

# Road Management

## Providing Reliable and Efficient Movement of People and Goods

### Government Goal







Better Places

### Aim

Optimise real-time traffic management of the network, provide traveller information, improve asset management planning and support service delivery.

### About the Program

The program includes activities associated with the management and operation of the road network, the Road Network Operations Centre, road safety support, Heavy Vehicle Services, Network Operations and Planning and Technical Services.

Key Performance Indicators	Results
 Community satisfaction with Main Roads target was achieved and is consistent with last year	90% 
 Percentage of the Network permitted for use by heavy vehicles B-Double – 27.5 m target was met	97% 
 We reached our target for percentage of the Networks bridges that met standard criteria for strength target	94% 

	2018	2019	2020
Program expenditure \$ million	136	128	174

### Looking Ahead

Projects and activities planned for next financial year, some of which have already commenced, include the following:

- prepare for implementation of the new ITS control system (STREAMS) contract
- develop and deliver the Congestion and Movement Program, including Pinch Points, Roadside Technologies and Control and Data Systems
- establish performance led innovations at signals program
- continue ongoing research and work closely with industry to minimise environmental impact, and improve whole-of-life sustainability, of Main Roads' road and bridge works
- undertake research and development on the use of recycled waste plastics in asphalt and other road infrastructure materials, and on the use of recycled waste glass in higher end uses such as drainage blankets
- implement the Heavy Vehicle Compliance Automation Project
- continue WA Heavy Vehicle Accreditation Scheme Operational Review consultation
- join the National Camera Information System.

Visit our website to find out more.

## Network Operations Achievements

### Pinch Point Program

The Pinch Point Program (PPP) identifies potential low-cost operational enhancements for Perth's metropolitan state road network. The PPP aims to improve journey times, reliability and productivity improving traffic flow and performance, in order to reduce congestion and improve road user experience.

Five intersections along Leach Highway were identified for turning-lane upgrades to improve road safety and traffic flow. We extended right turn pockets in the median at each intersection to prevent traffic queues building up on the highway. In addition, pavement markings, signage, drainage and street lighting were upgraded to cater for the improved intersections.

We installed CCTV cameras at 16 sites enhancing the Road Network Operation Centre's ability to manage disruption and improve operations in real-time.

### Incident Management

Managing incidents is a key function in providing a safe and efficient road network for our customers. Traffic incidents and unwanted debris can cause congestion at any time of the day. To help keep traffic moving we seek to provide quick clearance solutions, reinstating roads to a safe condition as quickly as possible. Following is a summary of incidents over the past 12 months.

We have seen an increase in the number of incidents across all categories, with the exception of events involving public utilities and vehicle fires.

Nature of incident	Goldfields–Esperance	Great Southern	Kimberley	Metro	Mid West – Gascoyne	Pilbara	South West	Wheatbelt	Total 2019	Total 2020
Road crash	15	43	13	2,443	59	19	146	69	2,379	2,807
Breakdown / tow away	1	8	1	3,140	11	12	23	8	2,482	3,204
Debris / trees / lost loads	4	50	4	2,345	13	8	79	58	2,029	2,561
Flooding	9	2	5	59	10	21	0	3	77	109
Public utilities (gas, water, power)	0	1	0	85	1	0	3	2	109	92
Bushfire	6	11	9	64	8	10	13	15	93	136
Animal / livestock	4	14	2	231	13	8	37	17	233	326
Hazmat (including spills)	1	5	0	55	1	1	5	4	90	72
Vehicle fire	2	0	1	40	1	1	3	2	58	50

### Dedicated Incident Response Team

In conjunction with our Incident Response Service contractor, Lendlease, we have implemented a dedicated service for the Smart Freeway to ensure all events affecting the All Lane Running section are quickly resolved.

The new service has been expanded to operate from Mount Henry Bridge to the Narrows Bridge. For more information, visit our webpage.

### Speed Zoning Policy and Guidelines

Updates in Main Roads' Speed Zoning Policy and Application Guidelines are in-line with current Australian Standards and best practices, taking into account movement and place principles. New speed zoning initiatives align with the updated policy's Safe System principles.

The new policy focuses on uses of the road and its environment. We select suitable target speeds for safe road use for all – drivers, cyclists and pedestrians. A new Movement and Place framework determines target speeds for each road section and its environment. Posted speed zones and traffic calming measures foster target speed adherence.

Key stakeholders were consulted throughout the policy review.

## Heavy Vehicle Services Achievements

### Access, Permits and Helpdesk

Heavy Vehicle Services (HVS) is the heavy vehicle regulator for Western Australia and is responsible for improving heavy vehicle safety, productivity and the equity of services across the transport industry in the state through compliance, innovation and road asset sustainability. HVS facilitates and regulates the movement of RAVs across the state, provides a one-stop shop for permits and traffic escort services for oversize, over mass movements and works with industry groups and other government agencies at a state and national level. HVS works with the National Heavy Vehicle Regulator to allow the seamless movement of RAVs between Western Australia and other states.

Total Number of Permits Issued		
	2019	2020
Single Trip Permits	10,657	13,104
Period Permits	16,585	18,500
Special Purpose Vehicle Permits	2,430	2,696
<b>Total</b>	<b>29,672</b>	<b>34,300</b>

The HVS Helpdesk is the frontline for customers and stakeholders contacting Main Roads for heavy vehicle specific information and assistance. We provide general technical support and are customer service focused ensuring the heavy vehicle industry has access to specialist services and advice. This year we received 32,186 calls. The main reasons for calls were notices and permits, accreditation and general and heavy vehicle pilot enquiries.

### HVS Harvest Mass Management Scheme Route Assessment Team

We have been working with the agricultural and transport industries to address 'first and last mile' access issues to and from the farm gate, specifically during grain harvest season. A series of changes made to the Harvest Mass Management Scheme (HMMS) provided temporary special access arrangements. However, to investigate and provide a longer-term solution, farmers and transport operators nominated the roads they required RAV access to, via a HMMS Road List. A preliminary assessment of the roads was undertaken to ensure safety, followed by the creation of a project team to process HMMS Road List applications.

The road lists were used to prioritise onsite route assessments and determine suitability for adding them to the RAV network on a permanent basis.

The HMMS Assessment team completed over 1,050 onsite assessments from Northampton to Esperance, meeting our commitment to have onsite assessments completed prior to this harvest. Through this work, 915 roads were approved for RAV access thereby ending the need for special RAV access arrangements to continue under HMMS.

### Simplifying and Clarifying Movement of Oversize Agricultural Equipment

We worked with the agricultural industry to create practical solutions to Agricultural Pilot requirements and curfews, and develop a new Order. These changes helped to reduce red tape, improve safety standards and the level of compliance across the agricultural industry as well as enhancing productivity without compromising road safety.

A review of the agricultural pilot requirements resulted in the development of a simplified system that provides a fair and reasonable balance between road safety and the efficient movement of agricultural equipment.

A review of movement curfews investigated traffic volumes on major roads within, and outside of, the Christmas and Easter holiday periods, and any recorded increase in accidents during these periods. Through this process, curfews were restricted to only those major roads that had significant traffic increases over the holiday periods, thereby ensuring that farmers carrying out seasonal harvesting and seeding operations could move oversize agricultural vehicles on low risk roads during curfew periods.

Additionally an Oversize Agricultural Combinations Order was developed to eliminate the need for the majority of oversize agricultural vehicles to obtain a permit from HVS.

### Compliance and Accreditation

Our Compliance sections primary role is to ensure all heavy vehicles comply with the relevant legislation, provide a high level of safety for all road users and protection of the network through intelligence driven enforcement activities, auditing and education. Compliance Operations administers the WA Heavy Vehicle Accreditation Scheme and WA Heavy Vehicle Pilots Licences. At year-end, we had a total of 4,511 accredited operators and 2,065 Heavy Vehicle Pilot Licence holders. During the year, we processed 4,305 audits and conducted 240 random audits.

Transport Inspectors are the front line in enforcement and education to the community, providing initial contact with heavy vehicles whilst communicating a safety and asset protection message. We have a team of 15 inspectors who worked a total of 18,650 enforcement hours this year, intercepting 16,074 vehicles. Permit and load restraint breaches, as well as mass overloads were the primary offences for infringement notices issued.

## Planning and Technical Services Achievements

### Increasing Use of Recycled Materials in Road Construction

As part of our sustainability objectives, the Materials Engineering Branch has facilitated the use of recycled materials into our road construction and maintenance projects. The main developments are in the use of Crushed Recycled Concrete (CRC), Reclaimed Asphalt Pavement (RAP) and crumbed scrap rubber.

#### Crushed Recycled Concrete

Over 31,000 tonnes of CRC, produced from construction and demolition waste, was placed on the Kwinana Freeway northbound widening and Murdoch Drive Connection projects last year under the Roads to Reuse Pilot Project.

The project was very successful, with all material fully complying with the agreed specifications, as well as our own requirements for engineering properties.

The construction contractors provided positive feedback on the workability of the material and the excellent well-bound surface finish. Since completion of the pilot, we placed a further 3,000 tonnes on other road projects. We will also work with metropolitan local governments to increase usage of CRC on their road networks and are committed to lifting usage to over 200,000 tonnes.

#### Reclaimed Asphalt Pavement

Approximately 42,000 tonnes of RAP has been placed on various projects this year. RAP is comprised of asphalt waste and recovered millings from end-of-life asphalt surfacing and pavements. Up until now, our specifications have limited the inclusion of RAP to a maximum of 10 per cent, because higher levels have an influence on the long-term engineering properties of asphalt.

Through our Western Australian Road Research and Innovation Program (WARRIP) we have developed draft engineering guidelines and specifications to increase the use of reclaimed asphalt in full depth asphalt pavements. Working with industry, two suppliers now have approved 'RAP Level 2' asphalt mix designs with 20-25 per cent RAP, which have successfully been used with no issues in manufacture and placement. We are working with industry to embed these asphalt mixes as business as usual for full depth asphalt pavements, and anticipate this will provide a sustainable balance between RAP usage and RAP availability.

### Crumb Rubber Asphalt

A successful WARRIP project developing and trialling a crumb rubber open graded asphalt (OGA), resulted in its use on almost one third of the metropolitan freeway resurfacing program this year. The crumb rubber OGA includes 18 per cent crumb rubber blended in the bitumen binder, and is sourced from end-of-life tyres. These works have diverted the equivalent of more than 4,000 passenger car tyres from landfill creating direct initial sustainability benefits and longer service life for the asphalt.

The OGA projects form an important part of our strategy to increase the use of crumb rubber in road pavements and surfacing in order to provide immediate sustainability benefits, as well as long-term performance benefits. The strategy also seeks to stimulate an ongoing demand that will help make a local Western Australian scrap rubber crumbing industry viable.