for Perth’s northern corridor**
- 6 Grade separations**
  - a. Major highway grade separations
  - b. Level crossing removals

- 7 Albany Ring Road**

- 8 Cycling infrastructure projects**
  - a. Perth’s Principal Shared Path network
  - b. Green bridges

## Policy priorities

- » Investment of motorist taxation revenue
- » Vehicle safety standards
- » Cycling infrastructure funding
- » Mandatory vehicle emissions and fuel standards

<sup>1</sup> Western Australia Planning Commission (2018), “Perth and Peel@3.5 million”, [https://www.dph.wa.gov.au/getmedia/404a6895-f6ec-4829-87df-8de5b80075b8/FUT-PP-Perth\\_and\\_Peel\\_Sub\\_Region\\_March2018\\_v2](https://www.dph.wa.gov.au/getmedia/404a6895-f6ec-4829-87df-8de5b80075b8/FUT-PP-Perth_and_Peel_Sub_Region_March2018_v2)  
<sup>2</sup> Department of Transport Western Australia (2017), “Transport at 3.5 million Perth & Peel Transport Plan”

# 1. Rating and improving the safety of roads

WA is in the unenviable position of having the poorest road safety performance of all mainland Australian states. In 2018, WA's fatality rate (6.09) was once again above the national average rate of 4.59, Victoria's leading rate of 3.31 and New South Wales' rate of 4.43 fatalities per 100,000 persons<sup>3</sup>. However, the tragic and avoidable loss of life on WA's roads tells only part of the story. On average, 1,732 Western Australians are seriously injured and 92 are catastrophically injured each year due to road crashes<sup>4</sup>, resulting in serious and sometimes life-long injuries. In its Cost of Road Trauma in Australia publication, the Australian Automobile Association estimated that road trauma cost the nation's economy between \$22 and \$30 billion in 2015 and the direct cost of road trauma to government was more than \$3.7 billion in a single year.

RAC partners with other Australian Automobile Clubs and the Australian Government to rate the safety of roads using the Australian Road Assessment Program (AusRAP) star rating system. Safe roads with design elements such as divided carriageways, good line markings, audible edgelines and sealed shoulders have a higher star rating. Lower-rated roads are likely to be undivided with poor line marking and roadside hazards such as trees and poles.

Many crashes occur when ordinary people make everyday mistakes. Safe roads minimise the chances of these crashes happening, and if they do occur, they minimise the severity of the crash. The ultimate objective of AusRAP is to reduce road trauma by systematically assessing risk and identifying shortcomings to address and create a safe road system. A road system, where five-star drivers are in five-star cars on five-star roads travelling at safe speeds should result in zero deaths.

In 2013, 4,671 kilometres of WA's National Highway Network was star rated. Alarming, 27 per cent recorded an AusRAP star rating of just 1 or 2 stars, and a majority (57 per cent) rated 3-star<sup>5</sup>, presenting a significant risk to WA road users.

A Safer Roads Investment Plan developed for WA identifies that with the implementation of selected road safety treatments, approximately 4,150 lives and serious injuries would be saved. If fully implemented, this would cost just \$450 million and have a high benefit-cost ratio of 4.18. Further, it would reduce the proportion of 1-star rated roads to one per cent; 2-star to 14 per cent; and 3-star (66 per cent) and 4-star (19 per cent) to 85 per cent.

There must be a renewed and improved commitment to reduce the number people killed and seriously injured on our roads and regional WA presents a significant challenge. In 2018 alone, more than 60 per cent of all road fatalities occurred on regional roads, despite only around 20 per cent of the population living in regional WA, and in the five years to end-2017 around two in

three regional fatal crashes were the result of a single vehicle running off the road. Many such crashes could be avoided through implementation of effective low-cost safety treatments (e.g. sealing shoulders and installing audible edgelines). Increasing funds allocated under the Federal Black Spot Program and through a rolling Regional Road Safety Program (supplementing funds from WA's Road Trauma Trust Account) would accelerate implementation of such treatments, saving many more lives.

The road fatality rate in the WA Wheatbelt region is of particular concern as it continues to be disproportionately high, with 36.2 people killed per 100,000 people living in the region in 2017 (six times the State average for that year) and is therefore a high priority. The area represents a large proportion of single-vehicle serious and/or fatal crashes. Further, with increasing road-based grain freight movements, high volumes of heavy vehicles mix with local and tourist traffic travelling at different speeds on many roads. In 2013/14, the following sections of strategically important arterials were independently audited for RAC but still require remedial safety treatments:

- > Brookton Highway, between Brookton and Corrigin; and;
- > Goomalling-Toodyay Road between Toodyay and Goomalling.

There are many roads across WA in need of safety upgrades, including parts of the State's strategic and major freight road network. Priority projects, for which some planning and design works have already been progressed, include:

- > Bussell Highway duplication, between Capel and Sabina River;
- > Great Eastern Highway upgrade, between Walgoolan and Southern Cross; and
- > South Western Highway upgrade, between Manjimup and Bridgetown.

## RAC calls on the Australian Government to:

- » Commit funding to improve the safety of WA's strategically important arterial roads, including through the Federal Black Spot Program, the Regional Road Safety Program and implementation of the remaining aspects of the Safer Roads Investment Plan for the WA National Highway Network (\$800m in program and project costs).
- » Commit funding towards a rolling program to rate the safety of higher volume arterial regional roads across the State (\$650,000 in project costs), to inform the development of a Safer Road Investment Plan(s) of essential safety treatments.

<sup>3</sup> Australian Government (2018), "Road deaths in Australia" [https://bitre.gov.au/publications/ongoing/rda/files/RDA\\_Dec\\_2018.pdf](https://bitre.gov.au/publications/ongoing/rda/files/RDA_Dec_2018.pdf)

<sup>4</sup> Main Roads Western Australia (2013-2017). Seriously injured has been defined as follows: admitted to hospital as an inpatient for treatment of injuries sustained in a crash but did not die within 30 days of the crash.

<sup>5</sup> Australian Automobile Association (2013), "Star Rating Australia's Network of National Highways" [http://www.aaa.asn.au/storage/ausrap-star-rating-report.original\(2\).pdf](http://www.aaa.asn.au/storage/ausrap-star-rating-report.original(2).pdf)

## 2. Automated and connected vehicles

Automated and connected vehicle technology is advancing rapidly and varying levels of automation are now widely available in the vehicle fleet, including autonomous emergency braking, lane keeping and supervised autonomous mode, where drivers rely on technology to steer, brake and/or accelerate. Wider adoption of the technology has the potential to significantly improve road safety outcomes, as well as providing enhanced urban and regional mobility.

According to the US National Highway Traffic Safety Administration, around 94 per cent of crashes are a result of human error. Through full automation of the driving task, the possibility of a crash-free road environment is more likely than ever. Based on the Australia & New Zealand Driver Vehicle Initiative estimated timeframes<sup>6</sup> for the industry accepted SAE levels of automation<sup>7</sup>, Level 4 (High Automation) vehicles could be available between 2020 and 2025 and Level 5 (Full Automation) vehicles between 2026 and 2030.

While there are many unknowns, automated and connected vehicles will no doubt have considerable implications for our transport networks, towns and cities. A well-defined roadmap for how we plan for and manage the challenges of regulating the technology has never been more important to ensure their safe transition onto our roads and maximise their contribution as part of an integrated transport system.

Since 2015, RAC has been working to test and evaluate a fully driverless, electric shuttle bus (the Nayva 'AUTONOM SHUTTLE') and on 31 August 2016, RAC, with the support of the WA State Government and City of South Perth commenced Australia's first automated vehicle trial on public roads. In one of the first trials globally, the RAC Intellibus® consistently operates five days a week, taking passengers along its 3.5 kilometre route in South Perth, interacting with traffic, parked cars, cyclists and pedestrians. At the end of December 2018, it had driven over 16,400 kilometres in autonomous mode and enabled more than 10,700 people to experience driverless technology first-hand. The trial, which received grant funding from the Australian Government in late-2017, continues to improve national and international understanding around how automated vehicles operate and the potential impacts and opportunities of the technology.

Public trials can advance understanding, as well as the community's acceptance of the technology. RAC's Automated Vehicle Community Perceptions Monitor has revealed that whilst Western Australians are receptive, views continue to be mixed, particularly in relation to safety (many believe there will be road safety benefits and others have concerns about 'trusting computers'). However, those with an awareness of, or who have experienced the Intellibus®, feel more positively towards the

technology. Likewise, 97 per cent of respondents to the Intellibus® post-ride survey support its future use to provide the first and last mile services to complement public transport.

To ensure automated and connected vehicles complement traditional public transport and resolve rather than contribute further to Australia's urban and regional transport challenges, there will be a need to foster public or shared, on-demand services. In November 2017, it was announced that, along with just two other cities globally, RAC, in partnership with the State Government and Navya will be testing several driverless passenger 'AUTONOM CAB' vehicles in Perth, which have been designed as an on-demand shared mobility service (the RAC Intellicar Trial). A prototype vehicle, which arrived in September 2018, has now been commissioned and is undergoing testing on a private track.

All levels of government have a leading role in shaping the future with automated and connected vehicles. Strong leadership is required from the Australian Government to capitalise on and realise the benefits of advancements in the technology, including funding and coordinating the national framework. This requires:

- > Continuing to support public trials which evaluate and fine-tune automated vehicles in the early stages of development;
- > Collaboratively preparing a blueprint to guide the safe and well-planned transition to automated vehicles (in the short, medium and longer-terms);
- > Actively supporting options and developing policy for new shared, on-demand transport services, particularly to service the 'first or last mile';
- > Advancing regulatory changes to redefine the term 'driver' and being in 'control' of a 'vehicle', developing a framework for the policing and enforcement of automated vehicle operation and evolving public and private insurance schemes so that liability is clear and fair;
- > Outlining a process to review road rules and infrastructure needs, including that they gradually become more uniform across Australia; and
- > Identifying and investing in communications infrastructure to support these vehicles.

### RAC calls on the Australian Government to:

- » Commit funding to prepare for a future with automated and connected vehicles (\$50m in project costs) to enable WA and the nation to capitalise on advancements in technology and future proof new infrastructure.

<sup>6</sup> Australia & New Zealand Driver Vehicle Initiative (2018), "Levels of Automation", <http://advi.org.au/driverless-technology/>

<sup>7</sup> SAE International (2014), "Levels of driving Automation", <https://www.sae.org/news/press-room/2018/12/sae-international-releases-updated-visual-chart-for-its-%E2%80%99Clevels-of-driving-automation%E2%80%9D-standard-for-self-driving-vehicles>

# 3. Smart transport solutions

Reduced traffic throughput, higher crash rates, reduced public transport reliability and increased fuel consumption and greenhouse gas emissions are features of WA's increasingly congested roads. Funding for the timely development and implementation of technology solutions (or Intelligent Transport Systems, ITS) to enable a smarter transport system is essential to ensuring the State's future productivity and liveability.

WA's transport authorities must have access to ITS solutions that have been proven to enhance performance of the road and public transport networks, and deliver significant economic benefits, in other Australian states and overseas. ITS solutions can be integrated into road, parking and community infrastructure, as well as vehicles and public transport networks to deliver a more integrated, safer, reliable and efficient transport system. This not only increases the value of existing infrastructure by providing a more sustainable approach to 'build' capacity into the system but it can also optimise the delivery of future infrastructure investments.

Smart Freeway schemes (also known as Managed or Smart Motorways in some jurisdictions) employ real-time measurement and monitoring, coordinated ramp metering, active lane management and variable speed limits. These technologies have been successful in increasing capacity by five to 22 per cent and travel time reliability by up to 60 per cent, as well as reducing crashes by as much as 50 per cent<sup>9</sup>. The use of STREAMS (an integrated ITS combining software, hardware and data communications networks) by road authorities in Victoria and Queensland, in concert with coordinated ramp metering, to manage traffic operations on motorways has also delivered significant gains. Enhanced integration with SCATS (Sydney Coordinated Adaptive Traffic System) to ensure coordination with traffic signals on State and local roads can deliver broader network benefits.

With funding from the Australian Government announced in 2017, Perth's first Smart Freeways project is currently being implemented and is expected to be operational by early 2020. Further funding is required to develop and deploy ITS solutions along freeways and major arterials to minimise the need for costly road widening projects and importantly, maximise the value of both past and future investment in the road network.

It will also be essential to support use of technology solutions to optimise the broader transport system, with a focus on optimising the operation of public transport services, as well as enabling new shared, on-demand transport options. Further, to support the successful rollout of ITS solutions, and also to enable vehicles to operate safely and efficiently in full autonomy, foundation infrastructure such as a flawless communication network and network intelligence technologies to facilitate improved real-time vehicle and incident detection are needed. Real-time data is both a prerequisite for, and key output from smart transport systems.



**Melbourne's Australian Integrated Multimodal Ecosystem (AIMES) 'test bed' is one example where ITS solutions are being trialled to deliver safer, cleaner and more sustainable urban transport outcomes by connecting different transport modes and infrastructure at a street level.**

The Australian Government must take the lead on trialling and implementing smart transport systems through committing adequate funding, and by fostering a coordinated approach across sectors, vehicle manufacturers, technology suppliers, transport user representatives and a host of other stakeholder groups.

Key smart transport system priorities include:

- > Continuing the development and delivery of road network optimisation projects, prioritising technology solutions over physical increases in capacity, along Perth's freeways, as well as major arterials such as the Tonkin, Reid and Roe highways;
- > Implementation of optimisation measures across Perth's existing passenger rail network, utilising technology solutions such as next generation signalling and automatic train control, enhanced scheduling and complementary infrastructure upgrades such as platform extensions on the heritage lines (Fremantle, Midland and Armadale) to facilitate six-railcar sets and increased service frequencies;
- > Identifying and investing in communications infrastructure to enable public transport priority at signalised intersections, and to support the safe transition of automated and connected vehicles onto our roads; and
- > Investing in the State's real-time, multi-modal data collection and monitoring infrastructure and technologies, as well as advanced analytics and visualisation capabilities, to support the provision of real-time traveller information, network optimisation and strategic planning.

#### **RAC calls on the Australian Government to:**

- » Commit funding towards Intelligent Transport Systems, including solutions to enable road and public transport optimisation (\$250m in project costs) to maximise the value of past and future transport infrastructure investment.
- » Commit funding to implement a program of measures to optimise Perth's heavy rail system, including signalling system and infrastructure upgrades (\$1b in program costs), to make best use of existing rail assets and cater for increasing demands.

<sup>9</sup> Austroads (2016), "Guide to Smart Motorways", <https://www.onlinepublications.austroads.com.au/Items/AGSM-16>

## 4. Light Rail

Perth's road network is and will remain an essential part of the urban fabric of the capital city and State, but the reality is the road network can no longer handle the demands being placed on it. Light rail projects have time and again been proven to be transformational for cities and as such, the Australian Government should have a role in its delivery.

**! Infrastructure Australia estimates that by 2031 Perth's road congestion will cost more than \$16 billion and the Mandurah train line will be at or exceeding 'crush capacity'; with this, a choice will need to be made around expanding the urban fringes or increasing density and public transport in the inner city and middle suburbs<sup>9</sup>.**

While committed major public transport investments in Perth are largely focussed on expanding the reach of the heavy rail network to and beyond the outer suburbs, accessibility and connectivity through the inner suburbs needs to be addressed and the introduction of light rail, which would add a new dimension to the public transport system, presents significant opportunities in this area.

Perth's longstanding light rail proposal would provide high frequency services through Perth's central area, connecting the Specialised Centres of the University of Western Australia (UWA) / Queen Elizabeth II Medical Centre (QEII) and Bentley Technology Precinct / Curtin University (forecast to be required by a population of 2.7 million), and on to Canning Bridge (required by 3.5 million)<sup>10</sup>. This inner cross-city route would connect with the radial heavy rail network at several locations, helping to relieve patronage pressures on Perth Underground / Central Station and facilitate more seamless cross-city mobility.

**! Based on comprehensive analysis commissioned by RAC, the University of WA and QEII Medical Centre currently exhibit low accessibility by public transport<sup>11</sup>.**

Other corridors have and are being investigated by the State and local government and the private sector in recognition of the need for an inner city light rail network to provide a step-change in public transport access within the central sub-region and to major activity centres. This includes rapid transit connections between the newly redeveloped Scarborough Beach area / Stirling strategic activity centre to Glendalough and on to the Perth CBD, which would connect on to UWA / QEII and Bentley / Curtin. Being the largest business precinct outside of the Perth CBD, Stirling City Centre and adjoining Herdsman / Glendalough area is a major source of investment, economic activity and employment, and is forecast

to have the highest urban infill target in the Central Sub-region<sup>12</sup>.

Investing in these light rail projects has the potential to significantly improve economic productivity by:

- > Increasing public transport connectivity and mode share through the central area which is currently overwhelmed by traffic congestion, freeing up road capacity for commercial vehicles;
- > Connecting key tertiary education campuses and important centres for employment, retail and tourism;
- > Enabling further higher density and mixed-use development and revitalisation opportunities within strategically-important activity centres, near light rail stations and along the selected corridors; and
- > Rationalising and re-routing existing bus services and improving public transport journey times and reliability.

While the Scarborough / Stirling route requires further work, much of the planning and design for Perth's long-standing light rail proposal has already been undertaken. Despite this and light rail having for many years been identified as being a key component of the transport system for a city of 3.5 million, there remains a lack of funding to progress any projects.

### RAC calls on the Australian Government to:

- » Commit funding towards Perth's long-standing light rail proposal (\$1.8b in total project costs) to enhance inner-city mobility and deliver economic productivity, transport safety and sustainability outcomes in WA.
- » Commit funding towards light rail to connect Scarborough Beach / Stirling to Glendalough and the Perth CBD (\$1.1b in total project costs) to enhance access to strategically-important centres for employment, retail and tourism.



<sup>9</sup> Infrastructure Australia (2015), "Australian Infrastructure Audit Our Infrastructure Challenges" Report - Volume 2 April 2015, <https://infrastructureaustralia.gov.au/policy-publications/publications/files/Australian-Infrastructure-Audit-Volume-2.pdf>

<sup>10</sup> Op. cit. Transport at 3.5 million Perth & Peel Transport Plan

<sup>11</sup> RAC WA (2016), "Transport accessibility of Perth's activity centres", <https://rac.com.au/about-rac/advocating-change/reports>

<sup>12</sup> Department of Planning, Lands and Heritage (2018), "Central Sub-regional Planning Framework", [https://www.dplh.wa.gov.au/getmedia/7ea08c05-32f1-43dc-8c9b-29184ef5292c/FUT\\_PP-Central\\_Sub\\_Region\\_March2018\\_v2\\_part2](https://www.dplh.wa.gov.au/getmedia/7ea08c05-32f1-43dc-8c9b-29184ef5292c/FUT_PP-Central_Sub_Region_March2018_v2_part2)

# 5. Rail for Perth's northern corridor

Perth's densely populated northern corridor lacks the public transport services of Perth's other sub-regions as it operates without a heavy rail line or rapid transit connection. Currently, road connections to Perth's central area experience high levels of congestion. Without adequate alternatives, this situation will only worsen as strategically important centres such as Morley, as well as Ellenbrook and Wanneroo continue to grow.

There is a clear appetite for high frequency, reliable and high quality public transport options in this area. This is evidenced by the significant bus patronage on the 950 bus route, which is a high-frequency, through-routed service between Morley and Perth, and between Perth and Nedlands (serving UWA and QEII).

**! In its first 12 months of operation, 3.7 million boardings were recorded on the 950, equating to one million additional boardings (or 39 per cent) on all four routes that the service replaced<sup>13</sup>.**

The success of previous heavy rail projects in Perth further demonstrates an appetite amongst commuters to embrace public transport. Post-implementation monitoring following the opening of Perth's last major rail infrastructure project, the 72km Perth to Mandurah line in 2007, showed that 88 per cent of respondents agreed it was 'worth the expenditure'; and with more than 20 million passenger boardings each year<sup>14</sup> the line has eclipsed initial patronage projections.

Providing a rail connection from the Perth CBD to the Morley Strategic Centre (forecast to be required by a population of 2.7 million<sup>15</sup> [within the short term]), and creation of a station precinct within the centre, would significantly enhance access for business and local communities but would also be a major catalyst for development and revitalisation.

This, as well as enhanced public transport connectivity to the Ellenbrook Secondary Centre and in the longer-term a connection with the Joondalup Line through the northern suburbs would deliver significant productivity benefits by:

- > Driving an increase in public transport mode share, helping to manage congestion created by commuter traffic on key arterials connecting to the Perth CBD, as well as to strategically important centres;
- > Relieving operational constraints on the existing public transport network, including the Midland and Joondalup lines and bus corridors into the CBD which will see increasing demands due to projected population growth and committed rail projects;

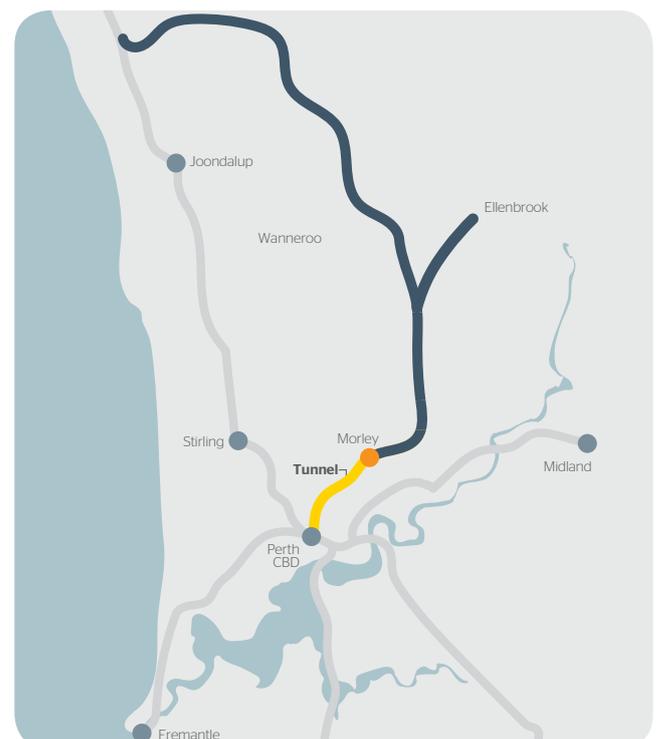
- > Improving access to employment opportunities for those residing in the area, as well as access to workforces and the benefits of proximity to the CBD for businesses; and
- > Supporting and enabling higher density and mixed-use development of strategically important centres and station precincts.

Both the State and Australian Government have made funding commitments towards heavy rail to provide a connection to Ellenbrook and the north east suburbs, with work underway on route options analysis, including preliminary investigations, planning and concept design. As such, now is an opportune time to ensure enhanced connectivity between the CBD and Morley Strategic Centre.

## RAC calls on the Australian Government to:

- » Commit funding towards heavy rail between Perth city centre and Morley Strategic Centre (\$2.8b in total project costs) to increase the public transport accessibility of this important activity centre.

## Rail for Perth's northern corridor



<sup>13</sup> Minister for Transport Western Australia (2015), "Superbus has a successful year", <https://www.mediastatements.wa.gov.au/Pages/Barnett/2015/03/Superbus-has-a-successful-year.aspx>

<sup>14</sup> Public Transport Authority (2018), "Annual Report 2017-18", <http://www.pta.wa.gov.au/Portals/28/AnnualReport/PTA-2017-18-AnnualReport-online.pdf>

<sup>15</sup> Op. cit. Transport at 35 million Perth & Peel Transport Plan

# 6. Grade separations

## a. Major highway grade separations

The importance of Perth’s orbital freeway network, comprising Reid Highway, Tonkin Highway and Roe Highway, as a critical freight transport link has become increasingly more significant, particularly now that Perth’s major north-south corridor, the Mitchell and Kwinana freeways, is operating at or near capacity.

**! Infrastructure Australia’s Infrastructure Audit in 2015 found that Perth’s transport network is heavily focused on the major north-south corridors, especially the Kwinana and Mitchell freeways and that these key freeways are already operating at capacity in peak periods, especially on the approaches to Perth’s CBD and the Swan River crossings<sup>16</sup>.**

The orbital network has been long planned to connect key existing and emerging employment zones (such as Balcatta, Malaga, Kewdale, Midland, Canning Vale, Jandakot and Forrestdale), as well as to connect the Port of Fremantle and Perth Airport with these, and the National Highway Network.

However, impediments to free flow traffic movement and bottlenecks are restricting economic productivity and most critically, impacting road safety. For example, some signalised intersections are at-grade (without flyovers to separate opposing traffic flows). As a result, these sections operate with significantly reduced efficiency and safety compared to grade separated intersections, forcing traffic to transition between 100km/h and 0km/h when red traffic signals are encountered.

Further, when an error is made by a motorist at one of these intersections, a fatal and serious injury crash outcome has a very high probability owing to the enormous energies that are potentially involved.

While the Australian Government is incrementally contributing to the removal of black spots, targeted corridor upgrades are urgently required to ensure the Australian Government receives the full value of the investment it has already made in Perth’s freeway and orbital highway network and to safeguard the future productivity of the State and national road freight task.

The intersections and associated upgrades which require funding include the following on Perth’s primary freight routes:

- > Elimination of the at-grade intersection on Reid Highway at Erindale Road;
- > Elimination of the at-grade intersections on Roe Highway at Morrison Road and Toodyay Road (giving consideration to the adjacent freight line and safeguarding for potential future strategic road upgrades); and
- > Planning and design stages to remove all remaining at-grade intersections on Tonkin Highway.

In previous years, the State Government has been able to achieve cost savings by delivering grade separations as part of a rolling program, thereby maintaining workforce continuity. For example, the \$20 million grade separation of Mirrabooka Avenue and Reid Highway was delivered as a sequential project to the \$50 million grade separation of Alexander Drive and Reid Highway.



<sup>16</sup> Op.cit. Infrastructure Australia 2015

## b. Level crossing removals

Perth's existing urban passenger rail network, which spans approximately 180km, currently includes 31 at-grade level crossings, most of which are on the heritage lines (namely, the Midland, Fremantle and Armadale lines). These represent constraints from a rail and road network operation and optimisation perspective, now and into the future. The current level of service around many crossings is poor, with some 'boom gates' being down for several hours each day, which causes traffic delays and increases the risk of an incident, particularly during peak periods when train services are more frequent and traffic demands are greater. They also further inhibit opportunities for urban renewal and associated outcomes which are essential for ensuring more liveable, connected communities.

**! According to Transport for Victoria's Level Crossing Removal Authority, with frequencies of 17 or more trains per hour (in the peak direction) boom gates will rarely open during peak times and even at frequencies of 10 trains per hour (in the peak direction of travel), capacity through signalised intersections near level crossings can be reduced by more than a third<sup>17</sup>.**

Investment to optimise, increase capacity and expand Perth's urban passenger rail network will be crucial to accommodate projected increases in patronage and ensure future productivity and liveability. National Transport Commission (NTC) forecasts suggest a 140-160 per cent increase in peak period rail boardings to 2031<sup>18</sup>, which will increase further as Perth and Peel head towards a city of 3.5 million people by 2050. Increased service frequencies will be required into the future along all lines. Further, new lines that have been committed will connect into, and increase the number of services utilising the existing network (e.g. Forrestfield Airport Link and the Thornlie Cockburn Line). As such, the duration of level crossing closures will only increase, significantly impacting transport system efficiency and safety.

**! By 2021, it is expected that the Midland and Fremantle lines will have trains operating between Claremont and Bayswater via the CBD every five minutes during peak periods due to the opening of Forrestfield Airport Link, double the existing service frequencies<sup>19</sup>.**

Removing level crossings (which can be achieved through grade separations [by elevating or sinking the rail line and/or

road] or road closures depending on the adjacent road network and land uses) has the potential to:

- > Reduce delays and improve traffic flow, supporting the more efficient movement of people and goods;
- > Support operational requirements and improved public transport efficiency;
- > Enhance safety and amenity for all road users, and reduce community severance; and
- > Unlock land for redevelopment to provide mixed-use development opportunities (particularly within station catchments or activity centres), as well as urban realm enhancements and opportunities for station upgrades.

The State Government has committed funding towards the removal of four priority level crossings - \$69 million for the removal of Denny Avenue level crossing (which was identified by Western Australians as the most risky road in the State in the 2016-17 RAC Risky Roads campaign) and \$1 million towards further investigations for the crossings at Caledonian Avenue (in Maylands), Oats Street (in Carlisle) and Wharf Street (in Cannington).

In addition to progressing the removal of these crossings, other priorities include the following which will experience increased train frequencies due to the committed Thornlie Cockburn Line and present opportunities to deliver positive congestion, safety and redevelopment outcomes:

- > Moore Street (Midland and Armadale lines);
- > William Street (Armadale Line);
- > Welshpool Road (Armadale Line);
- > Hamilton Street (Armadale Line); and
- > Kelvin Road (Armadale Line).

### RAC calls on the Australian Government to:

- » Continue to commit funding towards the rolling program of grade separations and associated upgrades on WA's major highways (\$260m in project costs) to bring these nationally significant orbital corridors up to freeway standard.
- » Commit funding towards a rolling program of road / rail grade separations / level crossing removals and associated urban realm enhancements, improving safety, road and public transport efficiency and amenity for all road users (\$1b in program costs).

<sup>17</sup> Level Crossing Removal Authority (Transport for Victoria), 2018. "Prioritising future level crossing removals. Site prioritisation framework," [https://levelcrossings.vic.gov.au/\\_data/assets/pdf\\_file/0006/334914/Extra-Crossings\\_Prioritisation-Framework.pdf](https://levelcrossings.vic.gov.au/_data/assets/pdf_file/0006/334914/Extra-Crossings_Prioritisation-Framework.pdf)

<sup>18</sup> National Transport Commission (2016). "Who moves what and where. Freight and Passenger transport in Australia", [https://www.ntc.gov.au/Media/Reports/\(D62E6EFC-36C7-48B1-66A7-DDEF3804CCA8\).pdf](https://www.ntc.gov.au/Media/Reports/(D62E6EFC-36C7-48B1-66A7-DDEF3804CCA8).pdf)

<sup>19</sup> Minister for Transport, Planning, Lands, 2018. "Claremont Station upgrade to support METRONET frequency boost," <https://www.mediastatements.wa.gov.au/Pages/McGowan/2018/04/Claremont-Station-upgrade-to-support-METRONET-frequency-boost.aspx>

# 7. Albany Ring Road

Located in the Great Southern Region of WA, Albany is the region's major industrial, commercial and retail centre, as well as one of WA's most popular tourist destinations. The Region is a key agricultural area that contributes significantly to the State's exports including wheat and woodchips, and as such Albany Port plays a critical role in the ongoing economic development of the region. Trade activities at the Port have been strong, with total trade being around five million tonnes per annum<sup>20</sup>.

The Albany Ring Road, which comprises three stages, will provide direct access for freight vehicles travelling to and from Albany Port, bypassing the built-up areas of the City. Stage One (Menang Drive, from Chester Pass Road to Albany Highway) was completed in 2007, at a cost of \$15.9 million. Detailed planning and design work for Stage Two (George Street through to the Princess Royal Drive) and Stage Three (Albany Highway to the Lower Denmark Road via the Link Road / George Street alignment) was undertaken from late 2012 to early 2015 with \$1 million in funding from the Australian and WA State governments.

Stage Two and Three include:

- > A grade separated intersection at Albany Highway / Menang Drive;
- > Grade separation at Hanrahan Road / Frenchman's Bay Road (construction of a bridge structure);
- > 17 minor at-grade intersections; and
- > Realignment of approximately 4km of single rail track and relocation of an at-grade road / rail crossing at Frenchman's Bay Road.

Stages Two and Three, which involve the construction of 11km of single carriageway road, are expected to be delivered together to provide a continuous and unimpeded connection to the Port of Albany. The new route will connect the existing major arterial roads and highways radiating from Albany and provide improved access to the Mirambeena Industrial Estate. It will also eliminate a critical bottleneck at the Chester Pass Road / Albany Highway roundabout where the South Coast, Albany and South Western highways converge and where, in the event of incidents, there are major network redundancy issues stemming from the limited options for detours.

The roundabout experiences over 40,000 vehicle movements per day<sup>21</sup>, including a high proportion of heavy vehicles. It was the site of 198 crashes in the five years to December 2017, ranking it the worst intersection in regional WA and 13th worst in the State<sup>22</sup>. Further, it is known to present a serious safety concern to the community and was ranked as the second most dangerous intersection in regional WA (6th State-wide) in RAC's 2016/17 Risky Roads campaign.

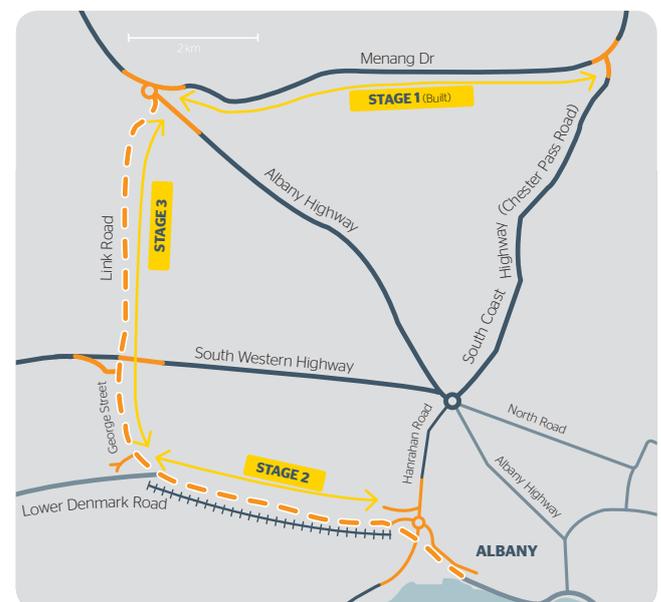
The completion of the Albany Ring Road will deliver a number of safety, efficiency and amenity benefits through reducing the volume of heavy vehicles mixing with local and tourist traffic travelling along Albany Highway and South Coast Highway. Furthermore, it will enhance regional road freight efficiency and connection with export markets, maximising the productivity and competitiveness of the Great Southern Region's primary industries and global competitive advantage of the south west of Australia.

Early land acquisition has already commenced, and planning activities are being progressed with \$35 million previously allocated by the State Government in recognition of the major road safety and economic benefits it is expected to deliver for Albany, and the Great Southern Region.

## RAC calls on the Australian Government to:

- » Commit funding towards the completion of the Albany Ring Road (\$137m in total project costs) to provide an efficient and safe road network around Albany.

## Albany Ring Road



<sup>20</sup> Southern Ports Authority (2018), 'Annual Report 2017', <https://www.southernports.com.au/system/tdf/publications/annual-reports/southern-portsannual-report2018web.pdf?file=1&type=node&id=70>

<sup>21</sup> Talitha Wolfe (2016), 'Roundabout still region's riskiest', The Western Australian, <https://thewest.com.au/news/great-southern/roundabout-still-regions-riskiest-ng-ya-121529>

<sup>22</sup> Main Roads Western Australia (2019), 'Intersection Crash Ranking - Interactive Report', <https://mrapps.mainroads.wa.gov.au/cr/frankingQueryC.asp>

# 8. Cycling infrastructure Projects

## a. Perth's Principal Shared Path Network

The Principal Shared Path (PSP) network is the core of Perth's cycling network. It provides high standard radial routes to and from the Perth city centre through the region, which are separated from traffic. PSP's also cater for shorter trips by providing connections to local cycling routes and activity centres. Being located adjacent to Perth's freeways, major highways and rail lines, they serve an important function in helping to relieve pressures on the adjacent heavily trafficked road corridors.

**! Approximately 483,100 people ride a bike in Western Australia in a typical week (equating to 18.5 per cent of WA residents, which is higher than the national average of 15.5 per cent). When considering cycling for transport in Perth, of those who cycle in a typical week (24 per cent of Perth residents), 41 per cent do so for transport<sup>23</sup>.**

The provision of well-designed, continuous and connected cycling infrastructure can be effective in not only improving safety and amenity for existing cyclists, but also in attracting a wider range of cyclists. RAC's 2015 Cycling Survey<sup>24</sup>, which received responses from over 5,500 cyclists and non-cyclists across WA, revealed that 43 per cent of those who identified a barrier to cycling more frequently said they have a fear of sharing the road with motorists. While recent legislative changes in WA, such as those to permit cyclists of all ages to ride on footpaths (which came into effect April 2016) and the Minimum Passing Distance Regulations (which came into effect at the end of 2017) will help to enhance cyclist safety and create a safer road environment, the provision of appropriate cycling infrastructure will still be critical.

**! According to RAC's 2015 Cycling Survey, investment in both on and off-road cycling infrastructure (71 per cent and 64 per cent respectively) is a top priority to encourage increased cycling participation, followed by legislative changes.**

The importance of filling gaps within, and expanding the existing PSP network has been identified as being a crucial

component of the cycling network, and transport system, for Perth and Peel at a population of 3.5 million people. To support this, the State Government has committed funding to address a number of missing links, with \$67 million to close gaps along the Fremantle Line and Mitchell Freeway PSPs committed in the 2018-19 State Budget.

Priority missing links which require funding include:

- > Fremantle Line PSP - North Fremantle / Swan River to Fremantle Station;
- > Armadale Line PSP - Welshpool Road to Armadale Road;
- > Reid Highway PSP - Wanneroo Road to Mirrabooka Avenue;
- > Mitchell Freeway PSP - Reid Highway to Ocean Reef Road upgrade;
- > Kwinana Freeway PSP - Thelma Street to Mount Henry Bridge upgrade;
- > Roe Highway PSP - Berkshire Road to Great Eastern Highway;
- > Reid Highway PSP - Marmion Avenue to Everingham Street;
- > Tonkin Highway PSP - Mills Road West to Hale Road;
- > Stock Road - Roe Highway to Rockingham; and
- > Thomas Street - Wellington Street to UWA.

## b. Green bridges

Currently, the Swan and Canning Rivers, as well as other water bodies and major transport infrastructure create physical barriers in Perth's active transport networks, reducing the cycling catchment of the Perth city centre and major activity centres. There is currently a lack of river crossings, and many existing crossings provide inadequate facilities for pedestrians and cyclists (such as the Causeway, Narrows Bridge, and Fremantle and Guildford traffic bridges).

Green bridges are designed to cater for cyclists, pedestrians and in some cases public transport, as opposed to general traffic. Such bridges provide dedicated, safe and direct connections between key destinations and wider active transport networks, reducing severance issues and significantly increasing cycling mode share. Furthermore, they can unlock development potential and activate tourism opportunities.

Assessments of cycling infrastructure in South East Queensland for example have effectively demonstrated that overcoming major barriers, through constructing bridges or addressing missing links to provide direct connections to

<sup>23</sup> Austroads (2017), "National Cycling Participation Survey 2017: Western Australia", <https://www.onlinepublications.austroads.com.au/items/AP-C91-17>

<sup>24</sup> RAC WA (2015), "Cycling Survey", <https://rac.com.au/about-rac/advocating-change/reports>

activity centres results in a high mode shift (as well route change for existing cyclists).

**! An evaluation undertaken within the first few years of the opening of the Normanby Pedestrian and Cycle Link, which provides better and safer access between Brisbane CBD and the inner west and northern suburbs, demonstrated that of the 600 daily commuter cyclists (and 1,100 pedestrians) using it, 92 per cent had shifted from other modes (predominantly car and public transport)<sup>25</sup>. Likewise, shortly after opening, the Goodwill Bridge (connecting South Bank with QUT Gardens Point Campus) was being used by 2,000 cyclists, 30 per cent as a result of mode change and the Eleanor Schonell Bridge (connecting Dutton Park and the University of Queensland) by 1,100 cyclists, 60 per cent from mode change<sup>26</sup>.**

Green bridge priorities which require funding include:

- > A pedestrian and cycle bridge, adjacent to the Causeway which cyclists currently cross via a sub-standard shared path (this will also enable reconfiguration of the Causeway to accommodate Perth's long-standing light rail proposal through the CBD);
- > Elimination of the only at-grade road crossing on the Kwinana Freeway PSP, at Cranford Avenue which currently presents a safety concern, and completion of the PSP to South Street;
- > Lake Joondalup Green Bridge, providing improved connectivity between the activity centres of Joondalup and Wanneroo, as well as to the Joondalup rail line and ECU Joondalup Campus;

- > A pedestrian and cycle bridge over the Swan River, adjacent to the Guildford traffic bridge to provide a direct PSP connector;
- > Three Points Bridge, connecting Chidley Point, Point Walter and Point Resolution to provide the only river crossing between Fremantle and Perth CBD (a distance of over 12km), enhancing access to activity centres such as UWA / QEII;
- > Racecourse Bridge, linking Maylands to the Burswood Peninsula (which when coupled with the green bridge from East Perth to the new Perth Stadium will provide significantly reduced journey times between Maylands and the Perth city centre); and
- > Upper Canning River Connections (Salter Point Bridge, Pipeline River Crossing, and Canning River Elevated Boardwalk) to enhance access to a number of important activity centres including Murdoch and Bentley / Curtin knowledge hubs, Canning Vale and Cannington).

**RAC calls on the Australian Government to:**

- » Commit funding towards the completion of Perth's PSP network to deliver a step-change in the provision of a continuous and safe cycling network, particularly within a 15km radius of the Perth city centre and to strategically important activity centres (\$70m in project costs).
- » Commit funding for green bridges to address severance issues and increase cycling catchments for the Perth city centre and major activity centres (\$300m in project costs), delivering safety, health and productivity benefits.



<sup>25</sup> Michael Langdon (2016), "An evidence-based assessment of the impact of cycling infrastructure in South East Queensland", Queensland Department of Transport and Main Roads Engineering Technology Forum 2016, [https://www.tmr.qld.gov.au/-/media/aboutus/Events/ET\\_Forum2016/presentations/Day2/An-evidence-based-assess-cyc-infrast-in-SEQ.pdf?la=en](https://www.tmr.qld.gov.au/-/media/aboutus/Events/ET_Forum2016/presentations/Day2/An-evidence-based-assess-cyc-infrast-in-SEQ.pdf?la=en)

<sup>26</sup> Michael Langdon (2015), "Road engineering for cyclist safety", Department of Transport and Main Roads, <https://www.ipwea.org/HigherLogic/System/DownloadDocumentFile.aspx?DocumentFileKey=a6612bd8-76c9-43b2-a778-b7978e3ab8b4>

# Investment of motorist taxation revenue

In 2016, the Western Australian Auditor General identified that WA was facing an \$845m maintenance backlog<sup>27</sup> and it is widely recognised that across the State, the condition of the regional road network is in decline. Narrow seal, poor surface condition and hazardous roadsides are common complaints from regional road users and as part of its 2016/2017 RAC Risky Roads campaign, RAC received more than 6,000 nominations from across the State highlighting the poor condition and / or design of metropolitan and regional roads.

The maintenance backlog, combined with the escalating pressures and cost of congestion and road trauma being faced by WA will present significant challenges for government, particularly in an increasingly constrained fiscal environment. In December 2018, total public-sector net debt for WA, which encompasses all government activity, was reported to be almost \$37 billion (forecast to increase to \$38 billion by 30 June 2020)<sup>28</sup>.

Despite these pressures, as documented in an annual report commissioned by RAC on motorist taxation revenue and spending, WA consistently does not receive an equitable proportion of the revenue collected from WA motorists. To ease the burden of transport funding on the State, a greater proportion of the Australian Government's motoring-related revenue should be consistently dedicated to improving WA's road and transport networks.

Under the existing system road users pay for access to roads by delivering revenue to governments through a number of State and Federal taxes or charges. State governments raise revenue by imposing an access charge on vehicle owners in the form of vehicle registration, stamp duty and license fees. The Australian Government raises revenue from motorists primarily by imposing an excise tax on every litre of fuel sold. However, only a small proportion of this revenue flows back into public spending on transport infrastructure in WA.

RAC's most recent review undertaken in late-2018<sup>29</sup> found that, on top of fees and charges on motorists by the State Government, the Australian Government collected approximately \$2.88 billion from motor vehicle related taxes in 2018/19 but returned 59 cents in every dollar (\$1.69 billion) to the State for spending on WA roads. A further eight cents per dollar raised was also spent by the Australian Government on "indirect benefits" to WA motorists in 2018/19, for example towards public transport which provides enhanced mobility options and helps to manage congestion.

Historically from 2006/07 to 2018/19, the total return to WA motorists in both direct and indirect forms (roads, and public and active transport) from the taxes levied by the Australian Government has averaged just 34 cents per dollar collected per annum (31 cents if only considering spending on roads which was the case until recent years). This will average 41 cents per annum over the estimates period, falling to a low of just 17 cent in 2021-22 (for road spending the average is 25 cents per annum, falling to 14 cents). If at a minimum, 50 per cent of the revenue collected from WA motorists by the Australian Government was consistently returned to WA, this would equate to an additional \$1.25 billion over the estimates period alone. This would be sufficient to fully-fund the delivery of remedial measures to address WA's maintenance backlog, complete the Albany Ring Road and fund intelligent transport solutions to deliver road network safety and efficiency benefits.

An unrivalled opportunity exists for the Australian and WA State governments to develop and invest in targeted city shaping infrastructure projects to cater for the increasing demands being placed on the transport system as the Perth and Peel region grows towards a population of over 3.5 million. This and investment in the regional road network will be critical to deliver liveability and productivity outcomes for WA and the nation.

## RAC calls on the Australian Government to:

- » Provide a fairer distribution of funding from revenue collected from WA motorists (consistently a minimum of 50 per cent) to remediate WA's \$845m road maintenance backlog and tackle the increasing costs of congestion and road trauma, to deliver productivity and liveability outcomes.
- » Hold an inquiry into road-user pricing as part of a broader reform of motorist taxation that would remove revenue raising fees and charges, and / or hypothecate money collected for the provision of transport infrastructure and services.

<sup>27</sup> Office of the Auditor General (2016), "Maintaining the State Road Network - follow on audit" <https://audit.wa.gov.au/reports-and-publications/reports/maintaining-state-road-network-follow-audit/>

<sup>28</sup> Government of Western Australia (2018), "2018-19 Government Mid-Year Financial Projections Statement", <http://static.treasury.wa.gov.au/2018-19-myf/2018-19-myf.pdf>

<sup>29</sup> Acil Allen (2018), "Motorist taxation revenue and spending in WA". Note: 'Direct benefits' relate to motoring-related revenue spent on road and road-related infrastructure and 'indirect benefits' relate to motoring-related revenue spending on public and active transport infrastructure.

# Vehicle safety standards

Nearing the end of the State’s 12-year Road Safety Strategy, *Towards Zero*, WA has fallen behind on its target to reduce death and serious injuries by 40 per cent by 2020<sup>30</sup>. If fully implemented, *Towards Zero* could have saved 11,000 people from being fatally or seriously injured on Western Australian roads between 2008 and 2020. Notwithstanding the urgent need to remove the social impact of road trauma, the economic cost savings to WA’s health services, business and community were estimated to be \$6.6 billion. It follows that if we are to achieve ‘vision zero’ where no lives are lost on Australian roads, the Australian Government must take the lead on bolder and more decisive road safety regulation and policy.

Safe Vehicles is one of the four cornerstones of *Towards Zero*, which, over the life of the Strategy, will account for more than one quarter of the projected injury savings<sup>31</sup>. Vehicle design standards play a critical role in road safety through ensuring all new vehicles sold in Australia comply with a set of standards designed to ensure vehicles protect occupants and other road users in the event of a crash, as well as ensure those vehicles have a certain level of ability – through technology – to avoid or minimise the effects of a crash. As all new vehicles sold in Australia are now imported from international markets, Australia’s vehicle design standards in the form of Australian Design Rules (ADRs) perform a vital regulatory function.

The process for setting standards must be flexible and dynamic enough to accommodate and encourage rapid technical change and strategic enough to progressively facilitate a lifting of the baseline vehicle safety standards and ultimately vehicle safety features over time. However, the time currently taken to examine new regulatory proposals and implement them as ADRs remains too protracted. As a result, Australian road users do not receive the full benefit of vehicle safety features which are widely accessible in other markets.

To some extent the role of, and lag in updating, the ADRs are supplemented by the Australasian New Car Assessment Program (ANCAP). ANCAP is an independent vehicle safety advocate which crash tests and rates new vehicles to provide consumers with transparent advice on vehicle safety. According to ANCAP vehicle occupants have twice the chance of being killed or seriously injured in a vehicle rated 1-star compared to a 5-star rated vehicle<sup>32</sup>.

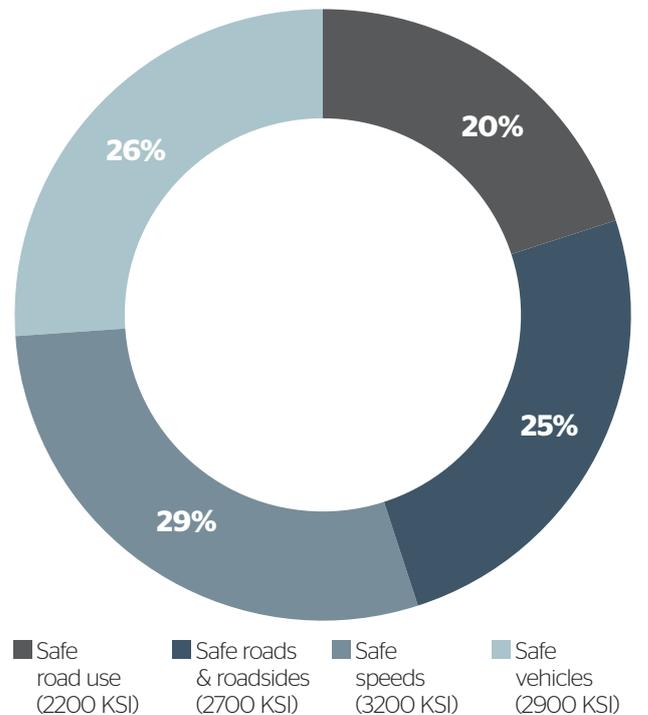
**! To demonstrate RAC’s own commitment to vehicle safety, we will not insure or finance any 2012 or newer manufactured vehicles which have been rated by ANCAP and do not achieve safety ratings of 4 or 5 stars.**

ANCAP currently publishes star safety ratings online. However, vehicle safety ratings are not always visible on cars at the point of sale, and as such, consumers do not have easy access to vital safety information when purchasing their new car. Consumer goods such as refrigerators, microwaves and washing machines are already required to display energy consumption labels at the point of sale. Even cars are legally required to display fuel consumption and emissions information at the point of sale. Yet, in what would be a low-cost measure, there is no mandatory requirement for vehicle safety ratings to be disclosed on new cars.

**RAC calls on the Australian Government to:**

- » Reduce the time taken to implement safety technology as ADRs so that Australian road users receive the full benefit of safer vehicle features widely available in other markets.
- » Make the display of ANCAP star ratings mandatory at the point of sale across all Australian states, ensuring consumers have access to the vehicle safety information which might one day save their life.

**Projected cumulative savings in number of people killed and seriously injured, 2008-2020**



<sup>30</sup> Road Safety Commission Western Australia (2008), "Towards Zero Strategy" <https://rsc.wa.gov.au/About-us/Towards-Zero>  
<sup>31</sup> Ibid.  
<sup>32</sup> ANCAP (2015), "Star Ratings Explained", <https://www.ancap.com.au/safety-ratings-explained>

# Cycling infrastructure funding

Motoring is and will remain integral to the mobility of Western Australians but with a looming congestion crisis, it is no longer just about the car – it's about choice. Investing in cycling infrastructure will provide road safety, health and productivity benefits. As such, the ongoing investment in the road network must be complemented with investment in extending the coverage, quality and accessibility of sustainable transport networks. This should however, extend beyond funding cycling and walking infrastructure as part of the delivery of major road projects, to include strategically important active transport corridors.

WA has one of the world's most conducive climates for cycling and the possibilities for further growth are limitless. While WA has some good cycling infrastructure, cyclists are often required to share road space with high-volume and sometimes heavy vehicle traffic, including on the National Highway Network.

Some examples are:

- › Roe Highway, from Berkshire Road to the railway line just north of Clayton Street;
- › Leach Highway, between Albany Highway and Jeffery Street;
- › Stock Road, south of Phoenix Road, Rockingham Road and Patterson Road;
- › Tonkin Highway, from Mills Road to Roe Highway; and
- › Reid Highway, from Wanneroo Road to Mirrabooka Avenue.



Cycling infrastructure is comparatively low in cost and provides for more sustainable transport choices, which can not only result in less cars being on Perth's roads leaving more space for the more economically productive freight and commercial vehicles but is also highly valued by the community. The availability of safe and connected active transport infrastructure has an important role in supporting healthy and liveable communities, which is in the national interest for a multitude of reasons, not least to reduce the growing burden on the nation's healthcare system caused by physical inactivity and harmful vehicle emissions.



**More than half of all adults in Australia are not active enough<sup>33</sup> and physical inactivity has been identified as the nation's fourth most burdensome risk factor<sup>34</sup>, accounting for five per cent of the total burden of disease and injury nationally in 2011. A recent University of Sydney study<sup>35</sup> found that physical inactivity cost the Australian economy \$805 million in 2013 alone; this includes \$640 million in direct costs (healthcare expenditure) and \$165 million in indirect costs (due to the impact on people's productivity). The total loss in tax revenue through public healthcare expenditure was also estimated at \$425 million.**

The Western Australian Bicycle Network Plan (WABNP) 2014-2031<sup>36</sup> identifies the importance of expanding, and closing the gaps in, Perth's cycling or Principal Shared Path network and this is reinforced in the cycling network for Perth and Peel @ 3.5 Million. Furthermore, a Cycling Business Case<sup>37</sup> developed by RAC found the total community benefits (in economic productivity, health, social wellbeing and the environment) associated with investment in cycling projects is at least 3.4 times the costs incurred; a finding which was endorsed by the WABNP.

## RAC calls on the Australian Government to:

- › Commit to an infrastructure investment program for strategically important cycling connectors to provide Western Australians with access to a range of mobility options and ensure the delivery of WA's primary cycling network.

<sup>33</sup> Commonwealth of Australia (2014). "Make your move - Sit less. Be active for life!". [https://www.health.gov.au/internet/main/publishing.nsf/content/FO1F92328EDADA5BCA257BF0001E720D/\\$File/brochure%20PA%20Guidelines\\_A5\\_18-64yrs.PDF](https://www.health.gov.au/internet/main/publishing.nsf/content/FO1F92328EDADA5BCA257BF0001E720D/$File/brochure%20PA%20Guidelines_A5_18-64yrs.PDF)

<sup>34</sup> Australian Institute of Health and Welfare (2016). "Australian Burden of Disease Study: Impact and causes of illness and death in Australia 2011". <https://www.aihw.gov.au/getmedia/d4df9251-c4b6-452f-a877-8370b6124219/19663.pdf.aspx?inline=true>

<sup>35</sup> D Ding, et al. (2016). "The economic burden of physical inactivity: a global analysis of major non-communicable diseases", *Lancet*, 2016; 388: 1311-1324

<sup>36</sup> Department of Transport (2014). "Western Australian Bicycle Network Plan 2014-2031". [https://www.transport.wa.gov.au/mediaFiles/active-transport/AT\\_CYC\\_P\\_WABN\\_Plan.pdf](https://www.transport.wa.gov.au/mediaFiles/active-transport/AT_CYC_P_WABN_Plan.pdf)

<sup>37</sup> RAC WA (2012). "The Economic Cycle. A Business Case for Investment in Cycling in Western Australia". <https://rac.com.au/about-rac/advocating-change/reports>

# Mandatory vehicle emissions and fuel standards

On a per capita basis, Australia's emissions are 44 per cent above the Organisation for Economic Co-operation and Development (OECD) average and almost four times the global average<sup>38</sup>. As part of a global response to climate change, the Australian Government has internationally committed to reduce greenhouse gas emissions by 26–28 per cent below 2005 levels by 2030. However, transport is responsible for 18 per cent of Australia's total greenhouse gas emissions and 25 per cent of total carbon dioxide (CO<sub>2</sub>) emissions<sup>39</sup> and is still the fastest growing sector, with emissions projected to continue to substantially increase.

Just as we have set and welcomed new vehicle safety benchmarks, it is critical that the Ministerial Forum on Vehicle Emissions achieves its objectives to coordinate a whole-of-government approach to addressing emissions from motor vehicles as part of a broader package of measures to meet Australia's emissions reduction commitments.

According to the NTC, CO<sub>2</sub> emissions intensity for new passenger cars in Australia during 2017 was 171.5g/km, 45 per cent higher than the European average of 118.5g/km<sup>40</sup>. The European Union currently has a CO<sub>2</sub> emissions standard of 130g/km which was introduced in 2015. This will be reduced to 95g/km for all new cars by 2021 (phased in from 2020), with plans to reduce that further by 37.5 per cent by 2030, with the first 15 per cent reduction required by 2025<sup>41,42</sup>. A growing chorus of nations have also announced bans on the sales of new Internal Combustion Engines (ICEs), including Norway (2022), India (2030), Germany (2030), Scotland (2032), France (2040) and England (2040); with France and England indicating a full ban on ICEs by 2050<sup>43</sup>. Unlike for other emissions, Australia has no planned or legislated CO<sub>2</sub> emissions standards.

Vehicles also emit oxides of nitrogen (NOx), hydrocarbons (including methane, benzene, toluene, xylene and benzo[a]pyrene), carbon monoxide (CO), oxides of sulfur (SOx), particulate matter (PM) and Ozone, which contribute to reduced air quality and are harmful to humans and the environment. These emissions also contribute to human health problems such as reduced lung function, ischemic heart disease, stroke, respiratory illnesses and lung cancer.

In 2011 alone, approximately 2,549 Australians fatalities were attributed to air pollution exposure, at an estimated economic cost of as much as \$11 billion<sup>44</sup>. Overall, 1.3 per cent of all deaths and a further 0.6 per cent of all injury and disease is attributable to air pollution<sup>45</sup>. The OECD states that deaths from air pollution across Europe reduced between 2005 and 2010, while Australian deaths rose over the same period<sup>46</sup>. This reduction correlates with the implementation of a European Emissions Trading Scheme and the accelerated tightening of vehicle emissions standards.

By international standards, our fuel quality and allowable sulfur content in petrol (up to 150 ppm) remains some of the worst in the world, higher than places like China, Europe, Russia, Canada, New Zealand and the USA (which limit sulfur at 10 ppm) where air quality is a major environmental issue in some cities. By 2020, India and several Middle Eastern countries will also require 10ppm sulfur maximum fuel.

## RAC calls on the Australian Government to:

- » Introduce an impactful national vehicle emissions standard, aligning Australia with the rest of the developed world and which provides the Australian market with better access to a greater range of low and zero emissions vehicles.
- » Increase the quality of fuel and reduce the maximum allowable levels of sulfur in fuel sold in Australia.
- » Introduce incentives and/or tax concessions for low and zero emissions vehicles.
- » Deliver an effective rating system to ensure consumers have access to user-friendly emissions and fuel consumption information when purchasing a new car.

<sup>38</sup> International Energy Agency (2018), CO<sub>2</sub> emissions from fuel combustion 2018 HIGHLIGHTS, [https://webstore.iea.org/download/direct/2373?fileName=CO2\\_Emissions\\_from\\_Fuel\\_Combustion\\_2018\\_Highlights.pdf](https://webstore.iea.org/download/direct/2373?fileName=CO2_Emissions_from_Fuel_Combustion_2018_Highlights.pdf)

<sup>39</sup> Department of Climate Change, (2018), "National Greenhouse Gas Inventory 2016", <http://ageis.climatechange.gov.au/>

<sup>40</sup> National Transport Commission (2018), Carbon Dioxide Emissions Intensity for New Australian Light Vehicles 2017, pg 24. Accessed at [https://www.ntc.gov.au/Media/Reports/\(F4FA79EA-9A15-11F3-67D8-582BF9D39780\).pdf](https://www.ntc.gov.au/Media/Reports/(F4FA79EA-9A15-11F3-67D8-582BF9D39780).pdf)

<sup>41</sup> European Commission (2018), "Reducing CO<sub>2</sub> emissions from passenger cars", [https://ec.europa.eu/clima/policies/transport/vehicles/cars\\_en](https://ec.europa.eu/clima/policies/transport/vehicles/cars_en)

<sup>42</sup> Reuters (2018), "EU agrees deal to cut greenhouse emissions from cars", <https://www.reuters.com/article/us-eu-autos-emissions/eu-agrees-deal-to-cut-greenhouse-emissions-from-cars-idUSKBNIOG278>

<sup>43</sup> Energeia (2018), Australian Electric Vehicle Market Study Prepared by Energeia for ARENA and CEFC, May 2018. Accessed at <https://www.cefc.com.au/media/401923/australian-ev-market-study-full-report-jun2018.pdf>

<sup>44</sup> Department of Environment and Energy, citing Marsden Jacob Associates Pty Ltd (2017). Analysis of AIHW burden of disease data, in Revised fuel quality standards: economic analysis, report prepared for the Department of the Environment and Energy.

<sup>45</sup> *ibid.*

<sup>46</sup> Organisation for Economic Co-operation and Development (2014), "The Cost of Air Pollution: Health Impacts of Road Transport", [http://www.keepeek.com/Digital-Asset-Management/oecc/environment/the-cost-of-air-pollution\\_9789264210448-en#page54](http://www.keepeek.com/Digital-Asset-Management/oecc/environment/the-cost-of-air-pollution_9789264210448-en#page54)



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