

REVIEW OF OPERATIONS

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## Key achievements in 2010–11

Completed road corridor projects including:

- Pacific Highway – Moorland to Herons Creek and Ballina Bypass Stage 1.
- Cowpasture Road.
- Bangor Bypass.
- 11 km widening on the F5 between Brooks Road and Narellan Road.
- 6.3 km upgrading on the Princes Highway.
- Alstonville Bypass on the Bruxner Highway.

Launched the Live Traffic website to give road users up-to-the-minute news on road traffic conditions.

Introduced a new service to inform motorists on the F3 of upcoming exits via variable message signs.



REVIEW OF OPERATIONS

# Transport

RTA result: The road transport system supports reliable and efficient movement of people and goods

## The NSW road transport system

The transport system is crucial to the economic prosperity and wellbeing of the NSW community. The RTA's role is to maintain, develop and operate the major road network to meet the needs of a growing population. This includes the day-to-day transport requirements of individuals and the growing freight task. In this role, the RTA manages a major program of new road and bridge works, from the inner suburbs of Sydney to the far corners of NSW.

The RTA also promotes alternatives to motor vehicle travel – such as public transport, cycling and walking – through the provision of infrastructure and a range of innovative programs to encourage sustainable methods of transport.

A key RTA role is the management of traffic on the road system. The RTA leads the world in technology to promote the efficient movement of traffic. The RTA also takes the lead in managing traffic during major planned events and unplanned incidents.

This chapter outlines the RTA's management of the road transport system over the past year. It is divided into four main sections:

**Development** – major projects and developments on motorways and other roads.

**Alternatives** – buses, bicycles and pedestrians.

**Traffic** – speed and traffic flow.

**Challenges and the way forward.**

Chapter cover image: Aerial view showing construction of Woomargama Bypass including bridges, earthworks and concrete pavements. Photo by Lightbox Imageworks, May 2011.

## Development

### Project delivery

Appendix I contains details of progress on all major works.

### Motorways

#### M2 Motorway upgrade



The M2 is one of Sydney's busiest road corridors, providing an important link in the Sydney Orbital Network between the M7 Motorway and the Lane Cove Tunnel. It carries around 100,000 vehicle trips and more than 17,000 bus passengers a day.

Upgrading the M2 will improve traffic safety, relieve congestion and prepare for additional growth, with 140,000 new homes and 100,000 new jobs planned for Sydney's north west during the next 25 years. The project extends over 14.5km from Windsor Road, Baulkham Hills to Lane Cove Road, North Ryde and involves:

- Widening sections of the eastbound and westbound carriageways from two to three lanes.
- Providing west-facing on and off ramps at Windsor Road.
- Providing an on ramp at Christie Road and an off ramp at Herring Road.
- Widening the Norfolk Road Tunnel.
- Building a permanent cycle facility.

Construction work began in January 2011 and is expected to be completed in the first half of 2013. Extensive information regarding the project is on the project website at [www.hillsm2upgrade.com.au](http://www.hillsm2upgrade.com.au).



Work on the new M2 on and off ramps at Windsor Road, Baulkham Hills, June 2011.

## M5 East filtration trial

Construction of the M5 East Tunnel air filtration plant started in April 2008 and was completed in March 2010 with public inspections. An 18-month air filtration trial is underway with the plant used daily. The purpose of the trial is to improve tunnel air quality in a section of the westbound tunnel and evaluate the performance of air filtration technology, including:

- Electrostatic precipitation for the removal of particles from tunnel air;
- Denitrification for the removal of nitrogen dioxide from the tunnel air.

## M5 West widening

The project involves widening of 20km of the M5 South West Motorway between King Georges Road, Beverly Hills and Camden Valley Way, Casula. It includes:

- Additional lanes on the M5 for the majority of its length by pavement widening in the median, asphalt overlays and new linemarking.
- An upgraded operations management control system, including a new control room building at Hammondville and variable message signs on the motorway and surrounding arterial roads.
- Extensive additional noise walls along the M5.

The environmental impact assessment for the project was displayed for community comment in September/October 2010. The majority of the comments received concerned traffic noise. The project has since been revised to provide significantly more noise barriers along the motorway. A number of submissions also suggested the need to widen the motorway between Fairford Road and King Georges Road in the eastbound direction. Again, the project has since been revised to include this work, as supported by further traffic modelling. The RTA and the motorway company, Interlink Roads, are working together to develop the project and agree on financial arrangements.

## Pacific Highway Upgrade Program

The Pacific Highway links Sydney and Brisbane but also passes through local areas with growing populations.



Communities are active in the development of the highway to ensure their needs are being met.

In response, the RTA has provided road infrastructure for safe and efficient transport along this key transport corridor.

The highway is part of the National Land Transport Network. The NSW and Australian governments have been jointly upgrading the Pacific Highway since 1996, achieving travel time savings to date of about 80 minutes and 70 minutes for heavy and light vehicles respectively.

The two governments spent \$3.9 billion on the highway upgrade to 2009 and have committed \$3.65 billion to continue the upgrade over the five years to mid 2014. It comprises:

- **Priority 1:** Hexham to Port Macquarie, Raleigh to Woolgoolga and Ballina to the Queensland border.
- **Priority 2:** Port Macquarie to Raleigh.
- **Priority 3:** Woolgoolga to Ballina.

As at June 2011 (the end of year two of the current program), 337km of the Pacific Highway is dual carriageway (double-lane divided road). This is about 51 per cent of the final highway length of 664km. Around 67km of the dual carriageway highway is currently under construction and about 128km is being prepared for construction. Planning is also being progressed on the remaining sections of highway.

This year the RTA significantly improved public information available on the Pacific Highway Upgrade with a new website, interactive products, videos explaining construction techniques and more. Customer feedback has been positive.

Major upgrading activities in 2010–11 are outlined below.

### Priority 1: Hexham to Port Macquarie, Raleigh to Woolgoolga and Ballina to the Queensland border

#### Cooperook to Herons Creek

The RTA formed an alliance with contractors in September 2006 to design and construct the 33km dual carriageway upgrade of the Pacific Highway from Cooperook to Herons Creek (incorporating the Cooperook to Moorland and Moorland to Herons Creek projects).

This \$580 million project was jointly funded by the NSW and Australian governments and is the longest single upgrade project carried out on the Pacific Highway to date.

Construction started in late 2007 and the new carriageway was progressively opened to traffic from January 2010, with the final stage opening in July 2010. The completed project provided about 163km of continuous dual carriageway between Bulahdelah and Port Macquarie.

Construction included building bypasses of the villages of Moorland, Johns River and Kew. The upgrade is expected to significantly improve safety for local residents by rationalising property access points to the new highway and bypassing three villages; improving road conditions by providing continuous dual carriageway between Cooperook and Herons Creek; and removing the bottleneck at the signalled intersection at Kew.

The project involved the construction of new twin bridges at Two Mile Creek, Moorland railway bridge, Pipe Clay Creek, Holey Flat Creek, Tom Cat Creek, Stony Creek, Ross Glen railway bridge, Walkers Creek and Herons Creek. A new major bridge for southbound traffic was built over the Camden Haven River. Interchanges were also built at Moorland South, Johns River and Kew.





### Banora Point

An alliance for the construction of the \$359 million highway upgrade at Banora Point was formed in August 2009. Major construction for the 2.5km Banora Point upgrade started in December 2009. As the project is in an urban area, door-knocking, community meetings and weekly information updates are essential to its success. The community has formed several groups that interact frequently with the RTA. Construction is well advanced over the full length of the project. There was a major traffic switch in February 2011 at the northern section of the project, which has allowed the whole site to be under construction. In addition, 47 super-T girders were delivered and stored on site to build the southern valley viaduct. Some of these super-T girders have already been put in place.

Construction is progressing well and the project is expected to be opened to traffic mid 2012 and fully completed in late 2012.



First span of super-T girders erected for the southern valley viaduct, Banora Point, May 2011.

### Ballina Bypass

Construction of the 12km bypass of Ballina is well advanced. The \$640 million project is expected to be completed in mid 2012. Major construction started in May 2008 and the northern section of the project was opened to traffic in March 2011. Completed work to date includes the Teven Road bridge and bridge work for the Emigrant Creek central bridge and the flood relief bridge between Teven Road and Cumbalum. Sealing and linemarking for all completed local roads and property accesses is expected to be completed by the end of June 2012.

To explain how the RTA is addressing deep, soft soils, a video with animations of local construction techniques was sent to local interest groups and was well received.



Teven interchange on the Ballina Bypass, May 2011.

### Tintenbar to Ewingsdale

Concept design for the proposed Tintenbar to Ewingsdale project has been completed and planning approval received in January 2010. The project will provide 17km of four-lane divided carriageway between the Ballina Bypass and the Ewingsdale interchange. It includes the provision of twin tunnels to avoid the steep grades of St Helena Hill. Tenders closed in early 2011. Construction will begin in early 2012.

### Bulahdelah Bypass

Construction is well advanced on the \$315 million, 8.6km bypass of Bulahdelah. Major construction started in August 2010, the site is fully cleared and earthworks are progressing. Bridge work is also progressing with the new overpass bridge linking Bulahdelah township to Alum Mountain in place and the first girders installed on the bridge over the Myall River during May 2011. Work is advancing on the other bridges and structures along the full length of the project. Other recent work includes drainage, controlled blasting in the major cuttings and revegetation work. The project is expected to be completed in late 2012.

Sadly, in 2004 three people from the same family lost their lives in a road crash in the area. The RTA, having worked with the family and with strong local endorsement, included in the southern interchange design a memorial site called 'Our Girls Memorial'.



Aerial view of the temporary Myall River Bridge and new bridge works, Bulahdelah Bypass, January 2011.

### Hérons Creek to Stills Road

Construction of the 3.5km upgrade of the northbound carriageway between Herons Creek to Stills Road started in March 2011. The \$60 million project is jointly funded by the NSW and Australian governments. A number of environmental management measures are underway including mulching and recycling of timber, construction of sedimentation control basins and the relocation of Koala Bell plants. Clearing and excavation work is also underway. The project is expected to be completed in late 2012.

### Coffs Harbour (Sapphire) to Woolgoolga

The \$705 million major construction project for the 25km Sapphire to Woolgoolga Upgrade started in August 2010. Earthwork and drainage work is continuing. Controlled blasting is also underway about 1km southwest of Woolgoolga. The project is expected to be completed in early 2014.



Earthworks near Greys Road on the Sapphire to Woolgoolga Upgrade, January 2011.

## Priority 2: Port Macquarie to Raleigh

### Kempsey Bypass

In its 2009–10 Budget, the Australian Government announced accelerated funding to fast-track the Kempsey Bypass under the Building Australia Fund. Major construction for the 14.5km bypass started in June 2010. Flood management was a real concern for the local community and the \$618 million project includes a 3.2km bridge crossing of the Macleay River and floodplain, the longest in Australia.

Construction is well underway, with earthwork, utility relocations and flood mitigation work, including work with the local community on property protection measures, completed. The project remains on-track for completion ahead of schedule by mid 2013.

Work is also underway on a number of overbridges including at Crescent Head Road and the north coast railway line. The site for building the Macleay River bridge is established and geotechnical investigations are underway, with piling foundations to begin in July 2011.

Planning and preconstruction activities are proceeding on the 105km of undeveloped sections between Port Macquarie and Raleigh, including Warrell Creek to Urunga, Frederickton to Eungai and Oxley Highway to Kempsey.

## Priority 3: Woolgoolga to Ballina

Planning and community consultation is continuing on the 155km undeveloped section between Woolgoolga and Ballina, including the early purchase of some properties following requests by members of the community.

### Glenugie Upgrade

Major construction for the 7km upgrade south of Grafton started in March 2010. Pavement work, kerb and guttering and drainage work is continuing. The installation of fauna fencing and aerial rope crossings is either underway or complete. The \$60 million upgrade is expected to be open to traffic in late 2011.

### Devil's Pulpit

Planning approval for the Devil's Pulpit upgrade project was obtained in February 2011 and the contract for construction has been awarded. The project will provide 6km of new divided carriageways and also provide another 3km of median wire rope safety barriers. Major construction is expected to begin in late 2011, with completion expected in mid 2013.

## Princes Highway

### Bega Bypass

Milestones achieved over the year include completion of the concept design, display of the Review of Environmental Factors and, in December 2010, receipt of planning approval. Tenders will be invited in 2011–12.

### Gerringong to Bomaderry Upgrade

The current NSW Government is investing \$500 million in the upgrade of the Princes Highway between Gerringong and Bomaderry. The RTA is now planning to provide the four-lane highway with median separation as three separate projects:

- Gerringong Upgrade (Mount Pleasant to Toolijooa Road).
- Foxground and Berry Bypass (Toolijooa Road to Schofields Lane).
- Berry to Bomaderry Upgrade (Schofields Lane to Cambewarra Road).

### Gerringong Upgrade

Planning approval was obtained in November 2010. Following this, Registrations of Interest to design and construct the project were invited on 15 November 2010. Tenders were subsequently invited from a shortlist of tenderers on 3 March 2011.

### Foxground and Berry Bypass

Planning is continuing. An application for approval under Part 3A of the *Environmental Planning and Assessment Act 1979* was submitted in December 2010 and the environmental assessment requirements of the Director General of the NSW Department of Planning were issued in February 2011.



### Berry to Bomaderry Upgrade

Planning for this project is continuing. The concept design and environmental impact assessment for the proposal should be completed in the 2011–12 financial year.

### Lawrence Hargrave Drive Intersection

The overpass was officially opened to traffic in July 2010. Community feedback was used to refine the design of the project. Road safety around Bulli Public School was improved after consultation with the school community and local residents – maintaining safety for both local and through motorists.

### South Nowra Kinghorne Street to Forest Road

Upgrading 6.3km of the Princes Highway to four lanes between Kinghorne Street and Forest Road at South Nowra will link the existing four-lane section of the highway through the Nowra central business district immediately to the north with the four-lane section of highway to the south. This will result in at least four lanes on the Princes Highway between Bomaderry and the Jervis Bay turnoff.

The RTA has completed an environmental impact assessment and detailed design of this project. Pre-construction activities including property acquisitions and preliminary utility relocations are nearing completion. Construction is expected to start in late 2011 and the new section of highway should open to traffic in 2013.

### Victoria Creek realignment

The construction contract has been awarded for the \$45 million upgrade of the Princes Highway between Narooma Road (the Old Princes Highway) and Corkhill Drive at Central Tilba 13km south of Narooma. The preferred option will use a new alignment which closely follows the existing reserved road corridor shown on the Eurobodalla Shire Council Local Environment Plan, but improves the road geometry, providing greater road safety improvements and causing less disruption to traffic during construction. Major works have begun and construction is scheduled to be completed by 2013.

## Great Western Highway

### Wentworth Falls East

The new eastbound carriageway from Old Bathurst Road (west) to Tableland Road was opened to a single lane of traffic travelling in each direction in May 2011. The existing carriageway between Dalrymple Avenue (east) and Tableland Road is being rebuilt, including new utility services, drainage, retaining walls and local access roads. Pedestrian traffic lights have been installed across the new carriageway west of Tableland Road to improve safety for school children and others using the bus stop. Construction of the new westbound carriageway between Dalrymple Avenue (east) and Station Street continues. Community notification of construction work and traffic changes is ongoing.

## Lawson Upgrade, Ferguson Avenue to Ridge Street

The first (western) stage of the upgrade between Bass and Ridge streets opened to traffic on 17 December 2010, providing four lanes, upgraded intersections, new traffic signals at San Jose and New streets and connections to Blue Mountains City Council's township improvement works. Construction work between Ferguson Avenue, Hazelbrook and Bass Street, Lawson, including a new bridge over the railway and a 600m long rail realignment, is underway.

The project has major benefits for the local community and through traffic, including improved road safety, travel times, road access, and cyclist and pedestrian safety. Communities have been kept informed and offered alternative accommodation where necessary during weekend and night work over the rail shutdown. Community involvement is ongoing.

### Bullaburra

The Great Western Highway is being delivered in two sections at Bullaburra – Bullaburra East, and between Bullaburra and Wentworth Falls.

The RTA is proposing to widen the existing two-lane highway to a four-lane divided highway between Ridge Street, Lawson and 600m west of Genevieve Road, Bullaburra. Land acquisitions are being progressed and designs finalised to prepare the Bullaburra east project for construction. This project is undergoing detailed design work. Some changes were made to the draft design originally displayed to the public for environmental and safety reasons. The RTA communicated these to the community and is holding ongoing discussions with Bullaburra community groups and Blue Mountains City Council regarding property acquisition and adjustments.

Planning between Bullaburra and Wentworth Falls was completed in late 2010 and tenders for construction invited in January 2011. There is considerable community interest and affected property owners have been closely involved. Construction is expected to commence in late 2011 and be completed in 2014.

## Hume Highway

The duplication of the Hume Highway is well advanced and 2010–11 saw the following milestones:

- Construction of the \$247 million Holbrook Bypass started.
- Construction of the Woomargama Bypass including bridges, earthworks and concrete pavements continued.
- Construction of the Tarcutta Bypass including bridges, earthworks and concrete pavements continued.
- Additional landscaping and traffic mitigation works on the Albury Bypass started.

A feature of each of the Hume Highway projects has been the efforts of the construction teams to support fundraising for local activities, facilitate site visits and make presentations to local school students and service clubs.







Aerial view of the Tarcutta Bypass, June 2011.

May 2011 marked the official start of construction of the \$247 million Holbrook Bypass project. The Australian and NSW government-funded project represents the final stage in the upgrade of the Hume Highway into a four-lane, divided highway between Sydney and Melbourne.

The 9.5km bypass will provide easy entry and exit to the north and south of the town as well as twin bridges over Culcairn Road and Ten Mile Creek. Work on the Holbrook Bypass is expected to be completed in 2013.

The new bypass will improve safety for local residents by reducing the number of cars and trucks on Holbrook's local streets. The route selection for the bypass was confirmed with stakeholder involvement and the final design improved following discussion with landowners and transport operators. This project is employing many local residents and injecting millions into the local economy.

## Sydney area

### Bangor Bypass

The final link in the Bangor Bypass was completed on 20 April 2011. This means the Bangor Bypass project, which started in 2003, became fully operational. The new north-south link provides a 1.2km road linking New Illawarra Road in the south with Bangor Bypass (east-west link) and Alfords Point Road in the north.

The Bangor Bypass now provides an important cross-regional link between the key residential and employment centres of Sutherland and Bankstown. The final link improves access between Heathcote and Alfords Point roads. One of the main features of the project was traffic lights at the intersection of Old and New Illawarra roads to replace the roundabout and a 115m long, 3.5m high retaining wall. The construction involved 30,000m<sup>3</sup> of earthworks and the installation of more than 30,000m<sup>2</sup> of new pavement.



The four-lane Bangor Bypass opens to traffic, April 2011.

### Alfords Point Bridge northern approach and bridge over Henry Lawson Drive

The new bridge over Henry Lawson Drive was opened to two lanes of traffic in May 2011. In 2010-11 construction of the \$44 million northern approach to the Georges River Bridge continued and is expected to open to traffic in late 2011.

### F5 Freeway widening

The NSW and Australian governments have committed \$116 million to widen the F5 Freeway between Ingleburn and Campbelltown. Widening of the 11km of the F5 Freeway between Brooks Road, Ingleburn and Narellan Road, Blair Athol is being undertaken by Nace Engineering Pty Ltd. Construction began in February 2009 and completion is scheduled for late 2011. The following sections of widened freeway opened to traffic on 22 December 2010:

- Southbound, 6km of four-lane freeway between Brooks and Raby roads.
- Northbound, 2km of four-lane freeway between Brooks Road and Denham Court exit ramp.
- Northbound 4km of three-lane freeway between the Denham Court exit ramp and Raby Road.

The new Raby Road ramp onto the F5 was opened to traffic on 6 June 2011. The upgrade of the F5 between Campbelltown and Ingleburn is expected to be open by the end of 2011.



Construction of noise wall on the F5 Freeway, November 2010.



## Cowpasture Road Upgrade

Cowpasture Road was a 12.8km, two-lane, undivided arterial road from the roundabout at The Horsley Drive, Wetherill Park to Camden Valley Way, Leppington. It was progressively upgraded to a four-lane divided road, fully funded by the NSW Government.

Construction of the final \$53 million upgrade between the M7 Motorway and North Liverpool Road began in January 2009 and opened to traffic in December 2010.

The upgrade links new residential areas and employment zones, and provides a regional freight link between Prestons, Wetherill Park and Smithfield industrial estates. Cowpasture Road also forms an important link to the M7 Motorway, with an interchange near Hoxton Park Road. The upgrade provides improved access for local motorists as well as a safer road environment for all road users.

## Camden Valley Way, Cobbitty Road to Narellan Road

Camden Valley Way is a major arterial road linking Liverpool, Camden and Harrington Park in Sydney's south. The upgrade of Camden Valley Way to a four-lane divided road between Bernera and Cowpasture roads is expected to open to traffic in July 2011. Planning and pre-construction for the upgrade of Camden Valley Way between Cowpasture Road and Cobbitty Road is continuing. Work to upgrade Camden Valley Way between Narellan and Cobbitty roads, Harrington Park began in August 2010. Construction of the upgrade is progressing well and is expected to be completed in 2012.

## Erskine Park Link Road

The new road will provide a vital link to the Western Sydney Employment Area, which comprises more than 2,200 hectares and is expected to accommodate 40,000 jobs. The Western Sydney Employment Area is located adjacent to the intersection of the M4 and M7 motorways.

The Erskine Park Link Road will link Lenore Lane and Old Wallgrove Road, providing a vital connection between the Western Sydney Employment Area and the M7 Motorway. Tenders for construction were invited in November 2010 and the contract awarded in May 2011. The construction works are scheduled to begin in the second half of 2011, with completion scheduled in 2013.

## Hunter region

### The Hunter Expressway



The \$1.7 billion Hunter Expressway is a 40km, four-lane freeway between the F3 near Seahampton and the New England Highway, west of Branxton.

The Australian Government committed \$1.5 billion while the NSW Government is contributing up to \$200 million for the project.

Major construction started in August 2010. The 13km eastern section of Hunter Expressway is being built by the Hunter Expressway Alliance. Since the start of major construction, the alliance has treated mine voids beneath Sugarloaf Range and built a number of site access intersections on John Renshaw Drive, George Booth Drive and Buchanan Road. It has also started earthworks, retaining walls, drainage and bridge work along the eastern section of the route. Animations of the innovative construction techniques are on the RTA's Road Projects website ([www.rta.nsw.gov.au/roadprojects](http://www.rta.nsw.gov.au/roadprojects)).

**The Hunter Expressway Alliance received praise from the Awabakal Land Council for the positive example of Aboriginal consultation and engagement as well as for the Aboriginal cultural awareness training program conducted by RTA.**

Major construction started on the western section of the project in April 2011. This section comprises 27km of four-lane divided road from just east of Kurri Kurri to the New England Highway west of Branxton. A virtual reality model was created to help explain the new arrangements to residents and businesses, which was well received.

This Hunter Expressway project will provide a direct boost to the NSW economy, directly creating more than 800 jobs and indirectly 2,400 jobs.



Aerial view of the Buchanan Interchange, Hunter Expressway, May 2011.



## Harry Boyle Bridge, third Hunter River crossing



The \$59 million Third Crossing of the Hunter River at Maitland, including the Harry Boyle Bridge, opened to traffic on 3 December 2010. The RTA, in conjunction with the *Maitland Mercury*, ran a competition to name the bridge. The winning entry was announced at a community celebration on 6 November 2010. Finishing works including final road surfacing are expected to be completed by October 2011.



The completed Third Crossing of the Hunter River at Maitland, including the Harry Boyle Bridge, December 2010.

## Newcastle Inner City Bypass, Shortland to Sandgate

Work is continuing for a four-lane divided carriageway extension of the Newcastle Inner City Bypass for 1.8km between Shortland and Sandgate. The \$133 million extension will pass underneath Sandgate Road at Shortland, with a bridge over Deepbridge Creek and the main northern railway line, past the western side of Sandgate Cemetery and join the Pacific Highway at Sandgate.

The main contract was awarded to Reed Constructions in February 2011. Initial construction activities began in April 2011 and include establishing the site, installing sediment and erosion controls and piling works for the three main bridge sites. The project is expected to open to traffic in 2013.

## Removal of the old Tourle Street bridge

The contract for the removal of the old Tourle Street bridge between Mayfield and Kooragang Island was awarded in December 2009. The demolition of the steel-truss bridge used a temporary bridge for two cranes to remove the bridge a span at a time. Strict environmental controls were placed on the removal of the six bridge piers, which had been supported by numerous large diameter piles cut 1m below mud level. The work also removed over 200 original falsework piles embedded in mud. The demolition work was innovative as no barges were used, and the cutting of large steel encased and steel reinforced piles 1m below mud level and 3m below water level was done without using explosives.

## Central Coast



### Central Coast Highway Upgrade, Carlton Road to Matcham Road

The \$75 million upgrade of this 2.2km length of highway will extend the four-lane divided carriageway from Erina to the north, and will significantly contribute to the four lanes planned for the section between the F3 at Kariong and Tumby Road at Wamberal. The 500m section between Serpentine Road and Matcham Road opened to traffic in March 2011. Full construction is scheduled for completion in 2012.

### Central Coast Highway Upgrade, Matcham Road to Ocean View Drive

This \$80 million, 2.2km, upgrade of the highway between the F3 at Kariong and Tumby Road at Wamberal is the final project to provide four-lane carriageway. A contract for major roadworks was awarded in November 2010 and construction started in January 2011. The project is expected to be opened to traffic in 2013.

### Avoca Drive widening, Sun Valley Road to Bayside Drive

Planning was completed in 2008 to complete a continuous four lanes between the Central Coast Highway and Davistown Road. A contract for major roadworks for the 1.2km section between Sun Valley Road and Bayside Drive was awarded in June 2009 and construction started in September 2009. The \$38 million project opened to traffic in February 2011.

## Wyang Road intersections

High priority projects for Wyong Road included planning and preconstruction activities for the Wyong Road/F3 Sydney–Newcastle freeway interchange improvements and planning the Wyong Road/Pacific Highway intersection upgrade at Tuggerah. The preferred proposal for the Wyong Road/F3 Freeway interchange upgrade was on public display from December 2010 until February 2011. Pre-construction activities will be finalised in late 2011.

## Northern region

### Bruxner Highway, Alstonville Bypass

The 6.6km Alstonville Bypass provides significant benefits including quicker journey times, improved traffic flow and safety, and reduced through traffic and congestion in Alstonville. Construction began in April 2009 and was officially opened by the Hon. Anthony Albanese MP, Federal Minister for Infrastructure and Transport on 27 May 2011. This \$97 million project was fully funded by the Australian Government.



## Waterfall Way bridge replacement

Waterfall Way is one of the main routes linking the New England region with the North Coast and is an important road for tourism, commerce and primary production. Two bridges, across St Helena and Four Mile creeks, around 2km apart, were rebuilt to provide wider and stronger bridges on better alignments. The upgrades were undertaken to improve road safety on Waterfall Way and to ensure that the road can continue to safely carry legal loads into the future. The \$8.5 million project was fully funded by the NSW Government and work was completed in September 2010.

## Western region

### Newell Highway, Moree Bypass Stage 1

The \$56.2 million Moree Bypass removes heavy vehicle traffic from the town centre of Moree and improves safety and access for local traffic and pedestrians.

A contract was awarded in August 2007 for Stage 1, which included road work and a new Mehi River Bridge. Stage 1 opened to traffic on 13 December 2010.



The completed Mehi River Bridge on the Moree Bypass, December 2010.

## South West region

### Adelong Creek bridge

The Adelong Creek and Adelong Flood Channel bridges are located on the Snowy Mountains Highway in Adelong, south west NSW. These timber beam bridges were modified 10 years ago with the addition of concrete decks. While the modifications extended their life in the short term, they continued to deteriorate. The bridges also lacked the capacity to safely handle increasing freight traffic. This, combined with high maintenance costs and difficulties in obtaining suitable timber, resulted in the replacement of the two bridges with one new structure. It consists of four spans of 15.5m each, totalling 62m in length.

Preconstruction began in December 2007. Two lanes opened to traffic in December 2010 and the official opening was held on 17 February 2011, one month ahead of schedule and despite significant flooding.

## Southern region

### Main Road 92 upgrade, Nowra to Nerriga

The Nowra to Braidwood Road, Main Road 92, is classified as a Regional Road under the responsibility of Shoalhaven City and Palerang councils. In 1988 the Australian Government declared Main Road 92 a Road of National Importance, in recognition of its potential as a significant route between Canberra and the South Coast. The Main Road 92 upgrade was initiated by the Australian Government. It was constructed in three stages, with the final stage opened in September 2010.

Stage 1, the 24km upgrade from Hames Road to Morton National Park was opened to traffic in June 2007. Stage 2, a 9km section from 44km west of Hames Road (near the Touga Road intersection just east of the Bulee mountain area at Billy's Hill) was opened to traffic in September 2009. Stage 3 delivered over 20km of upgraded road from Tianjara Falls to Billy's Hill near Bulee Gap.

The full 54km \$99 million upgrade of Main Road 92 between Nowra and Nerriga is now complete and was marked by a family fun day held in Nerriga in October 2010. With RTA sponsorship, the Nerriga Progress and Sports Association hosted the celebrations and more than 1,200 visitors enjoyed the village fair atmosphere. A highlight was the ribbon cutting ceremony by Kevin Smith, Nerriga's oldest resident.

The local community was kept informed during construction of the project through numerous meetings and email updates.



## Kings Highway deviation

Construction work on the Kings Highway realignment on the outskirts of Queanbeyan was completed in December 2010. Major construction on the realignment began in January 2010. Four lanes have replaced two lanes on this busy section of the Kings Highway. The new deviation is the largest single part of the \$27 million Kings Highway Upgrade completed by the RTA on behalf of the NSW and Australian governments to cater for the new Defence Headquarters near Bungendore.

## Lanyon Drive duplication

The Lanyon Drive duplication addresses the increase in traffic congestion and delays caused by development and increased traffic volumes along Lanyon Drive from Tomsitt Drive across the ACT border to the Monaro Highway. The work consisted of constructing a dual carriageway with two traffic lanes in each direction. The existing bridge at Jerrabomberra Creek was widened and a new bridge constructed to accommodate the dual carriageway.

The \$19 million project, jointly funded by the NSW, Australian and ACT governments, was completed on time and \$2 million under budget. Construction commenced in January 2010 and the deviation was fully opened to traffic in April 2011.

## Australian Defence Force Memorial Plantation

In November 2010 the Governor-General of Australia officiated at the dedication of the Australian Defence Force Memorial Plantation, which comprises 50,000 trees planted by the RTA. The plantation stands on Remembrance Driveway near the Mount Annan Botanic Garden. The RTA organised the dedication in partnership with the Remembrance Driveway Committee, Governor-General's Office and Department of Premier and Cabinet and produced a printed program and DVD depicting theatres of war, including peacekeeping missions since the Vietnam War.



Memorial wall identifying the start of the Australian Defence Force Memorial Plantation, Remembrance Driveway, Hume Highway.

## Alternatives

### Supporting bus priority

#### Inner West Busway

Victoria Road is one of Sydney's busiest transport corridors, carrying around 75,000 vehicles and 40,000 bus passengers per average weekday across Iron Cove Bridge.



The \$175 million Inner West Busway project provides 3.5km of new, dedicated peak hour bus lanes through Drummoyne and Rozelle.

It also includes improved cyclist and pedestrian facilities through Rozelle and Drummoyne.

The first buses travelled on the Inner West Busway in January 2011, following the opening of the new Iron Cove Bridge to westbound traffic. The installation of a moveable concrete median barrier on Victoria Road marks a first for Australian roads and safely provides the additional capacity for a dedicated bus lane in the morning peak period.

By improving bus travel times and encouraging more people to use public transport, the new bus lanes will assist efforts to reduce congestion and vehicle emissions. The project is providing city-bound bus commuters with travel time savings of up to 17 minutes in the morning peak period.



The completed \$175 million Inner West Busway, January 2011.





## Strategic bus corridors

The objective of strategic bus corridors is to improve travel time reliability, using both infrastructure solutions and the Public Transport Information and Priority System (PTIPS). 2010–11 was the sixth year of a seven-year, \$295 million bus priority program.

To June 2011 a total of 134 bus priority projects had been completed on strategic bus corridors, including 16 in 2010–11, at a total cost of \$265 million. These corridors are described on the RTA's Road Projects website, [www.rta.nsw.gov.au/roadprojects](http://www.rta.nsw.gov.au/roadprojects). Bus priority treatments, established in close consultation with neighbouring residents and businesses, include intersection improvements, bus priority 'B' signals at traffic lights, road widening and installation of red bus lanes, bus-only lanes and transit lanes. A \$10 million bus layover facility was opened in May 2011 on the Warringah Freeway at Cammeray. Since the program began, the length of bus lanes has increased from 78km to 147km.

## Technology roll out to State Transit Authority buses

PTIPS uses satellite technology to identify late-running buses and communicate with the RTA traffic management system to give priority to those buses at traffic signals. The system has been installed on all State Transit Authority buses in Sydney and Newcastle and is now being extended to private buses. Over 870 traffic signals have now been activated to enable priority for late-running buses. PTIPS also provides real-time bus status information to support the recently implemented SMS Real Time Bus Information Service now in operation.

## Supporting cycling

### Information and events

As part of delivering the *NSW BikePlan*, the NSW Government launched a website that provides a user-friendly and comprehensive source of all NSW Government cycling information ([www.bicycleinfo.nsw.gov.au](http://www.bicycleinfo.nsw.gov.au)). The website includes safety tips and road rules for beginner riders, a calendar of sporting and social cycling events, and a compendium of NSW cycleway maps. It was developed by the RTA in collaboration with government agencies and major cycling organisations including Bicycle NSW and Cycling NSW.

As part of the RTA's program to encourage more people to cycle, it sponsored major community cycling events, including the NSW Government Spring Cycle, the Parra Pedal for the Amy Gillett Foundation, MS Sydney to the Gong Ride and NSW Bike Week. These events receive strong community support. A total of 9,476 cyclists participated in the NSW Government Spring Cycle held on 17 October 2010, a 10.1 per cent increase since 2006. There were also events held across the State as part of NSW Bike Week in 2010, with 49 events attracting 5,450 participants.



Cyclists gather in Parramatta Park for the inaugural Parra Pedal.

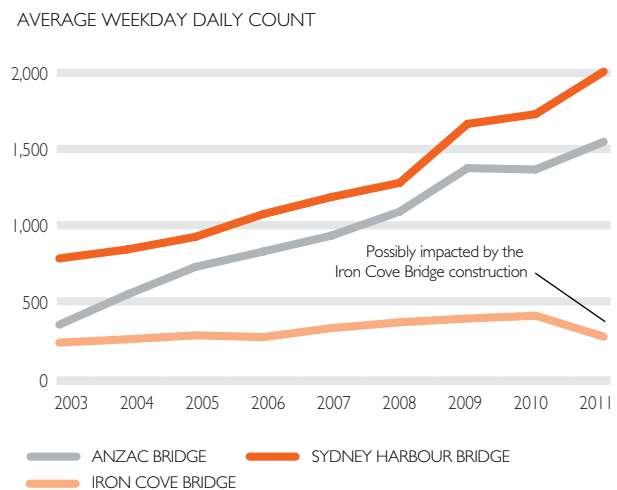
## Cycle count reporting

The RTA began developing a cycle count reporting system to gather improved statistics on cycle use. When complete, the system will include external data such as weather information, which will enhance the RTA's ability to track trends and performance. The new system will also allow weekly updating of cycle counts. The initial phase will be completed by October 2011.

The table below charts cycle use of the Sydney Harbour, Anzac and Iron Cove bridges from 2003 to 2011. It clearly shows that there are now twice as many weekday cyclists using the Sydney Harbour Bridge compared to five years ago. The same trend is evident on all major cycle routes into the city.

Cycleway counter data for the year ended 30 June 2011 indicates that the Sydney Harbour Bridge cycleway had the highest average daily count over weekdays and weekends (1,390).

FIGURE 4. ANNUAL AVERAGE WEEKDAY CYCLE COUNT



According to the latest NSW Bicycle Network GEOdatabase information, NSW has 8,746km of cycleways. This is an increase of 174km on 2009–10. Road shoulders (2,742km, excluding high-speed roads), shared paths (2,440km) and shoulders or breakdown lanes on freeways and rural highways zoned at 90km/h or higher (2,205km) comprise most of the total cycleway length.

# Pedestrians

## Pedestrian infrastructure



The aim of pedestrian facility programs is to improve safety, mobility and access, particularly in areas of high pedestrian activity. Typical projects include preparation of Pedestrian Access and Mobility Plans, provision of kerb ramps, new crossings at signalised intersections, and new traffic control signals for pedestrians.

Sixty-five pedestrian infrastructure projects were delivered on the State road network across NSW. These were fully funded by the RTA at a cost of \$3.9 million. A further 61 projects were undertaken on regional and local roads in local government areas around the State, with funding matched dollar-for-dollar by local councils to an RTA contribution of \$1.5 million.

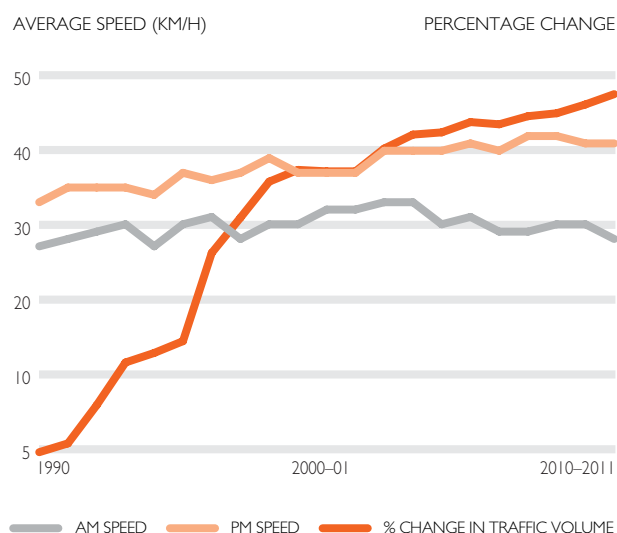
Additionally, two major pedestrian bridge projects approached construction this year. A contract was awarded for the Epping Road Marsfield project, which will begin construction in 2011–12. The Anzac Parade Moore Park project is in the initial scoping stages with residents and stakeholders. Their input and a comprehensive pedestrian and cycle study will inform the final design.

# Traffic

## Speed and traffic volume trends

The trends in AM and PM peak speeds on the seven major routes to and from Sydney have remained broadly consistent despite a growth in traffic of 49 per cent since 1990, as shown in Figure 5 below.

**FIGURE 5. SPEED AND TRAFFIC VOLUME TRENDS FOR SEVEN MAJOR ROUTES TO AND FROM SYDNEY**



Between 2009–10 and 2010–11 overall travel speeds have decreased for the AM peak period and remained unchanged for the PM peak period.

For the AM peak there was a decrease in the overall average speed from 31 to 29km/h from 2009–10 to 2010–11. Speeds were generally lower across each of the seven routes, with decreases of up to 3km/h. The M4 corridor was down from 28 to 25km/h, which appears to reflect changes in travel patterns following removal of the toll. The M2/Lane Cove Tunnel/Gore Hill Freeway corridor decreased from 39 to 36km/h, which had been expected due to road works and associated reductions in speed limits. The other five corridors all recorded slight decreases of 2km/h or less.

For the PM peak, the overall average speed of 42km/h was unchanged between 2009–10 and 2010–11. The speed on the M4 corridor was up from 35 to 39km/h, a reversal of the reduction in 2009–10 caused by road works to remove the toll plazas. The M2/Lane Cove Tunnel/Gore Hill Freeway corridor decreased from 65 to 60km/h and, as for the AM peak, this was due to road works and speed limit changes. The speed on the Victoria Road corridor decreased from 34 to 31km/h due to road works during the November 2010 survey period, however, speeds had improved by the March 2011 survey following the completion of the Inner West Busway. The changes on the other four corridors were minor.

In September 2011 the RTA published the first Key Roads Performance Report, which reports peak period travel times for over 100 roads in the Sydney, Newcastle, Central Coast and Wollongong regions for a three-month period. Over time, this more extensive reporting will form the basis for annual comparisons of travel speeds in NSW, enabling a broader perspective than the seven routes reported to date.

## Managing major incidents



The Transport Management Centre uses advanced monitoring, communication and traffic flow systems to manage the NSW road network 24 hours a day, seven days a week. It works to make journey times more consistent, respond to and clear traffic incidents as fast as possible, and help road users choose the best routes and modes of travel with quality up-to-date information.

Incident management is controlled using sophisticated traffic management systems and the field response capacity of the Traffic Command Unit (Traffic Commanders) and Traffic Emergency Patrols. In 2010–11 there were over 200,000 calls to the 131 700 Incident Reporting Hotline.

The 39.98 minute average incident clearance time for 98 per cent of unplanned incidents on principal transport routes remained below the target of 40 minutes, even though more routes were included in the target.



## Special event management

The Transport Management Centre has a lead responsibility in the preparation of plans for both major government and international special events, including the City 2 Surf, New Year's Eve celebrations and World International Triathlon Championships. It works closely with Events NSW, the Department of Premier and Cabinet, transport agencies, other government departments and event promoters to manage safe and successful events while minimising impacts on the non-event community. This function includes planning and delivering public transport to and from specified events by negotiating transport levy and service level contracts, together with integrated event transport ticketing.

## Accessing traffic information

### F3 travel time system

In November 2010 a new service was introduced on the F3 Freeway to provide road users with estimated travel times to upcoming exits based on the current traffic flow.

The service displays travel time estimates on variable message signs between Wahroonga and Ourimbah, which are updated every 3 minutes. It uses fixed tag readers to detect vehicles as they travel between various points on the freeway and then calculates the average time to move between these points as the estimated travel time.

The service allows road users to monitor traffic flow during their journey. Increasing travel times may be the first indication to road users of heavier traffic ahead, and give them the option to take an earlier exit and an alternative route to get where they are going. The travel time estimates can also be viewed on the Live Traffic NSW website by road users before they start their journey on the F3.

The service, which is the first of its type in NSW, has received positive feedback overall from regular commuters and other users of the F3 and will be rolled out for the M4 and M7 motorways during 2011–12.



Travel time display on the F3.

### F3 critical alerts message service

In December 2010 the RTA piloted a new service for road users – alerts to their email or mobile phone about significant delays on the F3 Freeway. Road users register for the free service through the RTA or Live Traffic NSW website, and can choose to receive alerts by email, SMS or recorded text-to-voice message. When there is heavy traffic, a crash or other incident on the F3 that causes significant delays to normal travel times, alert messages are sent to advise customers of conditions so they can make alternative travel arrangements. An alert message is also sent to notify customers when the incident has been cleared or traffic has returned to normal.

The F3 was chosen for this pilot because it is one of the busiest roads in NSW, used by more than 78,000 vehicles every day and up to 3,800 vehicles an hour during peak travel times. The F3 is also a unique road in terms of its infrastructure as there are fewer exits than other major roads and motorways in the NSW network, and therefore fewer opportunities for road users to exit the freeway once they are travelling on it.

At 30 June 2011 8,842 customers had registered for the F3 critical alerts service. From the launch of the service in December 2010 and the end of June 2011, alerts were sent for nine incidents.



## Live Traffic NSW

In September 2010 the RTA launched the new Live Traffic NSW website ([www.livetraffic.com](http://www.livetraffic.com)) providing motorists with up-to-the-minute news of incidents and conditions that affect their journeys. The website helps motorists make the best possible travel decisions, thereby contributing to the safe and efficient management of our roads. Features include:

- Latest traffic information including incidents, road works, major events, fires, floods, and alpine conditions.
- Access to 66 live traffic cameras with images updated every 60 seconds.
- Traffic flow information on major NSW State roads that shows if traffic is light, medium or heavy.
- A trip planner allowing users to view journeys on a map and filter information to show current conditions or scheduled road work and events for a specified date.
- Trip planning features such as heavy vehicle checking stations, rest areas, train stations, ferry wharves, and more.
- Travel time information on the F3.

From its launch to 30 June 2011, the website received more than 2.8 million visits.



A screenshot of the new Live Traffic NSW website.

## Pinch point strategy reduces congestion

The network management or 'pinch point' strategy aims at improving traffic flows at key congestion points on 23 of Sydney's major arterial road corridors. Information is on the RTA's Road Projects website ([www.rta.nsw.gov.au/roadprojects](http://www.rta.nsw.gov.au/roadprojects)). It targets peak hour traffic pinch points and develops and implements treatments to maintain travel speeds, provide reliable travel times and improve the information available to Sydney motorists. The allocation for the strategy is \$100 million over the five years from 2007–08 to 2011–12.

To June 2011 a total of \$70.3 million had been spent, including \$27.3 million in 2010–11.

Corridors treated in 2010–11 included the Princes, Cumberland, Pacific and Hume highways and Old Windsor Road. Travel time delays during weekday morning and afternoon peak periods have been reduced where projects have been implemented. Local congestion at other times has also been reduced in some instances.

Although separately funded, improvements on the Spit Road–Military Road corridor are also continuing. Works in 2010–11 totalled \$9 million and included tidal flow at Spit and Ourimbah roads and intersection improvements at Spit and Parriwi roads, Mosman.



Extended right turn bay southbound into Greenwich Road on the Pacific Highway, completed under the 'pinch point' program June 2011.



# Challenges and the way forward

Having the customer at the heart of everything we do in transport infrastructure means:

- Improved planning in collaboration with residents and businesses.
- Close liaison with local communities about construction impacts.
- Ensuring our decisions are evidence-based and transparent.
- Recognising the important role communities play as custodians of their local area.

In the lead up to the NSW Centenary of Anzac Commemoration between 2014 and 2018, the RTA will undertake consultation with a range of stakeholders and provide support to the NSW Government's initiatives to commemorate this important period in history.

## Development

The creation of Transport for NSW and Infrastructure NSW will help strengthen integrated planning and partnerships with other agencies, particularly other NSW transport agencies. The RTA will continue to build closer relationships with organisations such as The Department of Planning and Infrastructure and the Office of Environment and Heritage to help streamline the approval process for high priority infrastructure projects, so that government infrastructure priorities can be achieved.

The focus for the future will be on:

- Community engagement on RTA projects to negotiate local benefits or project improvements.
- Preparation of good business cases for motorway projects to demonstrate community benefits in line with the requirements of the NSW and Australian governments.
- Improvement of procedures for the effective management of development works to place our customer at the heart of what we do.
- Ongoing funding requirement to upgrade security measures for critical infrastructure.
- Work with other states on projects of mutual interest, for example, with VicRoads on community concerns on Murray River bridge projects.

Australian and NSW government priorities will continue to drive the RTA's Road Development Program, specifically the upgrade of the Pacific Highway, construction of bypasses to complete a four-lane divided highway between Sydney and Melbourne and delivery of the NSW Government's \$200 million congestion and safety works package across the State.

Delivering these priority projects on time and budget will be a key challenge for the RTA, as will be managing a vast array of projects in consultation with stakeholders.

## Alternative transport

The RTA will continue to implement the *NSW BikePlan* and develop strategic bus corridors and bus transport hubs. The next corridors to be addressed will be Victoria Road from Parramatta to Gladesville and the northern beaches from Mona Vale to Seaforth.

## Traffic

With the success of the travel time system for the F3, motorists have growing expectations regarding availability of up-to-the-minute information on travel times on key arterial roads, a trend also driven by interstate and international developments. The challenges for the RTA and Traffic Management Centre will be to ensure continual improvement in critical message alerts, the Live Traffic NSW website and motorway travel information to meet best practice and examine how use of emerging technologies can enhance communication with motorists planning trips and on the road.

A key challenge for the future is reform of heavy vehicle charges and funding arrangements. This is contentious, reflecting the potential impacts such reform could have on the heavy vehicle industry, users of road freight services and on the current funding arrangements and investment commitments of Australian, State and local governments. NSW will continue to be actively engaged in the development of and negotiations over the reform agenda to ensure the development of appropriate and balanced reforms that reflect the needs of the NSW freight industry, businesses and communities.



## REVIEW OF OPERATIONS

# Asset

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### Key achievements in 2010–11

Spent \$471.3 million in road pavement maintenance delivering:

- 1.43 million m<sup>2</sup> of asphalt resurfacing (3.2 per cent of the asphalt surfaced network).
- 12.00 million m<sup>2</sup> of sprayed bitumen resurfacing (9.59 per cent of the sealed network).
- 1.88 million m<sup>2</sup> of road pavement rebuilt, including widening (1.01 per cent of the total network).

Spent \$140.4 million on the maintenance of State bridges, including 23 major repairs, the replacement of the Morpeth Bridge approaches and replacement of Adelong Creek Bridge.

Managed \$152.9 million of NSW Government funds to repair damage arising from natural disasters such as from storms and floods.

Spent \$10.9 million upgrading 35 timber bridges under the Timber Bridge Partnership – bringing the total number of bridges completed to 148 with another 24 nearing completion.





# Asset

**RTA result: The condition and value of the road network meets acceptable standards**

## The road asset

The RTA manages 18,028km of State roads, as well as 2,970km of regional and local roads in NSW. The RTA is also responsible for 5,130 bridges and a range of other assets such as traffic signals and tunnels.

The RTA is tasked with maintaining this enormous network to acceptable standards, in the context of an increasing population and increasing number of commuter and freight vehicles using roads. The network is crucial to communities across NSW – in many ways it is the social and economic lifeblood of the State. This chapter details the work the RTA is doing to maintain the system, and shows what performance levels have been reached in the past year.

NSW is also a major gateway to Australia for goods coming in and leaving our shores. For this reason, the road network's role in assisting freight transport is essential. This chapter details how freight access is being managed across the road network in the face of continuing strong growth in the freight task.

This chapter outlines the RTA's management of the road network to ensure its condition and value meet acceptable standards. It is divided into three main sections:

**Access** – sustainable access for freight.

**Maintenance** – management of roads and infrastructure.

**Challenges and the way forward.**

Chapter cover image: Repainting of Tom Ugly's Bridge on the Georges River between Blakehurst and Sylvania. Photo taken by RTA photographer Geoff Ward, June 2011.

## Access

### National heavy vehicle reforms

The RTA Chief Executive is a member of the governance board directing a feasibility study into options for the reform of heavy vehicle charging and funding arrangements. The board reports through the Transport and Infrastructure Senior Officials Committee (TISOC) and Standing Committee on Transport and Infrastructure (SCOTI) on a six-monthly basis ahead of delivery of the final report to the Council of Australian Governments by end 2011. The RTA is actively involved in the national arrangements for the delivery of this work.

The following stages were completed towards the feasibility study in 2010–11:

- The former Australian Transport Council approved the Stage 1 to 3 reports.
- A Preliminary Findings Consultation Paper was issued on 27 June 2011, and an extensive public consultation process started.

Subject to the outcome of the public consultation process and further research and analysis, detailed findings and recommendations will be prepared for inclusion in the final feasibility study report. These will form the basis of advice to the TISOC and SCOTI in late 2011, ahead of SCOTI submitting the final feasibility study to the Council of Australia Governments. Should the council approve the recommendations, further work will be undertaken in 2012 on developing detailed options for the reform of heavy vehicle charging and funding arrangements for implementation by end 2014.

The Department of Transport and the RTA have been actively involved in the development of the research and analysis arising from this reform. National debate is now focusing on the governance and resourcing arrangements that will be required to deliver the later parts of this reform, which includes options that align to NSW expectations.

### 'Last mile' access for heavy vehicles

The Road Freight Advisory Council's Last Mile Sub-committee, established in 2010, supported an 'early gains' package to address road access issues affecting cargo delivery. Tasks completed under the package to 30 June 2011 include:

- Approval of all 108 routes relevant to the top 30 livestock centres for 4.6m high vehicles.
- Approval of an additional 30 Higher Mass Limits (HML) vehicle routes relevant to the top 30 livestock centres.
- The development of new route assessment guidelines for 4.6m high vehicles.
- A study to analyse supply chains in country NSW that rely on rural State roads. The findings are informing HML priorities.



- Level 2 assessments of 5,071 RTA-managed bridges. Of these, 156 are on State roads while 97 are on other roads that are not capable of HML B-Double access. The RTA will explore options for prioritising works to upgrade these bridges or alternate routes.
- Review of HML maps. The updated maps are now publicly available on the RTA website.

## Oversize and overmass heavy vehicle policy changes

Over the years the demand by oversize and overmass vehicles for access to the NSW road network has increased. In 2009–10 the RTA issued 19,838 permits for such vehicles and 22,363 permits in 2010–11. Since 2001 there has been a 60 per cent increase in permit numbers.

In November 2010 the RTA developed a risk management framework to address road safety, traffic management and infrastructure issues associated with oversize and overmass vehicle movement. A draft policy manual was developed to clearly define the steps involved in assessing oversize and overmass permit applications, and the roles and responsibilities of relevant RTA staff. The draft manual will go to industry for feedback in September 2011 and, when finalised, will be published on the RTA website.

### Movements during the December 2010 floods

The 2010–11 Christmas period saw extreme weather conditions, including flooding, which affected the NSW harvest season, especially in the Western Zone. As a result, there were restrictions introduced on wide and heavy vehicle movements that limited wide loads to 3.5m and heavy loads to 77t on and west of the Newell Highway. To accommodate the harvest season, agricultural machinery and trucks transporting oversize harvest machinery out of flood-affected areas in western NSW to the Western Zone east of the Newell Highway were exempt from these travel restrictions.

However, machinery and truck drivers were advised to exercise caution to prevent damage to roads and unnecessary risk to other road users.

### Cotton machinery movements for the harvest season

In May 2011 the RTA approved an exemption to allow Class 1 permits to be issued for overmass cotton picker machines operating during the cotton harvest season. These machines have been designed to improve efficiencies in the cotton industry by decreasing the number of workers and the equipment required to harvest cotton. In the longer term, their use will decrease the amount of cotton harvesting machinery on the roads. Their mass and axle configuration, however, adversely impacts road infrastructure, in particular, bridges.

As the operation of these vehicles was a key part to the 2011 cotton harvest, the RTA issued permits with conditions. The maximum distance for these machines to be 'walked'

was limited to 80km. Those travelling longer distances had to be 'floated' with an additional pilot vehicle at the front of the vehicle.

The RTA also provided an exemption for vehicles transporting oversize cotton harvest machinery to travel on the Newell Highway from sunrise Friday 22 April 2011 until sunset Sunday 24 April 2011 inclusive. Generally oversize vehicles cannot travel during the Easter holiday period. However, due to the lateness of Easter in 2011, the longer than usual Easter holiday period and disruptions to agricultural activity caused by extreme weather conditions, the RTA allowed this exemption so that the cotton harvest could be finished uninterrupted.

### Facilitating the movement of larger and heavier loads

With the opening of new mines in the Hunter Valley there has been a considerable increase in oversize and overmass vehicle movements from Queensland. These have the potential to cause traffic disruption, infrastructure damage and road safety risks.

The RTA therefore worked with relevant stakeholders on a package that addresses potential risks, consulting with the regions in order to better understand specific regional issues. The package provides operators with information on the types of documentation they need to supply in order to apply for a permit to move an oversize overmass load and illustrates the potential risks of such loads to give operators a greater appreciation of the nature of the proposed movement so that they can take mitigating action.

Oversize overmass movements in excess of 7m in width will not be automatically granted a permit. Where operators cannot comply with this requirement, the RTA will work with them on a case-by-case basis to achieve a solution. This process has proved successful and the RTA is proactively working with operators and adopting a more educative approach to the issue.

### Increase in mass limit for complying buses

BusNSW requested an increase in the gross mass limit for complying buses and in February 2011 the Class 3 Complying Bus Mass Limit Exemption Notice 2011 was gazetted. In return for the 0.5t increase in the gross mass limit, additional bus safety features are required, such as anti-lock braking, electronic braking or electronic stability control. These features optimise brake wear, reduce response times and braking distance, protect vehicles from rollover, skidding and under braking and assist driving stability.

### New dimension limits for grain augers

On 1 October 2010 the Class 1 Grain Auger Combination Notice 2010 was gazetted.

Due to the increase in demand for the longer size machines available on the market, a review of the dimension and travel requirements in the Grain Auger Combination Exemption Notice 2007 had been necessary pending its renewal.



Following discussions with the grain auger industry and comparisons of the various makes and sizes of grain augers available, new parameters which balanced the need for grain auger transporters and the safety of other road users were determined. Accordingly, the new allowable dimension limits for the rear overhang and width of the grain auger combinations were increased in the new Notice. The increase is subject to stricter travel requirements, namely the requirement for at least one pilot vehicle.



An oversize overmass vehicle on the road.

## Intelligent Access Program

The Intelligent Access Program (IAP) is a national initiative that allows road agencies to use certified satellite-based tracking technology to remotely check whether heavy vehicles are complying with conditions such as load limits and approved access to the road network. The IAP grew during 2010–11 and, as at 30 June 2011, there were 605 vehicles fully enrolled in the program.

The program was also extended to mobile cranes from 27 June 2011 following work by the RTA and the crane industry.

A three-month transition period is currently in operation to allow sufficient time for NSW crane operators to enrol and have IAP certified equipment installed in their cranes by an IAP service provider. Enrolment will be mandatory for all high risk cranes from 5 October 2011.

## Higher Mass Limits

In a key customer service improvement initiative, the RTA made Higher Mass Limits maps available on the website from 30 June 2011. Transport operators can now determine whether the Intelligent Access Program is suitable for their operations by viewing the maps.

In addition, the RTA expanded road access for Higher Mass Limits vehicles by abolishing exclusion zones. The whole of NSW is now eligible for Higher Mass Limits assessments.

## Performance Based Standards



The nationally agreed Performance Based Standards (PBS) Regulatory Framework for heavy vehicles operating in NSW focuses on how well a heavy vehicle 'performs' on the road, rather than prescriptive dimension and mass limits. The PBS approach enables innovation in the transport industry and achieves community benefits such as improved productivity, safer performance and the least possible impact on road infrastructure.

At 30 June 2011 there were 49 PBS vehicle design combinations with permits to operate in NSW, of which 23 were permits to operate at level 2 access, meaning an assessment must be made regarding the roads they can operate on. The National Transport Commission PBS Review Panel approved 77 vehicle designs under the PBS scheme in 2010–11. The RTA continued to play an active role on the panel, attending all meetings and voting in favour of these combinations.

The NSW road network is continually being assessed for its capability to carry (and therefore be classified for use by) various PBS vehicles. In principle, routes have been identified for the different categories of PBS vehicles throughout NSW. These now appear on the National Transport Commission PBS website.

## Livestock Welfare Mass Management Accreditation Scheme

In December 2010 the NSW Government approved the implementation of the NSW Livestock Welfare Mass Management Accreditation Scheme to improve the safety and productivity of the NSW meat and livestock industry. The scheme was developed by the Ministerial Livestock Loading Working Group which comprises representatives from the RTA and the NSW Livestock and Bulk Carriers Association. In recognition of the challenges inherent in the transportation of live loads, the scheme enables livestock transport operators to access higher productivity masses equivalent to Concessional Mass Limits, which are about 5 per cent above existing general mass load limits, and Higher Mass Limits, which are about 10 per cent above existing general mass load limits.





Livestock loaded in line with the livestock calculator.

## Transport of wool bale concessions

On 30 June 2011 the Minister for Roads and Ports announced a 2.7m width concession for the transport of wool bales in NSW. The concession is for 12 months and a number of conditions apply to ensure road safety issues are adequately addressed.

The impetus for the concession came from the RTA's work with industry to resolve non-compliance with the 2.5m width limit for transport loads. (Wool baling processes and the dimension and structure of wool bale packs mean that, when loaded and restrained tightly on a vehicle, the bales bulge beyond the allowed limit.) Taking a lead role, the RTA established the Wool Bales Transport Working Group, which is made up of representatives from the RTA and from the wool industry, including the NSW Farmers Association and NatRoads.

**The concession is a good result for drivers, farmers, industry members and stakeholders alike.**

It demonstrates how government, the RTA and the wool industry can work together to respond to industry needs while ensuring that the safety of all road users is not compromised.

The RTA plans to investigate the safety risks associated with the overwidth movement of wool bales to ensure that further compliance initiatives are clearly supported with solid evidence and sound, risk-based information.

# Maintenance

## Managing a large asset base

The road system can be divided into four categories:

- 18,028km of RTA-managed State roads including 4,323km of the National Road Network, for which the Australian Government provides a funding contribution, and 147km of privately-funded toll roads.
- 2,970km of RTA-managed Regional and local roads in the unincorporated area of NSW.
- 18,231km of council-managed Regional roads, which receive significant State grant funds administered by the RTA.
- 145,565km of council-managed local access roads, funded by local ratepayers and Australian Government programs such as the Financial Assistance Grants and the Roads to Recovery Program.

The RTA is also responsible for maintaining and operating:

- 1,423 school zone flashing light signs.
- 3,867 traffic signal sites.
- 9,800 street lights.
- 5,130 bridges and major culverts and 23 tunnels.
- 5 automated tidal flow systems.
- 56,000km of longitudinal linemarkings and other pavement markings.
- 2 million reflective raised pavement markers.
- 71,698 guide signs for major structures and 84,192 parking, 66,018 regulatory and 39,181 warning signs.
- 9 vehicular ferries.
- Intelligent traffic systems including 251 variable message signs, 135 variable speed signs and 824 CCTV cameras.

The RTA faces considerable challenges in maintaining and renewing the NSW road and bridge infrastructure to ensure it is safe and reliable, both now and into the future. Strong risk management, practical planning and robust assessment of the likely future usage and performance of the road network are essential. Currently over 41 per cent of road pavements are more than 30 years old (Figure 6). Seventy-eight bridges are over 100 years old and a further 991 are over 50 years old. (Figure 7).

## Road management

The extended wet weather this year impacted the RTA's capacity to complete the planned resurfacing, rebuilding and upgrading works, and saw RTA and council personnel working for extended periods under trying conditions to achieve:

- 1.43 million m<sup>2</sup> of asphalt resurfacing.
- 12.00 million m<sup>2</sup> of sprayed bitumen resurfacing.
- 207km of rebuilding and upgrading.

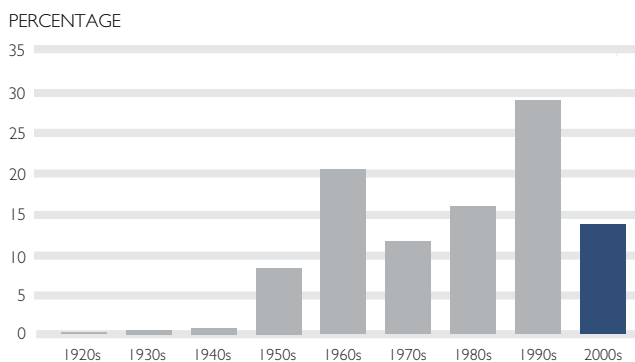




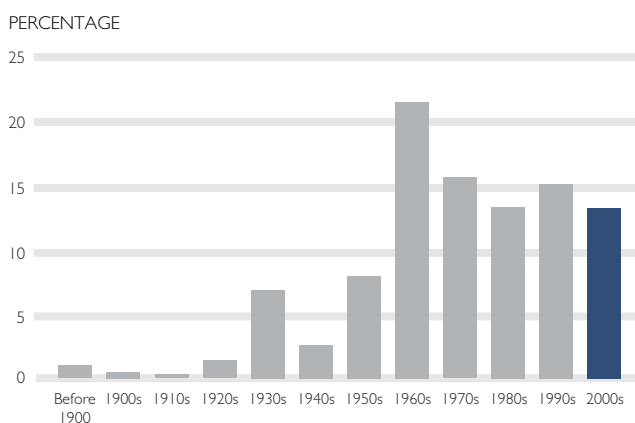
Other achievements in road asset management in 2010–11 included:

- Implementation of the culvert risk assessment process and software.
- Achievement of a \$8.38 million efficiency saving by improving work practices.
- Completion of the five-year Timber Bridge Partnership program, with a total of 172 bridges replaced on regional roads.
- Introduction of a world's best practice pavement management system to optimise expenditure on pavement works.
- Development of the Timber Truss Bridge Strategy to balance network freight operations needs and heritage preservation.
- Completion of the marginal cost analysis of freight impacts on road pavements.
- Review of long-term maintenance need as part of Treasury's Expenditure Review Committee process for 2011–12.

**FIGURE 6. DISTRIBUTION OF CONSTRUCTION PERIOD FOR ALL STATE ROADS (INCLUDING NATIONAL NETWORK) AS AT 30 JUNE 2011**



**FIGURE 7. DISTRIBUTION OF CONSTRUCTION PERIOD FOR ALL BRIDGE SIZE STRUCTURES**

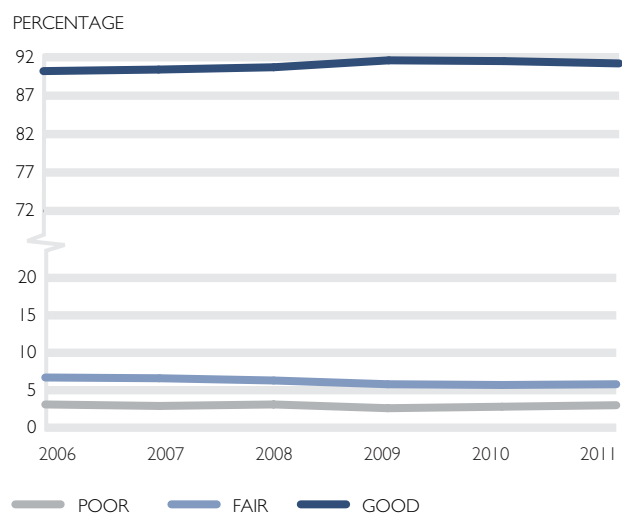


## Infrastructure condition performance

The RTA has historically used the following performance indicators to demonstrate the condition of the infrastructure it manages:

- **Ride quality:** This is a measure of the longitudinal profile and undulations of the road surface and is measured using vehicle-mounted laser technology. Smoother roads are more comfortable to drive and ride on and reduce the heavy vehicle dynamic loads that result in increased road damage. Smoother roads also cause less damage to vehicles and save fuel. The indicator is reported in terms of the percentage of travel on roads with 'good', 'fair' or 'poor' smoothness. The percentage of travel on roads with 'good' smoothness is a *NSW State Plan* indicator with a target of 93 per cent smooth travel by 2016.
- **Pavement durability:** This is a measure of the amount of surface cracking on the road. Cracks let water in, which can soften the underlying road pavement and lead to premature deterioration. The road surface plays an important role in providing both a safe running surface for traffic and a waterproofing layer to protect the underlying pavement from moisture. Cracking is measured at highway speed by automated technology using the RTA's road-crack vehicle.

**FIGURE 8. RIDE QUALITY ON STATE ROADS**



The overall ride quality on State roads has remained effectively stable over the past two years with a decrease in 2010–11 of 0.3 per cent to 91.2 per cent compared with 2009–10. (Figure 8).

During 2010–11 the extensive wet weather impacted the ride quality of the State roads in two ways. Water flooding or soaking into the pavements caused the pavement structure and its surface to weaken, which accelerated destabilisation by heavy vehicles. The weather also delayed significant amounts of pavement rebuilding and resurfacing, which improve ride quality if undertaken. The balance between wet weather and works undertaken has generally resulted in minimal change to ride quality across the State.

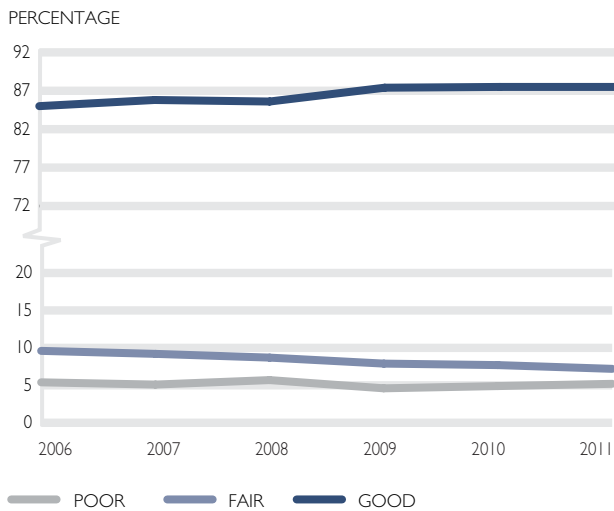


Despite the adverse weather conditions, the RTA carried out significant works on the State road network that contributed to the smoothness of roads. This included:

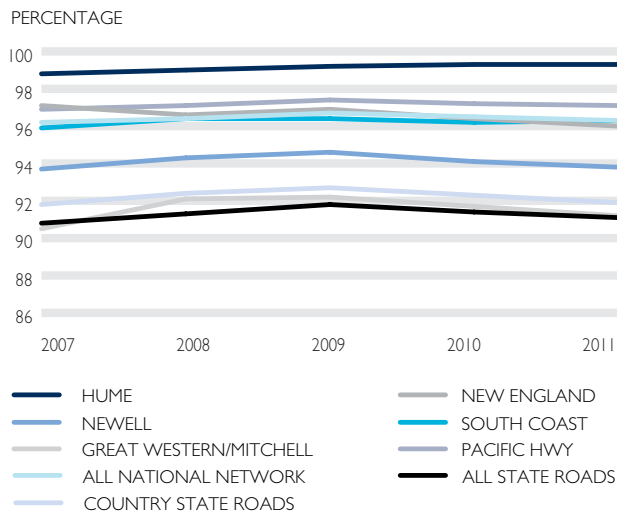
- Delivery of 55km of new carriageway.
- Rebuilding or upgrading of 207km of carriageway.
- 135km of asphalt resurfacing.

Figures 9 to 13 show ride quality and pavement durability performance for different types of roads.

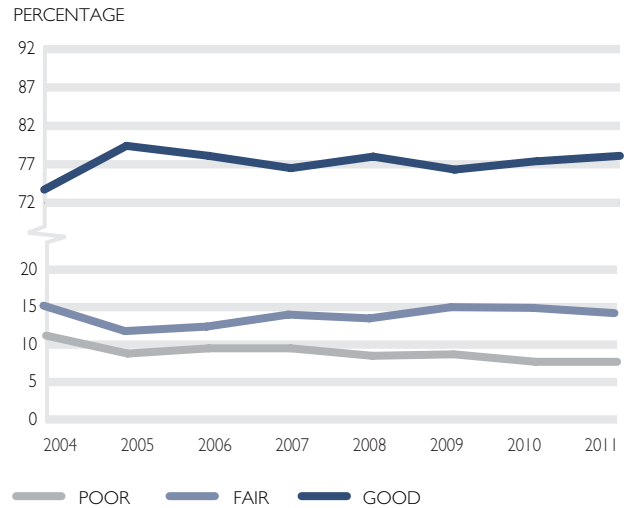
**FIGURE 9. RIDE QUALITY ON SYDNEY STATE ROADS**



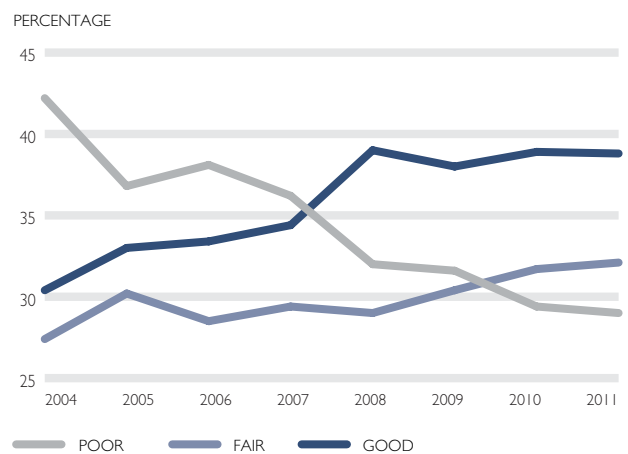
**FIGURE 10. ROAD SURFACE ROUGHNESS PER CENT 'GOOD' ON SELECTED STATE ROADS**



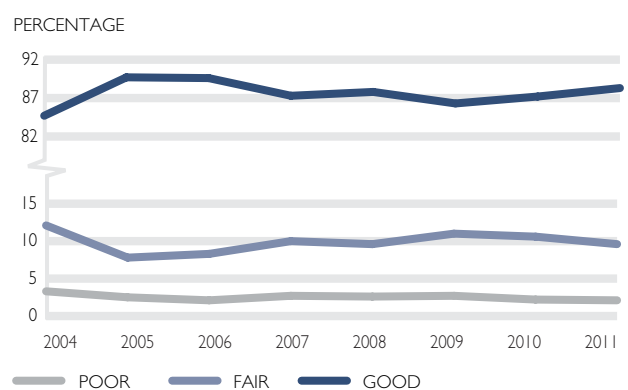
**FIGURE 11. PAVEMENT DURABILITY – ALL STATE ROADS**



**FIGURE 12. PAVEMENT DURABILITY – URBAN STATE ROADS**



**FIGURE 13. PAVEMENT DURABILITY – RURAL STATE ROADS**



Pavement durability on the rural network has been relatively stable over the last seven years with the extent of road cracking remaining at very low levels. Greater attention is required to minimise cracking on rural roads, which are more susceptible to variations in moisture. This year there was a \$30 million increase in the reactive maintenance required on rural State roads due to prolonged wet weather compared to the previous year which had been drier.



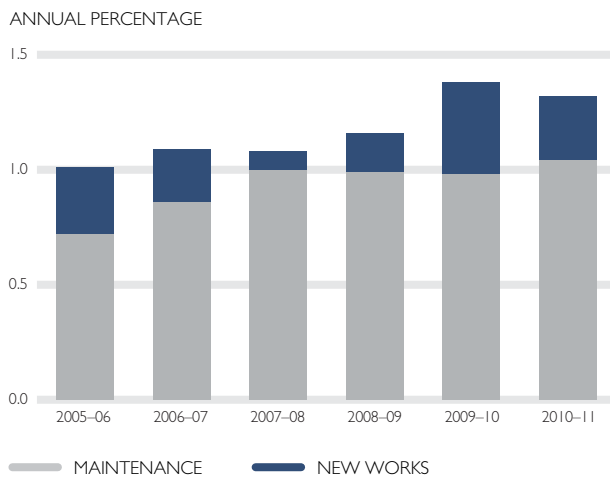


The RTA will continue to place high priority on minimising the potential adverse affects of increased rainfall by implementing a road pavement preservation strategy that focuses on:

- Rehabilitating roadside drainage.
- Maintaining the waterproof protective seal.
- Widening roads so that water runs further away from the road, thereby reducing soakage.
- Improving the surface of the road so water sheds off it.

Urban roads in general display a higher level of cracking than rural roads but tend to be more resilient as they are made of manufactured materials like asphalt. The RTA has recently increased its funding and focus on urban roads and has achieved a significant improvement in road condition, with the level of poor cracking dropping from a high of 42.2 per cent in 2004 to a low of 29.0 per cent in the current year.

**FIGURE 14. REBUILDING OF ROAD PAVEMENTS**



The contribution of rebuilding activity from new works is dependent on the nature of projects undertaken in any year, and whether they involve rebuilding existing pavement, or provision of new infrastructure. The contribution from new works tends to fluctuate from year to year. In 2010–11 the contribution to rebuilding from new infrastructure works was 55km, that is, an additional 0.2 per cent of the State road network. As this new work is delivered to a high standard, it will require minimal maintenance for many years. Demand for maintenance funding will continue to rise due to an ageing network, of which 41 per cent is older than 30 years, and an increasing freight loading, which reflects regional economic growth.

## Maintenance programs

The RTA spent more in 2010–11 on State road maintenance than in any previous year, excluding the \$196 million spent on restoration of natural disaster damage on State, local and Crown roads. The high level of spending indicates continued commitment to providing safe travel and managing the asset.

## Road pavement maintenance

During the year \$471.3 million was spent on road pavement maintenance delivering:

- 1.43 million m<sup>2</sup> of asphalt resurfacing (3.2 per cent of the asphalt surfaced network).
- 12.00 million m<sup>2</sup> of sprayed bitumen resurfacing (9.59 per cent of the sealed network).
- 1.88 million m<sup>2</sup> of road pavement rebuilt, including widening (1.01 per cent of the total network).

## Road corridor maintenance

The RTA spent \$107 million on the routine maintenance of roadside assets, which includes vegetation, drainage, slopes, rest areas, noise walls, safety barriers and fencing. Heavy rainfall throughout the year led to the prolific growth of roadside vegetation, highlighted blocked culverts, contributed to slope failures, and led to an increased number of road incidents requiring an emergency response.

Graffiti vandalism remains a significant community problem and a recurrent impost on financial resources. The RTA is actively working with the Department of Attorney General and Justice and other stakeholders to address the issue.

## Bridge maintenance

Bridge maintenance is dominated by heritage bridges. Excluding the Sydney Harbour Bridge, at least 42 per cent of bridge expenditure is on heritage bridges, which represent only 5 per cent of bridge stock.

During the year \$140.4 million was spent on the maintenance of State bridges. Program delivery included:

- Completion of 23 major bridge repairs.
- Replacement of Adelong Creek Bridge.
- Replacement of Morpeth Bridge approaches.
- Repair of 10 other bridges.



Maintenance work on Hampden Bridge, Kangaroo Valley, June 2011.



## Sydney Harbour Bridge

In 2010–11 the RTA repainted around 15,000m<sup>2</sup> of the Sydney Harbour Bridge. Work carried out included the complete removal and repainting of 10,000 m<sup>2</sup> of southern approach spans and maintenance painting of 5,000m<sup>2</sup> of the main arch.

In view of the significance of the structure, the RTA is preparing a long-term maintenance strategy which describes the most appropriate investment regime for maintaining the bridge in a condition that will:

- Allow reliable delivery of the services required.
- Protect its original structure from deterioration for an indefinite period.
- Do both cost effectively.

The experience gained on the Canal Road, St Peters upgrade is being utilised to upgrade the Electronic Lane Control System of the Sydney Harbour Bridge. The old system is proprietary and outdated, with high maintenance costs. The work on the upgrade has already been started, with new software currently being developed.

## Anzac Bridge

The RTA continues to work with industry and local land and water users to improve management of critical infrastructure. In 2010–11 an alliance was formed to undertake key maintenance upgrades on the Anzac Bridge. The alliance has allowed the RTA to bring together the strengths of our own organisation, Australian contractors and world best practice to undertake maintenance works that will preserve the bridge while minimising impact on road and water users. The announcement of the preferred scope of maintenance work was accompanied by an animation of the robot technology to be used on the cables.

## Higher Mass Limits Bridge assessments

To support NSW Government and industry initiatives, the RTA has been identifying roads and bridges unable to carry the higher productivity vehicles which will reduce operating costs when introduced to the road network. A particular concern has been the capacity of bridges, many of which are over 100 years old and built for much lower vehicle loads.

By the end of 2010–11 RTA had completed assessment of its bridges for the increased weight from Higher Mass Limits (HML) B-Double type vehicles, identifying 152 bridges on State roads as not suitable for HML loading. A more comprehensive assessment is being undertaken of these bridges to determine how to make the necessary improvements to the most critical structures.

## Morpeth Bridge

Morpeth Bridge spans the Hunter River at Morpeth near Maitland. It is a timber truss bridge constructed in 1898 and has an overall length of 281m. Morpeth Bridge is maintained by the RTA and is of significant heritage importance. After a full refurbishment of this historic bridge in previous years, the approach spans were replaced in 2010–11 with more durable materials to reduce future maintenance and minimise user

## Traffic facilities

The RTA conducted a commercial field trial of an innovative application method of waterborne road marking paint that produces markings of much higher visibility. The trial demonstrated the value of the application method, implementation of which is being progressed. This will lead to better road safety outcomes and a potential reduction in maintenance frequency.

The upgrade of the Canal Road, St Peters tidal flow system was completed, replacing an outdated system that was costly to maintain. The current control technologies now in place will reduce maintenance costs and increase the life of the asset. The project was completed at a cost of \$2 million at the end of 2010.

## Slope stability

Around 59 slopes were remediated at a cost of \$15.3 million with projects selected using a risk management process.

Heavy rainfall across NSW throughout the year led to additional slope stability problems. At the end of June 2011 slope failures accounted for at least 10 road restrictions. There were restrictions on roads throughout the State, including on the Bells Line of Road, Oxley Highway, Waterfall Way, Summerland Way and the Kings Highway. Planning and design for the remediation of these slopes is progressing. This work often requires temporary lane or road closures and the RTA is grateful to motorists for their patience.

## Culverts

By 30 June 2011 all culverts on the State road network had been inspected by accredited inspectors. Information on the location, size and condition of more than 70,000 culverts was collated and is being used to assess risks and prioritise high risk locations for inclusion in the drainage repair program.

Training in the assessment of culvert risk was delivered to around 90 staff and consultants. This has facilitated a more systematic approach to the risk assessment and prioritisation of culvert remediation works.

A total of \$12.8 million was spent on the rehabilitation of culverts and drains to ensure their functionality and durability.

## Pavement management system

The RTA began development of a new pavement management system in late 2009 to support improved decision-making. The system involves creating models of pavement deterioration for each type of pavement across State roads for integration in a software package. When operational, it will enable the RTA to determine the best funding and works regime for road pavements across the State network.





The project progressed well in 2010–11 with the completion of a working system suitable for corporate applications. As accurate data about the asset inventory, condition and usage are essential to successful system implementation, a significant exercise was undertaken to identify data gaps, quality issues and data improvement tasks.

The RTA pavement management system is being developed using a phased approach with a view to starting simply and adding functions over time. The phased approach allows the RTA to quickly adopt many of the system benefits while facilitating continuous learning and improvement.

The next development phase will focus on:

- Providing web-based access to the system across the organisation.
- Refining and validating system outputs.
- Training staff.

## Remaining pavement life

The structural capacity of pavements is critical to both their current condition and future performance. Although pavements are designed and built in accordance with structural principles, the in-service measurement of pavement strength has been difficult. Road agencies have had to rely on surface condition as the key indicator.

Australian road agencies generally do not have a sufficiently robust capability to forecast the long-term structural condition of in-service road pavements.

The RTA has therefore developed a sophisticated model to gain greater insights into the structural adequacy of the road network based on extensive laboratory and field testing.

The methodology for this model requires the following inputs:

- Pavement condition and inventory data.
- Pavement deflection data.
- Traffic data.
- Detailed climatic data on rainfall and temperature.

In 2010–11 RTA began to implement this methodology. Most of the data inputs required are readily available in the RTA's corporate system except some inventory and climatic data. Working with NSW Office of Environment and Heritage, RTA has derived a sub-grade soil map for the State to provide the required inventory data. Detailed data on rainfall and temperature has also been sourced through the Bureau of Meteorology. The RTA is currently processing all data into the format required for application of the methodology.

## Marginal cost of road wear analysis

As part of the development of the Council of Australian Governments (COAG) Road Reform Plan (CRRP), the (former) Australian Transport Council and COAG have agreed that heavy vehicle prices should be set with reference to, amongst other things, the marginal costs of road wear associated with heavy vehicle activity.

It is important that the marginal cost of road wear associated with heavy vehicles is estimated as accurately as possible so that the impact of heavy vehicles on roads is neither over nor undervalued. The National Transport Commission/Australian Road Research Board have developed complex models to provide insight into this issue.

Their work is to form the basis of CRRP advice to the newly established Standing Committee on Transport and Infrastructure and COAG on a number of pricing issues, including the relative differences between the likely prices for different road types and the potential benefits from different pricing options. This analysis is expected to play a large role in guiding the assessment of pricing reform options within the CRRP.

To enhance its understanding of the issue and encourage debate, the RTA completed its own research on the marginal cost of road wear through a pavement life cycle costing analysis. The RTA also continues to encourage debate with the other parties on methodological differences to ensure the best possible estimate of the marginal cost of road wear.

## Benchmarking road maintenance delivery



The RTA has an ongoing focus on improving the efficiency of road maintenance delivery. Benchmarking provides the opportunity to compare the cost of delivery of different providers and different delivery models delivering the same services under comparable conditions. During the last financial year, the original benchmarking framework has been substantially revised with the primary aim of providing more timely and accurate performance data to a range of stakeholders involved in the delivery of maintenance activities.

Current delivery is via a mix of models:

- A performance specified 10-year maintenance contract in North East Sydney (450km).
- Road maintenance council contracts with 78 councils in rural areas (8,430km).
- Internal maintenance alliances with the RTA Road and Fleet Services (9,004km).
- Other maintenance contracts.

Benchmarking data is indicating that road maintenance activities in NSW are very competitive when compared to the other states and that maintenance delivered under council contracts and internal alliances is competitive with that delivered by private contractors. Specifically:

- Traffic and freight demand is the main driver of maintenance activity and cost. When compared to other states on a \$/tonne kilometre basis, NSW maintenance expenditure rates are below the Australia-wide average.



- Benchmarking data between the RTA's Road and Fleet Services and councils demonstrate comparable unit rates for similar activities under similar conditions.
- Benchmarking between internal and contractor delivery in Sydney is demonstrating comparable costs.

Benchmarking data inform mechanisms established to continually review performance and gain improvements in both process and pricing. Peer review groups of council representatives meet regularly to review benchmarking information to drive performance improvements. Similarly Roads and Fleet Services is continually reviewing unit rates and identifying efficiency opportunities.

## Funding assistance to local councils

The RTA offers full or partial funding to councils under a range of programs. Some of these specific programs are detailed below.

### Timber Bridge Partnership progress

The \$60 million Timber Bridge Partnership to assist councils to upgrade timber bridges on regional roads started on 28 October 2006. Funding is on a 50:50 matching basis. Under the program 172 of the then 285 timber bridges were approved for funding. The program was completed in June 2011.



Expenditure by the RTA during 2010–11 was \$10.9 million and 35 bridges were completed and opened to traffic. As at 30 June 2011, 148 bridges had been upgraded, with work half funded by an RTA contribution of \$59.9 million. At the same date a further 24 bridges were under construction and due for completion in early 2011–12. All RTA funding was expended at 30 June 2011 and any residual works will be completed using council funds.



New Leslie Bridge, Manning River, completed under the Timber Bridge Partnership, December 2010.

### Regional Road Block Grant and REPAIR programs

The RTA provides ongoing funding to councils for roads classified as Regional Roads in their area. Funding is by way of the Regional Roads Block Grant and the Repair and Improvement of Roads (REPAIR) programs. The former provides every council with an entitlement grant for use according to their priorities. The works undertaken are usually associated with maintenance of pavements, bridges and roadside.

Under the REPAIR Program, councils may also apply for additional assistance on a 50:50 funding basis for major rehabilitation and development works on Regional Roads.

In 2010–11 the RTA provided Block Grants of \$132.9 million and REPAIR Program allocations of \$27.1 million. While councils deliver essential improvements to their networks using these funds, funding demand continues to increase in many areas due to the impact of freight and an ageing pavement and bridge infrastructure.

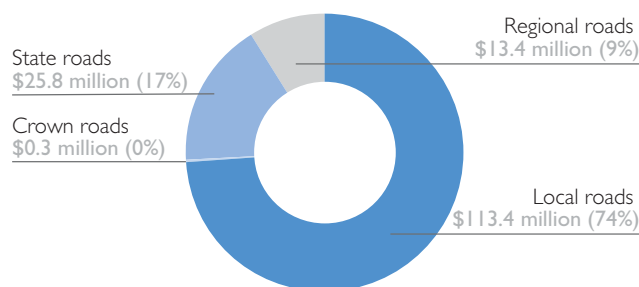
### Natural disaster repairs

Disasters cause severe and widespread hardship. The NSW Government funds repairs to RTA-managed State Roads damaged by declared natural disasters and provides significant financial assistance to local councils to bring their roads and bridges back to their pre-disaster condition.

There were an unprecedented number of natural disasters throughout almost the whole of NSW during 2009–10 and 2010–11, with some communities impacted on a number of occasions by separate disasters. In 2010–11 95 local government areas were declared natural disasters.

During the year the RTA allocated \$152.9 million of NSW Government funds to repair damage arising from declared storms and floods. Each claim required careful assessment to ensure compliance with the RTA's Natural Disaster Guidelines established with local government, as well as with the Australian Government's Natural Disaster Relief and Recovery Arrangements.

**FIGURE 15. NATURAL DISASTER EXPENDITURE 2010–11**



Major expenditure was on works to rectify damage caused by:

- Five separate North Coast floods between February and October 2009 – \$22.6 million.
- North west NSW flooding in December 2009 – \$16.7 million.
- Mid western NSW flooding in December 2010 – \$43.2 million.
- Western NSW flooding in February 2010 – \$9.6 million.
- Riverina flooding in March and October 2010 – \$25.4 million.

The extensive nature of many of these events means that restoration works will continue into 2011–12 and, in some cases, later years, with over \$200 million in outstanding damage remaining to be restored as at 30 June 2011.



# Challenges and the way forward

## Access

There are a number of challenges facing NSW in providing road access to more efficient freight vehicles while continuing to improve road safety and protect infrastructure. The RTA will meet these challenges by:

- Addressing increasing freight use of NSW roads.
- Managing the diverse and multiple transport needs of different community groups utilising different vehicle combinations.
- Working with local government to ensure end-to-end access for transport routes.
- Increasing on-road safety for heavy vehicle drivers and all other road users by targeting through education and compliance heavy vehicle speeding and driver fatigue.
- Developing policy, strategic and operational responses to the National Heavy Vehicle Regulator framework.

## Maintenance

Flooding across broad areas of the road network and consequent soaking of many road pavements showed that, while current maintenance practices have minimised the impacts, access on major routes is at risk without an increase in pavement reconstruction and strengthening. Prolonged wetting of under-strength pavements makes them very vulnerable under heavy freight vehicles. Loss of freight access has severe impacts to all parts of the freight chain from the producer; to the hauler and product receiver.

The increasing severity of flooding could also endanger a number of older bridges, the loss of which would cut highway access for a significant period, forcing extensive detours. The RTA must identify a program of capital renewal to mitigate this risk.

Key areas of focus include:

- Identifying assets that are at the highest risk.
- Improving understanding of how road assets are performing.
- Improving the efficiency of maintenance delivery.

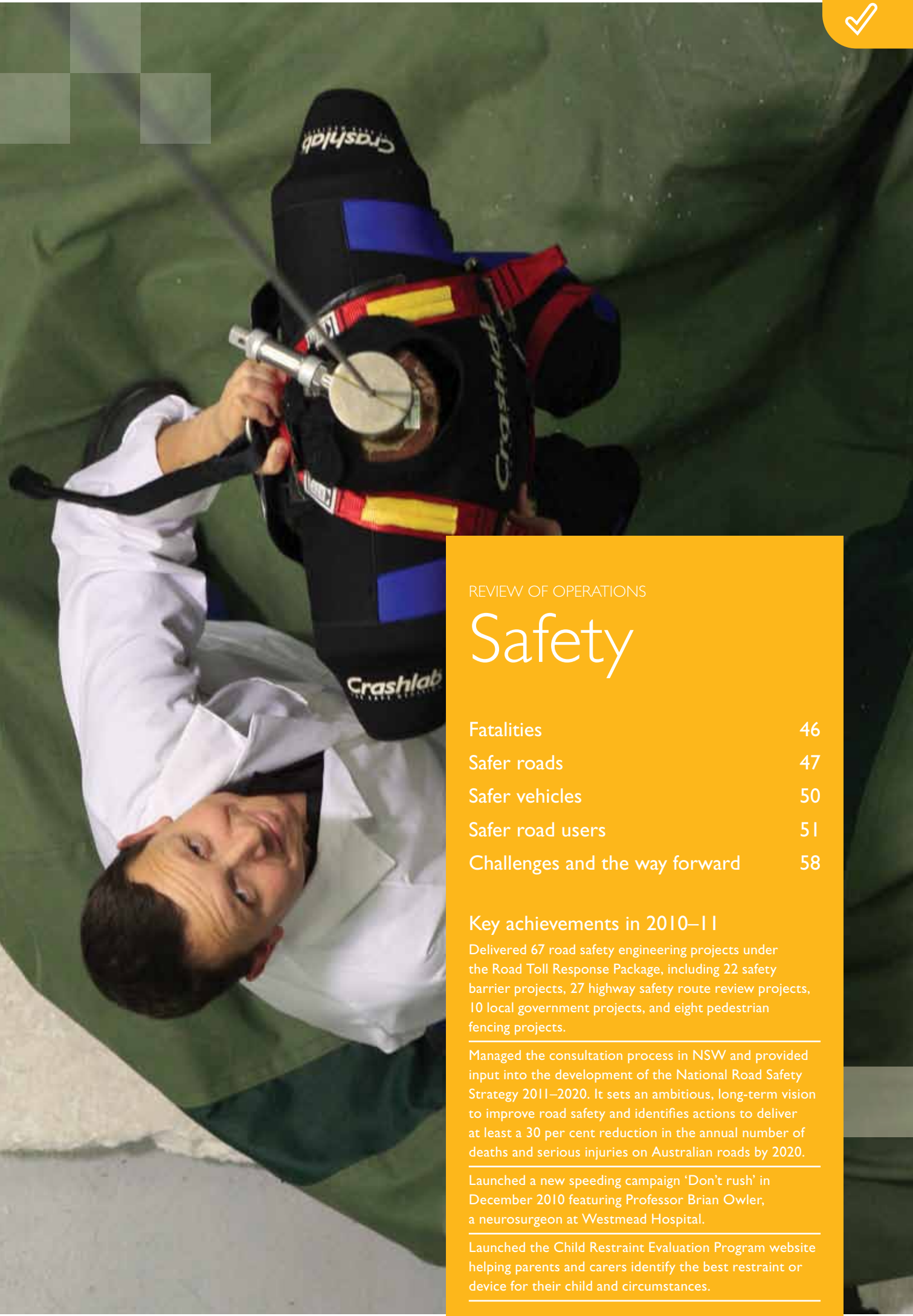
Strategies will include:

- Examining options to increase the contestability in road maintenance delivery.
- Enhance delivery of maintenance and minor work through the alliance model with internal and external providers including road maintenance contracts with local councils.
- Continuous enhancement of maintenance processes to achieve improvements in unit rates for key maintenance activities such as resurfacing and heavy patching.
- Assessment, funding and delivery of repairs to damage caused during natural disaster events.
- A coordinated approach to management of overmass and overdimension vehicles to address road safety and asset related risks.
- Management of the risks associated with ageing operating systems on major bridge and tunnel infrastructure and the sourcing of technical skills to address these risks.
- Management of drainage structures and their deficiencies.

The future challenges facing the RTA in managing the NSW road network need to be considered within the context of urban and freight growth, economic prosperity and environmental sustainability. The priorities of the *NSW State Plan* are significant influences on RTA performance in this area. Integration of the RTA within the Department of Transport will provide significant opportunities to share management expertise and synergies with other asset management agencies.

In addressing damage caused by extreme weather and other maintenance challenges, the RTA will review its 10 year Strategic Asset Maintenance Plan to align it with emerging needs. It will also:

- Continue to assess the maintenance and operational risks to critical road infrastructure and road systems.
- Work with local government to remove the backlog in repair works arising from natural disasters during 2010–11.
- Continue to seek improvements in technology supporting road maintenance assessment and maintenance treatments.
- Continue to improve the asset management capacity of the RTA so that the organisation has the systems, information, skills and structures to support the asset management task into the future.
- Apply leading research and the latest technology to improve the RTA's capability to more accurately forecast the structural condition of road pavements and to get the longest life out of maintenance treatments. Further details are in Appendix 19.



## REVIEW OF OPERATIONS

# Safety

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Safer road users	51
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### Key achievements in 2010–11

Delivered 67 road safety engineering projects under the Road Toll Response Package, including 22 safety barrier projects, 27 highway safety route review projects, 10 local government projects, and eight pedestrian fencing projects.

Managed the consultation process in NSW and provided input into the development of the National Road Safety Strategy 2011–2020. It sets an ambitious, long-term vision to improve road safety and identifies actions to deliver at least a 30 per cent reduction in the annual number of deaths and serious injuries on Australian roads by 2020.

Launched a new speeding campaign 'Don't rush' in December 2010 featuring Professor Brian Owler, a neurosurgeon at Westmead Hospital.

Launched the Child Restraint Evaluation Program website helping parents and carers identify the best restraint or device for their child and circumstances.





# Safety

**RTA result: The safety of the road environment, vehicles and road user behaviour is maximised**

## The RTA and road safety

With 421 recorded fatalities in the 2010 calendar year (provisional figure as at 1 January 2011), NSW achieved the second lowest annual figure since 1945 (with 411 fatalities) – the lowest annual figure since 1945 occurred in 2008 (with 374 fatalities).

Furthermore, the decreased road toll continued into the first half of 2011. During the 12 months ending June 2011, provisional data indicated that there were 367 fatalities on NSW roads, the lowest financial year outcome since 1933–34 (with 319 fatalities).

These outstanding results can be attributed to the implementation of the 'Safe Systems Approach' to road safety and in particular to the delivery of the Road Toll Response Package announced in March 2010.

The 'Safe Systems Approach' recognises that human error is inevitable and requires vehicles, roads and roadside environments that are forgiving of road user error.

The Road Toll Response Package was developed in response to the 2009 road toll increase and in consultation with NSW road safety stakeholders and community groups. With funding of \$170 million over five years, the Road Toll Response Package includes a number of initiatives to improve safety on NSW roads.

This chapter outlines the RTA's management of safety issues in the road transport system over the past year. It is divided into five main sections:

**Fatalities** – data, trends and key factors.

**Safer roads** – better safety of roads.

**Safer vehicles** – better safety features in vehicles.

**Safer road users** – better safety for road users.

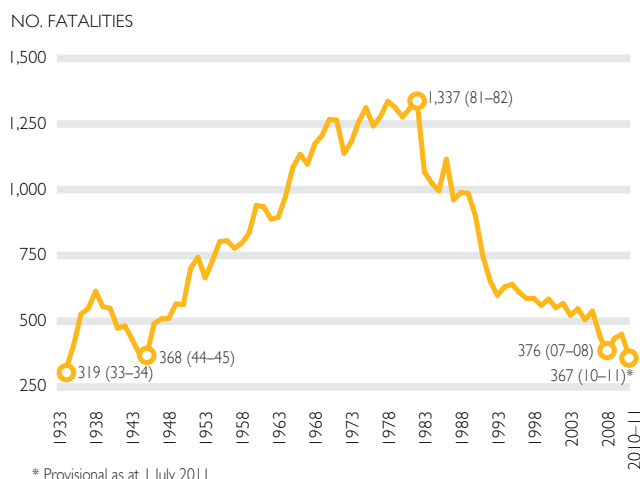
**Challenges and the way forward.**

Chapter cover image: RTA staff member Darren Small testing the fall protection standard of safety harnesses – one of the many tests carried out at Crashlab. Photo taken by RTA photographer Geoff Ward.

## Fatalities

Provisional data for 2010–11 indicates that there were 367 fatalities, 18 per cent fewer than in 2009–10 and the lowest number for a financial year since 1933–34.

**FIGURE 16. FATALITIES, NSW, 12 MONTHS ENDING JUNE, 1933–34 TO 2010–11**



\* Provisional as at 1 July 2011

Analysis of the provisional fatal crash data for the financial year ending 30 June 2011 revealed that:

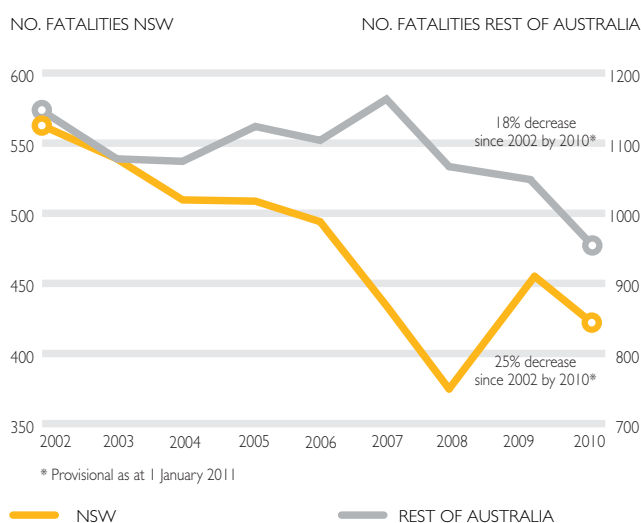
- Speeding was a factor in around 43 per cent of fatalities.
- At least 17 per cent of fatalities were the result of a crash involving a driver or rider with a blood alcohol level above the legal limit.
- At least 18 per cent of people killed in motor vehicles were not wearing available restraints.
- Driver fatigue contributed to about 15 per cent of fatalities.
- At least 7 per cent of motorcyclists killed were not wearing helmets. Motorcyclists accounted for 15 per cent of fatalities.

**NSW continues to outperform the rest of Australia in terms of fatality reductions.**

Since 2002 fatalities have decreased in NSW by 25 per cent while fatalities for the rest of Australia have decreased by 18 per cent. Compared to the road toll improvements for the rest of Australia, it is estimated that NSW has saved an extra 442 lives since 2002.



**FIGURE 17. TRENDS IN ROAD FATALITIES**  
NSW VS REST OF AUSTRALIA 2002–10



The NSW fatality rate per 100,000 population in 2010 was 5.8 (provisional figure), down from 6.4 in 2009, the second lowest figure since records began in 1908. This figure compares favourably with the rate for the whole of Australia, which was 6.1 fatalities per 100,000 population in 2010. International comparisons show NSW ahead of other Organisation for Economic Cooperation and Development countries such as France (6.8 fatalities per 100,000 population), Italy (7.1), New Zealand (8.9) and the United States (11.1), but still behind the United Kingdom (3.8), the Netherlands (3.9) and Sweden (3.9).

The *NSW State Plan* states as its primary road safety target: “We will reduce road fatalities to 4.9 per 100,000 population by 2016.” The 2010 result confirms that NSW is on track to achieve the target. The original 2016 road safety target of fewer than 0.7 fatalities per 100 million vehicle kilometres has been achieved each year since 2008, with provisional figures indicating that there were 0.61 fatalities per 100 million vehicle kilometres in 2010.

## National Road Safety Strategy

The *National Road Safety Strategy 2011–2020* was developed throughout the year, with workshops across the states and significant input from the NSW Centre for Road Safety, including public consultation.

The final strategy was released following the Australian Transport Council meeting on 20 May 2011. It sets an ambitious long-term vision to improve road safety and identifies a series of actions to deliver at least a 30 per cent reduction in the annual number of deaths and serious injuries on Australian roads by 2020.

The draft strategy was released for stakeholder and community consultation in NSW in December 2010 and around 700 submissions were received. The Centre managed the NSW consultation process and assessed a number of the submissions received by the Australian Government.

The Centre has begun implementation of the strategy actions and is initiating the development of a NSW road safety strategy outlining the key road safety strategies and actions to be implemented over the next decade to reduce road trauma.

## Road Toll Response Package

The NSW Road Toll Response Package was developed in March 2010 to address a rise in the 2009 road toll. In 2010–11 a total of 67 road safety engineering projects were delivered under the package, including 22 safety barrier projects, 27 highway safety route review projects, 10 local government projects, and eight pedestrian fencing projects. Other activities included:

- Development of the Motorcycle Safety Strategy (including stakeholder consultation workshops and identification of early initiatives).
- A review of literature on user-friendly intelligent crossing technology to improve pedestrian safety.
- Road safety communication campaigns.
- Investigation of a five star safety rating system for heavy vehicle operations.
- Development of a pilot of electronic work diaries for heavy vehicle drivers.

## United Nations Decade of Action for Road Safety 2011–2020

The NSW Government, in partnership with the NSW Chapter of the Australasian College of Road Safety, held a media launch and seminar at Parliament House on 11 May 2011 to support the global launch of the Decade of Action for Road Safety 2011–2020. This initiative from the World Health Organisation aims to raise awareness of road safety issues and halve global road deaths and injuries over the decade. Australia is a signatory to this action, which the NSW Government supports.

## Safer roads

### Speed zone mapping

The aim of the RTA's statewide mapping project is to collect spatially referenced speed zone data derived from speed sign GPS locations.

The mapping creates a data platform to facilitate integration with other spatial systems, and supports the development of SpeedLink, the interactive RTA speed zone management system for the NSW road network.





Mapping achievements over the year included:

- Uploading of over 216,000km of spatially referenced speed zone data to SpeedLink.
- Creation of a spatial dataset of over 10,000 speed zones and validation for compatibility with corporate geographic information systems.
- Spatial identification and mapping of all school zones and 40km/h high pedestrian areas into SpeedLink and completion of a system technology upgrade.

## High pedestrian activity areas

The NSW Centre for Road Safety developed schemes for the installation of 40km/h high pedestrian activity areas in partnership with councils with the aim of creating low speed travelling environments in busy areas. There are more than 80 high pedestrian activity areas across NSW, with an additional five new/expanded areas installed during 2010–11.



## Highway safety reviews

The NSW Centre for Road Safety conducts route reviews to examine crash risk locations and gather community input on crash and road safety issues. In the reporting period the Centre reviewed routes on the CENWEST Route, which incorporates the Great Western, Mitchell and Mid Western highways, and on the New England Highway from Maitland to the Queensland border. The review teams consisted of representatives from the RTA, NRMA, NSW Police Force and local communities. As part of the process there were a number of workshops to engage with the community on local issues. Works programs and behavioural strategies to improve safety on highways are being developed based on the review findings.



Highway safety review on the New England Highway, December 2010.

## Safety program

The RTA spent \$94.7 million in 2010–11 on engineering treatments specifically targeting road safety.

This included spending on the Australian and State black spot programs, the Road Toll Response Package, the Heavy Vehicle Safety and Productivity Program, dragon's teeth markings for school zones and the Picton Road and Newell Highway safety reviews.

In total \$24.1 million was spent in the Australian Government's Nation Building Black Spot Program under which 125 crash reduction projects were completed. NSW Black Spot Program spending of \$17.3 million included treatment of 56 high crash risk locations around the State with works such as traffic signals, roundabouts and turning bays, road realignments, safety barrier installation and clear zone enhancements. \$28.7 million was spent on safety treatments under the Road Toll Response Package. A further \$7.8 million was spent following the Newell Highway safety review.



Wire rope safety barriers on the New England Highway at Maitland, November 2010.

## Picton Road safety program

The RTA is delivering a \$42.6 million program of safety improvements on Picton Road to reduce the number and severity of the most common types of crashes. It includes upgrading sections of the road to reduce the risk of vehicles losing control in the wet, improving linemarking and medians to better separate opposing traffic and reduce the potential for head-on crashes, and installing new enforcement bays to give police more opportunities to catch dangerous drivers. By June 2011 a total of \$21.2 million had been spent. Thanks to a \$12 million funding injection from the new NSW Government, the full program is expected to be delivered by mid 2013.



## Better facilities for truck drivers

The Australian and NSW governments are each investing \$9.76 million in the second round of the Heavy Vehicle Safety and Productivity Program. In 2010–11 work began on five new rest areas and rest area upgrades at 10 existing sites. The rest areas, which are located on the Newell, Princes, Hume, Mitchell and New England highways, are due for completion by the end of the next financial year. To June 2011 \$18.4 million had been spent on rest areas under the program, including \$6.8 million in 2010–11.

## Sydney Harbour Tunnel – overheight vehicle management

Traffic on the Warringah Freeway was disrupted on more than 50 occasions in 2010 when overheight vehicles ignored repeated warnings and blocked the southbound entry to the Sydney Harbour Tunnel. As a result, the Minister for Roads requested that a committee be formed to investigate strategies for reducing this type of incident. Operating under the direction of the Road Freight Advisory Council, the Overheight Vehicle Sub-committee initiated a program to improve overheight vehicle behaviour generally and mitigate the risks for infrastructure, with the Sydney Harbour Tunnel a priority.

In January 2011 a new traffic management system comprising traffic lights triggered by overheight detectors was commissioned on the southbound approach to the tunnel. The standard traffic lights are familiar to drivers and provide a clear message to stop when directed. Tunnel safety cameras enforce the red lights and the fixed and variable signage has been upgraded to improve communication to motorists. Introduction of the system has all but eliminated overheight incidents at this location, minimising any impact on the surrounding network.

## Community input to Great Western Highway safety planning

The RTA held road safety community workshops at Hartley and Mount Victoria in June 2011 to consider possible responses to issues identified through earlier community consultation and a road safety review of the Great Western Highway between Mount Victoria and Lithgow. In light of the feedback received, the RTA decided against closing right turning access into and out of Mitchells Lookout and is developing safe turning options.

## Dragon's teeth

By the end of December 2010 triangular road markings called 'dragon's teeth' had been installed in all the of the State's 3243 school zones in accordance with RTA guidelines. The markings will increase zone visibility and enhance safety around schools.

## Wide centreline trial

The NSW Centre for Road Safety has undertaken a trial of the effectiveness of a wide, audio-tactile centreline on the Newell Highway in separating traffic and reducing head-on crashes. Early results have indicated many benefits from this treatment and the wide centreline will be recommended for rural roads where a dual carriageway is not an immediate option.

## Register of Road Safety Auditors website

The NSW Centre for Road Safety redeveloped the Register of Road Safety Auditors website and launched it with a new website domain, [www.roadsafetyregister.com.au](http://www.roadsafetyregister.com.au). The RTA maintains the register to verify auditors' performance credentials and promote their professional development. It is a valuable resource for RTA project managers, NSW local government and other stakeholders.

## Pedestrian countdown timers trial

Following a recommendation from the NSW Office of Transport Safety Investigation and the NSW Staysafe Committee, the NSW Centre for Road Safety investigated the potential safety benefits of pedestrian countdown timers. The RTA, in partnership with City of Sydney Council, implemented a trial of countdown timers at two intersections in the Sydney CBD.



Pedestrian countdown timers on trial.





## Testing safety barriers

The RTA Crashlab, part of the NSW Centre for Road Safety, tests safety barriers by crashing vehicles into the barriers under controlled conditions. The results help ensure the most appropriate barriers are used on roads to reduce the severity of crash outcomes. Eight tests were conducted during 2010–11 involving aluminium and concrete median barriers, wire rope safety barriers with objects in the deflection zone, and damaged wire rope safety barriers. One of the significant findings was that, even if previously damaged in a crash, wire rope safety barriers protect the occupants of errant vehicles.

## Safer vehicles

### Intelligent Speed Adaptation



The RTA published the results from the largest Intelligent Speed Adaptation (ISA) trial in the southern hemisphere in October 2010.

ISA is a system that advises drivers or physically limits the vehicle's speed when a driver is exceeding the speed limit. The trial found that speeding was reduced in 89 per cent of vehicles fitted with an advisory system. Modelling indicates that, if all vehicles in the trial area were fitted with an advisory device, there would be an 18.5 per cent reduction in fatalities and a 19.2 per cent reduction in injuries. The RTA is now working to develop an Intelligent Speed Adaption smart phone application and install ISA devices in RTA carpool vehicles.

### Electronic Stability Control

Electronic Stability Control (ESC) is a computerised technology that improves a vehicle's stability by detecting and minimising loss of control and skidding.

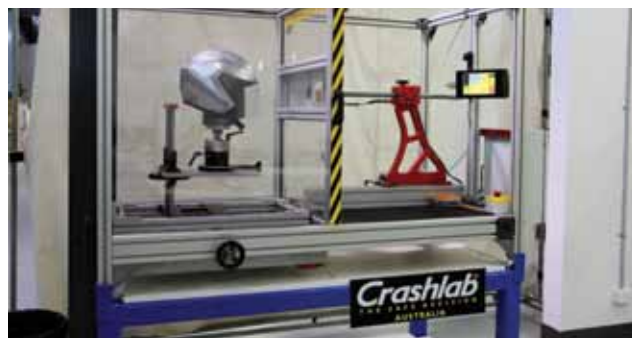


In June 2009 the Australian Government announced the introduction of Australian Design Rule 31/02 to require ESC for new passenger vehicle models from November 2011 and all new vehicles from November 2013. Research by Monash University Accident Research Centre has shown ESC has been associated with a 32 per cent reduction in single vehicle driver injury crashes, a 59.6 per cent reduction in driver injury rollover crashes, and an 81.6 per cent reduction in 4WD rollover crashes.

The NSW Centre for Road Safety continues to encourage the uptake of this technology, including actively promoting Electronic Stability Control through the NSW Government fleet, providing information to fleets and individual consumers, and assisting in development of the Australasian New Car Assessment Program (ANCAP) roadmap of required safety technologies for a vehicle to be awarded a high ANCAP safety rating.

## Crash tests

Crashlab conducted 50 crash tests including 17 road safety research tests, 19 ANCAP safety rating tests and 14 commercial tests (consisting of six vehicle and eight roadside furniture tests). The laboratory also conducted over 600 dynamic sled tests for the re-certification of over 33 different models of child and infant restraints to the newly amended Australian Standard, AS 1754:2010. In total, Crashlab conducted 767 dynamic sled tests on child restraints, seat belts, bus seats and miscellaneous devices as well testing 317 batches of bicycle and motorcycle helmets and conducting 124 tests on fall arrest devices for compliance with their respective Australian Standards.



Motorcycle helmet testing at Crashlab.

## National crash database

The NSW Centre for Road Safety participates actively as a member of the project steering body for the national crash database. It also collects NSW cases for the database and, to 30 June 2011, had contributed 29 cases, including vehicle and crash site inspections. Information from the database is used to develop countermeasures to address particular road safety risks.

## Vehicle repairability

The NSW Centre for Road Safety conducted a research study to assess the crashworthiness of vehicles which were repaired using vehicle manufacturer's recommended practice and other typical NSW repair industry practices. Results from the study have shown that cars repaired using both practices have only a slight reduction in crash protection compared to their original ANCAP performance. The results of this research have been used to validate the written-off vehicle assessment criteria, which form the basis of safety decision-making under the Written-off Vehicle Regulations 2010.



## Additional seat study

The NSW Centre for Road Safety conducted a study to assess the safety performance of additional seats when used by children between the ages of four and seven years without a booster seat. The results indicate that there is an increased risk of abdominal, head and lower extremity injuries to children occupying these seats compared to children occupying suitable child restraints in standard vehicle seats in the event of a crash.

## Child Restraint Evaluation Program

This program gives child restraint buyers independent and consistent information on the levels of protection from injury that child restraints provide in a crash and the ease with which they can be used correctly. The information is now available through the Child Restraint Evaluation Program website ([www.crep.com.au](http://www.crep.com.au)) which the Minister for Roads and Ports launched at the 2011 Royal Easter Show.

The website helps parents and carers decide which is the best restraint or device for their child and their circumstances.

The new website complements the existing RTA brochure, *Child Restraint Safety Ratings: Your guide to buying child restraints*, which is updated annually.

## Review of vehicle inspection schemes

New fees for proprietors of stations authorised to inspect vehicles were introduced in July 2010. The future fee structure will be included in the broader review of the Authorised Inspection Scheme which started in early 2011. The initial phase of this review of the principal third party vehicle inspection schemes has been completed. It included a detailed risk analysis of scheme design and administration, an audit of the scheme's management and research of customer perceptions.

Reform of the Authorised Unregistered Vehicle Inspection Scheme will be rolled out in 2011-12, delivering substantial benefits to customers. In addition, the Engineering Certification Scheme will be replaced by the Vehicle Safety Compliance Certification Scheme.

## RTA Authorised Crane Inspection Scheme

A new RTA Authorised Crane Inspection Scheme was launched during August 2010. Formulated through the RTA's partnership with the Crane Industry Association and third party providers, the scheme changes the procedure for renewing the registration of a mobile crane.

Under the new scheme, cranes with an 'SP2' configuration are inspected annually. (SP2 cranes are mobile cranes with more than 12t gross vehicle mass and overmass on one or more axles or axle groups.) The scheme covers both purpose-built and truck-based cranes and will ensure that cranes covered under the scheme meet consistent safety check standards across NSW.

In addition, changes to road transport regulations allow an authorised examiner to inspect cranes at suitable and convenient locations other than authorised inspection stations, which will benefit the industry as there are more than 900 cranes in NSW that require annual inspection.

## National benchmark for regulating written-off vehicles

New laws to improve written-off vehicle management in NSW started on 31 January 2011. The new laws aim to improve consumer protection and vehicle safety as well as reduce the risk of vehicle theft, car re-birthing and related crime.

The NSW reforms were developed by the RTA in partnership with the Department of Premier and Cabinet, NSW Police Force and the Office of Fair Trading. They represent a major government-wide push to clamp down on organised crime selling severely damaged and poorly repaired vehicles to unsuspecting buyers. Light vehicles that are written-off can no longer be repaired and re-registered, and – with very limited exemptions – can only be sold for scrap or parts. The new laws apply to all NSW light vehicles including trailers, caravans and motorcycles.

## Safer road users

### School zone flashing lights

In 2010 flashing lights were installed at 274 school zones, bringing the total of zones covered to 689. Due to efficiencies developed during the four-year program, the RTA was able to cover an additional 124 school zones over the year. The RTA will roll out a new \$13 million program over the next four years to cover an additional 540 school zones.



School zone flashing lights on Carrington Road at Waverley Catholic College, upgraded June 2011.



## Combating speed

### Safety cameras

Safety cameras have now been installed at 91 high risk intersections across the State following installations at 71 intersections in the reporting period. The cameras enforce both red light and speeding offences and improve the safety of intersections by deterring drivers from running red lights and speeding. Safety camera locations are selected based on strict criteria that include the number of casualty crashes at an intersection, the cost of these crashes to the community and suitable site conditions. The safety camera program has been supported in the reporting year with an advertising campaign to inform motorists and road users.

### Mobile speed cameras

The mobile Speed Camera Program was re-introduced in July 2010. Mobile speed cameras are intended to reduce speed-related crashes across the whole network because the unpredictability of the camera location leads to a reduction in speeding at all times, rather than just on the approach to a camera.

The program, operations for which were outsourced, was supported with an extensive media and public education campaign. The RTA worked with key stakeholders including the NRMA and NSW Police Force in the development of selection criteria for enforcement locations.

Since the reintroduction of speed cameras, over 9,500 infringement notices have been sent to offenders.

A community survey of 1,500 NSW drivers in May 2011 established that 72 per cent approved marked mobile speed cameras.

### Auditor-General's Performance Audit

The NSW Government requested the Auditor-General to examine the road safety benefits of speed cameras including fixed speed cameras, safety cameras and mobile speed cameras. The RTA prepared a detailed data analysis and submission as background for the Audit.

### Point-to-point enforcement

In 2010–11 point-to-point speed enforcement was installed on four lengths of road in NSW – the Great Western Highway between Raglan and Meadow Flat, the Pacific Highway between New Italy and Harwood, the Pacific Highway between Woodburn and Wardell and the Federal Highway from the Hume Highway to Collector. Point-to-point is used to enforce heavy vehicle speeding and is being installed on routes with a history of heavy vehicle crashes. The program has been supported with an advertising campaign targeted at heavy vehicle drivers.



### Speed penalties increase

From 1 July 2010 speeding penalties increased by 5 per cent as part of the Road Toll Response Package to strengthen speeding deterrence.

### RTA SpeedBlitz Blues sponsorship

For the ninth year, the RTA was the major sponsor of the NSW men's cricket team, the RTA SpeedBlitz Blues.

The sponsorship aims to change driver attitudes towards speeding by making it socially unacceptable.

It provides an invaluable opportunity to use players as well-respected, non-authoritative sources to communicate with drivers about the consequences of speeding. The sponsorship is valued at \$1.7 million over three years. In October 2010 the then Minister for Roads announced a two-year extension of the sponsorship to June 2013.

Among activities to leverage the sponsorship was the 'Slow Down Pledge', a Facebook initiative to encourage drivers and passengers to take the pledge to slow down on our roads. As at 30 June 2011 2,554 had taken the pledge. To promote the anti-speeding message and encourage pledging, the RTA held interactive road safety events featuring its crashed car display, bowling nets and pledge pods. These events were held at ANZ Stadium, Blacktown Olympic Park and the Sydney Cricket Ground Stadium.

A number of RTA SpeedBlitz Blues players also travelled with 'On The Road', an interactive educational road show. It visited 14 secondary schools, including 10 in regional areas, and four TAFE colleges across NSW, reaching over 5,000 students.



An RTA volunteer helps run a Cricket Road Safety Expo at ANZ Stadium.



## Slow Down Road Show

The Slow Down Road Show aims to tell the community about the consequences of speeding. It is an interactive display that features two crashed cars – one crashed at 60km/h and the other at 100km/h.

In 2010–11 the show visited more than 17 locations across NSW, reaching more than 420,000 members of the community. Locations included the 2011 Royal Easter Show, where the display won a Gold Commercial Exhibit Award for the third consecutive year. A targeted series of road shows was also conducted with retired NRL player Hazem El Masri acting as a road safety ambassador. The series visited 11 locations between October 2010 and February 2011.



The Slow Down Road Show at Parramatta farmer's market, October 2010.

## Enhanced Enforcement Program

The Enhanced Enforcement Program is a partnership between RTA and the NSW Police Force to reduce trauma by undertaking statewide operations to target particular behaviours such as speeding, drink driving, fatigue and non-seatbelt/helmet wearing.

The NSW Centre for Road Safety provided additional funding to enable the NSW Police Force to undertake Operation Maintain 2, which targeted drink driving in the lead-up to the Christmas holiday period. The operation was immediately followed by the regular statewide Christmas holiday operation, Safe Arrival, which extended the high profile police presence on NSW roads.

## Local Government Road Safety Program

The RTA approved and funded more than 300 safety projects by local councils across NSW during 2010–11. Projects involved a range of initiatives to target road safety issues and behaviours, including pedestrian safety, speeding, fatigue, motorised wheelchairs, child restraints, drive-to-conditions and



fleet safety. The NSW Centre for Road Safety also conducted a successful pilot with 15 NSW local councils trialling recommended changes to the program delivery model.

## Driver Reviver

The NSW Centre for Road Safety provided more than \$350,000 to support the NSW Driver Reviver Program which is operated by volunteers at 83 sites across NSW. The program raises awareness of fatigue and provides refreshments for travellers.

## Consultation on motorcycle safety

Under the Road Toll Response Package, the NSW Centre for Road Safety has been working with motorcycle representatives in the development of a new motorcycle safety strategy for NSW. There were four stakeholder consultation workshops held during the year to inform strategy development, which will be completed in late 2011.

There were also a number of early initiatives including:

- Increasing distribution of the *Good Gear Guide* which offers advice on protective clothing.
- Undertaking research on fatigue, returning riders and an in-depth motorcycle crash study.
- Expanding the use of the 'Check twice for bikes' and safe cornering campaigns.
- Expanding the Helmet Evaluation and Rating Program.

## Drink and drug driving

### Random roadside drug testing

Under an ongoing partnership, the NSW Centre for Road Safety funded the NSW Police Force to conduct 35,585 drug tests on drivers and riders across NSW. Roadside drug testing, which tests oral fluid samples for the presence of three illicit drugs, began in NSW in January 2007. Since then, the NSW Police Force has tested 21,188 heavy vehicle drivers and 80,701 light vehicle drivers. Of these 1,872, or one in 53, tested positive to one or more illicit drugs.



### Sober Driver Program

The NSW Sober Driver Program is an education and relapse prevention program for drink drive offenders who are convicted of two or more offences within five years. The goal is to reduce drink drivers re-offending. The RTA funds the program which is delivered by Corrective Services NSW. As at 30 June 2011 there have been 8,236 participants in the program.

In 2010–11 the course was delivered 56 times in 37 locations across NSW, with 465 people completing the program. An external review conducted by ARTD consultants determined that the program was still effective in reducing recidivism.





## Alcohol Interlock Program

An alcohol interlock is an electronic device fitted to a car that tests the driver's blood alcohol concentration (BAC) and allows the car to start only if the recorded BAC is below 0.02. The Alcohol Interlock Program is available to courts as an option in sentencing drivers convicted of certain serious drink driving offences. Participants can suspend part of their licence disqualification period if they have an alcohol interlock device installed in their car and obtain an interlock driver licence. Since the program began, 2,241 interlock licences have been issued (315 in 2010–11) and 1513 participants have successfully completed the program.

## Changes to the Demerit Points Scheme

The Demerit Points Scheme is a national program that allocates penalty points (demerits) for a range of driving offences. The scheme is designed to encourage safe and responsible driving. Along with financial penalties, demerit points provide a strong incentive to drive within the law.

### Demerit points for 22 offences reduced or removed

From 31 December 2010 demerit points for 22 offences committed on or after this date were reduced or removed. These included roundabout, indicator, bus lane and towing offences. Demerit points for key road safety offences such as speeding and seatbelt use remain unchanged.

### Demerit point threshold

On 31 January 2011 the Demerit Points Scheme was changed to increase the demerit point threshold for suspension of an unrestricted licence from 12 demerit points to 13. The concept of a 'professional driver' was also introduced. A professional driver, which includes a truck, bus or taxi driver, has a 14 demerit point threshold. Demerit points are also no longer to be assigned to an offence where the court finds the offender guilty of a demerit point offence but dismisses the matter under section 10 of the *Crimes (Sentencing Procedure) Act 1999*.

## Road safety education

### School Road Safety Education Program Refresh Project

The RTA's School Road Safety Education Program has responded to the changing needs of students and teachers to deliver relevant, respected and best practice road safety teaching and learning strategies. A Refresh Project was conducted during 2010–11 to build on the excellent work of the program over the last 25 years to ensure that it remains at the forefront of educational best practice.

By continuing to work with our school education partners and incorporating developments in pedagogy, technology and behavioural change theory, the RTA should ensure the program remains relevant and responsive well into the future.

### Early childhood program



The NSW Early Childhood Road Safety Education Program continued to inform services, peak organisations and family support agencies about the national changes in child passenger safety rules in the new child restraint legislation in NSW. Ongoing professional support was also offered to around 3,400 early childhood services and all tertiary early childhood students in TAFE colleges and universities

across NSW. All centres have received

copies of four wooden child restraint jigsaw puzzles together with samples of available brochures, road safety information, translations of child restraint information and contact details for the Early Childhood Road Safety Education Program at Macquarie University.

### Young driver safety

The RTA funded Youthsafe to develop the *Plan 2* DVD, a new resource to engage young people in discussions about planning safe travel strategies. It is available for use in TAFE programs and youth centres. In partnership with Communities NSW, the RTA promoted road safety messages to more than 12,000 young people through the Youth Week Rock Band Concert and competition.



Youth Week Rock Band winners Pennyblack, April 2011.

## Aboriginal road safety

### Aboriginal driver education

As more than half of the Aboriginal population lives in rural and remote localities, transport is a major issue and impacts on their ability to access basic services such as health and education, as well as work opportunities. Research has identified that, while Aboriginal people might be keen to obtain a driver's licence, low literacy and financial capacity can act as barriers.

The RTA formed a partnership with the Department of Justice and Attorney General and TAFE NSW to develop a nationally accredited driver education course to assist Aboriginal people obtain their NSW Learner driver licence. The course uses the *RTA Road Users Handbook* to improve student reading, writing and numeracy skills and increase road law and road safety knowledge in Aboriginal communities. A pilot was conducted at Mt Druitt TAFE during 2010, with several students passing the driver knowledge test to obtain their Learner driver licence.

Following the pilot's success, the course was expanded to Campbelltown, Kempsey, Toronto and Wellington. A fee exemption for the driver knowledge test was introduced and, as an additional incentive, participants successfully completing the course were eligible to receive an accredited qualification in 'Access to Work and Training'.

### New Aboriginal communication resources

The RTA developed the *Aboriginal Road Safety Communication Plan* to ensure that road safety messages are delivered in a culturally appropriate way. Using the plan, Aboriginal road safety resources were developed to support a campaign about the new child restraint laws for children aged 0 to 7 years. The campaign features Aboriginal people in radio and press advertisements and Aboriginal children in the parent information booklet.

## National Indigenous Road Safety Conference

The 5th National Indigenous Road Safety Conference was held in Coffs Harbour in November 2010 hosted by the Australian Department of Infrastructure and Transport and the NSW Centre for Road Safety. Centre staff delivered presentations on Aboriginal assessments, strategic planning, licensing and research.

## Aboriginal culture and heritage on display

Six new display panels were installed at rest areas on the Princes Highway at Minnamurra as part of a fatigue management project. The intention is to encourage travellers to take longer breaks from driving and increase their awareness of local Aboriginal culture and history. The project provided a fantastic opportunity to showcase the partnership between the RTA and the local Aboriginal community. A further rest area in the Southern Region (Waldrons Swamp) was completed in June 2011.

## Road safety marketing campaigns



### Seatbelts

Non-use of seatbelts remains one of the four major behavioural factors associated with road trauma.

The 'Clip Every Trip' seatbelt campaign was introduced in late 2010 and aired throughout the reporting period. The campaign, which was the first road safety campaign in NSW to use computer generated images, targeted residents in rural communities including farmers and tradesmen. Aboriginal communities were also included in the campaign.

The campaign aimed at encouraging all drivers and passengers to correctly use their seatbelt for every trip, no matter how short the trip is or how well they know the local roads. The highly memorable advertising ran on television, outdoor signs, online and radio and achieved nearly 70 per cent recall among the target audience.



A seatbelt comes to life and taps the driver on the shoulder to remind him to 'Clip Every Trip'.



## Driver fatigue

The 'Wake up to the signs' driver fatigue campaign ran in December 2010 and during the June 2011 long weekend. Evaluation showed that almost half of all NSW drivers were likely to have noticed the campaign, with the television commercial considered easy to understand, believable and informative. As a result of having seen the campaign, the target audience was more aware of the signs of fatigue and the dangers of driving fatigue and less likely to drive tired to get home sooner.

## Bicycle safety

The RTA developed a radio campaign promoting the safety benefits of wearing a bicycle helmet to teenagers and adults. The campaign was supported by a radio and online competition, which generated several hundred entries.

## Changing attitudes and behaviour on speeding

In December 2010 the RTA launched a new speeding campaign, 'Don't Rush', featuring Professor Brian Owler, a neurosurgeon at Westmead Hospital, in phase 1 and road crash survivors and their family and friends in phase 2. The campaign used a range of media including TV, radio and online. Seventy-five per cent of NSW drivers were exposed to each phase of the campaign, which feedback shows is having an impact on driver behaviour and attitudes in relation to speeding, and the secondary message about driving when fatigued.



Professor Owler, who features in the 'Don't rush' campaign, along with road crash survivors.

## Managing unauthorised driving

A campaign to create awareness about changes to legislation that impacted unregistered drivers was launched in August 2010. The five-week campaign informed NSW drivers that from 30 August enforcement cameras could be used to detect unregistered and/or uninsured drivers.

## Safety for elderly pedestrians

The RTA developed a new pedestrian campaign for older road users which targeted drivers and reinforced safe pedestrian practices. The key pedestrian messages were: 'Plan your trip', 'Wait for vehicles to stop', 'Look both ways', and 'Use marked crossings'. These were displayed on club television monitors and in seniors' magazines. A presentation for delivery by community professionals in the local community was also developed. The campaign successfully reached the target audience and received positive feedback.

## Heavy vehicle initiatives

### Heavy vehicle national law

In July 2009 the Council of Australian Governments agreed to the establishment of a uniform independent National Heavy Vehicle Regulator responsible for regulating all heavy vehicles over 4.5t. The establishment of the Regulator is expected to remove inefficiencies arising from inconsistent state and territory requirements, streamline regulatory arrangements, reduce the compliance burden for business, and reduce transport costs.

### Heavy vehicle electronic work diaries pilot

In March 2010 the NSW Government announced the Road Toll Response Package, which includes \$5 million over three years (2010–13), for an operational pilot of electronic work diaries involving other states. This project aims to test the National Transport Commission's *Electronic Systems for Heavy Vehicle Driver Fatigue and Speed Compliance: Draft Policy Paper* and the Austroads *Draft Performance-Based Specification for Electronic Work Diaries and Heavy Vehicle Speed Monitoring*. The pilot, which has strong support from industry and all jurisdictions, is being undertaken in three stages.

The scope for Stage 1 was developed in consultation with all participating jurisdictions and police agencies and the National Transport Commission. It involved resolution of a significant number of complex issues, including sourcing systems and participants for Stage 1, developing an intercept strategy, developing software to replicate the written work diary, establishing business systems, designing the pilot methodology and selecting and training participants. Planning was successfully completed on time.

Stage 1 (the in-field component) will begin in July 2011 and will test and refine the procedures and business systems to be used in Stage 2.



## Improving truck safety performance

Fatal crashes involving heavy vehicles have declined significantly over the last decade, particularly in NSW, compared to an increasing freight task. However, given the anticipated increase in freight task, improvement to road safety performance is critical.

The Five Star Trucking Accreditation Scheme is an industry-led initiative designed to support best practice and proactively reinforce safety and compliance. The idea is to reward operators, drivers and customers who invest in safety through a rating system. In the first stage of scheme development a sub-committee will examine a range of scheme options that came out of review of other rating systems and consideration of the impact on existing accreditation systems. The sub-committee will meet in 2011–12.

## Fatigue

A \$5 million heavy vehicle rest area on the Hume Highway at Pheasants Nest was completed in November 2010. Jointly funded by the Australian and NSW governments, the rest area includes spaces for 24 B-Doubles, appropriate night lighting, a walkway and fence for pedestrian safety and a covered area with tables and benches.



The Pheasants Nest heavy vehicle rest area, completed in November 2010.

## Chain of responsibility investigators

As part of the Road Toll Response Package, the RTA employed five additional 'chain of responsibility' investigators. Their employment has increased the RTA's capacity to undertake strategic investigations into commercial and operational practices to encourage greater compliance by heavy vehicle drivers and operators with speed and fatigue laws.

## Safe-T-Cam

The RTA has 24 Safe-T-Cam sites located on major freight routes across NSW. Combined with 11 Safe-T-Cam sites operated by the South Australian Department of Transport, Energy and Infrastructure, the Safe-T-Cam network continues to target heavy vehicles which have travelled at excessive average speed, travelled beyond prescribed driving hours, attempted to avoid detection by Safe-T-Cam, failed to enter a heavy vehicle checking station or are unregistered.

The aim of Safe-T-Cam is to reduce the risks associated with heavy vehicle driver fatigue in an effort to prevent crashes.

In 2010–11 Safe-T-Cam operations led to the issue of 4,780 Company Notices to Produce Records and 345 Driver Notices to Produce Records.

## A broad road safety role

The NSW Centre for Road Safety responded to various enquiries and reports such as:

- The NSW Office of Transport Safety Investigations report into the fatal crash in the Barrengarry Nature Reserve.
- The Staysafe Committee's Heavy Vehicle and Vulnerable Road Users inquiries.

Staff presented papers at the Australasian Road Safety, Policing and Education Conference in Canberra. The Centre also formed the new Road Safety Advisory Council in December 2010. Comprising road safety stakeholders across a variety of areas, the council oversees the development of road safety initiatives in NSW.





# Challenges and the way forward

There are many challenges to improving road safety in NSW. The continued trend for speeding is concerning and will require strong communication strategies to highlight the dangers and consequences of speeding. The ageing population in NSW will impact road safety and strategies need to be developed to improve safety for elderly drivers and pedestrians.

Lifestyle choices over the past decade have led to significant increases in motorcycle and scooter registrations, pedal cycle usage and smaller, lighter vehicles. Freight activity is expected to increase significantly resulting in increasing truck movements and larger, longer trucks. The interaction between the growing number and variety of road users presents a challenge for road safety.

The release of the *National Road Safety Strategy 2011–2020* presents an opportunity to work with other Australian jurisdictions to develop and implement a range of road safety initiatives.

The continuation of programs, policies and road infrastructure upgrading and development to improve the safety of roads is critical to achieving further road safety gains. The work to influence manufacturers to improve the safety of vehicles and increase consumer awareness of safety features at point of sale is also important to further improving vehicle safety.

## Safer roads

The NSW Centre for Road Safety is working closely with the community to ensure speed limits are set carefully to reflect safety and road user expectations. A new website has been developed to allow people to register their concerns with particular speed limits and signs. This information will be used to prioritise review of speed limits and signs in NSW. The website will also feature detailed information on the principles used to set speed limits.

The Centre will continue to work with the NSW Police Force, community and NRMA to carrying out route reviews. These reviews have previously seen significant reductions in injuries and fatalities and will continue to contribute to reducing the NSW road toll and serious injuries. The Road Toll Response Package will continue to assess priority locations for the rollout of wire rope safety barriers as a key safety infrastructure treatment.

The NSW Government has committed \$200 million across the state for the four years for a package to tackle congestion and safety on key routes. The package of works encompasses a broad range of projects including intersection improvements, overtaking lanes, bridge upgrades and traffic management upgrades. The projects are a mix of works on State and council roads. The challenge is to manage the vast range of projects with the various stakeholders to ensure the program is delivered within cost, time and project scope.

## Safer vehicles

Encouraging people into safer vehicles will help reduce the road toll and associated road trauma. Australia has a relatively old fleet (compared to other developed countries) and finding ways to encourage increased scrapping will be important, if we are to discourage older vehicles with fewer safety features ending up in the hands of novice drivers, who are those most at risk of crashing.

The Centre will continue a number of significant projects in 2011–12, including providing improved vehicle safety information to help fleet managers and individual consumers choose safer vehicles and reducing the barriers for young drivers to driving safer vehicles.

## Safer road users

A key focus is to continue engaging with the community and stakeholders to develop strategies and programs to target unsafe road user behaviour. Compliance and enforcement will still be crucial to ensuring the safety of all road users.

Speeding remains a significant factor in fatalities and injuries on NSW roads along with non-restraint usage and drink driving. The Centre will work with the NSW Government to ensure community awareness of these problems, along with continued targeted policing of unsafe illegal behaviours.

The Centre will develop a new NSW Road Safety Strategy for the next decade, drawing on the initiatives in the *National Road Safety Strategy 2011–2020* but setting actions specific for NSW.

The RTA is currently scoping the development of safe driver incentives such as a licence discount and has initiated the review of learner driver arrangements, including the development of a new Safer Drivers course.

The RTA will also consider the recommendations of the Auditor-General's Performance Audit once released.



## REVIEW OF OPERATIONS

# Environment

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### Key achievements in 2010–11

Conducted environmental performance reviews on sections of the Great Western, Pacific and Central Coast highways which resulted in clearer directions to contractors on erosion and sediment control.

Secured an Environmental Protection Licence for establishment of a roadworks material recycling centre at Unanderra. The new centre will improve the sustainability of RTA operations by increasing the volume of recycled material used in road building.

Trialled energy control devices in street lights that can potentially cut energy consumption by around a quarter. Implementation of the technology is being considered.



# Environment

RTA result: Impacts on the natural, cultural and built environments are minimised

## The RTA and the environment

The RTA aims to minimise the impact on the natural, cultural and built environments in all of its activities. Work ranges from improving the organisation's environmental footprint, to reducing emissions from vehicles and protecting threatened species and biodiversity during road works. The RTA also has statutory responsibilities to assess the environmental impact of its infrastructure projects as part of the planning process.

This chapter outlines the RTA's measures to minimise impact on the environment over the past year. It is divided into four main sections:

**Infrastructure** – environmental initiatives related to construction and maintenance of roads and bridges.

**Organisational** – internal measures to improve the RTA's use of resources.

**Emissions** – cutting down emissions from vehicles.

**Challenges and the way forward.**

Chapter cover image: Unidentified bug found on an evapotranspiration bed during an environmental inspection of the Mundoonan rest stop toilet treatment facility. Photo taken by RTA staff member Sarah Webb, July 2010.

## Infrastructure

### Biodiversity

#### Protecting biodiversity

Biodiversity is the variety of life forms, including different plants and animals, the genes they contain and the ecosystems in which they live. Australian ecosystems contain many species found nowhere else in the world. Roadsides often contain important biodiversity that is rare in the surrounding landscape.

The RTA is committed to protecting biodiversity along roadsides and considers biodiversity issues carefully during route selection and road design for all infrastructure projects.

Biodiversity protection is achieved through development, review and implementation of environmental impact assessment policy and guidelines, stringent environmental specifications, regular environmental inspections of construction sites, and environmental awareness training for RTA staff and council workers. An outline of how the RTA has protected and aimed to enhance biodiversity in 2010–11 is included in Table 18 on page 61.

#### Biodiversity performance review

Biodiversity performance reviews, which aim to confirm that biodiversity is being protected and managed appropriately on RTA projects, were conducted on the following projects in 2010–11:

- Hunter Expressway.
- Holbrook Bypass (early works).
- Hume Highway Upgrade.
- Banora Point Upgrade.
- Bulahdelah Bypass.
- Sapphire to Woolgoolga section of the Pacific Highway Upgrade.
- Woomargama Bypass.

The reviews identified where biodiversity mitigation measures could be improved, for example, improving procedures for access to exclusion zones.

#### Biodiversity training roll out

A new one-day training course on managing and protecting biodiversity was developed internally and delivered to all RTA regions in 2010–11 to guide staff and contractors in managing biodiversity throughout a project and during maintenance works.



**TABLE 18. BIODIVERSITY PROJECTS**

Activity	Purpose	Progress
Develop measures to minimise road impacts on biodiversity.	Manage wildlife on roads.	The RTA has investigated potential options to reduce road kill in Pittwater and Warringah local government areas. Some short-term measures have been implemented. Further investigation into the most appropriate long-term measures is being carried out.
Contribute to the NSW Wildlife Council.	Manage wildlife on roads.	The RTA provided \$25,000 to the NSW Wildlife Council, which coordinates wildlife carer groups and advises carers on wildlife management policy.
Fund research into effects of road construction and operation on koala ( <i>Phascolarctos cinereus</i> ) populations adjacent to the Pacific Highway at Bonville.	Research koala population.	The RTA funded the Australian Museum to research the effectiveness of mitigation structures such as underpasses and overpasses for koalas. Sensors have recorded koalas using the underpasses and overpasses.
Develop draft guidelines for protecting biodiversity during construction and maintenance works.	Provide best practice guidance and encourage consistency across NSW in protecting biodiversity during construction activities and maintenance works.	Guidelines for protecting and managing biodiversity on RTA projects were finalised. The biodiversity guidelines will be published on the RTA internet for use by RTA staff and contractors.
Monitor the effectiveness of measures to allow threatened squirrel gliders to move across the Hume Highway.	Minimise impacts on biodiversity.	The RTA continues to support joint research with VicRoads and the University of Melbourne to determine the effectiveness of crossing structures for squirrel gliders. Results to date indicate they are being used by squirrel gliders. Results are being used in the design of crossing structures for other RTA projects.
Manage vegetation at Beverley Grove adjacent to the M5 East Motorway.	Minimise impacts on biodiversity.	The RTA continues to manage a remnant patch of vegetation containing the endangered ecological community of the Cooks River/Castlereagh Ironbark Forest. The RTA has entered a contract with the National Trust to carry out bush regeneration works.
Manage Green and Golden Bell Frog ( <i>Litoria aurea</i> ), Arncliffe.	Minimise impacts on biodiversity.	The RTA continues to manage the Green and Golden Bell Frog population in ponds constructed as a compensatory measure for the M5 East Motorway. Regular monitoring of the frog population has been carried out since 2000. Monitoring indicates the 2010–11 season was excellent for Green and Golden Bell Frogs at Arncliffe and frog numbers continue to increase.
Maintain Duffys Forest endangered ecological community.	Minimise impacts on biodiversity.	The RTA owns two adjacent parcels of land in Frenchs Forest containing Duffys Forest endangered ecological community. A plan of management was prepared by the RTA to maintain the forest. The bush regeneration of the area is being managed by the National Trust Bushland Management Service.
Monitor Pacific Highway threatened species.	Minimise impacts on biodiversity.	In 2010–11 the RTA began a monitoring program studying the impact of highway development on populations of Spotted-tailed quolls and Rufous bettongs and the effectiveness of crossing structures.
Implement biodiversity offsets.	Purchase and manage land to offset the unavoidable biodiversity impacts of a project.	The RTA continued to develop and implement biodiversity offset strategies for a range of projects including the Hume Highway Duplication, Hume Highway bypasses and the Pacific Highway Upgrade.





## CASE STUDY

### Relocation of the Giant Barred Frog, Pacific Highway Upgrade

An example of the RTA's commitment to biodiversity is the work undertaken on the Sapphire to Woolgoolga section of the Pacific Highway Upgrade. On this project it was necessary to relocate a small population of the endangered Giant Barred Frog (*Mixophyes iteratus*) to nearby suitable sites. The relocation was undertaken in accordance with a biodiversity management strategy approved by the Office of Environment and Heritage. The strategy included strict hygiene and management protocols, including the use of frog exclusion fencing to ensure there were no unintended impacts on the species.



An endangered Giant Barred Frog reddied for relocation.

### Threatened species

The RTA contributed to a number of threatened species recovery plans prepared by the NSW Office of Environment and Heritage (OEH) in accordance with Part 4 of the *Threatened Species Conservation Act 1995*. Refer to Appendix 2 for full details.

### Roadside environment

The RTA continued to support the Roadside Environment Committee and funded the committee's secretariat and meeting costs in 2010–11. The committee's goal is to achieve the best possible environmental management of NSW roadsides and other linear reserves, for example, rail corridors, travelling stock reserves, Crown reserves and utility easements.

The member organisations are:

- Catchment management authorities.
- Essential Energy.
- Institute of Public Works Engineering Australia.
- Land and Property Management Authority.
- Livestock health and pest authorities.
- Local Government and Shires Association of NSW.
- Nature Conservation Council.
- Office of Environment and Heritage (OEH).
- RailCorp.
- RTA.
- Rural Fire Service.
- TransGrid.

Key achievements in 2010–11 included:

- Surveying and mapping implementation of local council Roadside Vegetation Management Plans in NSW.
- Developing learning outcomes for local council road maintenance and construction staff to assist councils develop their roadside management training programs.
- Developing a community fact sheet on Significant Roadside Environment Area signage.
- Initiating a project with the Sydney Weeds Committee to:
  - Review processes for managing weeds in linear reserves in the Sydney area.
  - Identify and map locations of key and priority weeds in linear reserves in the Sydney area.
  - Recommend improved processes for managing roadside weeds in the Sydney area.

The report from the study is due later in 2011 and the committee will assess whether its recommendations can be transferred to linear reserve management in other parts of the State.

- Sponsoring a special edition of *Australasian Plant Conservation* on linear reserve environmental management. The journal included three articles from committee member agencies.
- Maintaining and upgrading the committee website, which averaged 134 hits per month, and producing and distributing four editions of the committee newsletter.



## CASE STUDY

### Road crossing for woodland birds at Woomargama

One of the challenges for the Woomargama Bypass project was to provide opportunities for a number of threatened woodland birds to move across the road. These included the Brown Treecreeper, the Diamond Firetail, the Black-chinned Honeyeater and the Hooded Robin. A dual carriage road, such as the Woomargama Bypass, may deter some threatened woodland birds from crossing the road to reach suitable habitat.

The RTA prepared a wildlife crossing management plan to describe how the safe passage of key fauna species across the Woomargama Bypass, including threatened woodland birds, would be achieved. The plan was developed in consultation with the OEH and the Department of Primary Industries. The RTA also sought advice on the plan from recognised fauna experts. Crossing measures described in the plan included landscape treatments around bridge crossings for Sandy Creek and Mountain Creek.

A woodland bird underpass was constructed in the Mount McKenzie section of the Woomargama Bypass. The underpass comprises two arches designed to allow an unobstructed view of habitat on either side of the alignment. The design also includes revegetation of box gum woodland adjacent to the structure to provide a better corridor for bird movement between woodland areas. This is the first time a mitigation structure has been designed specifically for woodland birds and its value will be monitored as part of a threatened species monitoring program.



The woodland bird underpass on the Woomargama Bypass.

## Environmental planning and assessment

### The environmental framework

The *Environmental Planning and Assessment Act 1979* (EP&A Act) establishes the process for environmental impact assessment and approval. The *Environmental Impact Assessment Guidelines* are the RTA's framework for ensuring quality environmental assessment.

### Managing environmental requirements for projects of State or regional significance



In 2010–11 two RTA infrastructure projects of State/regional significance were approved by the Minister for Planning under Part 3A of the EP&A Act, which requires that environmental assessments are undertaken. These were the:

- Devil's Pulpit Upgrade (Pacific Highway), on which construction will begin in the new financial year.
- M2 widening project, on which construction started in January 2011.

As part of the Part 3A approval process, the Department of Planning and Infrastructure displays the environmental assessments and invites public submissions. Environmental assessments prepared under Part 3A were exhibited during this period for three projects:

- Warrell Creek to Urunga Upgrade (Pacific Highway).
- Oxley Highway to Kempsey (Pacific Highway).
- M5 West widening project.

For the Warrell Creek to Urunga Upgrade, issues raised by the community and council included the potential for the project to exacerbate flooding near Macksville. The RTA commissioned an independent review of the flood modelling, which confirmed the model was an appropriate representation of flood behaviour. Flooding impacts are not expected to be excessive. This project is currently being considered for approval.

Around 255ha of native vegetation and fauna habitat will be cleared for both the Warrell Creek to Urunga and the Oxley Highway to Kempsey upgrade projects. These losses will be offset by the protection of land with similar vegetation types. Offset packages will be developed in consultation with the Office of Environment and Heritage.

Fauna habitat connectivity has been enhanced by the inclusion of underpasses and rope bridge overpasses in the project design.



For the Oxley Highway to Kempsey Upgrade, community interest focussed on issues such as the location of service roads. The RTA has and will continue to work in consultation with the community to resolve the details of service roads for this project.

Traffic noise was a major environmental issue associated with the M5 widening. Noise modelling has been revised, supported by more detailed traffic modelling, and additional noise barriers will be built along the length of the motorway. The scope of the widening was also increased to include a section between Fairford and King Georges roads (eastbound), in response to community submissions.

The Director-General of the Department of Planning and Infrastructure issued environmental assessment requirements for one project, Foxground and Berry Bypass (Princes Highway). Environmental investigations began as part of the preparation of the assessment.

In 2010–11 the RTA developed a new template and guidance note for Part 3A environmental assessments reports, which were added to the *Guidelines for Environmental Impact Assessment*. The template and guidance note for preliminary environmental assessment reports, which support Part 3A applications, were also updated. The new and updated documents consolidated learnings from Part 3A projects assessed and approved in earlier years. Awareness of Part 3A processes and procedures was extended across the organisation through information sessions.



Terry's Creek upgrade, part of the M2 widening project, in construction, June 2011.

### Managing Part 5 reviews of environmental factors

Part 5 of the EP&A Act applies to activities that do not require development consent under Part 4 or approval under Part 3A. Part 5 applies to the majority of RTA projects. For these projects, the RTA is the proponent of the works and prepares a review of environmental factors report prior to determining whether or not the project should proceed. The report examines the potential environmental impacts of projects, assesses whether or not the impacts would be significant, and identifies measures to avoid, minimise, mitigate and, in some cases, offset impacts.



In 2010–11 reviews of environmental factors were exhibited for public comment for seven projects:

- Camden Valley Way Upgrade – Cowpasture Road to Cobbitty Road.
- Central Coast Highway Upgrade/Brisbane Water Drive, West Gosford.
- Bega Bypass, Princes Highway.
- Erskine Park Link Road.
- Gerringong Upgrade – Princes Highway.
- North Parramatta bus lanes – Church Street, Parramatta.
- Pacific Highway Upgrade – Lisarow to Ourimbah (Stage 3A).

Six submissions were received during the display of the review for the Lisarow to Ourimbah project. A report is now being prepared to summarise and respond to issues raised. Further investigations into the design of the Camden Valley Way project and its impact on a threatened shrub species, *Pimelea spiciflora*, are being undertaken in consultation with the Office of Environment and Heritage and the Department of Planning and Infrastructure. An addendum review is being prepared to consider design refinements to the Bega Bypass project.

Construction began on the North Parramatta bus lanes project in March 2011. The remaining projects have been determined to proceed to construction. The RTA determined a further 294 reviews of environmental factors in 2010–11.

The RTA trialled a new environmental assessment procedure for reviews, identifying where improvements could be made to ensure that reviews were efficiently prepared and of high technical standard. To build consistency across the organisation in applying the procedure, introductory sessions were held for project management and environmental staff across all RTA regions. Formal training is currently being developed.

### Environmental performance improvement

During the year the RTA undertook a detailed analysis of environmental incident data from the last three years. Spills made up the largest percentage of the incidents reported, however, the vast majority of these incidents were minor in nature, were cleaned up by site staff and did not result in any offsite impact. The most common cause of spills involved oil spills from burst hydraulic hoses, fuel spills and paint spills.

Of the more serious environmental incidents, erosion and sediment control-related incidents (such as dewatering of sediment basins and uncontrolled contaminated water discharge) were the most significant, followed closely by unauthorised works such as clearing of vegetation outside the boundary of projects.



Incidents relating to the environmental impact assessment process generally fall within one of three categories, namely incorrect application of the RTA's routine and minor works procedure, failure to implement environmental safeguards set out in the review of environmental factors and exceeding the scope of the works described in the review. In response, the RTA has developed an improvement strategy which comprises guidance and training in the key areas described above. A training program is being made available to both RTA and external contractor staff to reduce risk of these serious incidents and improve our environmental performance.

## Improving contractor environmental performance



The RTA continued to work closely with its external contractors to improve their environmental performance to meet our expectations and the broader environmental objectives of the NSW Government.

The RTA tracks contractor environmental performance through analysis of environmental audit and inspection reports. Reporting improvements initiated by the RTA have resulted in provision of better information, which has enabled the organisation to give more comprehensive feedback to contractors about statewide performance. A review of environmental contract specifications was undertaken during the year and led to clearer requirements for contractors undertaking road construction and maintenance works.

Environmental performance reviews of major construction projects were conducted on eight projects on the Pacific, Great Western and Central Coast highways. The reviews, which focused on erosion and sedimentation control, identified compliance risks and examples of innovative and good performance. The RTA has used the reviews to brief senior management on performance and prepare for discussion with contractors regarding environmental performance improvement.

## Road works recycling facility

The RTA secured an Environmental Protection Licence to allow construction of a roadworks material recycling facility at Unanderra. The facility will assist with the sustainability of roadworks operations by increasing the rate of recycling of materials. The first stage of construction, the hard standing area, proceeded using transferred stockpile materials as these became available. Completion of the facility is scheduled for the 2011–12 financial year.

## Koala management on the Oxley Highway Upgrade

The upgrade to a section of the Oxley Highway near Port Macquarie is nearing completion. The road passes through an area of koala habitat of regional and State significance.

Under an approved translocation plan, 11 koalas were moved into a nearby conservation area in 2009–10 and their adjustment monitored with radio tracking collars. Continued monitoring in 2010–11 confirmed a successful translocation. The koalas have stayed within the conservation area, maintained social cohesion and now appear to be functioning as an established population. Monitoring will continue until 2012. The information gathered will assist in developing a national translocation methodology for koalas under the National Koala Conservation and Management Strategy 2009–14.

## Noise management

### Noise Abatement Program

In 2010–11 the RTA treated 57 dwellings exposed to high levels of road traffic noise under the Noise Abatement Program. Architectural noise treatments include sealing around doors and windows, installing mechanical ventilation and replacing doors and windows with acoustically rated units. The majority of building treatments were provided in the Sydney region (around 40 homes) with the remaining treatments focused in the Northern and Illawarra areas of the State. The RTA allocated \$3 million to the program in 2010–11. This will be increased to \$8 million in 2011–12 to help reduce the backlog of residences waiting for treatment.

The eligibility criteria for the program and the method of prioritising offers of treatment were reviewed and amended to create a simpler and more equitable process. The prioritisation of treatment is now based on the date of application to the program. This new approach provides more certainty on when treatment will be delivered. The changed eligibility criteria include making the program available where building development was approved before 1 January 2009 to align with requirements for new buildings in the State Environmental Planning Policy (SEPP) (Infrastructure) 2007, and extending the availability of architectural acoustic treatment where the period of residency is less than seven years on a cost sharing basis.

Under the Infrastructure SEPP, for new developments in locations already significantly exposed to road traffic noise, noise abatement is the responsibility of the relevant developers.

### Training

Noise awareness training began in June 2011 in Sydney and was followed by training in Wollongong, Newcastle and Grafton. Around 90 RTA staff attended. Following strong interest, an additional six sessions are planned for July to August 2011 in Wagga Wagga, Sydney, Gosford and Grafton.





## Land and water management

### Management of construction site dewatering

Dewatering is required following rain to remove ponded stormwater from construction sites and maintain sedimentation controls such as basins. It has been identified as a critical risk for construction project delivery.

The RTA released the new *Technical Guideline – Environmental Management of Construction Site Dewatering* in April 2011 to improve due diligence in managing construction projects. Supporting its release were specification changes that set out the RTA's minimum requirements in managing dewatering activities and require construction contractors to prepare work method statements for these activities.



Dewatering a sediment basin via siphoning on the Pacific Highway Upgrade at Glenugie.

### Erosion and sedimentation training

The RTA has reviewed and updated the two-day erosion and sedimentation training package with the NSW Soil Conservation Service. Staff in all regions have been trained and the RTA has facilitated delivery of the training package to contractors to improve understanding of environmental management requirements and techniques to improve performance.

## Heritage

### Timber truss bridge conservation

The RTA manages 48 timber truss bridges across NSW, many of which are listed on the NSW State Heritage Register. When built these bridges carried loaded bullock drays and trucks of about 16t. The general access limit is now 42.5t and, although these timber bridges can be modified to bear this load, they are unable to handle the higher loads that are becoming more common in the freight industry.



During 2009–10 the RTA prepared a draft timber truss bridge strategy, which identified a representative sample of bridges that it could retain in permanent operation while replacing the remainder over time. This was presented to the NSW Heritage Council in late 2010. In cooperation with the Heritage Council, the RTA will undertake public consultation during late 2011 to seek community input on its proposed approach before finalising the strategy.

### Sydney Harbour Bridge tolling – oral history

The catalyst for this project was the introduction of cashless tolling on Sydney's icon in January 2009. The oral history was based on interviews with 11 people who had been involved in all aspects of tolling – toll collectors, supervisors and managers, technicians and engineers. It discusses the evolution of tolling on the bridge from the early days of collectors standing on platforms exposed to the weather to the arrival of electronic tag technology and the final removal of a human presence when tolling went cashless. The oral history was released in March 2011 and is available on the RTA website.

#### CASE STUDY

### Aboriginal archaeological investigations

Construction of the Hume Highway duplication and town bypasses impacted on a number of archaeological sites identified in consultation with Aboriginal communities along the route. During September 2010 four years of archaeological excavations finished, revealing occupation dating back 6,500 years. Aboriginal sites officers from 40 local community organisations helped to reveal continuity in occupation of the land, connection between different cultural areas and use of the environment. Adhering to the *Procedure for Aboriginal Cultural Heritage Consultation and Investigation*, the RTA identified and consulted with knowledge holders and Aboriginal community members to identify measures to minimise the impact of road construction on Aboriginal cultural heritage.



Archaeological excavations being undertaken for the Hume Highway Upgrade, July 2010.



## Aboriginal cultural heritage consultation



The RTA complies with the *National Parks and Wildlife Act 1974*, which sets out the requirements for impacts to Aboriginal heritage objects and places. In 2010 the Act was amended, with significant changes to the penalty regime and the introduction of new codes of practice and guidelines.

RTA heritage specialists updated the organisation's *Procedure for Aboriginal Cultural Heritage Consultation and Investigation* to reflect the changes. This is an essential tool for project managers to ensure they comply with the legislation and minimise the risks of accidental impacts on Aboriginal heritage.

### CASE STUDY

#### St Patricks Cemetery, North Parramatta – managing heritage issues

The widening of Church Street at North Parramatta to install a southbound bus lane encroached on the edge of Australia's oldest Catholic cemetery – the heritage-listed St Patricks Cemetery. In close consultation with the Heritage Branch of the Department of Planning, Parramatta City Council and the community, the RTA undertook archaeological remote sensing and monitoring to ensure that no unmarked burials were impacted. This work also allowed the correct original boundary line of the cemetery to be confirmed and a new boundary fence to be installed, restoring the cemetery's original rural character.



The main gate at St Patricks Cemetery, North Parramatta after restoration.

## Urban design

### Urban design policy

Policy work this year included:

- Finalisation of research investigating the carbon asset of the State road landscape. The study investigated the carbon cycle in relation to the road network and how best to manage and safeguard it. The study also developed and tested a method for calculating the total carbon stored in all trees, shrubs and soil throughout the network.
- Development of the draft guideline, *Contributing to liveable communities: roads as links and places*, which sets out a process for assessment of a project's effect on such urban design aspects as pedestrian connectivity, comfort, safety, amenity and general quality of life. The guideline is currently being piloted on a number of different projects.

### Urban design in project development and delivery

In the RTA, urban design thinking is applied in all stages of project development and delivery: the initiation phase, the development phase, the implementation phase and the finalisation phase.

In the **initiation phase** network and corridor strategies are developed with urban design objectives governing their implementation. For example, this year the Campbelltown Road, Newcastle Road – F3 to Broadmeadow and Bells Line of Road planning studies included urban design input.

In the **development phase** options are assessed and design outcomes developed which maximise benefits to the built and natural environment. Of note this year was development and refinement of the Gerringong to Bomaderry concept designs including the Berry Bypass. Urban design objectives were at the heart of the development of the design to ensure a road that fits well with the beautiful south coast landscape and attractive tourist towns such as Gerringong and Berry.

In other work relating to the development phase, an urban design concept plan and visual impact assessment was prepared for the 150km long section of the Pacific Highway between Woolgoolga, north of Coffs Harbour, and Ballina. The plan identifies the main character zones of this vast tract of land and assesses the effect the road would have, and how urban design principles can help fit the road into the landscape.

In the **implementation phase** designs are refined and design quality pursued in the detailed design and construction stages. In 2010–11 construction of the Hunter Expressway, Banora Point Upgrade and Kempsey Bypass continued with multi-disciplinary collaborations between engineers, urban designers and environmental experts. Completed projects showing the benefit of urban design in the implementation phase included the Alstonville Bypass, Adelong Bridge and Inner West Busway, including the new Iron Cove Bridge.

In the **finalisation phase** projects are reviewed and landscapes are established for the operations stage of a road. When the project is completed it is only the beginning for the establishment and eventual maturation of the



landscape. The prime example this year of urban design in the finalisation phase was completion of the Australian Defence Force Memorial Plantation of 50,000 trees along Remembrance Drive to the south west of Sydney. Two stone location markers were designed and located at each end of the memorial plantation, which was opened by the Governor-General in November 2010.



Urban design in the development phase: photomontage illustrating the visual impact of the proposed fence types on Anzac Bridge.

## Organisational

### Environment Executive Committee

The committee meets bi-monthly and provides strategic direction and leadership to RTA environmental programs and policies. Its major activities and achievements for 2010–11 included:

- Promoting and monitoring implementation of initiatives in the RTA's Green Plan, which is a chapter in the *Blueprint Update 2011*.
- Reviewing RTA management responses to environment incidents and identifying improvement strategies to reduce incidents.
- Tracking contractor environmental performance trends and providing strategic direction for contractor performance improvement.
- Providing effective coordination of resources to implement performance improvement strategies, environmental policy and incident management across the RTA.
- Providing strategic review and endorsement of environment procedures and guidelines.

### Environmental sustainability strategy

Following the release of the RTA's environmental sustainability strategy in June 2010, the RTA has continued to integrate sustainability projects into many areas of its business. Some key sustainability initiatives implemented include:

- Completion of a trial into the use of energy control devices in street lights that adjust the power to the lamp according to remaining lamp life. The trial, conducted over a six-month period, demonstrated up to a 23 per cent reduction in energy consumption with the installation of the control equipment. The RTA is now considering amending its street specification to allow for its use.
- Expansion of the Diesel Retrofit Program to include retrofits of off-road equipment.
- Changes to the RTA's specifications for asphalt to allow use of warm asphalt additives which will allow asphalt to be produced at lower temperatures.
- Changes to the RTA's specification for road sub-base materials to permit an increase in the quantity of certain recycled building materials to be used.
- Installation of rainwater tanks at Yennora and Narrandera works centres.
- Development of new environmental specifications for printed material.

### Climate change

#### RTA Climate Change Plan



The RTA Climate Change Plan is a key element in helping the RTA to become more sustainable.

The RTA reports twice yearly on progress against specific climate change actions in the plan. The RTA also reports on climate change performance indicators through annual reporting of greenhouse emissions from fuel and electricity use to the NSW Government (under the NSW Government Sustainability Policy) and internal reporting of the Vehicle Emissions Measure.

Key initiatives completed in 2010–11 include:

- Identifying options for reducing street lighting energy consumption.
- Calculating construction emissions for a range of infrastructure projects using the RTA's greenhouse gas calculator.
- Supporting the development of nationally agreed methods for measuring and benchmarking road construction greenhouse emissions.



- Investigating the effect on vehicle emissions of various strategies for traffic signal control.
- Developing a program with other road and environment agencies to improve understanding of vehicle emission modelling.
- Developing updated speed and acceleration-based emission factors from in-service vehicle emission testing data.

## Greenhouse gas emissions

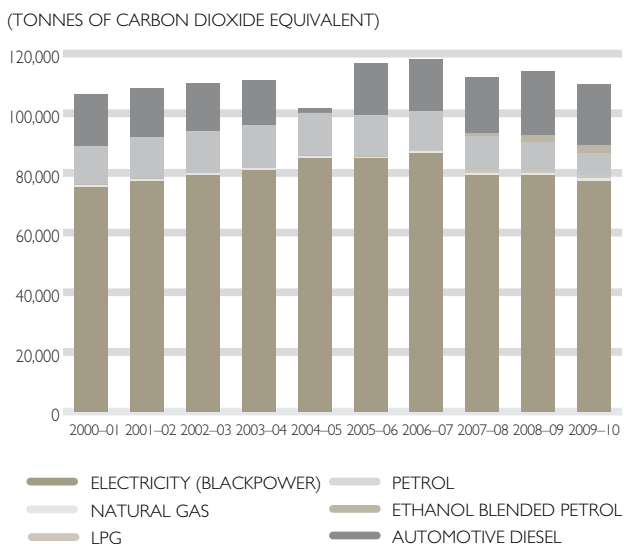
Reducing RTA greenhouse gas emissions is an important objective. Specifically, the organisation has set a target of reducing its greenhouse gas emissions by an average of 2 per cent per annum until 2020.

In 2009–10 the RTA reduced its greenhouse gas emissions by 3.7 per cent on the previous year. Historical trends in greenhouse gas emissions since 2000–01 are shown in Figure 19. The main sources of emissions are the operation of the RTA's buildings, street lights, traffic signals and vehicle fleet. The reduction in emissions was largely due to:

- Reduction in diesel use (4 per cent).
- Reduction in petrol use (13 per cent).
- Reduction in building energy use (5 per cent).

The RTA is continuing to implement strategies to reduce its energy consumption and greenhouse gas emissions. For example, at the Campbelltown Motor Registry a new energy efficient air conditioning system has been installed and the ceiling lowered to reduce the volume of air that needs to be heated or cooled.

**FIGURE 19. TOTAL GREENHOUSE GAS EMISSIONS**



## Reducing the RTA's carbon footprint

### Improved environmental performance from the light vehicle fleet

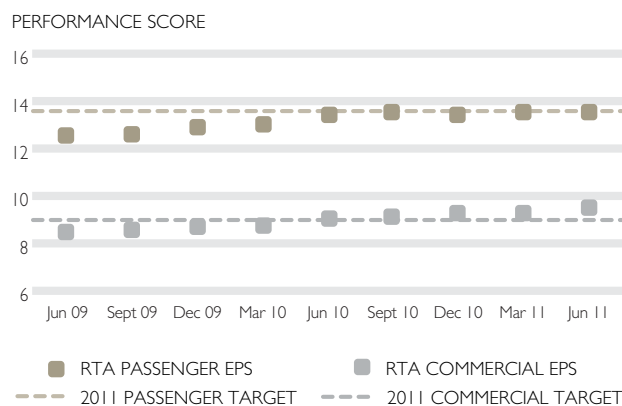
The Environmental Performance Score (EPS) is a rating out of 20 given to all light vehicles sold in Australia and is based on the greenhouse gas emissions and air quality impact of vehicles. The higher the score the better the environmental performance of a vehicle.

The NSW Cleaner Government Fleet Program sets performance targets for government fleets as follows:

- A target average Environmental Performance Score for passenger vehicle fleets of 13.5 by June 2011. The RTA average EPS was 13.42 as at June 2010 and 13.78 as at June 2011. The passenger vehicle target has been met and exceeded.
- A target average Environmental Performance Score for commercial vehicle fleets of 9 by June 2011. The RTA average EPS was 8.93 as at June 2010 and 9.51 as at June 2011. The commercial vehicle target has been met and exceeded.

Figure 20 shows the RTA's improving EPS for its light vehicle fleet which is due to the implementation of a cleaner fleet procurement policy.

**FIGURE 20. ENVIRONMENTAL PERFORMANCE SCORE FOR THE RTA LIGHT VEHICLE FLEET**



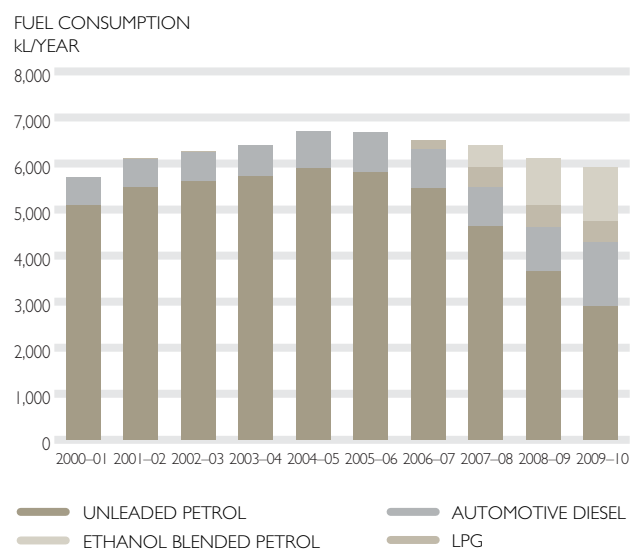
There was a continued decrease in the use of unleaded petrol in 2009–10 compared to previous years and a corresponding increase in diesel, LPG and ethanol blended petrol (E10) used in the RTA's light vehicle fleet. This trend is shown in Figure 19. The decreased use of unleaded petrol is largely due to the increasing availability of E10 fuels and the improving environmental performance of fleet vehicles (as demonstrated by the increasing EPS score in Figure 21).

A target 20 per cent of all fuel used in government fleet light motor vehicles should be E10. The use of E10 in the RTA light vehicle fleet has been gradually increasing, from 26 per cent in June 2009 to 36 per cent in June 2010 and 63 per cent in June 2011, far exceeding the NSW Government target.





**FIGURE 21. FUEL CONSUMPTION IN THE RTA LIGHT VEHICLE FLEET 2000–01 TO 2009–10 (KL/YEAR)**



Note: Ethanol blended petrol data not collected before 2006–07

### Eco-driving to reduce heavy vehicle fuel use

The consumption of diesel by the RTA's heavy vehicle fleet is currently responsible for about 30 per cent of the RTA's direct energy consumption and about 15 per cent of its carbon footprint. This means controlling fuel use and greenhouse gas emissions from the operation of the heavy vehicle fleet is an important element of managing the RTA's overall energy use and carbon footprint. In 2010–11 the RTA commissioned development of an eco-driving training program to improve the efficiency of fuel use in RTA heavy vehicles. The program will be delivered to RTA heavy vehicle drivers in 2011–12.

### Road Corridor Carbon Landscape Project

**Stage I** of the Road Corridor Carbon Landscape Project consisted of an investigation of opportunities to reduce the RTA's carbon footprint through corridor landscape initiatives. Three reports were prepared by consultants:

- A carbon inventory methodology report, which outlined a methodology to quantify carbon stock and carbon stock change in the public road landscape in NSW. It was tested on three regions.
- A carbon landscape management techniques report, which provided an overview of determinants of carbon stock in the landscape and described baseline scenarios for assessment of alternative landscape management techniques.
- A new carbon landscape management report, which compared the outcomes of alternative landscape carbon management techniques.

**Stage 2** of the project applied the carbon inventory methodology developed in Stage 1 on a statewide basis. This involved undertaking carbon inventory calculations and some sensitivity analysis of various management scenarios to assist in future policy/strategic planning. As of June 2011 a baseline inventory for each of the management regions and preliminary sensitivity analysis of various management scenarios had been undertaken. The project is expected to be completed in early 2011–12.

### CASE STUDY

#### Electric vehicle on trial

RTA has further demonstrated its commitment to environmental sustainability by leasing one of Australia's first fully electric passenger vehicles, the i-MiEV (Mitsubishi innovative Electric Vehicle). Only 40 of these vehicles have been imported into Australia and, as the lead road agency in the State, the RTA is taking the opportunity to trial the new vehicle technology.

The i-MiEV is powered by an electric engine and lithium ion batteries and emits zero 'drive time' greenhouse gas and other air emissions. The batteries are charged through a standard 240 volt, 15 amp power plug or can be fast charged in 30 minutes using quick charge power stations, which are currently being rolled out in major cities around Australia. The vehicle has a top speed of 130 km/h and a range of up to 160km once fully charged.



The RTA's i-MiEV, one of Australia's first fully electric passenger vehicles.



## Energy efficiency

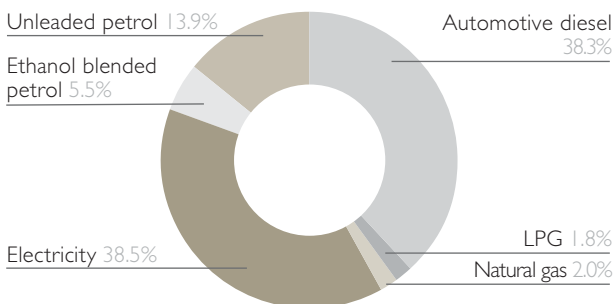
The RTA reports in October of every year on its direct energy consumption, in accordance with the NSW Government Energy Management Policy and NSW Government Sustainability Policy.

In 2009–10 the RTA consumed 708,180 gigajoules of energy. The RTA’s major direct energy uses include electricity to operate traffic signals, street lights and buildings, and diesel and petrol for road machinery and RTA vehicles. In addition, minor amounts of LPG and natural gas are consumed for heating buildings, fuelling some light vehicles and for manufacturing asphalt. The RTA’s energy use profile for 2009–10 is shown in Figure 22.

On 1 January 2011 the RTA signed a contract with United Group Limited for the management of the RTA’s real estate portfolio. A key element of the contract is to identify energy efficiency measures in buildings and make recommendations to the RTA. In addition to this engagement, the RTA continued to implement the recommendations from energy efficiency audits undertaken of its most energy consuming buildings. This included upgrading older air-conditioning systems in offices, motor registries and work centres with more energy efficient systems.

**FIGURE 22. ENERGY USE PROFILE 2009–10**

(Per cent of direct energy consumption as measured in gigajoules)



1 Because of the time delay in obtaining data and collating energy reports, all annual report energy data is 12 months in arrears.

## Waste Reduction and Purchasing Plan

The RTA reports every two years to the Office of Environment and Heritage on the progress of its Waste Reduction and Purchasing Policy (WRAPP). The last progress report was submitted in October 2009, with the next report due for submission in August 2011.

Initiatives implemented by the RTA since the last progress report include:

- Amendment of specifications to allow reuse of crumbed rubber from waste tyres in spray bitumen and asphalt mixes, and reuse of a broader range and increased quantities of recycled construction waste in sub-surface road pavement layers.
- Development of a specification for the recycling of bridge timbers. The aim is to maximise opportunity for safe recovery and reuse of bridge timbers. Reuse of bridge timbers has been problematic due to uncertainty about the use of timber treatment chemicals. This resulted in potentially valuable used timbers being sent to landfill. The new specification provides a process for testing used bridge timbers before and after processing at timber mills and defines acceptable contaminant limits to allow for their reuse.
- Development of an e-learning sustainability awareness module that incorporates WRAPP information and awareness activities. The module will form part of the RTA’s online training program and will be available to all staff wishing to learn more about sustainability issues.



## Emissions

### Diesel Retrofit Program

The Diesel Retrofit Program this year was much broader in scope. The RTA continued to work with the Office of Environment and Heritage to improve the emissions performance of heavy diesel vehicles operating in the Sydney greater metropolitan area by fitting after-treatment devices to exhaust systems to filter out particulate matter, resulting in improved air quality. The Office also extended the scope of the program to include fitting exhaust after-treatment catalysts to non-road vehicles. The RTA provided funding to fit devices to trucks accessing Port Botany, Port Kembla, Port of Newcastle and Cooks River Rail Yard to assist the NSW Government in meeting national air quality goals. Eighty-six devices were fitted across all projects during 2010–11.



### Clean Fleet Program

The Clean Fleet Program is an audited vehicle maintenance program designed to improve air quality by reducing diesel emissions. Participants are eligible to seek a fuel tax credit under the Federal Fuel Tax Credits Program if they meet standards for using clean fuel, correct engine settings, regular vehicle maintenance and effective fault identification and repair.

A promotional mail-out to high profile organisations and NSW Government authorities took place in November 2010 and the program was advertised in the December edition of *Australasian Transport News*. As at June 2011 there were 6,702 vehicles in the program (including 2,061 State Transit Authority buses and 595 RTA vehicles). Clean Fleet is a voluntary program.

### Green Truck Partnership

The Green Truck Partnership is an alliance between the RTA and the road transport industry. The partnership was initiated following concerns from road transport operators about a gap in the availability of independent research on products that seek to improve the environmental performance of heavy vehicles. At present, heavy vehicle operators rely on information from manufacturers when seeking to purchase a product to improve the environmental performance of their heavy vehicle fleet.

The steering group to oversee the Green Truck Partnership consists of representatives of the road transport industry and public sector. During 2010–11 five technology trials of biodiesel, compressed natural gas, liquified natural gas, lift trailer axles and automatic gearbox technology were completed. Economic benefits with regard to fuel savings range from \$1.15 to \$19.30 per 100km depending on the technology.

## Challenges and the way forward

Improving the environmental performance on our road construction and maintenance projects will be a key focus next year. The RTA will continue developing tools to assess environmental performance, share knowledge and experience with contractors, and provide training opportunities to achieve better outcomes.

Enhancing the quality and efficiency in the delivery of environmental assessment reports prepared by professional service contractors is another focus. To efficiently deliver quality assessments, the RTA aims to embed environmental staff in project teams, ensure that the early scoping of impacts is thorough, and better manage the performance of professional service contractors. A formal process has been established to benchmark quality environmental impact assessments and will be promoted through implementation of the new procedure for review of environmental factors and extensive training for staff and contractors.

The recent repeal of Part 3A of the *Environmental Planning and Assessment Act 1979* and the introduction of new planning requirements for State significant infrastructure under Part 5.1 of the Act will present the RTA with new challenges in delivering major projects that have significant environmental impacts. To ensure that projects are appropriately assessed, the RTA will modify existing guidelines so that environmental impact statements prepared under Part 5.1 meet the intent and spirit of the amended legislation.

The Australian Government's price on carbon emissions also poses a challenge, but one which the RTA had anticipated. It will add impetus to the programs in the RTA Climate Change Plan to reduce greenhouse emissions, and hence exposure to the effects of a carbon price.

The RTA is committed to reducing the environmental impact of its operations and embedding the principles of environmental sustainability in all aspects of its operations. It is focusing on developing a 'green culture' across its workforce. Central to achieving this is equipping staff with the skills and awareness they need to consider the environmental effect of any work they plan to do. A new sustainability e-learning module has already been introduced and included in staff induction.





REVIEW OF OPERATIONS

# Services

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## Key achievements in 2010–11

Ninety-four per cent of customers rated motor registry services as 'good' or 'very good' in a survey conducted in May 2011 (against a target of more than 90 per cent).

Installation of a state-of-the-art queue management system was completed for all 126 motor registries in October 2010 to enable a more efficient, high-level customer service, and provide greater customer access through a multi-lingual interface.

The myRTA.com site was redesigned to incorporate customer feedback and new features. Customers can now easily change their address details and renew their registrations, among other services.

A Mobile E-Toll Office was developed to provide easier access to a range of tolling products and information.





REVIEW OF OPERATIONS

# Services

RTA result: Meeting community needs

## The RTA's services

The RTA works to meet the needs and expectations of its broad range of customers and stakeholders, such as those who use its licensing and registration services and those who are affected by the RTA's roadwork and management of the NSW road system.

The RTA provides its services in many ways, including through an extensive network of motor registries which are the central point for licensing and registration transactions. This network also provides important information to the community about issues such as the comparative safety of new and used cars and the safety and ease of use of child restraints.

This chapter outlines how the RTA has worked to meet the needs of the people of NSW over the past year. It is divided into three main sections:

**Customers** – accessible, high quality, data integrity and identity management.

**Stakeholders** – a focus on effective consultative, communication and partnerships.

**Challenges and the way forward.**

Chapter cover image: Competition winners arrive for New Year's Eve celebrations on the Cahill Expressway. Photo taken by RTA photographer Geoff Ward, December 2010.

## Customers

### Motor registries

#### Survey indicates increased customer satisfaction

The RTA aims to excel at providing the most efficient, effective and accessible services for its customers at optimal cost.

Motor registry services exceeded the customer satisfaction target of greater than 90 per cent in an independent survey of 1,246 customers conducted in May 2011. Ninety-four per cent of customers rated services as 'good' or 'very good'. The results have shown a consistently high level of satisfaction over the past several years.

#### Queue management system installed

The installation of a state-of-the-art queue management system was completed for all 126 motor registries in October 2010. This new integrated system enabled motor registries to:

- Provide a higher level of customer service by efficiently rostering staff to meet customer demand.
- Provide an aesthetically pleasing first point of contact for customers that reflected the RTA brand.
- Improve customer access through provision of a multi-lingual interface.

#### Workforce management system improves service

The roll out of the motor registries' new electronic workforce management system was completed in 2010. This leading software was introduced into motor registries in order to:

- Improve customer satisfaction.
- Increase staffing efficiencies.
- Enhance management productivity.
- Provide specialised reporting.

Introduction of the system has allowed the RTA to forecast the right staff levels at the right time, thereby improving customer satisfaction. Management productivity has been enhanced with the improvements in staffing efficiency and the introduction of specialised reporting.

#### New motor registries

In 2010–11 the motor registry network was improved through the relocation and refurbishment of several sites:

- Wollongong Motor Registry relocated to new premises which opened for business on 9 August 2010.
- Burwood and Campsie motor registries were amalgamated to a new location at Burwood, which opened for business on 13 September 2010.

Mayfield and Newcastle motor registries were amalgamated to a new location at Newcastle, which officially opened on 20 June 2011.



## These new motor registries provide state-of-the-art equipment and facilities for both customers and staff.

In addition, a number of motor registry upgrades were undertaken, including refurbishment of Griffith Motor Registry (April 2011) and Albury Motor Registry (May 2011). Both upgraded locations provide customers and staff with modern facilities which incorporate the latest design features, such as improved public seating, newly designed transaction counters and merchandise display units.

Disability access and facility upgrades to a number of motor registries were also completed, including Inverell (January 2011), Kiama (May 2011) and Deniliquin (June 2011).



The new amalgamated motor registry at Newcastle, June 2011.

## RTA Contact Centre

Together with motor registries, the RTA Contact Centre is often the first point of contact for customers with the agency, either through telephone or email enquiries. Contact Centre staff conducted more than 3.4 million transactions in 2010–11.

Over the year the Contact Centre began upgrading the telephone system, which has increased the availability of lines. As a result customer waiting times, particularly during peak periods, have been reduced by over one minute.

A new disaster recovery 'warm site' was established which will allow the Contact Centre to continue to serve RTA customers in the event of emergencies arising at the Centre's physical location. Calls can be immediately redirected to this new site so that disruptions to customer service are minimised.

## New technology improves customer interaction

In April 2011 the Contact Centre began utilising a new customer interactive management and interactive voice response system. This new technology replaces legacy telephone systems and associated infrastructure, and significantly improves staff interaction with customers. It enhances the efficiency and effectiveness of staff

in addressing customer enquiries by allowing the business to better understand customer requirements and immediately route calls to subject matter experts anywhere within the RTA. Also improved is the RTA's capability to handle critical events such as bushfires, major traffic incidents or other emergency situations that impact NSW road users.

## Mobile E-Toll Office

In order to provide easy access to tolling information and products, the RTA has developed a Mobile E-Toll Office. This year the office was deployed at seven major events and a number of shopping centre precincts across the State. Thousands of people attended the stand at major events, including the Royal Easter Show, the Hunter Transport Awareness Day, and the Bathurst 1000 and Telstra 500 V8 Supercar races.

The Mobile E-Toll Office adds to the suite of E-Toll customer focused initiatives, including the E-Toll office at Sydney Airport, that supports over 17,000 industry customers, and the rental car tolling solution delivered by AVIS and Budget Rent-a-Car.

## Online services

### Use of online services increases



The number of transactions processed online continued to grow.

The percentage of eligible online transactions increased from 38.1 per cent in 2009–10 to 42.7 per cent in 2010–11, an increase of 680,000 transactions.

This year the total number of transactions via myRTA.com exceeded 4 million for the first time, with a total of 4.021 million transactions completed. The site was redesigned to incorporate customer feedback and usability testing, ensuring a better customer experience. The redeveloped site also saw the introduction of an instructional video demonstrating the online address change service to customers. The video has proved very successful, with in excess of 17,000 hits since its upload in February 2011.

After a successful promotion of the myAddress online address change service, the overall percentage of online address changes grew from 20 per cent in July 2010 to 27.4 per cent in June 2011, representing an additional 128,000 online address changes.

The RTA's myRego system allows customers to renew their vehicle registration via the internet or telephone. During 2010–11 2.46 million vehicle registrations were renewed via myRego, which represented around 46 per cent of all eligible registration renewals for the entire year.



The RTA's Dealer Online system allows motor dealers to conduct registration transactions online.

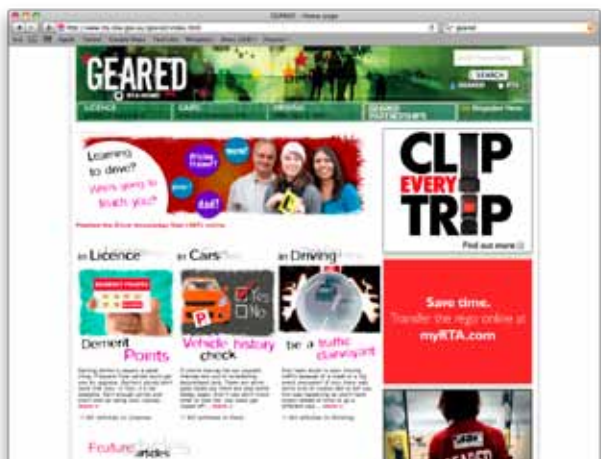
The percentage of new vehicles registered via the system increased from 70.2 per cent in July 2010 to 80.5 per cent in June 2011, representing a total of 244,000 new vehicles registered online.

The RTA is planning further enhancement and new online services to further increase the number of transactions done online.

## Geared website reaches young drivers

Geared.com.au is an RTA website with important information for young drivers, including road safety and licensing information. The RTA partnered with Surfing NSW to have co-branded signage displayed at over 30 junior surf events. The partnership proved to be an ideal platform for the RTA to promote the young driver site to 16 to 20-year-olds along the NSW coast. In 2010–11 the site had a 73 per cent increase in traffic compared to a 54 per cent increase in 2009–10.

The partnership will end in December 2011, at which time an evaluation will be undertaken and a decision made on extension of the partnership into 2012.



Screenshot of the Geared website homepage.

## myE-toll website now easier to use

As part of a redesign of the myRTA self-service facility, the myE-Toll website was relaunched. The site, which makes it easy for customers to find the services they want, allows them to open a new tag account, purchase a casual user pass, or pay a toll notice. The improvement in ease and accessibility of the new website has increased the percentage of new tag accounts opened via myE-Toll from 32 per cent in July 2010 to 45 per cent in June 2011.

The myE-Toll portal also allows existing customers to 'top up' their account, view and update contact information, and download tax invoices and usage statements for free. In response to customer feedback, the RTA increased the usage statements history online from 12 months to 18 months, giving customers better information about their tolling account.



## Website provides a single access point

Motor registries provide a range of services on behalf of other agencies, including the State Debt Recovery Office and Maritime.

The OneGov Direct Access Service, a joint project of the RTA and the Department of Finance and Services, was originally developed for use by RTA Government Access Centres. In July 2010 the OneGov website became available to non-RTA centres, providing a single point of access to government services, products and information for centre officers. OneGov also facilitates the renewal of Maritime NSW licensing and registration products at all RTA motor registries, including RTA Government Access Centres.

## Information for the community

### Road Projects website refreshed



The Road Projects website at [www.rta.nsw.gov.au/roadprojects](http://www.rta.nsw.gov.au/roadprojects) (formerly the Construction and Maintenance website) was redeveloped to give customers easier access to information about the RTA's road infrastructure projects across the State. This included an engaging new design, better navigation, interactive features and a consistent layout. As at 30 June 2011 the 954-page website featured around 5,440 images, 7,320 documents and 188 videos/animations.

Since the launch in May 2011 there have been more than 63,906 visits to the website and 324,101 page views. Feedback has included:

- "It is nice and easy to navigate. I like it because it is very intuitive."
- "Just wanted to say I love the new site. So easy to quickly find the projects that I want to know about. Great look and great ease to move around the site. Well done!"
- "Your new construction section of the website is awesome! So much easier to navigate, and much clearer. Well done!"



Screenshot of the new RTA Road Projects website homepage.

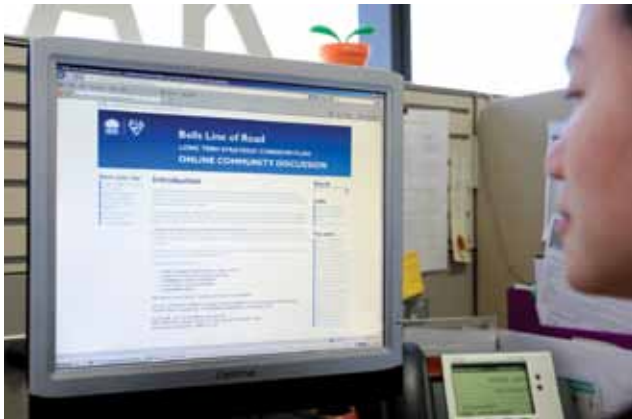


## Bells Line of Road online community forum

In November 2009 the NSW and Australian governments announced a Long Term Strategic Corridor Plan for Bells Line of Road.

While a major upgrade of Bells Line of Road is not required until after 2033, long-term planning must start now in order to address future transport requirements and development pressures, particularly in the north west sector of Sydney.

Community consultation on the future of the Bells Line of Road corridor was undertaken between 1 November 2010 and 31 January 2011 following the publication of the *Background Summary and Corridor Objectives Report*. It included the RTA's first online discussion, which took place via a forum-specific section of the Road Projects website and received 4,599 actual visits in the fourth quarter last year. Twenty per cent of people who visited the site participated by posting comments/questions. Those who chose not to post a comment read what others had posted and used this to inform themselves – much like a community meeting.



The online community forum for the Bells Line of Road plan.

Considering the project under discussion concerned strategic planning and not an actual proposal, the number of people visiting the online forum (excluding RTA staff) indicated that the website was highly successful. An evaluation of the forum found that it met its stated aim of being an open and inclusive means of consultation and attracted a broad demographic and geographic range of participants. The behaviour of participants was exemplary.

## Property owner guide to RTA land acquisition

In 2010 the RTA recognised the need to update and improve advice to landowners who are directly affected by RTA work or who may be involved in a property purchase with the RTA. The updated *Land Acquisition Information Guide* gives people an understanding of what to expect from the RTA if their property is to be acquired. Information in the guide is used as a basis for further discussion between the community and RTA property management staff. Presented in plain English, the publication is one of the clearest guidelines on the relevant state acquisition process in Australia.

## F3 commuter pack on incident management and driver response

When a crash or incident on the F3 causes lane closures, traffic can quickly build up and create unavoidable delays. To equip users to deal with these situations the RTA developed a special commuter pack. It has both printed and online material and aims to help road users understand how major incidents on the F3 are managed and how they should respond if they are about to travel, heading towards the freeway or already on the F3 when an incident occurs.

A printed 'glove box guide' for travelling on the F3 was developed to advise road users on what to do in the event of a major road incident.

Included is a map marked with all entry and exit points, train stations and detour routes along the freeway. The guide was distributed to customers in Sydney, the Central Coast and Hunter regions via registration renewal notices, motor registries and NRMA customer care centres.

New web pages were also published on the RTA website with information for customers about incident management on the F3. The new material includes an animation of a major incident to demonstrate how traffic on the freeway can be affected and how road users should respond. A video showing how a contra flow is implemented to manage traffic during major road incidents was also developed to help road users understand the process.

## Road and Fleet Services

Projects that delivered significant customer benefits over the reporting year included:

- Continued repainting and resurfacing projects at Tom Ugly's Bridge where the RTA's innovative use of an underslung scaffolding system resulted in cost savings of more than 20 per cent.
- Completion of the dragon's teeth program across NSW ahead of time and budget.
- Completion of the \$12 million Mulgoa and Jamison Road intersection reconstruction at Penrith.
- Rehabilitation and strengthening of the ceiling beams in the Kings Cross Tunnel.





Outside NSW, Road and Fleet Services (RFS) successfully designed, manufactured and installed a full-colour variable message sign at Gungahlin Drive in Canberra. As the result, RFS was asked to provide technical and engineering expertise in the expansion of the ACT's traffic management systems. RFS also completed a \$9.5 million restoration of the heritage-listed Tharwa Bridge.

The project included several Australian engineering firsts – intricate fabrication of timber trusses and the longest (110m) stress-laminated timber component ever constructed to replace the bridge deck. RFS also negotiated a contract to construct and supply two state-of-the-art linemarkers to Queensland Main Roads.

RFS completed the Ryde and Tempe bus depot reconstruction projects valued at \$10.6 million for the State Transit Authority without restricting their normal operations.



Restoration of the heritage-listed Tharwa Bridge, November 2010.

## War Widows Concession

The War Widows Concession was implemented in January 2011. Pensioners and war widows applying for a NSW photo card are exempt from fees and all war widows, irrespective of age, will not have to pay for their driver's licence or vehicle registration. The NSW photo card is a voluntary identification card for people who do not hold a current NSW driver's licence or other form of photo identification to help them prove who they are.

## Australian Disability Parking Permits

The RTA worked with the Australian Disability Parking Working Group on development of the Australian Disability Parking Scheme. The RTA began issuing Australian Disability Parking permits in addition to NSW Mobility Parking Scheme permits in September 2010. The permits must be displayed together to gain parking concessions.

The Australian Disability Parking Permit aims to replace over 100 different permit types across Australia and make it easier for permit holders when travelling interstate. The common design for the new national permit will ensure easy recognition by all enforcement officers across Australia. The permit also includes enhanced security features to help reduce permit misuse.

## Stakeholders

### Account managers appointed for key stakeholders

The RTA introduced dedicated account managers for some of its key stakeholders including NRMA Motoring & Services, the Pedestrian Council of Australia, the NSW Taxi Council and the NSW Ombudsman's Office. Their role is to work towards improving relations and collaboration on strategic issues. They give stakeholders a point of contact with the RTA and allow the organisation to better understand and coordinate stakeholder issues. For example, the RTA has been able to work more closely with the NRMA on a number of initiatives including the roll out the comprehensive F3 commuter pack and promotion through motor registries of the Australian Government/Australian Automobile Association 'Keys2drive' initiative for younger drivers. The NRMA and the RTA now meet quarterly to discuss roads matters.

### Inaugural industry forum

The Transport Industry Forums were established to engage with corporate stakeholders and business groups and allow them to hear first-hand from transport leaders. The inaugural event on 25 August 2010 was attended by both the Minister for Transport and Minister for Roads. Two hundred stakeholders attended to hear Department of Transport (DoT) Director General Les Wielinga speak about the formation of DoT and the *Metropolitan Transport Plan*.

### Road Freight Advisory Council

The Road Freight Advisory Council's main role is to advise the NSW Government on policies relating to heavy vehicle safety and economic productivity. Council membership comprises industry leaders who have expressed support for the council as an effective forum to work with government on key issues.

The council has several very active sub-committees, including the Five Star Sub-committee whose work is highlighted in the Safety chapter of this report.

### The Last Mile Access Sub-committee

The sub-committee was formed to consider 'last mile' issues, which include access to roads for vehicles operating at Higher Mass Limits, 4.6m high vehicles and B-Doubles, as well as the development of networks for higher productivity vehicles. During 2010 the sub-committee developed an early gains package which identified several deliverables that could be completed or substantially progressed by early 2011. Areas for improving 'last mile' access for heavy vehicles in 2011 were proposed and, if supported, will build on achievements gained through the package. These included:

- Publication of assessment guidelines for 4.6m high vehicles.
- Increased access for 4.6m high vehicles to all major livestock centres.



- Review of Higher Mass Limits access in NSW.
- Identification of improvements to access application processing times.

In May 2011 the Road Freight Advisory Council endorsed the establishment of a Metropolitan Last Mile Sub-group reporting to the sub-committee to focus on the particular challenges of last mile access in the metropolitan areas of Sydney, Newcastle and Wollongong.

More detail on the work of the sub-committee appears in the Access section of the Asset chapter.

## The Urban Freight Sub-committee

The sub-committee was formed to investigate delivery curfews in urban areas and, in particular, night-time access to retail outlets. Work completed includes:

- Developing a strategy to reduce time-based restrictions on heavy vehicle access which affect urban freight deliveries.
- Improving network utilisation and supply chain efficiency.
- Addressing the amenity, environmental and safety concerns of the community.
- Developing a hierarchy of strategic freight routes for the greater metropolitan area.

## The Overheight Vehicles Sub-committee

The sub-committee was formed to identify and recommend strategies to prevent overheight incidents, with special consideration of technological and infrastructure measures, legislative options, educational programs and alternative route options.

Their final report went to members of the Road Freight Advisory Council, the Transport Operations Logistics Group and industry associations on 24 January 2011. A team was formed within the RTA to implement the report recommendations and will develop a business case for a program to significantly reduce the incidents associated with overheight vehicles travelling through tunnels and under bridges in NSW.

## Motor Accidents Authority and RTA consultative forum

The inaugural Motor Accidents Authority and RTA forum was held in May 2011 and aimed at facilitating closer working relationships between senior managers on strategic issues. Issues identified ranged from national projects, such as national heavy vehicle reforms, insurance law, road safety research and programs, data exchange improvements and enhancements to registration and number plate schemes.

## Education and profile building at AgQuip, Gunnedah

The AgQuip Field Day at Gunnedah is the largest of its type conducted in country NSW and this year attracted around 560 exhibitors representing some 2,500 companies.

More than 100,000 people attended, mainly farmers, transport operators, heavy vehicle drivers and families.

Two exhibitions provided the RTA with the opportunity to raise its profile in rural NSW and liaise with customers in a friendly and informative environment. The aim was to educate road users regarding relevant rules and regulations, thereby improving road safety. Topics discussed at AgQuip included driver fatigue, load restraint, vehicle roadworthiness, registration, licences, mass loading and access, child restraints, seatbelts and vehicle safety.

The 'regular' RTA customers had the opportunity to make enquiries not normally made during interception due to time constraints or concern that they may bring about enforcement action. Children's activities were incorporated, allowing time for adults to engage with RTA staff. Access to the RTA website was made available for information on road safety, career opportunities with the RTA, licensing and regulation, and heavy vehicles.

## National Heavy Vehicle Regulator

The Council of Australian Governments is establishing a single National Heavy Vehicle Regulator to improve productivity and safety for the heavy vehicle industry. It is expected to be operational on 1 January 2013.

The RTA has a special team tasked with implementing the regulator within the organisation. Activities to date include working closely with the Department of Transport on submissions to the regulator's office and detailed planning to scope the size of the change required within the RTA. Achieving road safety and asset protection while reducing the regulatory burden on industry are the underlying principles of NSW's continued participation in this reform.

## Tow truck industry training

In 2009 the RTA, in partnership with the Transport and Logistics Industry Skills Council, completed a pilot training program for the tow truck industry. It is the first nationally accredited tow truck driver program to provide qualifications that can be transferred between state jurisdictions and between various job categories within the wider transport industry. The program is aligned to the National Training System and is designed to improve the profile of the industry, both amongst the public and those considering the tow truck industry as a choice for employment or career progression. Under the second phase of the pilot program, which began in October 2010, 58 tow truck drivers from the far north coast and western Sydney were trained.

## NSW Farmers Association

RTA held quarterly meeting with the NSW Farmers Association to discuss key issues over the year and in 2011-12 will attend the association's annual conference. Attendance at stakeholder events allows RTA representatives to liaise with customers in a friendly, informal environment.



## Transport Operations Logistics Group

The Transport Operations Logistics Group is an active industry forum that provides advice and feedback to the RTA on proposed legislation and implementation of new policy or procedures that impact either the road freight industry or the freight logistics chain. The RTA briefs the group on proposed changes, with recent briefings including the introduction of the National Heavy Vehicle Regulator and the introduction of electronic work diaries.

The group receives updates on heavy vehicle road safety issues and members are encouraged to communicate this information to their stakeholders. For example, the number of drivers involved in fatalities who had not been wearing seat belts was recently highlighted and was taken up by group members as an issue requiring greater industry awareness.

## Community consultation

The RTA consults with communities and stakeholders on the delivery of road planning, infrastructure construction and maintenance, including:

- Residents and businesses.
- Public transport users, motorists, pedestrians and cyclists.
- Planners and construction groups.
- Commuters, road transport operators or holiday makers.
- Local, state and Australian government agencies and others.

In 2010–11 local communities were engaged in discussion of more than 400 different planning, construction and maintenance projects.

RTA consultation involved letterbox drops of over 1,929 newsletters and flyers, more than 1,095 meetings, events and staffed displays, and updating of over 1,300 pages on the website.

The RTA participates in a wide range of advisory groups to remain informed and to consult about reports, reviews, impact assessments and enquiries relevant to the operation of the road network.



Ballina Bypass Senior Project Engineer Mark Gallagher presents to the community.

## New Year's Eve event on Cahill Expressway

Since 2000 the RTA has closed the Cahill Expressway on New Year's Eve and hosted a family-friendly ticketed event at the site for the fireworks over Sydney Harbour. The road deck is transformed into a festival village with catering stalls, entertainers and a family atmosphere. Tickets for the 2010 event were distributed through a public competition run in print media and on the RTA website. More than 1,700 family passes of five tickets each were available via the public competition to either the 9pm or midnight firework sessions.

## Challenges and the way forward

### Customer service

The RTA is operating in an environment in which the community and NSW Government expect that there will be opportunities for involvement, consideration of diverse community ideas and open and transparent decision-making. It is also facing increased customer demand for online information, services and interaction, including through social media.

To put the customer at the heart of everything we do, and keep improving customer service in this environment, the RTA will:

- Expand self-service options for customers, including online replacement registration and licensing products.
- Further increase its online presence to ensure the website is an extension of conversations with RTA communities.
- Implement business standardisation and simplification programs.

### Non-payment of tolls

Consistent with the RTA's commitment to put the customer at the heart of everything we do, improvements to tolling compliance on the Sydney Harbour Bridge, Sydney Harbour Tunnel and NSW private motorways will focus on customer needs and circumstances. In a break with past approaches that punished offenders, work has already started on identifying incentive-based and reward strategies to reduce the small number of repeat toll offenders.

### Stakeholders

The RTA will continue to work towards strengthening relationships with key stakeholders. It will build on a program already in operation that focuses on introducing systems for better coordination, management and resolution of critical issues, which has already resulted in improved responsiveness to stakeholder issues.





REVIEW OF OPERATIONS

# Governance

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## Key achievements in 2010–11

Implemented a new approach to governance, including a new executive charter, executive committee structure and committee management system.

Relaunched the corporate plan as *Blueprint Update 2011* to recognise achievements since the plan was first published and reflect changes to the operating environment.

Launched a new professional development program for engineers to build the RTA's engineering capability now and into the future.

Integrated RTA financial information into the financial statements for the Department of Transport.

Conducted extensive training to ensure managers have the 'critical tools' for safeguarding the occupational health and safety of team members.





REVIEW OF OPERATIONS

# Governance

RTA result: Aligning our investment and people to our vision

## Governance of the RTA

The RTA is one of Australia's largest asset managers and services providers, with a multi-billion-dollar budget servicing millions of customers, communities and stakeholders. For this reason, the RTA seeks to uphold the highest standards of organisational governance, which includes sound strategic planning and performance management across its business.

This chapter outlines how the RTA has worked over the past year to strengthen organisational governance. It is divided into four sections:

**Financial** – business opportunities, accountability and performance.

**Organisational** – executive, strategic and business planning, business improvements, audit/assurance and risk management.

**Our people** – including developing a high performance culture, workforce capability, diversity and equity and occupational health and safety (OHS).

**Challenges and the way forward.**

## Financial

### Financial strategy

Financial strategy within the RTA is directed towards facilitating effective decision-making regarding the optimal allocation of financial resources in delivering its programs and services to the NSW community. The strategy continued through 2010–11 and focused on enhancing business efficiency and risk management across all RTA operations through the provision of timely, relevant and accurate information and reporting systems.

The Finance Strategy Committee continued its governance role, including the direction of funding allocations and review of program and resource budget performance.

The financial strategy is supported by the following key reporting and review activities.

### Financial reporting

#### Reform of the RTA's financial reporting framework is in progress.

The goal is to significantly enhance the ability of the financial reporting framework to meet the information requirements of all stakeholders as well as accurately describing the day-to-day RTA activity undertaken to achieve community objectives and business results.

A key part of the reform is a review of the underlying accounting processes in order to significantly strengthen the integrity of financial data supporting RTA decision-making.

The RTA's financial dashboard continues to provide important business information to the RTA Executive and senior management. In line with the financial reporting reform, the dashboard structure is under review to ensure that information on financial performance is consistently defined and measured across the organisation.

### Policy and procedure review

Accounting processes are continually reviewed to enhance the integrity of financial data supporting RTA decision-making.

An ongoing review and update of financial policies and procedures is conducted to ensure the robustness of the financial management framework to mitigate risk and support the RTA's business and statutory compliance requirements.

### Corporate framework

The RTA's corporate framework aligns its community and business objectives with *NSW State Plan* priorities. The RTA continues to monitor expenditure against those priorities for which it is a lead or partner agency. The RTA tracks funding budgets for these priorities as well as movements in the budgets and the reasons for any changes. Actual expenditure is closely monitored.



## Strategic investment

Sound strategic investment decisions are fundamental to the development of a strong and sustainable road system for NSW. The priorities set out by the *NSW State Plan* require targeted investment to support program delivery.

The Commercial Services Directorate was established during 2010–11 and is responsible for pursuing business opportunities to improve services and generate additional resources for investment in the RTA's road and service delivery programs.

The governance of strategic investment decisions is through the Finance Strategy Committee which integrates strategic risk and a robust investment decision framework. The assessment of risk is managed through the corporate risk framework.

## Corporate card and purchasing card

The RTA's use of corporate credit and purchasing cards has been in accordance with the Premier's memorandum and the Treasurer's directions.

## Financial performance

For details of the RTA's financial performance in 2010–11, refer to the Financial Statements (see pages 95–168).

## Department of Transport integrated budget

As the lead transport agency of the NSW Government, the Department of Transport (DoT) has primary responsibility for transport policy, planning and coordination functions and the oversight of infrastructure delivery and asset management. The RTA is an operating entity within the transport agency cluster.

2010–11 saw the first consolidation of RTA financial information into the financial statements of the Department. All required compliant information was delivered to enable successful completion of the consolidated financial statements. The RTA continues to work with the Department and other operating entities within the cluster on the implementation of an integrated budget. The key objective is to enable strategic and flexible financial resource allocation across the transport portfolio that optimises whole-of-transport outcomes, priorities and service delivery.

## Department of Transport shared services support

In July 2010 the NSW Government published the *Blueprint for Corporate and Shared Services in NSW*. The Blueprint provides a framework for the consolidation of corporate and shared services across government through six shared service providers across the nine clusters.

Transport Shared Services (TSS) is one of the six shared service providers and is responsible for delivering transactional, functional and value added services to all the agencies which are part of the Department. The RTA's Business Services Group was the first business unit to be assigned to TSS on 22 November 2010. Since that time, personnel from the RTA's Information Management and Information Technology and Human Resources Strategy branches have also been assigned to TSS.

Transport Shared Services now comprises around 1,000 personnel from across the transport portfolio. Work has been underway since November 2010 on transforming TSS into one of the best shared service centres in Australia.

## Advancing business opportunities

### Building a framework to pursue commercial opportunities

As part of the RTA realignment in August 2010, the Commercial Services Directorate was formed as both a service delivery arm for the RTA, and as an advisory group optimising public and economic value from RTA commercial interests, assets, partnerships, agreements, and operations. In delivering services, the directorate is embedding a culture of putting the customer at the heart of everything the RTA does, ensuring safety first, implementing environmental management and driving business performance.

The Directorate has implemented a comprehensive governance framework to drive commercial financial performance, strategic planning and reporting, and ensure a rigorous approach to managing commercial risk and assurance, business improvement and change management. Overseen by a special committee of the RTA Executive, it delivers critical funds for road safety and maintenance programs through innovation, reducing costs and strengthening relationships with our customers and industry partners.

The Tolling Group was the first business to have a new commercial framework designed and implemented. The new framework, to operate from 1 July 2011, aligns its financial performance with industry standards by providing a commercial methodology for building a leaner, more efficient business and allowing an improved customer experience.

### Traffic information and systems

The Sydney Coordinated Adaptive Traffic System (SCATS) continues to be the premier intelligent transport system in the world and is now deployed in over 140 cities in 25 countries. SCATS expanded domestically in Queensland, with the RTA delivering the SCATS solution to Brisbane City Council to significantly improve the reliability and performance of their traffic management systems.

The Commercial Services Directorate began implementation of the SCATS business model to distribute their Intelligent Transport Systems products.





## Road and Fleet Services

Road and Fleet Services (RFS) deliver road network maintenance and construction for the RTA and external customers.

RFS is a full-service engineering operation, with experienced teams of engineers and work delivery teams located strategically around NSW. RFS employs around 2,200 staff to carry out its tasks, with the majority employed in rural and regional areas. Over 150 are apprentices and trainees in various disciplines, making RFS a significant training ground for rural youth. RFS subcontracts over 30 per cent of its work through subcontractors and industry partners.

RFS made substantial improvements in all aspects of its business by exceeding all safety targets and embedding a culture of environmental performance, particularly in the recycling and reuse of materials. RFS demonstrated its capacity to provide effective emergency response services for the wider community during extreme weather conditions. Emergency road repairs, traffic control and assistance in flood response highlighted the commitment and dedication of staff.

**RFS delivered record levels of work in 2010–11, completing \$777 million of internal projects for the RTA and \$57 million of projects for external clients.**

Project highlights included:

- Completion of the \$35 million Moree Bypass.
- Delivery of the \$9 million 'dragon's teeth' project to improve school zone safety at all NSW schools.
- The \$9.5 million reconstruction of the heritage-listed Tharwa Bridge for the ACT Government.
- Bus depot reconstruction works for the NSW State Transit Authority valued at over \$7 million.

Going forward, the NSW Government and the RTA is examining options to introduce greater contestability in the provision of road maintenance services, increasing private sector participation in the delivery of these services for the community.



Work underway at Tempe bus depot for the State Transit Authority.

## RTA tags in rental cars

In December 2010 the RTA, in partnership with Avis and Budget Rent-a-Car, implemented an industry-first national solution for rental car companies to provide cost effective, convenient and seamless access for rental car customers to the national toll road network. Previously, customers were required to make their own arrangements for toll payments before hiring a rental vehicle. As rental customers are often unfamiliar with electronic tolling, rental car companies were inundated with toll notices which led to additional costs for customers – as high as \$60 per trip. The rental car tolling solution, which uses tags permanently installed in all Avis and Budget Rent-a-Car vehicles, eliminates these toll notices and ensures a positive motoring experience for rental car customers.

## myPlates

In 2010 the myPlates concession through Plates Marketing Pty Ltd was established to develop an agile new business model which focussed on managing the product range and increasing sales. The concession model contributed to a \$5 million increase in revenue from \$62 million in 2009–10 to \$67 million in 2010–11. Customer focused marketing campaigns were undertaken, which included an extensive integrated Mother's Day campaign through the *Daily Telegraph* and key social media channels. This campaign was also supported by the charitable partnerships with the McGrath Foundation and the Prostrate Cancer Foundation of Australia.



# Organisational

## Executive

The Chief Executive manages and controls the affairs of the RTA in accordance with any direction from the Director General of the Department of Transport, the Minister for Roads and Ports, or the Minister for Transport and is involved in all major decisions about policy and planning. The Chief Executive also has a wider role in interacting with heads of other transport agencies in NSW, across Australia, and internationally. The Chief Executive is accountable to the Minister for Roads and Ports and to Parliament for the RTA's overall performance and compliance.

## Executive framework

**In 2011 the RTA's Executive implemented a new approach to how it managed and monitored the organisation.**

This approach included a new executive charter, executive committee structure and committee management system

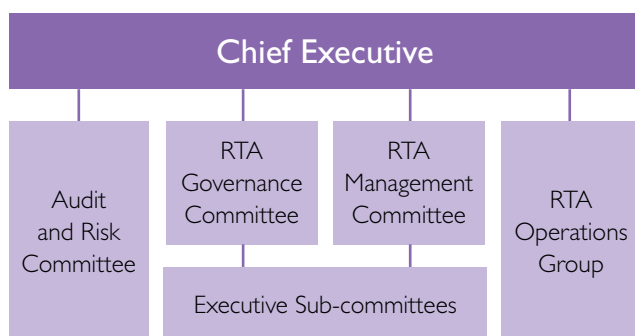


which outlines how the RTA Executive as a whole supports the Chief Executive in ensuring the effective governance of the organisation. These changes led to the formation of the RTA Governance Committee as the peak governance forum to focus on the longer-term future of the organisation and specifically on matters concerning strategy, policy, risk, resource priorities, organisational integrity and the monitoring of overall organisational performance.

The RTA Management Committee was also formed. This enables the Executive to focus on the management of the organisation in the context of business and strategic priorities for the current period by monitoring current performance, particularly any issues or risks that could affect the current delivery of RTA results and services. Both committees meet on a monthly basis and are supported by a committee management system that ensures critical decisions are addressed by the Executive in a timely and efficient way.

Management of the RTA is also supported by a range of executive committees that address a number of key issues within the RTA, for example, commercial development, occupational health and safety, and the environment. These committees typically comprise directors and key managers from across the organisation to ensure an integrated approach to the management of these issues. As part of the new approach to governance a number of innovations were also implemented to ensure the flow of appropriate information to these committees to facilitate their effective support of the Executive in achieving its objectives. Figure 23 demonstrates the relationship between the organisation's peak committees.

**FIGURE 23.** RTA COMMITTEE STRUCTURE



For more information about organisational governance, including the organisational structure, see pages 10-11.

## Governance

The Governance Branch continues to lead the organisation in adopting and implementing the RTA's governance framework in close partnership with the Executive and staff responsible for day-to-day operations. The framework identifies the key elements that are fundamental to managing and monitoring the RTA. It documents the key processes, systems and tools that need to be in place to ensure that these key elements are operating effectively across the organisation. The framework is continually improved through a program of works which is based on the results of an annual governance survey of the RTA Executive and senior management.

## INTERNAL AUDIT AND RISK MANAGEMENT ATTESTATION FOR 2010-11 FINANCIAL YEAR FOR THE ROADS AND TRAFFIC AUTHORITY OF NEW SOUTH WALES

I am of the opinion that the Roads and Traffic Authority has internal audit and risk management processes in place that are, in all material respects, compliant with the core requirements set out in Treasury Circular NSW TC 09/08 *Internal Audit and Risk Management Policy*. As a consequence the senior management of the Roads & Traffic Authority are able to understand, manage and monitor the organisation's risk exposures.

I am also of the opinion that the Audit and Risk Committee for the Roads and Traffic Authority is constituted and operates in accordance with the independence and governance requirements of Treasury Circular NSW TC 09/08. The Chair and members of the Audit and Risk Committee are:

1. Greg Fletcher, independent chair.
2. Dr Elizabeth Coombs, independent member.
3. Michael Ellis, independent member.
4. Peter Wells, Director Regulatory Services, internal member.
5. Geoff Fogarty, Director Infrastructure Services, internal member.

In addition, I note the following as per Section 1.2.8 of TPP09/05:

*"The department head or governing board of the statutory body is required to set out which service delivery model for the Internal Audit function has been established in the department or statutory body, including the reasons for establishing that model, in the annual Attestation Statement required by the Policy."*

In this regard the RTA's Governance Branch has adopted a "co-sourced" service delivery model, as defined in the policy, ie:

*"...co-sourced service delivery with in-house management, where the department or statutory body provides and manages internal audit services through a combination of in-house resources and contracted services delivered by an appropriately qualified third party provider."*

A major reason for this is related to the diverse nature of the RTA's operations, ie they include a strong focus on large infrastructure projects as well as a strong front-line community presence in regard to, for instance, the licensing of road users and registration of vehicles for use on the roads. In conjunction with the current climate of rapid technological change this means that, to effectively manage its major risks, a wide range of technical engineering, financial and ICT audit and risk expertise is required. My view is that a co-sourcing model is the most effective and efficient way to procure this.

**Michael Bushby | Chief Executive**





## Risk management

The RTA has a well-established, enterprise-wide risk management framework which describes the RTA's approach to risk management. It consists of a set of key elements that provide the foundation and processes for developing, implementing, monitoring, reviewing and continually improving risk management. The RTA invited Vero Risk Services of Suncorp Group to assess the RTA's level of risk management maturity based on their enterprise risk management framework self-assessment tool. The assessment, which was carried out in 2010–11, involved interviews with staff throughout the organisation and a review of key corporate documents. It found that:

- The RTA's overall framework maturity score of 82 per cent is indicative of an agency that has a highly mature approach to enterprise risk management.
- Integration of risk management into all aspects of the RTA's business is a fundamental tenet of the agency's approach.
- The RTA has a clearly defined holistic approach to enterprise risk management and is focussed on the continual improvement of this approach.

## Audit and Risk Committee

The Committee meets at least once a quarter and provides independent assurance to the Chief Executive that the RTA's risk and control frameworks are operating effectively and related external accountability requirements are being met.

In terms of audit, the committee:

- Approves, and monitors the implementation of, the internal audit programs.
- Reviews performance of internal and external audit functions.
- Reviews the internal control framework.
- Approves related external reporting of financial information.
- Reviews compliance with audit and finance related policies, procedures, central agency requirements and applicable laws and regulations.

In terms of risk management, the committee:

- Reviews the organisation's risk management framework.
- Reviews the RTA's Risk Profile.
- Reviews compliance with risk-management standards, policies, central agency requirements, relevant legislation and regulations.
- Approves internal and external risk reporting.

## Internal audit/assurance

### Department of Transport

As part of the integration with the Department of Transport (DoT), the RTA was involved in new transport-wide initiatives in the area of audit and assurance. Projects include:

- Piloting coordinated shared audits across the DoT operating entities.
- Implementing a new audit and risk database in cooperation with DoT that will facilitate consistent audit and risk related reporting across the cluster.

### Engineering

A major part of the RTA's operations are engineering-related and the Engineering Assurance Group provides independent and objective assessments of civil engineering operations. The Group's work is based on the development and implementation of a risk based audit program covering the organisation's major engineering programs, projects, systems, processes and products.

Major reviews carried out in the 2010–11 financial year included:

- Environmental audit and inspection systems.
- Maintenance alliances cost management pain/gain review.
- Bridge Rehabilitation Program.
- AusLink Black Spot Program.
- Speed Management Engineering Program.

Audits were prioritised on the basis of the identification and analysis of major operational risks and on an assessment of the control environment in place to address these risks. In consultation with line management, audit outcomes resulted in the identification and implementation of a range of improvements to the engineering operations. For example, in the Bridge Rehabilitation Program audit it was agreed that the consistent application of probabilistic estimating as per Road and Fleet Services business rules would improve project estimating.

### Customer and regulatory services

The RTA undertakes regular monitoring of motor registry operations, other service delivery channels and back office functions supporting the customer and regulatory services business. This year specific projects included enforcement adjudication and replacement licences. The risk management framework and related control environment for dealing with the exposures in these operations is continually reviewed and strengthened to ensure controls remain effective and appropriate. Lessons learned from the investigations and other reviews of the business are incorporated into the risk management program to ensure effective management of risk.

### Information technology

Information technology (IT) audits this year covered newly purchased and installed systems, systems under development and, to a limited extent, those in production.



IT security and e-commerce audits focused on aspects of operating systems such as access and permissions security. A major strategy of the IT audit staff was to maintain membership of a range of internal steering committees and working parties. This allowed them to focus on critical IT processes and systems, IT security and e-commerce, IT infrastructure and the provision of risk/control advice on projects that were identified as high risk to the organisation. Audit and risk staff also worked closely with business units on risk assessments of new IT initiatives, system purchases and developments.

Major reviews included:

- Transport Management Centre Development Program – video system upgrade.
- Property information and management system.
- Integrated management system vehicle regulation timesheet and rostering.
- E-Toll Modernisation Program.
- Court and case management system.

Significant findings at the project level led to improved management of project risk. Cross-audit analysis identified 'root cause' issues, which led to more fundamental improvements in, for example, the Project Management Office.

### Finance and operations

The Annual Financial and Operational Audit Program's coverage included the RTA's financial support functions and a range of activities in road safety, traffic management and other RTA business units. The audit projects included an independent assessment of risks and compliance with policies, procedures and Treasury guidelines to provide assurance to the Chief Executive that related objectives were being met.

The key audit projects for the 2010–11 year included:

- Budgeting and financial forecasting.
- Efficiency improvement and wages strategy savings.
- General receipting and banking.
- Purchase order and service entry release process.
- Debt management.
- RTA property sales and leasing.
- Procurement.
- Driver licensing.
- Freedom of Information.

### Corruption and fraud investigations

The main responsibility of the Corruption and Fraud Investigations Section is to manage the organisation's relationship with the Independent Commission Against Corruption (ICAC). In this regard it performs or oversees a range of internal corruption and fraud investigations, as well as investigations into serious maladministration and serious and substantial waste.

On completion of an investigation, an assessment is made and, where appropriate, outcomes of matters investigated are forwarded to RTA senior management to action. This may include management consideration of a number of alternatives, including disciplinary proceedings against appropriate staff. Where protected disclosure requirements apply, there is strict adherence to the prescribed obligations and formal management of relevant information. Recommendations arising from both investigations and corruption and fraud risk assessment are referred to line management, to address any weaknesses or areas of concern relating to risks, policies, procedures or controls, and to internal audit for consideration in the preparation of their audit programs.

In compliance with Section 11 of the *Independent Commission Against Corruption (ICAC) Act 1998*, the Corruption and Fraud Investigations Section also refers allegations of corruption to ICAC and manages delivery of notices and other requests the RTA receives from the ICAC. Fraud by community members that impacts on the RTA's business are primarily referred to the NSW Police Force for investigation and prosecution and, where appropriate, are further referred to RTA senior management to address any policy, procedure or control issues.

The Section also oversees the organisations legislative requirements under the *Protected Disclosures Act 1994*, now known as the *Public Interest Disclosures Act 1994*.

Key achievements for 2010–11 include:

- Detailed assessment and investigation of allegations.
- Meeting legislative obligations under the ICAC Act.
- Delivery of corruption prevention training to new staff.

### Corruption and fraud risk management

In addition to the investigation of allegations of corruption and fraud, the RTA has a corruption and fraud control framework, for which the Corruption and Fraud Investigations Section has centralised oversight. This includes a range of initiatives to minimise the risk of corrupt and fraudulent activity by staff and business partners. In particular it involves:

- Delivery of corruption and fraud/ethics seminars to staff across high risk business environments to reinforce the corruption resistant culture of the RTA.
- Provision of anti-corruption information through the RTA's intranet.
- Provision of expertise and advice to staff and management on a wide range of corruption risks and ethical, probity and policy issues.



## Blueprint Update 2011

The RTA updated and relaunched its Corporate Plan – *Blueprint Update 2011* in February 2011 to recognise the achievements to date as well as to reflect on the changes to the operating environment since the Blueprint's inception in 2008. These changes and influences have included the:

- Revision of the *NSW State Plan* in 2010.
- Formation of the transport superagency on 1 July 2010.
- Release of recommendations in the *Report of the Inquiry into the Roads and Traffic Authority's Response to an incident on the F3 on 12 April 2010*.
- Structural realignment of the RTA on 5 August 2010.

As well as recognising the RTA's successes and highlighting changes to the RTA's operating environment, *Blueprint Update 2011* highlights the agency's high level strategic influences and provided clarity for 2011 business planning processes.



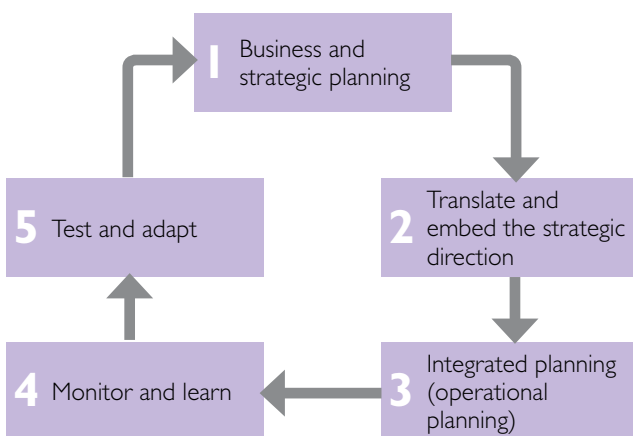
Delivery of *Blueprint Update 2011* achievements have been highlighted with the Blueprint logo throughout this Annual Report. The *Blueprint Update 2011* can be viewed in full at [www.rta.nsw.gov.au](http://www.rta.nsw.gov.au).

## Delivering priorities

### RTA planning and performance cycle

The RTA uses a cyclical approach to planning and performance to deliver integrated planning, drive improvements in performance and ensure a focus on continual improvement. Figure 24 demonstrates the RTA's approach.

**FIGURE 24.** RTA PLANNING AND PERFORMANCE CYCLE



This approach is consistent with the Department of Transport performance cycle (see page 15 of *Moving Together*).

## Integrated planning

Integrated planning ensures that the RTA's strategic direction is cascaded through the layers of planning, through and across the agency, to ensure clear lines of accountability and delivery. The RTA's application of integrated planning can be seen in the RTA suite of integrated plans (see page 89).

The RTA uses corporate strategic plans to link results and services with broader government priorities and to align internal business plans. The *Blueprint Update 2011*, the *Results and Services Plan* and the total asset management approach are used to communicate its strategic intent to the NSW Government.

The RTA's strategic direction and planning are also driven through the corporate framework (see pages 8-9), which defines the RTA's high level results and priorities, and is an integral component of the corporate plan. It sets the strategic direction that is filtered through layers of integrated plans to ensure a focus on achieving the RTA's results. The RTA corporate plan, business plans, operational plans and some individual plans are linked through the common language of the RTA's results.

These high level results are also translated throughout the organisation through internal strategic plans that help to drive and coordinate business activities. These are often cross-directorate plans that provide a three-to-five-year strategic direction, and set priorities for key areas of business (core and business support functions) and policy. They also provide the basis for making decisions about the allocation of resources and set out medium to long-term performance targets. The plans are in line with NSW Treasury, Department of Premier and Cabinet, and Department of Transport guidelines and advice.

Planning and performance reporting guidelines exist within the organisation to maintain an effective and consistent planning and performance reporting system.

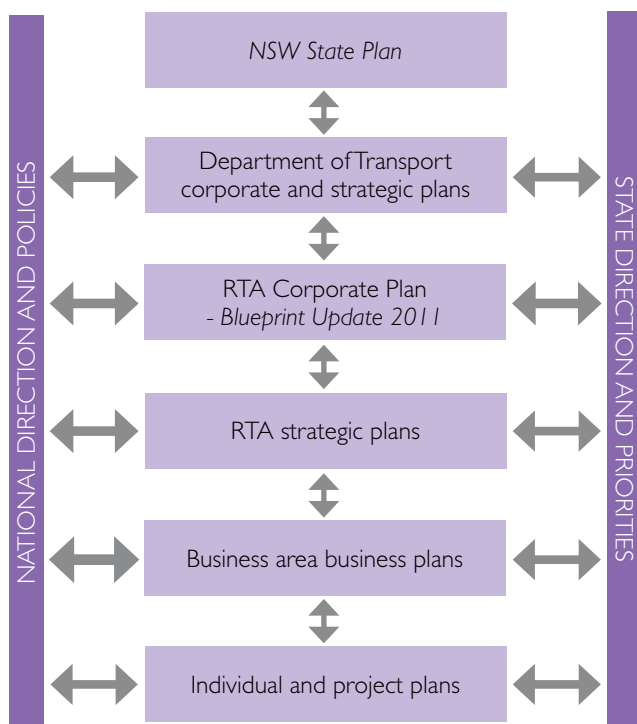
### RTA suite of integrated plans

RTA business and strategic plans come together to form a hierarchy of plans — a complementary and integrated suite of plans (Figure 25). These also provide a hierarchy of aligned and integrated frameworks focussed on the organisation's key outcomes and output groups.

The *NSW State Plan*, Department of Transport Corporate Plan and *Metropolitan Transport Plan* are three high level strategies that set direction and priorities for the RTA.



**FIGURE 25.** RTA SUITE OF INTEGRATED PLANS



## NSW State Plan

The *NSW State Plan* sets the NSW Government priorities to 2016 and provides goals and priorities for government agencies on which to focus their delivery efforts. These are designed to meet community priorities by delivering better services and improving accountability across the public sector.

The RTA is the lead agency responsible for delivering a number of *NSW State Plan* priorities within the Better Transport and Liveable Cities chapter. These include Improve the Road Network, Maintain Road Infrastructure and Improve Road Safety. The RTA is in partnership with other agencies to contribute to various other *NSW State Plan* priorities, such as Increase Walking and Cycling.

The key *NSW State Plan* priorities are monitored through set targets that have been embedded throughout the RTA's layers of planning and performance.

A revised State Plan will be released in September 2011, to coincide with the budget. *NSW 2021: A plan to make NSW number one* will be a 10-year plan that will guide policy and budgetary decision making across the NSW Government. It will set long term goals and measurable targets, and outline immediate actions that will help to deliver on those goals.

## Metropolitan Transport Plan

The *Metropolitan Transport Plan* was released in February 2010, setting a transport vision for Sydney, a 'city of cities'. It aims to effectively link Sydney's land use planning with its transport network.

In December 2010 the *Sydney Metropolitan Strategy* was updated and integrated with the *Metropolitan Transport Plan* to form the *Metropolitan Plan for Sydney 2036*.

The RTA will be leading a number of essential services including: getting Sydney moving to promote a happier, healthier lifestyle; improving the bus network including strategic bus corridors; and increasing the efficiency of the road network.

## Business continuity

Business continuity management is the planning, preparation and response to a disaster or disruption to your critical business activities, processes or services.

RTA business continuity planning was progressed during 2010–11. A business continuity testing program was developed and implemented, with eight testing sessions undertaken by 30 June 2011. Business continuity plans were revised as a result of the tests. A review of the master plan for the Central Recovery Team was also undertaken.

## Planning and performance guidelines

The RTA's *Planning and Performance Guidelines* were updated in November 2010 to coincide with the RTA internal restructure, integration with Department of Transport and beginning of the annual business planning cycle. The guidelines were updated to assist RTA officers in understanding the RTA's approach, requirements and expectations in relation to planning and performance.

Five workshops were held for business strategy staff and other RTA officers involved in business or strategic planning and performance activities. These workshops aimed to increase common understanding of both the RTA's planning and performance approach and the mandatory government requirements for reporting. Planning and performance reporting are key elements in meeting the RTA's corporate governance requirements.

## Information and communication technology strategy

The RTA progressed implementation of the information and communication technology (ICT) strategy during 2010–11. This included enhancements to governance processes and ensuring early identification of capital funding requirements and strong alignment to organisational priorities. As part of the strategy, the Review and Advisory Panel was established to assist in prioritising projects and programs of work, and provide advice and recommendations to the ICT Executive Committee.





# Our people

## A safe and healthy workplace

### Occupational Health and Safety Executive Committee

The committee, which meets bi-monthly, reviews the RTA's occupational health and safety (OHS) performance and provides strategic direction on OHS programs and policies, including:

- Leading continuous improvement in safety culture across the RTA.
- Reviewing of OHS performance and providing advice on priorities for allocation of OHS resources.
- Reviewing OHS serious incidents and identifying trends and lessons learnt for the organisation.
- Ensuring effective coordination of risk management, OHS policy, claims and management across the RTA.
- Monitoring the effectiveness of the implementation of the RTA OHS Strategic Plan.
- Conducting a site audit to verify effective implementation of OHS strategies.

Significant achievements in 2010–11 include:

- The Ensafe upgrade which increased efficiency and user friendliness.
- Employee campaign 'Our Safety' and roll out of the RTA's Four Safety Beliefs.
- Completion of the 2010 internal OHS review with participation of all directorates.
- Roll out of the 'Critical Tools for Safety Leaders' training to all RTA managers and supervisors.
- Establishment of the seven high risk working parties.

### OHS performance

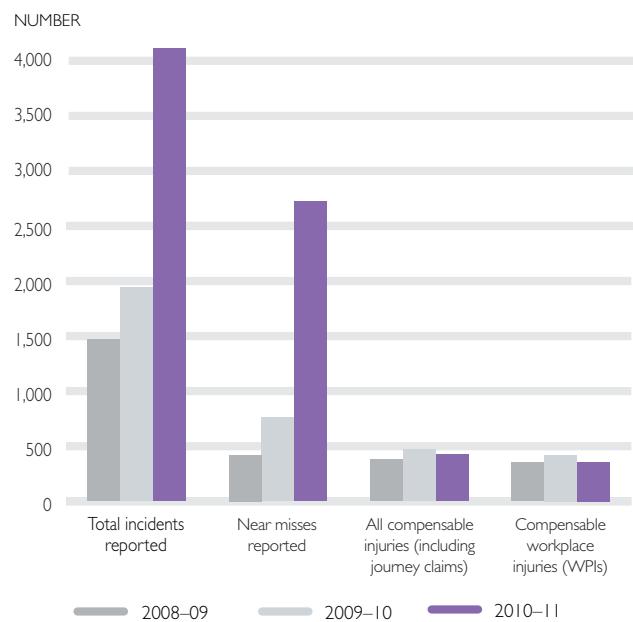
The reporting of near misses is a lead indicator in identifying significant risks to RTA employees and contractors. A near miss is an incident or situation resulting from exposure to a hazard that has the potential to cause injury or damage. Reporting near misses helps identify hazards so that action can be taken before someone gets hurt. Research shows that where near miss reporting increases, injuries actually decrease.

In 2010–11 the 'Our Safety' campaign and the continued roll out of the Critical Tools for Safety Leaders' reinforced the need to report near misses. The near miss reporting strategy continued to show great success with reporting of near misses indicating an increase of over 250 per cent on the previous financial year. Overall injury numbers for 2010–11 show a slight increase over the previous year largely due to an increase in minor injuries reported. However, injuries resulting in a workers compensation claim showed a substantial decrease compared to 2009–10.

**TABLE 9.** OHS STATISTICAL INDICATORS

Performance indicator	2008–09	2009–10	2010–11	Change on previous year
Near misses reported	419	760	2,721	258%
Lost time injuries	156	193	165	-15%
All other injuries (incl first aid only)	800	888	1,113	25%
Other reported incidents (excl asset/property damage)	93	99	111	12%
Total incidents reported	1,468	1,940	4,110	112%
Near miss: injury ratio	0.44	0.7	2.21	216%
All compensable injuries (incl journey claims)	377	470	423	-10%
Total claims costs (\$m)	2.7	3.2	2.2	-31%
Compensable workplace injuries	352	418	357	-15%

**FIGURE 26.** OHS PERFORMANCE INDICATORS



### Prosecutions

There were three prosecutions for a breach of the *Occupational Health and Safety Act 2000*. These concerned a fatality to a sub-contractor on Alford's Point Road in 2006, a fatality in 2009 when a B-Double truck hit a parked RTA maintenance vehicle, resulting in a fatal injury to one of the RTA's employees, and injuries to two RTA employees after a scaffold collapsed in 2008. The RTA was also fined \$180,000 after prosecution for an incident involving a fatality to a sub-contractor on Epping Road in 2008.



## 'Our Safety' campaign

The health and safety of the workforce is a core value for the RTA and it is committed to the following safety beliefs:



- All injuries can be prevented.
- Safety first, work second.
- Everyone is responsible for safety.
- Working safely is a condition of employment.

During 2010–11 the 'Stop.Think.Act. – Our Safety' campaign continued to be rolled out to embed our safety beliefs across the organisation.

**The campaign encourages staff to stop and think about what they need to do to work safely, and to take action to make their workplace safe.**

The campaign is one of several strategies to promote a strong safety culture within the organisation.

In addition to this campaign, all RTA managers, supervisors and/or team leaders were required to conduct an 'Our Safety' team workshop to further embed safety as a priority across the organisation. The workshops involved all staff discussing the importance of safety in their work environment. The workshops were run across the State and proved highly successful.

The RTA continues to engage with its contractors through two established activities: the Contractors Forum held once a year and the Contractors and Utilities Coalition, which holds quarterly meetings to identify best practice solutions for OHS challenges in the civil construction industry and discuss OHS risks in road construction and maintenance projects.

## Reducing health and safety risks

The OHS Executive Committee identified the top seven high risk activities for RTA employees and contractors. Working parties have been established to identify and implement strategies to reduce the following risks:

1. Work near or around utilities – this includes power lines above ground and gas/water under ground.
2. Work in the vicinity of a mobile plant.
3. Work near traffic.
4. Driver testing risks.
5. School crossing supervisor drive-throughs.
6. Violence/harassment by members of the public.
7. Driving incidents resulting from fatigue, driver or passenger behaviour.

## Incident reporting system upgrade

EnSafe4 is the RTA's online reporting system for incidents, hazards, and injuries. The successful roll out of EnSafe4 in October 2010 provided a more user friendly system and improved incident reporting and investigation.

## Critical Tools for Safety Leaders roll out

During 2010–11 all managers and supervisors were required to participate in a one-day OHS workshop to learn the 'critical tools' for managing OHS. The 'Critical Tools for Safety Leaders' workshop aimed to ensure managers and supervisors can identify, assess and control OHS risks, understand near miss reporting, conduct quality incident investigations and understand how their own behaviour influences their team's attitude to safety.

By 30 June 2011, 674 managers and supervisors had attended the training sessions.

## The journey to retirement



**MyJourney is an RTA seminar for staff aged 50 and over particularly aimed at those approaching retirement.**

The seminar covers a range of topics, including the important contribution these staff make to the RTA, and provides an opportunity to discuss a range of flexible work options to consider as they approach retirement. During 2010–11 there were 21 seminars held across NSW, including at least one in each region and several within the Sydney metropolitan area. There were more than 950 participants in the targeted 50-plus age group. Feedback was positive, with over 52 per cent of staff engaging in health checks, 45 per cent taking up financial planning and 13 per cent requesting for flexible work options.

## Women in Engineering

The RTA has implemented strategies to help attract women into non-traditional roles. Four RTA women (including two engineers) were profiled as part of the NSW government publication, *Breaking Through: Stories of Women in non-traditional occupations*, which was distributed across NSW schools, TAFE colleges and universities. The RTA is also piloting new strategies to attract women into our trade apprenticeships, including the career transition of female candidates from RTA traineeships to apprenticeships.

Four Women in Engineering events for girls in Years 10 to 12 were sponsored in partnership with the University of Technology, Sydney, the University of New England and the University of Wollongong, reaching 440 young women and helping RTA cadet engineers develop their presentation skills.



## Employing people with a disability

In supporting NSW Government efforts to build a talented and responsive workforce that reflects the diversity of the population, the RTA implemented programs to attract and retain people with a disability. Through both the Australian Paralympic Workplace Diversity Program and the 'Stepping Into' Disability Internship Program, the RTA has provided opportunities for temporary or permanent employment for appropriately qualified people with a disability in both professional and administrative roles.

The programs recognise and value the participation of people with different life and work experiences while helping to identify and minimise workplace barriers to inclusion.

## Developing skills to meet future organisational needs



Through continued development of the Critical Skills Initiative, the RTA has identified future skills, knowledge gaps and priority needs across the organisation.

To meet identified needs, it launched the Ongoing Professional and Technical Development (OPTD) Program, which has a number of specialist streams. The OPTD Program for Engineers aims to build and maintain the RTA's engineering capability to enable it to achieve objectives now and into the future. Focusing on road safety engineering in its inaugural year, the program provided over 4,347 hours of professional development to 549 RTA participants and 41 council engineers. Design of the Policy Stream was finalised with the specific aim of growing the level of expertise in policy creation and maintenance. OPTD policy programs will begin in the next financial year.



Professor Ian Johnston addresses attendees at the Ongoing Professional and Technical Development Program launch, July 2010.

## Employment programs

The RTA's suite of employment programs, which are designed to prepare people with little or no work experience for entry level positions, continue to set the benchmark in the NSW public sector. With more than 600 people participating across the full suite of programs, the RTA continued to develop programs for the retention of quality staff. At 30 June 2011 the RTA employed:

- 151 graduates across 17 disciplines.
- 83 apprentices completing nine trades.
- 205 trainees in seven different types of traineeships.
- 66 people working towards five para-professional qualifications.
- 64 engineering cadets.

Additionally, the RTA provides support to its program participants and the broader community through:

- The Graduate Mentoring Program.
- Investigation of internal transition of female trainees to trade-based apprentice roles.
- Support to 35 students in five universities with RTA-sponsored engineering scholarships.
- Support to six Aboriginal HSC students through the Aboriginal HSC Scholarship Program.

## Internal communication

The internal communication strategy for 2010–11 focussed on improving face-to-face and multi-directional communication within the RTA. This included conducting an audit of internal communication tools and channels available across the organisation.

In 2011 a monthly Chief Executive video message was introduced to improve message consistency and allow the Chief Executive to be more visible to staff. This replaced a written Team Brief but still allowed managers to discuss message content with their teams.

The RTA's monthly staff magazine, *Momentum*, was redesigned to bring it into line with the organisation's visual identity and to make it more appealing to staff. An online interactive version was also developed as part of the redesign. The RTA's intranet continued to be a key source of time critical information for staff, with news items and supporting images posted daily. Key news and policy issues relating to frontline staff continued to be posted on *Frontline*, the organisation's dedicated intranet for customer service staff.

## Our award-winning staff

### Environmental achievement

The Hume Highway Woomargama Alliance of the RTA, Abigroup and Sinclair Knight Mertz won the International Erosion Control Association Environmental Achievement Award, an award for an outstanding erosion and/or sediment control project, program, or system that demonstrates excellence in natural resource conservation and environmental protection.



## Safety

The Ballina Bypass Alliance comprising the RTA, Leighton Contractors, AECOM, SMEC and Coffey Geotechnics won the award for Best Workplace Health and Safety Management System at the sixth annual SafeWork Australia awards. The Alliance is constructing the \$640 million bypass.



SafeWork Award recipients: Ballina Bypass Alliance team for the Best Workplace Health and Safety System – from left Brett Smythe, Alliance Leadership Team member; Brendan Luke, Safety Manager; Geoff Fogarty, RTA Director Infrastructure Services; Annie Stante, Communications Manager; and Tony Stante, Alliance Manager with The Hon Michael Daley MP and WorkCover Chief Executive Lisa Hunt.

## Royal Easter Show

The RTA’s stand at the Sydney Royal Easter Show won the Gold Commercial Exhibit Award for the third year running. The interactive display in the Home Garden and Lifestyle Hall, included the RTA’s Slow Down Road Show, a toll booth, an interactive child restraint display, the ‘Slow Down Pledge’ and, for the first time, information for young people via Geared.com.



RTA staff proudly display the gold award for best commercial exhibit at the Sydney Royal Easter Show.

## Government partnership

The RTA was jointly awarded the 2011 Government Partnership Excellence Award, along with Transurban, for the M2 Motorway Upgrade project. The award was presented at Infrastructure Partnership Australia’s National Infrastructure Awards. It recognised the RTA’s work in developing sound public private partnerships for the delivery of major infrastructure projects.

## Road design

The upgrading of the road from Leura to Katoomba from two lanes to four won the Australian Institute of Landscape Architects NSW 2010 Award of Excellence for Design in Road Infrastructure Projects. The judges praised the “sensitive design”.

## Surveying and spatial information

At the 2010 NSW Excellence in Surveying and Spatial Information Awards, the RTA continued its successful run, taking out the Extra Dimension & Innovation category. The joint entry from the RTA and McMullen Nolan Surveyors was highly commended in the Mobile Laser Scanning for Data Capture of Infrastructure category.

## Online performance

For the seventh year in a row, the RTA won the Hitwise Online Performance Award for the NSW Government agency recording the highest number of annual website visits.

## Annual reporting

The RTA won silver in the Australasian Reporting Awards for its 2009–10 annual report. This is the second silver in a row and a move up on the bronze of the previous three years.

## Individual staff awards

Sam Ireland, a second year civil construction trainee at the RTA’s Ballina District Office, won the Intermediate Award at the NSW inter-agency awards for trainees.



Professor Marie Bashir, Governor of NSW, with RTA trainee Sam Ireland.





# Challenges and the way forward

## Financial governance

The RTA continues to demonstrate fiscal responsibility with both capital expenditure and deficit before grants performance achieving results within the NSW Treasury limits. The challenge is to continue to deliver services within budget constraints and achieve significant savings efficiency targets over the next four years' forward estimates.

## Commercial services

Against a backdrop of a likely slowing economy, the challenge for the RTA's commercial business will be maintaining growth to ensure continued delivery of vital funds for road safety and maintenance programs. Several initiatives are in place to optimise customer experience and revenue growth. These include:

- Completion of the direct delivery project for myPlates, allowing customers to receive special number plates at their home or workplace without attending a motor registry.
- Completion of a systems and software upgrade to allow a more customer focussed service offering for traffic control training services.
- Continued implementation of the Tolling Improvement Program, including improving the ease with which customers find and understand existing tolling products and services information on the RTA website and in motor registries.
- Completion of the strategy to provide a consistent approach to managing surplus properties across the RTA.
- Completion of a review of Intelligent Transport Systems capabilities to enhance the service provided to existing customers as well as increasing market breadth.

## Organisational governance

With the creation of Transport NSW and Roads and Maritime Services, the RTA will review governance arrangements to ensure it delivers on its governance commitments, including probity, risk management, planning and performance reporting requirements in its new operating environment.

As part of the formation of Roads and Maritime Services, the RTA will:

- Deliver an executive charter, executive committee framework and associated systems to support the Roads and Maritime Services Executive in the formation of the new agency and maintain high governance standards.
- Review RTA risk maturity, including its risk management framework, strategies and processes.
- Drive an integrated corporate planning and performance cycle that responds to changes to the organisational structure and the operating environment and provides clarity and focus for the organisation.
- Ensure an appropriate framework is developed to provide assurance that the proposed Roads and Maritime Services operations and activities comply with applicable laws and other legal requirements.
- Review the policy development framework to better enable the organisation to coherently formulate operational policy, and ensure consistent application and good practice.

## Our people

The ageing RTA workforce will lead to an increasing number of retirements in the coming years, which will create challenges for knowledge and expertise transfer in specialist areas. Work is ongoing to ensure knowledge continuity.

The geographic distribution of the RTA's operational arms and skill shortages in specialised functions, such as bridge engineering, are making it more difficult to maintain adequate technical and specialist expertise skills in the required locations. Imbalances of skills across the State can result in a void in expertise and impact on project delivery. This is being addressed through mobility and recruitment strategies and continuous focus on skills enhancement.