

Managing the Environment









Aim

Committing to protecting and enhancing the natural environmental and social values in all our activities

Approach

Our staff and others working on our behalf will:

- recognise the importance of natural environmental and social values and the broader benefits that these provide for the community
- foster strategic relationships with community and other stakeholders to contribute to the management of environmental values
- facilitate environmental governance of our activities to deliver broad community benefit through inclusion of environmental requirements in planning, programming, constructing and maintaining processes
- communicate publicly our environmental policy and our environmental performance.

Key Performance Indicators	Results
 Percentage of state-wide clearing permit audits of compliance completed continues to meet our target	100 
 Scope 1 and 2 Emissions (t CO2) are lower than expected and continue to come in under target	25,110 
 Community satisfaction with our sustainability practices exceeded our target with an increase from last year	91 
 Community satisfaction of our intent towards managing our impact on the environment target was achieved and was an improvement on last year	91 

Looking Ahead

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

- embed a strategic approach within government processes to meet environmental and road safety objectives in the agricultural region of Western Australia
- launch the revised environmental specifications for our contracts to drive improved environmental performance
- continue implementation of the Wildflower Capital Initiative at key sites within the Metropolitan Region including on the Mitchell Freeway and at the Narrows and Mounts Bay Road approach to the Point Lewis Roundabout. Approximately 32,850 native Western Australian species will be planted
- disseminate information gathered through the Aboriginal Journey Ways Project to road users and the general public
- renew or replace Main Roads' State-Wide Clearing Permit CPS818, which is used to clear native vegetation for approximately 70 project activities throughout the state each year
- deliver high-quality impact assessments that meet regulatory standards and obtain timely environment and heritage approvals for our projects
- continue the roll out of the Infrastructure Sustainability rating tool Version 2.0, for major projects within our project development processes
- progress plans to utilise 100,000 tonnes crushed recycled concrete and double the usage of crumbed rubber to 1,200 tonnes in road construction
- support the Memorandum of Understanding for sub-national collaboration on increasing the uptake of electric vehicles
- review the sustainability key aspect management plans that underpin our sustainability policy including setting a new approach for our Carbon Reduction Plan.

Our Unique Environment

As managers of the State Road Network we acknowledge that Western Australia’s environment is significant from a global perspective and taking into account the conservation values in our road reserve. This is demonstrated, as the table below shows; by the significant number of threatened flora and fauna species located or having habitats in our road reserves. We have a responsibility to protect the unique flora and fauna that may be affected by our operations and ensure we minimise our environmental impacts. The tables use IUCN (International Union for the Conservation of Nature) Red List categories.

Number of Threatened Species with Habitats Located in the Main Roads Road Reserve

IUCN classification	Flora	Fauna	Total
Critically Endangered	31	2	33
Endangered	26	15	41
Vulnerable	26	24	50
Near Threatened	572	32	604
Total	655	73	728

Data for flora obtained from Western Australian Herbarium and Threatened Priority Flora records maintained by the Department of Biodiversity, Conservation and Attractions (DBCA). Data for fauna species obtained from the State Threatened Fauna records maintained by DBCA. Note that the majority of near threatened flora and fauna species are not recorded or reported. None of the flora and fauna species of least concern (i.e. no ranking) have been reported here.

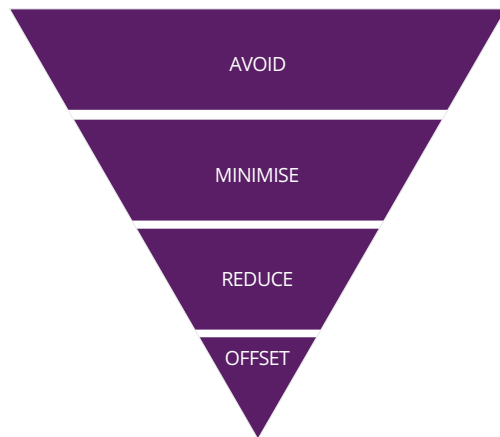
Our road network transects: sensitive and protected environmental areas such as Ramsar wetlands, wetlands of international importance; threatened ecological communities; environmentally sensitive areas; conservation areas; Bush Forever sites; and habitat for threatened fauna such as Baudin’s Black Cockatoo, Carnaby’s Black Cockatoo, Forest Red-Tailed Black Cockatoo, Northern Quoll, Greater Bilby and Western Ring-Tailed Possum. To view maps of these environmentally sensitive and protected areas in relation to our roads please refer to our website.

Environmental Management of Road Projects

We use the precautionary principle in our approach to environment and heritage and aim to avoid and minimise impacts wherever possible. The precautionary principle is built into our internal processes and Western Australian environmental legislation.

We manage our operations using a systematic approach in which all our activities are screened for potential environmental impacts. Environmental impacts can include positive or negative changes to the values of our environment. Values impacted might be: physical, that is, land, water and air; biological meaning flora and fauna; cultural and heritage related values; and socio-economic and human-health values. If potential impacts are negligible then the activity is implemented using standard management measures. If potential impacts are identified, the activities require further impact assessment.

We operate on a hierarchy of avoid, minimise, reduce and offset our environmental impacts. This is achieved primarily through changes in scope and design, and the development and implementation of an Environmental Management Plan (EMP) and an Offset Proposal.



Where the environmental impacts are likely to be significant and relate to more than just the clearing of native vegetation, we refer our projects to be assessed by the relevant regulators such as the Western Australian Environmental Protection Authority (EPA) or the Commonwealth Department of the Environment and Energy (DotEE).

The regulator will decide whether or not to assess the project. Where the regulator does not assess the project, the project is implemented in accordance with the relevant EMP. Where the regulator assesses the project, it is subject to a comprehensive Environmental Impact Assessment and may be open to extensive public consultation.

We do not implement projects assessed by the regulators until they are approved, and the relevant approval conditions have been met.

Environmental Management of the Road Network

At a regional level, network environmental risk is managed through its Regional Environmental Management Plans. The activities delivered through Term Network Contracts are screened for environmental impacts and the risks managed through Construction or Maintenance Environmental Management Plans. These detail how the Region's implement their ISO 14001 requirements. Some of the environmental operational controls that are implemented under these are:

- Water Bore Management Plans
- Pit Management Plans
- Aggregate Stockpile Plans
- Special Environmental Area Registers
- Revegetation Plans.

Environmental Management of Buildings and Depots

We manage the safety, environment and property risks of each of our depots through Depot Management Plans (DMP), Depot Inspections and Depot Compliance Checks. A DMP, details how they manage safety, health and wellbeing, environment and property management requirements. In addition to the plans, regular depot inspections and compliance checks are conducted to ensure that the DMP are being complied with. Corporately there are quarterly Depot Management Meetings where incidents, results from compliance checks and inspections, innovations, feedback and corporate templates are discussed.

Screening all Projects for Impacts

Of the 398 projects that we screened in 2018 for potential environmental impacts we concluded that 178 of these were low impact and could be managed through standard management actions. 220 projects required further investigations through Main Roads Environmental Impact Assessment, Management and Compliance process.

	2016	2017	2018
No. projects screened	305	431	398
No. projects assessed as low impact	144	206	178
No. projects subject to further impact assessment (i.e. not low impact)	161	225	220

Data is based on calendar year

Clearing Native Vegetation

In 2018 we assessed 114 projects under CPS818, 38 of which were referred to the Department of Water and Environmental Regulation (DWER) for assessment in accordance with the permit conditions and 65 projects were delivered.

	2016	2017	2018
No. projects assessed under CPS818	82	63	114
No. projects referred to DWER under CPS818	41	30	38
No. projects cleared under CPS818	68	70	65

Data is based on calendar year

In 2018 we applied for 21 project-specific Clearing Permits, 14 were granted, and seven were appealed. In 2018 10 projects were cleared under project-specific clearing permits.

	2016	2017	2018
No. project-specific clearing permit applications	16	15	21
No. project-specific clearing permit applications granted	22	13	14
No. project-specific clearing permit applications appealed	1	3	7
No. projects cleared under project specific clearing permit	2	3	10

Data is based on calendar year

Projects with Potentially Significant Environmental Impacts

In 2018, two projects were referred to the EPA for potential assessment under s38 EP Act. The EPA assessed one project, which the Minister for the Environment approved in May 2019.

	2016	2017	2018
No. of projects referred to the EPA	1	1	2
No. of projects assessed by the EPA	1	1	1
No. of projects approved by the Minister for the Environment	1	0	0*

Data is based on calendar year

* The project that was assessed by the EPA in 2018 was approved by the Minister for Environment in May 2019

In 2018, seven projects were referred to the DotEE for potential assessment under the EPBC Act. The DotEE assessed two projects, including projects referred in previous years. Five projects received approval under the EPBC Act in 2018.

	2016	2017	2018
No. of projects referred to the DotEE	11	10	7
No. of projects assessed by the DotEE	6	3	2
No. of projects approved by the Commonwealth Minister for the Environment	3	4	5

Data is based on calendar year

Revegetation and Offsets

We strive to find a balance between achieving road safety objectives and the environment and it is not always possible to avoid the clearing of native vegetation. We reduce our clearing footprint where possible by changing the project scope and design, restricting earthworks limits for projects, steepening batters, installing barriers, establishing borrow pits in cleared paddocks and avoiding temporary clearing for storage, stockpiles and turn around bays. Where avoidance is not possible, and after seeking to minimise and reduce our impacts, we then seek to offset our impacts.

In 2018, we cleared 535 hectares of native vegetation for the delivery of 104 projects. To mitigate the negative impacts of this clearing we undertook 139 hectares of revegetation works of which six hectares was required under a legislative approval. We provided offsets in the form of \$557,844 to the Western Australian Environmental Offsets Fund for the purchase and management of 324 hectares of native vegetation. Approved project offsets can be viewed via the Department of the Environment and Energy website or the Government of Western Australia Environmental Offsets Register.

The table below summarises our clearing, revegetation and offset activities over the past three years.

	2016	2017	2018
Clearing (ha)	487	246	535
Total revegetation (ha)	287	206	139
Offset			
Revegetation (ha)	(a) 3	83	6
Land acquisition (ha)	(b) 3,285	None settled	None settled
(Value of land acquired (\$))	(16,642,883)		
Financial contribution (\$)	(c) 3,077,979	1,978,567	557,844
(Area of land to be acquired using the financial contribution (ha))	(691)	(1,738)	(318)
Total offset (ha) (a+b+c)	3,979	1,822	324

Aboriginal Heritage

We acknowledge the traditional custodians of Western Australia's lands and aim to protect Aboriginal cultural values wherever possible. We seek to achieve full compliance with statutory requirements and have developed an Aboriginal heritage process that ensures compliance with Western Australia's *Aboriginal Heritage Act 1972*. We also work closely with other state government agencies including the Department of Planning, Lands and Heritage (DPLH) and the Department of Premier and Cabinet to ensure our Aboriginal heritage processes are robust.

We aim to avoid, minimise, and reduce impacts to Aboriginal heritage sites wherever practicable. All our activities are screened for potential impacts in compliance with the DPLH Due Diligence Guidelines using our internal Aboriginal Heritage Risk Assessment. In 2018 we screened 503 projects for potential impacts to Aboriginal Heritage Sites and determined that 402 of these were low impact projects, while 101 projects required further assessment.

	2016	2017	2018
Aboriginal Heritage Risk Assessments	449	479	503
No. projects considered low risk (No further assessment)	299	353	402
No. projects not considered low risk (Further assessment required)	152	126	101

Where it is not possible to avoid impacts to an Aboriginal heritage site, Main Roads will seek consent and will not proceed with the works without obtaining approval from either the Registrar of Aboriginal Sites or Minister for Aboriginal Affairs. Prior to the application for an approval, we will undertake consultation with the relevant Traditional Owners.

We value the input and contribution of Traditional Owners and seek, via site surveys and other consultation processes, their advice and opinions regarding potential impacts. In our endeavour to protect Aboriginal cultural values we also liaise with other stakeholders including Prescribed Body Corporates, Native Title Representative Bodies and Aboriginal Corporations and we directly engage with relevant community groups. Throughout 2018, we conducted 48 Aboriginal heritage surveys (ethnographic, archaeological or a combination of both) across Western Australia with 24 different Aboriginal groups. Of these surveys, 17 were commissioned via heritage consultants and 27 were conducted in line with a Heritage Agreement.

Where the works will not impact an Aboriginal heritage site in a negative way, an application under Regulations 7 and 10 of the *Aboriginal Heritage Regulations 1974* is submitted for approval by the Registrar of Aboriginal Sites (Regulation 10). Where the impacts have the potential to be significant, an application under Section 18 of the *Aboriginal Heritage Act 1972* (Section 18 approval) is submitted for approval by the Minister for Aboriginal Affairs. Prior to the application for a Regulation 10 or Section 18 approval, we will undertake consultation with the traditional custodians.

In 2018, we applied for two Regulation 10 approvals and were granted three, including an application from a previous year. We applied for 12 Section 18 approvals and were granted 23, including applications made in previous years.

	2016	2017	2018
Regulation 10 Applications Submitted**	2	7	2
Regulation 10 Applications Granted**	2	6	3
Section 18 Applications Submitted*	19	26	12
Section 18 Applications Granted*	18	23	23

* Applications under the Western Australian *Aboriginal Heritage Regulations 1974* submitted or granted between 1st January to 31st December 2018.

** Applications under the *Aboriginal Heritage Act 1972* (WA) submitted or granted between 1st January to 31st December 2018.

Committed to Continual Improvement

Environmental Policy

We are committed to the protection and continual enhancement of the environment. This is communicated internally and publicly through our Corporate Environmental Policy. The key objectives outlined in our policy include:

- deliver our services in full compliance with the obligations of environmental legislation and policy, as a minimum standard
- manage environmental impacts of our activities through the hierarchy of avoid, minimise, rehabilitate and offset
- contribute to a sustainable transport system through the delivery of products and services that minimise environmental impacts, conserve natural resources and also achieve positive social and economic outcomes
- implement, maintain and continually improve an effective environmental management system compliant with ISO 14001:2015 across Main Roads activities.

Environmental Management System

We have an independently certified Environmental Management System (EMS) to ISO14001:2015. The EMS ensures that we protect and enhance the natural environmental and social values in all our activities and we continually improve our environmental performance. Our EMS covers our processes and activities undertaken by personnel who work for and with us, and that have the potential to impact on the environment. The EMS ensures compliance with our legal obligations and provides the framework for driving environmental and heritage requirements throughout our leadership, planning, support, operation, performance evaluation and improvement actions.

Through the implementation of our EMS we aim to enhance our environmental performance, fulfil our compliance obligations and achieve our environmental objectives.

Management of Environmental Incidents

All regions and operational areas in Main Roads prepare for the possibility of significant environmental incidents by ensuring that there are systems and processes in place to ensure valid contingency planning and incident response.

Main Roads environmental incident reporting and investigation process reflects the risk classification adopted across the Transport Portfolio agencies, with 5 categories of incidents (catastrophic, major, moderate, minor and insignificant).

The environmental incident reporting and investigation process applies to Main Roads as well as to Third Parties (i.e. an organisation or a person not employed by or working on behalf of Main Roads). The significant Third Party and Main Roads Environmental Incidents that occurred last year are outlined below.

Significant Incidents (Moderate, Major and Catastrophic)	2016	2017	2018
Incidents caused by Third Parties	4	3	9
Incidents caused by Main Roads or people working on Main Roads behalf	11	19	33

Data is based on calendar year. Significant incidents are those defined as Moderate, Major or Catastrophic according to Transport Portfolio risk classification process. Minor and insignificant incidents have not been reported here.

There were no catastrophic Third Party or Main Roads incidents in 2018.

Two major Third Party and three Main Roads incidents occurred in 2018. The two Third party incidents classified as major related the disturbance of a known Declared Rare Flora (DRF) site and the spill of approximately 40,000 litres of diesel due to a truck roll over on the Main Road’s road network.

Of the three major Main Roads incidents, one related to unauthorised disturbance of native vegetation adjacent to a known threatened (declared rare) flora site (no impact to DRF plants), while two incidents related to the unauthorised clearing of native vegetation.

The incident relating to unauthorised disturbance of native vegetation adjacent to a known threatened flora site was subject to a formal incident investigation. The incident investigation concluded that the works did not impact the threatened flora and the clearing of native vegetation was authorised, however DBCA should have been notified at least one month prior to the works commencing in accordance with Main Roads Permit to take Threatened Flora. The incident investigation recommended the following actions that have now been completed;

- Notify DWER and the Department of Biodiversity, Conservation and Attractions (DBCA) of the incident and investigation outcomes,
- Undertake additional training for operation staff regarding DRF and the DRF permit requirements, and
- Update and communicate Main Roads procedures for the demarcation of significant environmental areas as exclusions zones.

The two incidents relating to unauthorised clearing of native vegetation are summarised below:

- Clearing of 6.47 hectares was undertaken prior to completion of a fauna management action. Works were stopped immediately upon identification of the incident, and a formal incident investigation was completed. The incident and investigation was reported to DotEE and DWER. No fauna were injured or killed as a result of the incident.
- Clearing of 0.02 hectares was undertaken outside of the approved clearing area due to operational error and confusion between the pegged and mapped project boundary and the approved clearing boundary. Once the incident was identified, the works were stopped immediately and a formal incident invitation was completed. The incident and investigation was reported to DWER.

The remaining 37 incidents were classified as moderate with seven caused by Third Parties and 30 caused by Main Roads or our contractor’s actions.

These 37 incidents related to; spills (28), unauthorised clearing (6), working outside of normal hours without an approval (1), non-compliance with an approval (no environmental impact) (1) and impact to ground / surface water (1).

No penalties or financial sanctions related to these incidents. We addressed these procedural failures through training, changes in processes and increased compliance audits to ensure they are not repeated.

Sustainability Assessment in Projects and Operations

For our highest value major projects we have adopted the Infrastructure Sustainability (IS) rating tool, Australia's only comprehensive rating system for evaluating sustainability across design, construction and operation of infrastructure. All infrastructure projects exceeding \$20 million utilise the IS framework as part of project development and evaluation. Three programs and two individual projects have been registered for an IS Rating.

The Bunbury Outer Ring Road is the first ever project registered for an IS Planning Rating. The NorthLink Southern Section was verified as having a Leading As Built rating of 95.2 points, the highest under IS to date.

Stand-alone public sustainability reports are produced for our projects with IS obligations. This year a Public Sustainability report was submitted by: Great Northern Highway Muchea to Wubin Stage 2 Upgrade; NorthLink WA – Central Section: Reid Highway to Ellenbrook; NorthLink WA Northern Section: Ellenbrook to Muchea; the Metropolitan Roads Improvement Alliance; Kwinana Freeway Northbound Widening; Smartways Alliance; Wanneroo / Ocean Reef Road and Marble Bar Road – Coongan Gorge Realignment. For more information on IS and to view the project sustainability reports please go to our website.

The following table lists all projects greater than \$100 million that have been formally registered for an IS rating and their current status.

Program	Project	IS Version	Current Rating Phase	Target Rating	Tracking Status
Great Northern Highway Muchea to Wubin Stage 2 Upgrade	Overall Program	1.2	First Round Interim Design	Commended	Commended
	Muchea North	1.2	As Built (complete, not verified)	Commended	Commended
	New Norcia Bypass	1.2	As Built (complete, not verified)	Commended	Commended
	Walebing	1.2	As Built	Commended	Commended
	Miling Bypass	1.2	As Built (complete, not verified)	Commended	Commended
	Miling Straight	1.2	As Built (complete, not verified)	Commended	Commended
	Pithara	1.2	As Built	Commended	Commended
	Dalwallinu to Wubin	1.2	As Built	Commended	Not Started
NorthLink WA	NorthLink WA Southern Section	1.2	As Built	Excellent	Verified Leading for Design Verified Leading for As Built
	NorthLink WA Central Section	1.2	Design	Excellent	Leading
	NorthLink WA Northern Section	1.2	Design	Excellent	Leading
Mitchell Freeway	Mitchell Freeway Extension	1.0	As Built	Commended	As Built Rating Abandoned

Program	Project	IS Version	Current Rating Phase	Target Rating	Tracking Status
Metropolitan Roads Improvement Alliance	Armadale Road	1.2	Design	Excellent	Excellent
	Murdoch Activity Centre	1.2	Design	Excellent	Excellent
	Wanneroo Road Duplication	1.2	Design	Excellent	Excellent
Armadale Road	Armadale Road Northlake Road Bridge	2.0	Design	Silver	Silver
Bunbury Outer Ring Road	Bunbury Outer Ring Road	2.0	Planning	Bronze	Bronze

The following table provides information on projects valued between \$20 and \$100 million and subject to internal self-assessment using the IS rating tool and current status.

Project	IS Version	Current Phase	Target	Tracking Status
Swan River Pedestrian Bridge – Matagarup Bridge	1.0	As Built	Commended	Commended, Complete
New Lord Street	1.2	As Built	Commended	Commended
Nicholson Road Bridge Over Rail	1.2	As Built	Commended	Commended, Complete
Great Northern Highway – Wyndham Spur to Maggie's Jump Up	1.2	As Built	Commended	Excellent, Complete
SMART Freeways	1.2	Design	Excellent	Behind
Marble Bar Road – Coongan Gorge Realignment	1.2	As Built	Excellent	Behind
Mitchell Freeway Southbound Widening	1.2	Design	Excellent	Behind
Kwinana Freeway Widening Northbound	1.2	Design	Excellent	Excellent
Wanneroo/Joondalup Interchange Project	2.0	Design	Silver	Silver

Emissions and Energy

Developing, operating and using a road network consumes energy and generates emissions in numerous forms including carbon emissions, noise, vibration and other air pollution such as carbon monoxide, nitrogen dioxide, and particles. The predominant impacts from energy and emissions fall outside our direct control and arise from use of the road network itself. Urban air pollution is a known carcinogen and has a range of human impacts. Globally air pollution contributes to more deaths than road accidents. Of all the pollutants assessed, PM2.5 (tiny particles of matter, one-fortieth the width of a hair) is considered to present the greatest potential impact to our health. No level of air pollution is completely safe for humans. Motor vehicles are a significant contributor to emissions, contributing 14 per cent of PM2.5, and 62 per cent of nitrogen oxides.

Road transport makes up 15 per cent of Australia's total emissions and has been the highest growing source of emissions since 1990. We estimate that the road network generates carbon emissions at a rate of 288.7 t CO₂-e per million vehicle kilometres travelled (MKVT). In 2018–19, MKVT was 27,401 and thus emissions were approximately 7.9 mt CO₂-e from use of the road network.

Our current approach has focused on reducing our direct energy use and emissions generation but we are aware of our ability to influence outcomes from our contracts and from the road network use.

For example, travel times have improved in locations across the network including by up to two minutes along Marmion Avenue during peak periods. Reducing delays and stop-start traffic has a positive effect on carbon emissions from the road network.

Noise and vibration is produced and influenced by the road network in a number of ways including from vehicles, infrastructure and road design, construction and maintenance activities. Installation of noise walls is an example of a mitigating activity.

Carbon Reduction Plan

We have a Carbon Reduction Plan and Target, 5 to 15 per cent reduction on 2010 levels by 2020, focused on Scope One and Two emissions and have had a Climate Change Adaptation Plan since 2011. Our total emissions across our facilities over the past year were 25,110 CO₂-e, achieving our target which was to be below 27,925 CO₂-e.

In December 2017, the State Government signed a Memorandum of Understanding (MOU) for Sub-National Collaboration on Electric Vehicles (EVs). The MOU is an output of the Climate Action Roundtable. Together with Western Power, we were nominated joint lead to 'Take a coordinated approach to the strategic planning and construction of infrastructure for EVs'. In response, we commissioned UWA to undertake research into the need for State-wide EV Charging Infrastructure in WA. The report has been finalised and it is intended to be tabled in Parliament.

Emissions Metrics

Scope 1 or 2 and 3			
GHG Type (t CO ₂)	2017	2018	2019
Fuel*	2,860	3,088	3,150
Street and traffic lights	16,804	18,614	23,497
Buildings	4,230	4,183	3,834
Air travel*	271	331	527
Projects and maintenance fuel use*	8,010	27,661	40,686
Waste*	8,391	10,241	19,317
Offsets	-1,183	0	-2,749
Total	44,472	53,877	88,262

* Note: Air travel, project and maintenance fuel usage and waste are Scope 3 emissions

Scope 1 or 2 and 3			
GHG Category (t CO ₂)	2017	2018	2019
Scope 1	3,046	3,296	3,347
Scope 2	20,848	22,590	24,578
Sub Total	23,848	25,886	27,925
Offsets	-1,183	0	-2,749
Total	22,711	25,886	25,176
Scope 3	19,772	38,232	60,530

Energy Use by Source

Energy Source	2017 (000)	2018 (000)	2019 (000)
Electricity usage (MJ) (within)	105,404	116,622	126,677
Fuel and gas usage (MJ) (within)	45,095	47,353	49,387
Projects and maintenance (outside)	290,651	374,828	548,731

Intensity Indicators

	2017	2018	2019
MJ per km State Road	8,101	8,850	9,480
Scope 1 & 2 t CO ₂ per km State Road	1.29	1.40	1.50

Climate Change Adaptation

We have identified more than 50 kilometres of State Roads that have been assessed to warrant earlier, more detailed evaluation for the impacts of climate change. The indicative replacement value of this at-risk infrastructure is in the order of \$165 million. A fundamental aspect of our Sustainability Policy is climate change. Our Key Aspect Management Plan for Climate Change includes a progressive approach to embedding adaptation practice into standards and asset management practices. An important activity was embedding resilience into our asset management framework.

Materials for Road Building

Natural materials are crucial in road building. Our philosophy on materials use is to minimise lifecycle impacts, including embodied energy, and to follow the hierarchy of reduce, re-use where possible, and recycle materials to their highest end-use possible. When obtaining road-building materials, we endeavour to avoid clearing natural vegetation. On-site materials unsuitable for use in road construction are used, as appropriate, for rehabilitating areas where road-building materials were obtained.

We also seek to incorporate recycled content into the significant materials used for road construction. Recycled content includes crumbed rubber, glass, asphalt and concrete. We have intent to contribute to developing the circular economy in WA.

Crush Recycled Concrete (CRC) is a road building material making up 50 per cent of Western Australia's waste stream. We recognise our role in establishing an ongoing practice for the use of this material. A key project has been a collaboration with the Department of Water and Environmental Regulation (DWER), the Waste Authority and Industry to pilot the Roads to Reuse Program. A new product specification, that enables CRC to be used as road sub-base, has been released by DWER to manage the risk of contaminants including asbestos. Two infrastructure projects, Kwinana Freeway Northbound Widening and the Murdoch Drive Connection have been identified to use up to 25,000 tonnes of CRC under the product specification in 2019-20. Under the Waste Strategy 2030, we have committed to increasing our use of CRC to 100,000 tonnes.

Waste tyres are another significant challenge of the Waste Strategy 2030. We currently utilise crumbed rubber in resealing works, which could potentially be sourced using recycled tyres. We have committed to develop and implement alternative crumbed scrap rubber bituminous binders to double our and local government's usage to over 1,200 tonnes per year.

Imported Road Construction Materials

Indicator (t)	2017 (000)	2018 (000)	2019 (000)
Sand	768.7	5,722.9	2,678
Gravel	1,244.4	1236.7	2,037.9
Crushed rock	404.3	684.5	825.7
Limestone	462.2	814.4	520.9
Aggregate	83.8	172.6	45.2
Asphalt	202.5	403.9	422.7
Bitumen	781.5	1284.4	40.8
Bitumen cutter	85.9	223	36.6
Emulsion	120.2	789.2	27.0
Concrete and steel	244.9	152.2	56.0
Concrete	-	-	32.0
Cement stabilised backfill	-	-	12.0
Mulch	-	-	12.0
Other (steel, paint, glass, primer, topsoil)	2.6	67.5	19.0

Imported Recycled Construction Materials

Indicator (t)	2017 (000)	2018 (000)	2019 (000)
Sand	4.8	0	99.6
Road base	0	33.9	66.3
Asphalt / profiling	6	2.1	14.4
Crushed glass	0	17.1	7.4
Rehabilitation purposes – unsuitable material	4.2	7	88.5
Other (crumbed rubber, limestone, plastic, concrete, steel, topsoil, mulch)	0.1	0.6	0.8
Imported construction materials with an eco label	0	6	1.5

Waste Materials to Landfill (Waste)

Indicator (t)	2017 (000)	2018 (000)	2019 (000)
Kerbing / concrete	0.6	0.02	2.4
Existing seal	0.05	3.0	2.5
Unsuitable material	5	39	77
Site office / general waste	-	0.04	2.2
Other (roadside litter / waste, plastics)	0.4	0.1	0.02

Materials Recycled

Indicator (t)	2017 (000)	2018 (000)	2019 (000)
Sand	0.6	73.7	162.2
Road base	0.0	3.6	46.8
Asphalt / profiling	6.2	24.8	17.0
Steel	0.9	0.6	0.24
Concrete	6.7	0.3	12.6
Office waste, general, roadside litter	3.0	1.6	0.7
Timber		0.2	0.9
Rock	-	-	89.4
Other (green waste, plastic, topsoil, hydrocarbons)	0.0	0.0	0.5

Waste Management: Roadsides, Buildings and Facilities

Controlling roadside waste across the State's road network requires ever-increasing attention. We collaborate with key stakeholders, interested parties and community groups for a consistent litter management approach taking into account individual regional requirements. We continue to implement our State-Wide Litter Plan developed with the primary objectives of educating road users to take their litter with them and to reduce littering and illegal dumping. Implementing the plan involves boosting public awareness as well as increasing community buy-in and participation in litter reduction programs and behaviours.

Our commitment to improved waste management practices is evident in the design, construction, operation and ongoing management of our offices and depots. These incorporate waste management principles in design and construction, achieving five-star Green Star and NABERS ratings. Our offices have waste avoidance strategies and our depots have waste management plans for materials such as asbestos, concrete, steel, aluminium, batteries and waste oil. The separation of general office waste and recyclables is encouraged by providing paper, battery and printer cartridge recycling facilities.

We are reducing single-use plastics in the Don Aitken Centre by using alternative bin liners, replacing disposable cups with a biodegradable paper product and completely removing plastic cups from several building levels.

OUR STORIES

ANIMAL WELFARE A PRIORITY WITH OUR FIRST FAUNA BRIDGE

Along with 37 new road bridges, nine new interchanges and more than 150 kilometres of road safety barriers, NorthLink WA features the state's first dedicated fauna bridge. Whilst we have many animal underpasses throughout the State this is a first for us.

Contractor Great Northern Connect, a joint venture between BGC Contracting and Laing O'Rourke, has built the bridge as part of the NorthLink WA central section.

There are 12 fauna underpasses along Western Australia's newest stretch of freeway, but the jewel in the crown is our first ever fully vegetated fauna bridge.

Located north of Ellenbrook, the bridge will connect bushland known to house abundant wildlife. At 12 metres wide, it will provide a natural route that encourages and allows animals of all kinds to cross the freeway safely.

During the design phase, the contractor indicated a preference to keep the profile of Tonkin Highway as low as possible to reduce noise and visual intrusion for residents of Ellenbrook.

Because of this low profile, a fauna overpass was a more viable option at this location, with better environmental outcomes than fauna underpasses used elsewhere on the project.

With construction now complete, the fauna bridge will be densely landscaped to mimic the natural environment by using trees, bushes, shrubs and ground covers native to the area.

Natural barriers such as heavy logs will be placed at each entrance to discourage unauthorised human access. Mounding and rockeries are built into the design providing habitat and cover for crossing animals.

The bridge will be closely monitored and maintained, ensuring continued habitat connectivity for the long-term sustainability of our treasured wildlife.

OUR STORIES

COMMITMENT TO INFRASTRUCTURE SUSTAINABILITY RECOGNISED

Winning the 2018 Organisational Leadership in Infrastructure Sustainability Award once again shows our contribution and commitment to sustainability.

The award, from the Infrastructure Sustainability Council of Australia (ISCA), recognises the organisation exhibiting the most outstanding performance, leadership and greatest contribution to advancing infrastructure sustainability in Australasia.

This is the second time we have won this award, having previously received it in 2014, illustrating our continuing dedication to sustainability. We define sustainability as a commitment to 'creating lasting benefits through an integrated consideration of social, environmental and economic aspects in all that we do'. In other words, we meet the needs of today without compromising those of future generations.

The judges acknowledged Main Roads' leadership and significant contribution to advancing sustainability, highlighting examples such as:

- being actively involved in building staff capability, sustainable practices and sharing knowledge and experience across the industry
- setting an internal standard to utilise the Infrastructure Sustainability (IS) Rating tool across all infrastructure projects

- aligning with the United Nations Sustainable Development Goals
- being an award winner in category three, Earth Award for the Third Avenue Bridge Replacement by contractor BMD Constructions
- being an award winner in category one, Earth Award for the Enviro Infrastructure for Refurbishment of Bridge 0930, Haydn Bunton Drive
- winning the IS Impact Award and the IS Outstanding Achievement Award for the NorthLink Southern Section.

ISCA developed and administers the infrastructure sustainability (IS) rating scheme which evaluates the performance of infrastructure assets during planning, design, construction and operations.

By using the rating tool to independently assess and verify our claims for sustainability, the IS scheme is effectively an independent auditing process looking at both 'process' and 'outcome' to determine the extent to which an infrastructure project embeds sustainability. The ISCA is a not-for-profit peak industry body operating in Australia and New Zealand with the purpose of advancing sustainability outcomes in infrastructure.

Improving Customer Experience






Aim

Providing a transport network centred on what our customers need and value

Approach

We are always endeavouring to:

- work with our customers to understand what they need and value
- ensure consistent communications
- seek to improve our customers' experiences
- encourage shared vision and commitment
- demonstrate a proactive, whole-of-government approach to transport outcomes

Key Performance Indicators	Results
 We achieved our target for community satisfaction with Main Roads and it has increased slightly since last year	90 
 The aim to continue to increase the number of customer subscriptions to our project updates was achieved with more than double the amount recorded last year	+ 141%
 The target for resolving enquires at first point of contact with our customer information centre was achieved and significantly improved compared to last year	81 

Looking Ahead

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

- deliver the new website project, which seeks to improve our customers' online interactions with us
- redefine how we deliver key services such as travel information, based on what the community wants and expects
- refine our new Customer Experience Measures, ensuring a focus on the right things and use of data and analytics to continuously improve
- transition Main Roads' telephony services to be provided by the Department of Transport
- discover and surface previously untapped customer insights to help ensure every area at Main Roads is working towards better outcomes for the community

Our Customers' Experience

Customer experience starts with understanding our customer needs, pain points and expectations. We use that understanding to develop and deliver services for improving experiences in all interactions.

We know we won't always get it right, or make everyone happy all the time, but that doesn't stop us from striving to deliver better outcomes for our customers and stakeholders.



GENERAL GINO

Customer Types – regional and metro motorists, general public or community members

Key Need – I want to travel from A to B safely and efficiently

Pain Points – I don't like not knowing about issues affecting my journey until it's too late, I don't like not knowing what work is going on in my local area, I don't like not knowing who to report issues to, I don't like it when issues I've reported don't get fixed

Improving Gino's Experience: Communication during Incidents

Managing the road network during incidents and significant weather events is critical for us. This year, Tropical Cyclone Veronica caused 1,244 kilometres of road to be closed across the Pilbara and damaged numerous properties requiring substantial communication support during and after the cyclone.

We know that our customers like to source and receive information in different ways, particularly with regard to incidents and events with significant impacts on the road network.

During Cyclone Veronica we used a range of channels for communicating critical network information to road users and the community, including:

- Travel Map
- website
- traffic broadcasts
- Facebook
- Instagram
- Twitter
- Customer Information Centre.

Read the Cyclone Veronica Case Study to find out more.



CRITICAL CHRISTY

Customer Types – community advocates, local government, researchers and students

Key Need – I want to get the right information early on about the things that matter to me, so I can have my say

Pain Points – I don't like finding out about things that impact me too late in the project, I don't like not having an opportunity to have my say on things that matter to me, I don't like feeling like my opinion doesn't matter

Improving Chrissy's Experience: MySay Transport

MySay Transport is an interactive, online consultation portal enabling the community to provide thoughts and insights for shaping Western Australia's transport network.

Alongside our portfolio partners, we use MySay Transport to help shape what and how we deliver, operate and maintain State Roads in Western Australia. Through MySay we collect valuable feedback and data on proposed projects and initiatives.

Kwinana Freeway Foreshore Access

Between December 2018 and February 2019, we asked the community to complete a survey on how and when they use the Kwinana Freeway foreshore.

We received 366 responses and the information collected will assist us in planning for the future maintenance and protection of the Kwinana Freeway.

Visit MySay Transport to learn more.



INVESTIGATING YVONNE

Customer Types – industry or interest groups, lobbyists or journalists, politicians

Key Need – I want to get more information about an issue I am invested in and I want to get a response from Main Roads

Pain Points – I don't like having to wait a long time for information or a response, I don't like receiving less than the full story on an issue, I don't like feeling that my opinion doesn't matter

Improving Yvonne's Experience: Project Website

We have made it easier for customers to discover how we are transforming and upgrading the road network, with the introduction of a state-wide map to our Project website. The map enables users to explore road projects in our state, including plans for future developments.

Users can view clusters of work in a state-wide view and zero in on areas of interest for project overviews with an option to read more on the detailed project pages. With a look and an approach based on Google Maps, the Project map provides a familiar and simple user experience.

The Stay Updated feature of the website allows customers to subscribe to the latest project news and keeps them up-to-date on areas they are invested in.

Visit the Project website to learn more.



ALL-WHEELS ANDY

Customer Types – heavy vehicle drivers or companies, fleet managers, compliance officers

Key Need – I want to be given timely and accurate information to get on with my job

Pain Points – I don't like it when I'm on the move and I can't access accurate road information, I don't like trying to understand government lingo, I don't like Main Roads changing things without me knowing

Improving Andy's Experience: Travel Map

Our Travel Map helps residents, tourists and commercial road users travel on Western Australia's vast road network. Sourced from a network of data and information, the Travel Map provides accurate and timely information about road conditions, closures and other incidents that may impact road use.

Fatigue is a silent killer on Western Australian roads so planning ahead is crucial to managing fatigue on long road trips. This can present even bigger challenges for heavy vehicle drivers who do not have the same flexibility or capacity to stop and revive before continuing their journey.

This year, we enhanced our Travel Map to display a wide range of data about rest areas across the State road network. Additions such as Heavy Vehicle Parking and Overnight Stopping, allow drivers to plan journeys ensuring safe and efficient travel to and from their destination.

Visit the Travel Map to learn more.



DETAIL DARREN

Customer Types – consultants, engineers, land developers, government

Key Need – I want to source relevant and accurate standards, specifications and guidelines so I can propose, design or construct

Pain Points – I don't like not knowing what information I need to obtain, I don't like things being out of date, I don't like conflicting information

Improving Darren's Experience: Standards and Technical Expertise

We have accumulated a wealth of specialised knowledge on design and construction of roads and bridges and associated environmental aspects. Expertise is used for developing guidelines, standards and specifications, for internal staff and external consultants.

This specialised knowledge is available on our website for customers like Darren. Such information plays an important part in the planning, design, construction and maintenance of our road network.

On our website, a broad spectrum of information on the following is available: road and bridge design, environmental management, pavement technology, surveying methods and data, traffic engineering, and projects and contracts.

Visit Main Roads website to learn more.



MAINTENANCE MAX

Customer Types – traffic managers, minor works crews, local governments

Key Need – I want to know rules and regulations so I can get the job done

Pain Points – I don't like not knowing what information I need to obtain, I don't like the way in which things are processed and interpreted. It should be black and white. I don't like not knowing where my application is in the approval process

Improving Max's Experience: trafficmap

The trafficmap provides, in relation to roads in Western Australia, fast, easy traffic information about vehicles – including the number and type of vehicles travelling, speed of travel and, for some locations, the mass of the vehicle.

Drawing data from more than 4,000 sites across Western Australia, trafficmap helps identify the way people use the road network and how this has changed over time.

This makes the trafficmap vital for traffic managers, crews, local government and the community for planning, executing and navigating efficient and safe use of the road transport network.

Visit [trafficmap](#) to learn more.

Community Perception Survey

Our annual Community Perception Survey gives people an opportunity to tell us what they really think. By examining responses about our performance in construction, maintenance and management of the road network, we can plan and deliver projects and services based on what the community wants, needs and expects.

The following table shows this year's results.

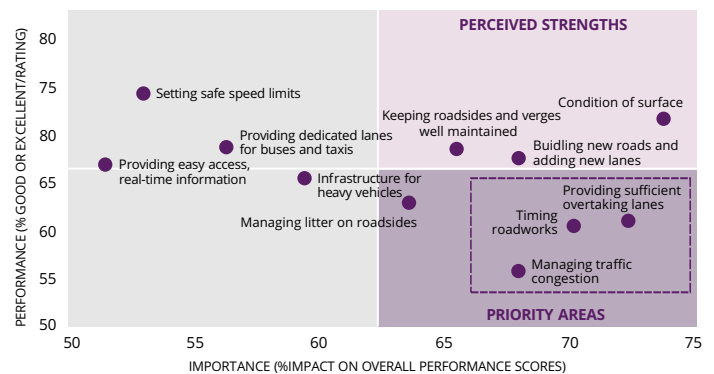
Area of Satisfaction	2017 (%)	2018 (%)	2019 (%)
Overall performance	87	88	90
Road safety	90	88	91
Provision of cycleways and pedestrian facilities	87	89	91
Road maintenance	84	82	87
Sustainability	85	86	91
Environmental Management*	-	88	91

*Collected for first time in 2017-18

We also ask the community to rate our performance across a range of services and responsibilities. This helps us determine our strengths and priorities, giving insights for integrating into our strategic planning and day-to-day operations.

At a state-wide level, priority areas for Main Roads to address are related to road infrastructure and minimising congestion.

The following matrix shows our perceived strengths and priority areas.

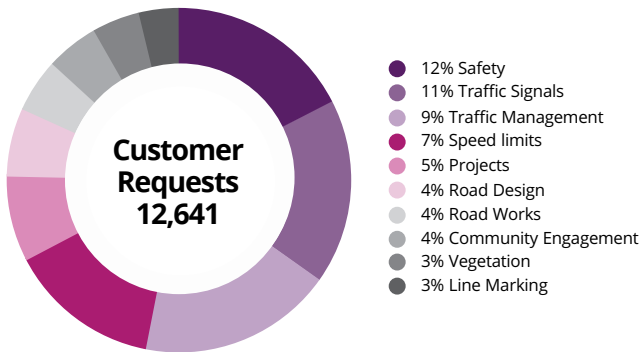


Customer Feedback

We value customer feedback and regularly investigate trends and issues that provide us with insights for improving our business areas. The types of feedback received from all sources across the past 12 months are shown below.

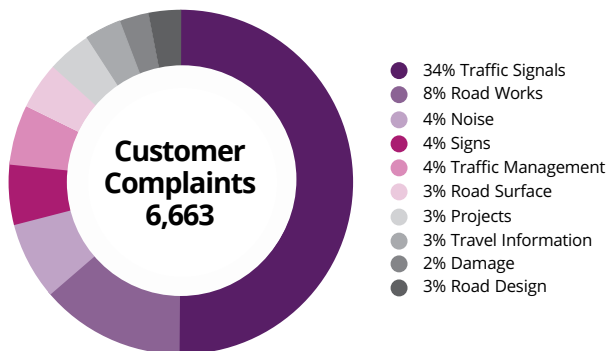
Customer Requests

This year we received 12,641 customer requests. The top 10 categories are shown and represent almost 62 per cent of all customer requests.



Customer Complaints

Sixty-eight per cent of all customer complaints fall into one of 10 categories, as shown. This year we received 6,663 customer complaints. Our Customer Information Centre and Complaints Handling Process aim to deal fairly with complaints and improve performance in all areas.



Customer Information

We provide a 24-hour-a-day, 365-day-a-year service through our Customer Information Centre (CIC). The CIC plays an important role in state-wide incident response and management, providing timely and accurate information to the public. Our front-line customer service area is also an important information source for road network activity.

Self-service options on the phone continue to improve services for customers. Our call volumes have had a very slight increase during 2019, and our customer interaction via email and digital services continues to rise. In 2019, we undertook work to refine the channels we use for engagement with our customers and to improve the digital experience. This continues to be a key priority as we progress the new website project in 2020.

Customer Contact Statistics	2017	2018	2019
Telephone calls	103,531	91,573	91,732
Calls self-served	16,409	11,896	14,293
Email enquiries	30,474	32,620	53,988
Percentage of enquiries to Customer Information Centre resolved at first point of contact	73	65	81

Complaints Handling Process

We provide an accessible, fair and equitable complaint handling process, meeting Australian Standard for Complaints Handling, AS ISO 10002 – 2006.

We use our customer information and quality assurance framework to:

- check compliance to process and commitments
- identify staff training requirements
- investigate and resolve reasons for non-compliance
- identify opportunities to improve customer experiences.

For more information on complaints or to understand our commitment to follow through on your concerns, please visit our website.

Engaging with Local Communities

Main Roads is delivering an unprecedented program of major infrastructure works across the Perth metropolitan area, with 72 projects in the delivery stage and numerous others at the latter stages of design and development.

We are engaging with distinct communities across 29 Perth metropolitan projects and many more in the regions. Transforming our road network brings with it the challenge of minimising the impacts of construction on local communities in the vicinity of the works and providing timely, ongoing communication to road users.

We are widening key sections of the Mitchell and Kwinana Freeways, upgrading major intersections and enhancing other key arterial routes such as Armadale and Wanneroo Roads to improve safety, relieve congestion and enhance traffic flow.

In the past 12 months we have significantly strengthened contractual requirements for external contractors delivering engagement on our behalf, and put in place forums to encourage cross project collaboration, ensuring communications are delivered in an effective, customer-centric manner. The outcome has been a marked improvement in the quality and consistency of our engagement programs, in accordance with ever-increasing community expectations.

In addition to projects being delivered, future projects have necessitated earlier engagement with stakeholders and the community, fostering better understanding of the works and advocating our broader vision for our State's road network.

Engaging at an earlier point within the project lifecycle enables us to integrate natural opportunities for regular evaluation following each phase of community input. Structured evaluations of our strategies are included at the end of the planning, development and procurement stages of the project lifecycle, and again at six-monthly intervals during the construction period.

Open and Transparent Project Communications

We provide project information and engagement opportunities reflecting the diverse ways in which communities seek and digest information. We maintain a strong digital presence ensuring changes to the road network can be shared in real-time and we utilise online engagement including community surveys with strong levels of participation.

Our communications include effective use of the portfolio MySay Transport forum, which has encouraged community participation on a number of high profile projects including the High Street Upgrade in Fremantle and our Orrong Road Planning Study.

This has been complemented by encouraging online subscriptions to our newsletters and project updates through our centralised Customer Relationship Management system, and the ongoing restructure of our Projects website to create a more user-friendly customer experience.

Widespread community input – though information sessions, reference group meetings and face-to-face meetings on projects in both metropolitan and regional areas – confirms that traditional engagement techniques remain popular and relevant for the community.

Feedback from the broader community and specific stakeholders informs our work from early planning stages to final delivery; this is balanced against the technical requirements that ensure our road network enhancements continue to improve the travel experiences of all Western Australians.

Digital Channels

In addition to our regular media updates, we provide project and road user information on a range of digital channels. We support business areas within Main Roads with their communication needs, and our customers have told us that this is their preferred way of receiving information.



Our website continues to be a popular source of information for the community with more than 1.31 million visitors.

The official source of traffic and travel information for the main road network in Western Australia is our Travel Map. This includes live, up-to-date information on road conditions, closures and other incidents that may affect road use. With enhancements to rest area information, users can now filter travel requirements such as overnight stopping, accessible toilets and bins. The map is most popular during major incidents, and has had more than 858,000 visits.

We've made it easier for customers to discover how we're transforming and upgrading the road network, with the introduction of a state-wide map. The map enables customers to explore all projects currently taking place across the state, including our plans for future developments.

Popular projects include:

- NorthLink WA
- Matagarup Bridge
- Great Northern Highway – Muchea to Wubin



Our Twitter following, for both our Metropolitan and Regional accounts, continues to grow with both accounts used by other agencies and the media for real-time traffic updates. Images during major incidents visually help motorists understand impacts, and they highlight the need to take alternative routes. Twitter continues to be a successful method of notifying road users of incidents or disruptions on the road network:

- Perth Traffic – 63,379 followers and 6,999 tweets, earning 49,336 clicks on links posted
- WA Roads – 16,878 followers and 1,598 tweets, earning 9,813 clicks on links posted.



Our Facebook channels are expanding with two new groups for customers to communicate with us. The Main Roads WA in the Kimberley Group allows customers in the Kimberley region to interact with us and to hear about things relevant to their community.

Information on major traffic disruptions during peak travel is now provided through our Perth Traffic Group. For users seeking information on possible impacts on their trip, this complements our existing traffic channels.

Customers continue to connect with us on our NorthLink WA Group, with the most popular topic being new road sections due to open. Our members have nearly tripled to 3,431.

Our corporate page, with more than 54,000 followers, continues to provide updates on our activity around the state. Our posts reached more than 5.5 million customers with images from hay bale relief deliveries over east being our most viewed post during the year, reaching more than half a million people. A new way to share information is through Facebook Stories and is another avenue for us to promote Main Roads.

To join any of our Facebook Regional or Project Groups visit the Main Roads Facebook page. Throughout the year we anticipate that more of our regions will create Community Group pages.



YouTube showcases some of our services, network changes and fantastic images of our construction projects. Our YouTube subscribers increased by 244 to 740 over the past 12 months and we expect this to continue as drone footage becomes more popular. We continue to promote this service across our other media.



We have nearly 2,500 Instagram followers and continue to develop our engagement focusing on trending hashtags and story highlights. The use of Stories, which are available for 24 hours, is increasing on Instagram. They are a great tool to promote communications, such as advising customers what the Matagarup Bridge lighting theme is. Our Instagram account started in January 2016 and complements our digital channels.



LinkedIn allows us to engage with those specifically interested in Main Roads business and services. Our following, which increased by around 2,450 over the past year, is now more than 8,850 followers.

Disability Access and Inclusion Action Plan 2018-2022

Over the year, we have been working on delivering key actions from the Disability Access and Inclusion Plan (DAIP) 2018-2022. The DAIP aligns with the Western Australian *Disability Services Act 1993*, amended in 2004 and 2014, and was produced in recognition that people with disability, their families and carers have the same rights to access our products and services as any other member of the community. The implementation of our plan is being actioned by an internal working group and monitored by Corporate Executive to ensure we keep access and inclusion a high priority when we are making decisions.

OUR STORIES

TEAMWORK ENSURES COMMUNITY AND ROAD USER SAFETY

In March 2019, Tropical Cyclone Veronica caused widespread damage to the Pilbara region – flooding roads, spreading debris and isolating communities. In some areas the cyclone brought in excess of 300 millimetres of rain, more than a year's worth, in one day.

Our Pilbara Team worked hard to make the road network safe and to reopen routes to traffic as soon as possible. Where necessary, detours were established and emergency repairs began immediately.

More than 1,600 kilometres away our Customer Information Centre worked to ensure support was provided to the region – both to road users and to local Main Roads personnel, extremely busy with local matters, by allowing them time to tend to the safety of their own families and homes.

Keeping the travelling public informed was the main aim during and after Cyclone Veronica and entailed, for example:

- 6,288 calls received by our Customer Information Centre with 63 per cent of callers choosing the 'self-service' option
- 270 Travel Map updates and 46 traffic broadcasts published online
- 1,244 kilometres of road closed across the Pilbara

- six emergency response teams deployed to undertake repairs
- 175 permits issued for delivery of essential supplies and services
- three flights to inspect the network
- 12 Corporate Crisis Management team meetings
- 10 Main Roads properties requiring repair
- \$7 million estimated full-recovery cost.

We worked with agencies to ensure community and road user safety. These included the Department of Fire and Emergency Services, who helped us to survey road conditions and undertake preliminary damage reports. When it was deemed safe we also escorted a convoy of Horizon Power trucks through the damaged area to provide much needed fuel supplies. This assisted in preventing the potential for energy restrictions in the region.

Our People

Aim

To attract, develop and sustain organisational capability through our people

Approach

We strive towards:

- demonstrating our values through our behaviours
- creating a positive work environment that provides challenges and encourages development
- focusing on solutions
- engaging with our people
- sustaining good workforce planning practices.

Key Performance Indicators	Results
✓ Headcount	1083
✓ We exceeded our target in respect to women in leadership positions at Level 6 and above, and this has increased since last year	27
✓ There was a high level of completion of Career Conversations coming in just under our target	96
✓ We exceeded our target in relation to the percentage of staff who have knowledge that innovation is part of our guiding principles	84

Looking Ahead

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

- meeting the challenge of attracting and retaining appropriately skilled employees, particularly in regional areas
- negotiating and implementing new Employee Bargaining Agreements
- consolidating new maintenance contracts in Metropolitan, South West and Great Southern regions and working with the accompanying resourcing challenges
- continuing a focus on increased Aboriginal employment and creating pathway programs beyond the traditional university stream
- beginning a new blended learning approach which will improve understanding of our responsibilities and deliver learning across the agency in a more timely and effective way. The newly developed Learning Management System is to be implemented in July 2019
- continuing workforce planning with a strong focus on providing the information to enable us to make strategic decisions for our future workforce.

Our Profile

Our workforce profile helps to illustrate who we are. As at 30 June 2019, we have 1,083 employees.

Demographics	2017 (%)	2018 (%)	2019 (%)
Female employees	31	31	31
Male employees	69	69	69
Indigenous Australian employees*	1	2	1
Employees with a disability*	2	3	3
Employees of culturally diverse background*	20	22	25

Employee age profile	2017 (%)	2018 (%)	2019 (%)
<30	12	12	10
30-39	21	22	23
40-49	20	21	21
50-59	28	28	30
60+	19	17	16

Regional profile (headcount)	2017	2018	2019
Great Southern	31	30	31
Goldfields-Esperance	15	21	21
Kimberley	30	29	30
Mid West – Gascoyne	45	44	44
Pilbara	24	33	28
South West	58	62	63
Wheatbelt	40	34	33

New starters	Employees (headcount)
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Number of new starters 55

New Starters by gender

Female 22

Male 33

Turnover

Turnover rate 4%

Turnover by gender (headcount)

Female 19

Male 29

*Figures do not represent an accurate profile of our diversity, as the information is provided by self-declaration.

Developing Our People

Our people are the key to our success. Investing in them and their knowledge is essential to creating an organisation where people embrace and accept those who inspire and bring innovative ideas, skills and perspectives. We seek to ensure that the right people are attracted and retained within our business and grow and develop in ways that will help us to make the most of the opportunities that are facing our industry.

Learning Management System

In July 2019, we will be releasing a new corporate Learning Management System, called LearningHub. LearningHub is designed to be a 'one stop shop' for all training and development; that is, a centralised, easy-to-use portal to which all employees have access. It will enhance access to online learning for employees – offering a smoother process for registering for training and approvals; giving enhanced visibility to managers on training activities of their team; and providing compliance reporting capability at the fingertips of training coordinators.

Training Engaging Accountable Managers

Our tailored in-house management skills development program called TEAM (Training Engaging Accountable Managers) has continued over the last 12 months. The program empowers people managers to perform their role more effectively. It covers a wide range of topics including resource management, procurement and finance, conflict resolution, performance management and mental health in the workplace. In total 18 modules are available, offering a balance of internal and external experts, keynote sessions and coaching. TEAM has been popular with approximately 145 staff having completed individual modules identified as a development need or as refresher training.

Development Employee Programs

With a renewed focus on Development Employee Programs, the Human Resources team is reviewing pathway programs to align with our capability gaps and long-term workforce planning. Recruitment is planned ensuring a pipeline of capability is developed. We continue to focus on diversity through our recruitment efforts. We aim to exceed the current gender split of our Development Employees – 31 per cent female, 69 per cent male – as well as look at Aboriginal Pathway programs involving sponsorship at secondary and tertiary level.

Career Conversations

Our performance review process, Career Conversations, encourages open discussion between manager and employee on performance objectives, development opportunities, career goals and demonstrating our guiding principles in work activities. A streamlined form through MyHR focused participants on feedback, reflection and review. This year we had a 96 per cent completion rate for the initial Career Conversations and 89 per cent of mid-year reviews were carried out.

Innovation and Research Program

The Innovation and Research Program encourages our people to collaborate, learn, solve problems and explore new and innovative opportunities. Our Bright Ideas software package helps us to foster a high level of engagement throughout the year as people can participate in specific corporate challenges or submit their own ideas on innovative approaches.

Some of the activities and projects include:

- improving road safety at signalised intersections
- eradication of dieback from gravel pits
- electric vehicle infrastructure strategic planning
- using drones to capture traffic engineering data at signalised intersections
- continued testing of cold applied plastic line marking
- improving software used for water runoff catchment design
- development of a prototype pointcloud visualisation tool
- capturing, sharing and warehousing innovations from across the business.

Strategic Research

We undertake significant activity to develop and enhance our collective knowledge of economic, environmental and social topics. We do this through close collaboration and partnership with industry and research institutions undertaking leading-edge road and transport research. These organisations include:

- Austroads
- ARRB Group Ltd
- WA Road Research and Innovation Program
- Planning and Transport Research Centre
- Sustainable Built Environment National Research Centre
- Curtin-Monash Accident Research Centre.

We regularly conduct a 'Futures' review to identify new trends, technologies and business models from around the world that might affect the transport sector. This review is updated periodically to ensure currency and that we understand the global and local context in which we operate.

Employee Relations and Recruitment

Freedom of Association and Collective Bargaining

Our employees are covered by enterprise bargaining agreements between the Commissioner of Main Roads and each of the unions. Negotiation and registration gives opportunities for key stakeholders to provide input into agreement provisions, in particular, recognising the needs of employees and our business. All employees are free to join unions and we recognise the integral role of unions in the agreement making process.

Labour Relations

After successful negotiation we registered three Enterprise Bargaining Agreements (AWU, APEA, CSA) with the Western Australian Industrial Relations Commission in mid-2018.

Negotiations will soon begin with the intent of registering the three new agreements in January 2020. Agreements continue to reflect our business requirements while recognising the needs of our employees.

Workforce Planning

Our workforce planning cycle has identified that attracting and retaining critical skills, particularly in regional areas, continues to be a significant challenge. Workforce planning has been focused on identifying and addressing key capability risks and gaps in core areas within a five-year forecast. It involves a comprehensive environmental scan of the organisation and considers current capability, succession planning, recruitment forecasting and other capability development and resourcing strategies.

Recruitment and Turnover

Activity over the past 12 months focused on Asset Management, Project Delivery, Maintenance Management, Network Operations, Traffic Management and specialised technical and engineering disciplines, in particular structures and materials engineering.

We also focused on the re-introduction of our Development Employee Programs. Last year, there were 14 Development Employees, including graduate engineers, engineering associates and trainees commencing programs. 55 new starters joined the organisation throughout the year with 40 per cent being female. Our turnover remains relatively stable at 4 per cent.

Promoting Diversity and Equal Opportunity

We want to have a workforce that is rich, diverse and based on equality ensuring that we can all work in an environment that is free from harassment and discrimination. We want all of our employees to have access to training, progression and promotion. We firmly believe that a diverse workforce brings a greater range of skills, knowledge, experiences, backgrounds and capabilities into our organisation. This environment will lead to higher performing teams and better outcomes for our customers. The public sector has an obligation to engage people from diverse backgrounds, reflecting the broader community, however, we want to see and deliver more than just an obligation. An update on achievements in this area follows.

Equal Employment Opportunity Management Plan 2017–2020

Our Equal Employment Opportunity (EEO) Management Plan focuses on increasing the engagement and representation of:

- Aboriginal and Torres Strait Islander people
- women
- people with disabilities
- youth
- people from culturally diverse backgrounds
- lesbian, gay, bisexual, transgender, intersex and questioning (LGBTIQ+).

Our Diversity Calendar notes dates and events of significance to our focus groups. These dates are highlighted and awareness raised through internal communications, information sessions by guest speakers and participation in community events and projects supporting these diversity groups.

Women in Leadership

As a business imperative, we recognise and value the role of women in the workforce and gender diversity at all levels of the organisation. We continue our focus on attracting, retaining and developing women in non-traditional roles and leadership positions. We recognise that women in positions instrumental to our future will lead to increasing numbers of women in leadership roles.

On International Women's Day, celebrating the social, economic, cultural and political achievements of women, the theme '#BalanceForBetter' was about motivating and uniting friends, colleagues and whole communities to think, act and be gender inclusive.

We promoted the day through both internal communications and by having four of our aspiring female leaders, nominated by Corporate Executive, attend a valuable networking event by Engineers Australia. This included a panel of industry leaders and keynote speaker Turia Pitt inspiring women with her life-changing events, personal journey, achievements and lessons learned.

	2017 (%)	2018 (%)	2019 (%)
Women in Level 6 and higher positions	19	21	27

Reconciliation Action Plan

Our Reconciliation Action Plan focuses on:

- building stronger relationships with Aboriginal people and communities
- creating greater understanding for ourselves and our partners of Aboriginal heritage and cultures
- providing opportunities for Aboriginal people through our activities and our industry.

Some key workplace and employment achievements through our Reconciliation Action Plan have been:

- working with Aboriginal people through employment and engagement opportunities specific to our road infrastructure industry
- creating a more culturally safe environment through cultural awareness
- participating in key events
- trialling new eLearning
- developing and adopting new Aboriginal protocols embodying respect, understanding and protection of cultural heritage.

In support of the Government's Aboriginal participation policy, our Aboriginal Advisory and Working Groups have progressed in implementing Aboriginal engagement initiatives specific to procurement of goods and services from Aboriginal businesses and engagement of Aboriginal groups in design, construction and maintenance activities related to our road infrastructure projects. See '*Our Stories*' for more on Aboriginal Engagement.

Aboriginal Employment

We are delivering on our commitment to increase the direct employment of Aboriginal people through targeted recruitment for Aboriginal-specific positions. We are achieving this by working in partnership with Nudge, a for purpose charity that focuses on getting young people into jobs and training opportunities. We will be looking at other employment pathways for Aboriginal people as an even more targeted approach next year.

This year we have engaged the expertise of a Senior Advisor in Aboriginal Engagement who has played an integral role in helping us achieve the outcomes of our Strategic Business Case for Aboriginal Engagement. We have also engaged the expertise of an Indigenous Employment Officer to assist with the consultation and coordination of our next Reconciliation Action Plan 2020-22.

National Reconciliation Week

This week reflects on impacts of Australia's colonial history and the importance of ongoing reconciliation. National Reconciliation Week theme was 'Grounded in Truth, Walk Together With Courage'. The week was celebrated by:

- sponsoring and participating in the launch of the 2019 Street Banner Project
- participating in the Walk for Reconciliation 2019, a public show of leadership, support and solidarity to reconcile our state and promote equity
- participating in the Breakfast held by Reconciliation WA along with our portfolio partners
- promoting the event through articles on our internal communications
- supporting the initiatives of Reconciliation WA.

National Aborigines and Islanders Day Observance Committee (NAIDOC) Week

We recognise the importance of engaging our staff to celebrate the history, culture and achievements of Aboriginal and Torres Strait Islander peoples during NAIDOC Week.

The 2018 theme was 'Because of Her We Can' which was a tribute to all Aboriginal and Torres Strait Islander women who have played, and continue to play, crucial roles in our history.

Our celebration included a metropolitan office based event with a Welcome to Country and storytelling from Whadjuk Elder, Doolann Leisha Eatts. Her book *Our Country, my Nyungah Home* and husband Elder Walter Eatts' book *Somewhere Between Not White, Not Black, Not Wanted* were promoted. This was followed by bush tucker inspired delicacies for afternoon tea sourced from Kuditj Kitchen, an Aboriginal-owned and locally based café. NAIDOC week raises the cultural awareness of our staff and also includes internal communications and articles on the meaning behind NAIDOC week and the celebration.

OUR STORIES

INTERVIEW WITH OUR SENIOR ADVISOR ABORIGINAL ENGAGEMENT DENNIS KICKETT

During the year we welcomed Dennis Kickett to Main Roads. Dennis has traditional ties to the people from the Ballardong and Whadjuk language groups. He brings to Main Roads extensive experience around Aboriginal engagement having worked in Government and private industry, mainly in the resources sector.

Dennis said that since joining, a big focus for him has been on developing and building effective relationships internally and externally with our local Aboriginal businesses and suppliers.

He said that his role provides a focus on developing an effective strategy to enable Main Roads practitioners to embed broader diversity outcomes and real opportunities through our projects and partnerships with our major contractors.

The approach being taken is broken into different components focusing on how we want to work and engage with local Aboriginal people throughout the state. Dennis said the fact is that we have highly skilled Aboriginal people ready, developing their own businesses, and wanting to work with us and our large contractors.

He said that as he talks to different people around the state its clear that we have a long history of employing local Aboriginal people and he feels that this can be built upon further through opening the doors for the next generation. The aim is that through the continued work of Main Roads it will enable the next generation to be a part of Australia's mainstream business economy.

Dennis believes that it is important to have the courage to challenge mindsets in a healthy way, and to work together as one to achieve genuinely sustainable outcomes that will make a difference. We are not exactly at the beginning of the journey and we can certainly build on what we have. There is still much more to do and he will try to work with everyone to facilitate and guide that process.

Dennis said that he believes there is a very strong commitment to succeed and to make a difference and for those people that want to be a part of that, he will do what he can to get the right outcome.

OUR STORIES

INAUGURAL AWARD WIN FOR HARDWORKING TRAINEE



Becoming a role model and inspiration to her family, youth and community members, and encouraging them to pursue their dreams and career pathways, is a goal that Cynthia Nelly is already well and truly on her way to achieving.

Her dedication and drive saw her being awarded the inaugural Nudge Clerical Trainee of the Year.

Nudge is a for-purpose charity focusing on getting young people into jobs and training opportunities. It is committed to empowering business through community employment. The awards, launched last year, acknowledge and recognise the contribution across sectors and industries of trainees and organisations in their commitment to training.

A proud young Aboriginal Yamaji woman, Cynthia won the award from a field of 33 clerical trainees state-wide. She has quickly become a respected member of the Mid West – Gascoyne Geraldton office receiving praise from her co-workers for the hard work she has put in throughout the year, both in her formal traineeship requirements and in her work environment.

She recently completed her Certificate III in Business with Registered Training Organisation, Trainwest and will continue on to the Certificate IV in Business and take advantage of the many opportunities Main Roads has to offer. She says this will help to increase and enhance her knowledge and skills, to gain more personal and professional development and help build her career pathway.

Speaking from personal experience, Cynthia says advantages and opportunities that are offered to youth through traineeships from organisations such as Main Roads can lead to many positive impacts. She sees these opportunities through training, employment and upskilling as vital to achieving great outcomes. Not only are there benefits for employers but the flow-on effect for trainees, their families and communities from taking on full-time roles is immeasurable.

Enhancing Safety, Health and Wellbeing

Aim

Consistently leading safe outcomes

Approach

We work to establish consistent application of policies, standards and procedures across the organisation and with our business partners based on effective risk management.

Key Performance Indicators	Results
✓ There were no Fatalities last year	0
✓ Our Lost-time injury (LTI) and/or disease incidence rate target was achieved with continued improvement	0.196 ⁽¹⁾
✓ Our Lost-time injury and severity rate target was achieved	0 ⁽²⁾
✓ We exceeded our target of helping injured workers return to work within 13 weeks	100 ⁽³⁾
✓ We met our target of helping injured workers return to work within 26 weeks demonstrating consistent performance	100 ⁽⁴⁾

1. There were 2 LTI claims lodged in 2018-19

2. There were 2 LTI claims lodged in 2018-19, zero of these resulted in severe lost time injuries (actual or estimated 60 days or more lost from work)

3. There were 2 LTI claims lodged in 2018-19, both employees have returned to work within 13 weeks

4. There were 2 LTI claims lodged in 2018-19, both employees have returned to work within 26 weeks

Looking Ahead

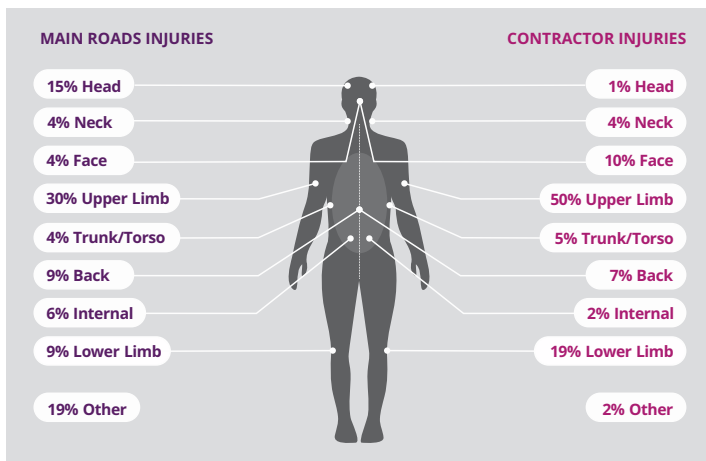
Projects and activities planned for next financial year, some of which have already commenced, include the following:

- implementing actions from the three year Safety, Health and Wellbeing Strategy
- maintaining our Federal Safety Accreditation for our Direct Managed Works in the Kimberley Region
- reviewing low cost, low-complexity works to ensure safety requirements are met
- maintaining proactive safety, health and wellbeing practices across the organisation through leadership walks, workplace inspections and internal audits
- working across Main Roads to ensure the Semi Quantitative Risk Assessment (SQRA) process is used to manage our critical risks. The SQRA approach combines the inherent strengths of both qualitative and quantitative risk assessment methodologies.

Our Safety Performance

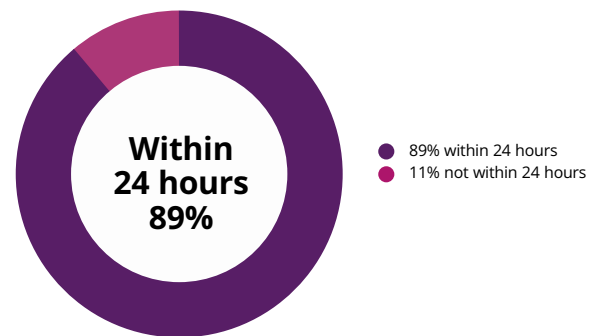
A series of Safety, Health and Wellbeing (SHW) measures are tabled at the monthly Corporate Executive and Corporate SHW Committee meetings. The information available in our online incident reporting system, EQSafe, has enabled us to review both employee and contractor injuries. The Pin Man figure below is used for our Key Performance Indicator (KPI) reporting and data is based on a rolling 12 months. The data from 2018-19 has shown that of all the injuries recorded, 24 per cent are Main Roads employees and 76 per cent are contractor injuries. Other KPIs include the number of serious incidents reported for the month, and the status of outstanding investigation reports. This information helps identify critical issues, trends and emerging challenges that assist Corporate Executive to make strategic decisions to ensure the safety of our workforce and those that work with us in delivering our services.

Total Injuries on Body



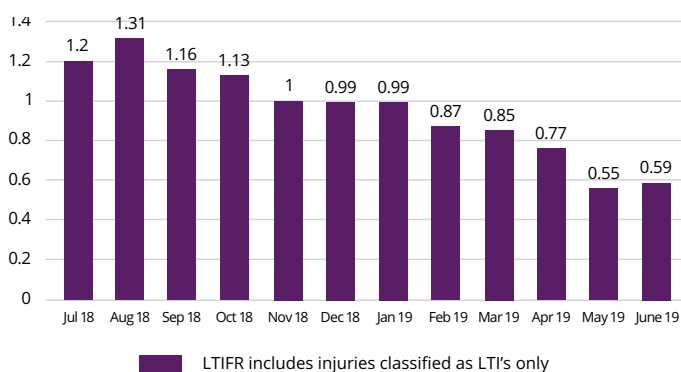
There was a high incidence of upper hand and arm injuries throughout the year. A trend that is being seen across industry generally.

Serious Incidents Reported Within 24 Hours



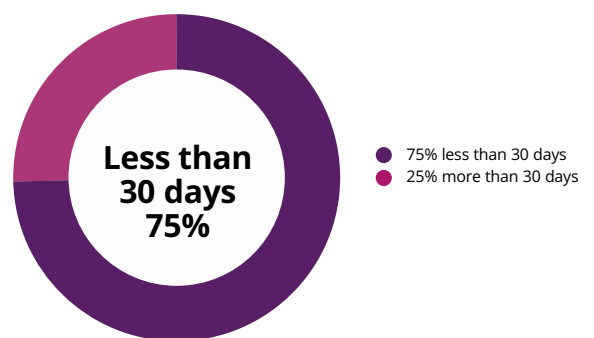
Over the last 12 months, almost 90 per cent of serious incidents were reported within 24 hours.

Lost Time Injury Frequency Rate



Over the last 12 months, the Lost Time Injury rate has improved.

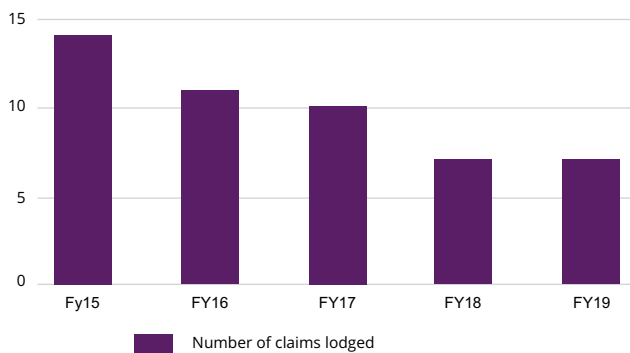
Incident Investigations Closed Out <30 Days



We seek to have all incident investigations closed out within 30 days. Last year, we achieved a 75 per cent closure rate.

Workers' Compensation and Injury Management

Injury prevention and effective injury management continue to be a key focus of our SHW Strategy. We have continued to steadily reduce claims over the last few years achieving a 57 per cent reduction of workers compensation claims and improved claim-closure rates. Amongst the three workers compensation events, two have resulted in LTIs and are being managed.



Safety Health and Wellbeing Strategy

We completed all 2018-19 actions associated with the SHW Strategy. The actions were reviewed quarterly by the Corporate SHW management committee.

The SHW Policy Statement was reviewed and approved by the Managing Director for two years with a commitment to focus on both physical and mental wellbeing.

We also operate and implement policies that manage the risk of being killed or seriously injured on our roads, or while working directly or indirectly for Main Roads, through our overall Road Safety Strategy.

Proactive Safety, Health and Wellbeing

Many of our people and the people we work with are directly engaged in road construction activities or interact with the road environment in some way. The construction industry itself is characterised by activities that are high risk from a safety perspective. According to Safe Work Australia the construction industry is consistently among the top industries in Australia with the highest number of serious incidents and is currently ranked as having the fifth highest incident rate of all industries.

We aim to influence safe practice throughout our business including on our construction projects, road maintenance and operational activities. We require our contractors to provide safety related information including the reporting of serious incidents and reporting to our external bodies such as WorkSafe or EnergySafe if required. The following outline some of our key achievements over the last 12 months.

Certification to ISO45001:2018

Following the 2019 Integrated Management System external audit Main Roads was recommended for certification to ISO45001:2018 – Occupational Health and Safety Management Systems. The focus for this certification includes leadership, consultation and risk management.

Critical Risk Project

We are committed to employee safety and commenced, in November 2018, a project examining potential fatality scenarios for Main Roads personnel and contracting partners. The project focused on the top 10 fatality risks to our workers, contractors and sub-contractors, and involved workshops with more than 70 employees. The Critical Risk Project was finalised at the end of May 2019 providing us with a thorough understanding of the causes of fatality risk events. We will now focus on strengthening the performance of identified critical controls and planning for the implementation of the Network Critical Risk Management Program during the next 12 months.

Mental Health Strategy

Mental health is increasingly important in the workplace, playing a crucial role in everything from productivity and economic success to the social wellbeing of the nation. The impact of mental health on organisations can be significant – especially from work absences and long-term work incapacity. Nationally, this impact is estimated to be as high as \$11 billion per year.

Our Main Roads Mental Wellbeing in the Workplace Survey has set a baseline. Results indicate that 45 per cent of our workforce report a need for an approach to mental health in the workplace (including awareness raising, capability building, and prevention and support) that is embedded in an integrated and sustained way.

During 2019, Human Resources has developed the Mental Wellness Strategic Framework and the Mental Wellness Action Plan 2019–2022, with release set for late 2019.

This is Main Roads' first comprehensive approach for workplace mental health. It is a three-year program, delivered across four principles: people management; prevention; early recognition and support; and rehabilitation and return to work. It is a framework for staff to build their capability and commitment to positive workplace culture, to assess mental health risks, to take informed action for improving mental health and ensure early access to effective care and rehabilitation.

Working in Isolation Technology

Main Roads has been conducting a trial for a device called Spot Generation 3, a location, tracking and emergency response device. The device is used for hazards associated with driving on the network and working in isolation. Functions include global coordinate tracking, message notifications and SOS functions to initiate an emergency response. If the trial is successful then the device may form part of our journey management and working in isolation processes.

Incident Management

We have reviewed and updated incident management processes. The update simplifies the process, summarised via flowcharts, and aims to increase efficiencies whilst also gaining better quality outcomes. In summary, working harder at the prevention of reoccurrence. Streamlining of root-cause analysis tools to a single methodology (Incident Cause Analysis Method – ICAM and ICAM Lite) to drive behaviours whilst also separating the investigation process from the analysis process gives more complete reports.

Communication of Safety Banner Alerts

We regularly communicate Safety Banner Alerts across the organisation and to our contractors providing lessons learnt from serious incidents with associated corrective actions. During 2018-19 the following Banner Alerts were communicated:

Safety Banner Alert Type	Number
Red (Initial information on a serious incident)	30
Grey (Final investigation with corrective actions associated)	27
Blue (Safety information – General)	16
Orange (Technology and Innovation)	1
Contractor	11

Austrroads Occupational Safety and Health Networks

This year has seen the establishment of the Austrroads' OSH Working Group Network with all Australian jurisdictions and New Zealand represented. Each agency provides a quarterly report that can include innovation, safety alerts and policy and procedure updates. Under the auspices of Austrroads an Asbestos Management Working Group has been created and we have allocated a technical specialist to be part of this group. The working group will meet annually to discuss current best practice and share learnings.

Supporting the 16 Days in WA to Stop Violence Campaign

In November 2018, the State Government was shining a light on the state's horrifying family and domestic violence statistics through their '16 Days in WA to Stop Violence' campaign. The campaign raised awareness, particularly on violence against women, and encouraged active change in communities.

Main Roads supported the campaign and was involved in lighting, in orange, recognisable Perth landmarks such as the Matagarup Bridge. We also promoted the campaign to staff through articles and items on workplace impacts, support available, and tips for supportive environments and respectful relationships.

Family Day

We value our employees and recognise family is an important part of our employee's life. To embrace work-life balance, we host a Family Day event annually with family members invited to the workplace. Activities, including displays of Main Road's initiatives, can enhance understanding and show employee contributions to the community.

OUR STORIES

SUCCESSFUL SAFETY FORUM BECOMES A REGULAR EVENT

During the year, we hosted a two-day forum promoting, through speakers and topics, a positive safety culture and providing an opportunity to network and knowledge share. This brought together our business managers, safety personnel and representatives as well as colleagues from our portfolio partners.

Some of our own safety champions gave informative presentations on a broad range of topics including:

- asbestos management
- risk perception
- Direct Managed Works
- journey and traffic management
- effective communication for engaging our people.

External guest speakers included representatives from the Public Transport Authority, Department of Transport, WorkSafe, RiskCover, Department of Mines, Industry Regulation and Safety and HBF. They presented on a range of subjects including injury management, WorkSafe and legislation updates, exercises for stretching, and internal safety processes.

SafetyWise facilitated a two-hour Incident Cause Analysis Method Lite training, and attendees were able to participate in the challenging session as well as have this recognised in their personal performance record. We also heard from a road safety advocate who spoke of his personal road trauma and recovery story and a mental health awareness proponent on the importance of this in the workplace and home.

We were able to network and build our understanding of the safety risks faced by co-workers in the regions, on projects, and in other agencies and how these are managed across the portfolio. Discussion from a panel of key safety advocates at the conclusion of the forum also gave an opportunity for questions beyond the presentations and training.

The feedback from participants was positive and the intention is to host a similar event across the Transport Portfolio in two years.

We will continue to discuss safety, health and wellbeing priorities and share our stories, with the objective of having a unified approach to best practices and leading the way with safety in the Western Australian Government.