

AUDITOR-GENERAL'S REPORT PERFORMANCE AUDIT

Handback of the M4 Tollway

Roads and Traffic Authority of NSW



The Legislative Assembly
Parliament House
SYDNEY NSW 2000

The Legislative Council
Parliament House
SYDNEY NSW 2000

In accordance with section 38E of the *Public Finance and Audit Act 1983*, I present a report titled **Handback of the M4 Tollway: Roads and Traffic Authority of NSW**.

A handwritten signature in black ink that reads 'Peter Achterstraat'.

Peter Achterstraat
Auditor-General

Sydney
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Foreword

It is becoming increasingly evident that in order to maximise effectiveness, public-private sector partnerships (PPPs) need to be well managed throughout every phase from establishment of the project deed, through operation and finally to handback.

The M4 tollway was one of the first PPPs established by the NSW Government in 1989. It will be the first to be returned to Government ownership and operation. The handback is due to occur at midnight on 15 February 2010.

This audit focuses on the M4 handback. It looks at whether the road will be in good condition when the State gets it back, and whether it will cope with the extra traffic after the toll is removed. These are critical issues for taxpayers and motorists. Taxpayers don't want to be responsible for a large repair bill and motorists don't want to be stuck in traffic jams.

In this audit, I chose not to examine whether the M4 tollway represented value-for-money. The Government's approach to assessing the value-for-money of PPP bids has changed substantially since the M4, and an audit of this would have offered limited benefits. On the other hand, there will be several more handbacks in the coming years so this audit offered good learning opportunities.

I need to make the point that this audit was conducted as planning for the handback of the M4 proceeded. We have therefore had to make judgements based on the evidence available at the time. This was deliberate, so that there was time for the Government to consider our findings before handback occurs.

Peter Achterstraat
Auditor-General

October 2009

Audit conclusion and recommendations

The focus of our audit

The M4 runs from Strathfield to Lapstone, and is one of Sydney's main transport arteries. It currently comprises sections of tolled and un-tolled motorway. It provides uninterrupted travel at variable speeds and bypasses 60 sets of traffic lights on the parallel Great Western Highway/Parramatta Road. The M4 services the transport needs of over 100,000 commuters, local residents and businesses each day.

The NSW Government initially built sections of the M4 in the 1970s and 80s. The main section was from the Great Western Highway at Prospect to the Nepean River at Penrith. The section from Concord Road, Strathfield to Mays Hill was also completed at that time.

In 1989, the Roads and Traffic Authority (RTA) awarded a contract to Statewide Roads (SWR) to build, own and operate the missing section of the M4 from Mays Hill to Prospect and to upgrade the lane configuration on the other sections. Since 2007, the Transurban Group has owned just over half of SWR, with the balance held by institutional investors. Transurban has a majority share in five Sydney tollways.

This was one of the first Public Private Partnership (PPP) projects in NSW. Tolls are levied to pay for the privately built parts of the road. Motorists have paid more than \$970 million in tolls since it opened in 1992. In 1997, the NSW Government introduced the 'Cashback' scheme for private users which has since reimbursed M4 users \$255 million.

At midnight on 15 February 2010, the M4 tollway will be the first major PPP in NSW to be handed back to Government. NSW Government policy is to remove the toll on handback. The objective of this audit was to assess how well the RTA is managing this handback to ensure the road is in a satisfactory condition and limit impact on road users. Our two lines of inquiry were:

- is the RTA taking appropriate steps to ensure the privately owned and operated sections of the M4 will be handed back in a satisfactory condition and fit for purpose?
- is the RTA taking appropriate steps to limit the impact of toll removal on road users?

Audit conclusion

Road condition

The 1989 project deed created a number of problems for the RTA. It did not specify how to determine repairs needed to bring the road to a satisfactory condition on handback. The deed did not require condition and maintenance approaches be kept up-to-date with industry standards and best practice. It did not establish a simple method to cover the cost of any repairs the operator may fail to make.

Despite the shortcomings in the deed, the sections of the M4 built and maintained by SWR should be in a satisfactory condition when handed back, not requiring major repairs to the pavement or substantial structures (such as bridges) in the next five years. This positive outcome can be attributed to a combination of good management and good will between RTA and SWR. Such a scenario cannot be relied upon in all PPPs, so it is important to address these shortcomings in future deeds.

Project deeds have evolved since 1989. The RTA's most recent deed (M7 Western Sydney Orbital) deals better with handback. It more clearly specifies the operator's handback obligations, establishes RTA's inspection rights, and seeks to keep condition standards and maintenance approaches up-to-date. NSW Treasury also requires agencies to incorporate stronger provisions to ensure assets are handed back in good condition and to consider asking private parties for performance bonds or other security to cover handback repair costs.

Impact on motorists

The Government's policy is to remove the toll on handback. This will increase the number of vehicles using the M4 and queuing in the peak period. More motorists will want to use the M4 than can fit on to it. By 2011, demand in the M4 corridor is predicted to increase by approximately 2,000 vehicles per hour. Of these, 500 will result from toll removal and 1,500 from natural growth. At the time of audit, the RTA could not say how much longer the queues will be at particular locations.

The RTA is taking steps to cushion the effect of toll removal on M4 motorists. These include changes to the lane configuration, additional capacity on some off ramps, changes at key intersections, traffic management system changes such as additional variable message signs, and a public education campaign. Planning is well advanced for the RTA's improvement works. Most should be finished before handback. Those that cannot start until handback (eg changes to lane configurations) should be completed soon thereafter.

The RTA's traffic flow changes will only have a limited impact on peak direction travel times on the M4, but will have an overall network benefit.

Even with the planned improvements, removing the toll will add 6.5 minutes (27 per cent) to travel times on the M4 heading east in the morning peak (between Cumberland Highway, Wentworthville and the eastern end of the motorway).

In the afternoon peak, westbound travel time on the M4 will be about the same whether the toll is removed or not. However, in the afternoon, users will be delayed getting onto the M4 at Strathfield.

At the time of audit, the RTA could not tell us how much longer motorists will have to wait to get from the city to the M4 in the evening or to get from the M4 to the city in the morning.

The RTA's modelling has focused on infrastructure solutions along the M4, and not necessarily the information needs of motorists. People need to know the impact toll removal will have on travel to and from the city, not just the M4 section of the trip. This would help them make decisions about when to travel, what route to take, or whether they should instead use public transport.

The RTA has no plans to further enhance the M4. It has advised that in the absence of an M4 East extension, further enhancements to the M4 would not be cost effective and only move congestion further along the motorway.

Recommendations

To ensure that future PPPs deal adequately with handback, we recommend that the RTA:

1. ensure deeds spell out an appropriate inspection and testing program to determine repairs required to bring roads up to a satisfactory condition at handback (p.11)
2. ensure deeds link condition standards and maintenance approaches to changing industry standards and approaches over the life of the PPP (p.11)
3. consider including in deeds a requirement that operators provide a performance bond or similar security over the cost of handback repairs (p.11)

To ensure that existing PPPs deal adequately with handback, we recommend that the RTA:

4. review the lessons learnt from the M4 tollway handback and determine whether it should seek to negotiate changes to existing tollway deeds to better deal with handback, by June 2010 (p.11)

To limit the impact of removing the M4 toll, we recommend that the RTA:

5. complete planned M4 road works on time, and no later than 31 March 2010 (p.15)
6. implement planned traffic management system changes on time, and no later than 31 March 2010 (p.15)
7. communicate to motorists the likely effect of toll removal on congestion and travel time by the end of 2009 (p.15)
8. determine the effect of toll removal on motorists travelling between the city and Parramatta during peak periods, and advise motorists before handback (p.15).

Response from the Roads and Traffic Authority of NSW

Please find attached the RTA's response to the Audit Office of NSW's report of the performance audit of the M4 Tollway Handback.

The RTA appreciates having the opportunity to respond and is pleased to endorse both the audit process and the findings of the report.

The M4 Tollway is the first NSW Public Private Partnership to reach maturity. At midnight 15 February 2010 the road will be transferred to public control after being under the stewardship of Statewide Roads Ltd since May 1992.

The RTA is keen to secure a satisfactory outcome and to ensure that the lessons learnt will be applied as other Public Private Partnerships reach maturity.

The transferral, or handback, process was developed by the RTA in the absence of adequate formal provisions in the M4 Project Deed. The process was designed to assure both the government and taxpayers that the motorway will be fit for purpose when it is returned and that due diligence has been maintained.

The M4 handback process involved investigations into three key areas:

- The quality and standard of assets to be returned.*
- Traffic and safety management issues.*
- Commercial, legal and due diligence issues.*

This Audit Office performance audit focussed on the first two areas. The third key area, although not audited by the Audit Office, nevertheless has been rigorously addressed by the handback process.

The RTA is pleased to support the eight recommendations presented by the Auditor-General in his report of the performance audit. The RTA's response to each of the recommendations is presented below.

Recommendations One to Three: Future Public Private Partnerships

Recommendations one and two reflect improvements that have already been applied to all post-M4 project deeds.

The RTA will apply recommendation three to future RTA Public Private Partnership Project Deeds.

The establishment of the RTA Motorway Management Branch has already brought a stronger focus to the longer-term operation and maintenance demands of tollway project deeds.

Recommendation Four: Existing Public Private Partnerships

Project deeds for tollway projects subsequent to the M4 have already benefited from progressive improvements. A post-handback review of the M4 Handback process will provide opportunities for further refinement as the handback provisions of each current tollway project are assessed in the light of the findings.

The most recent tollway project deeds call for constant adherence to best practice in operation and maintenance. For example, the M7 Motorway Project Deed states that the operator must comply with O&M Best Practices and for this purpose develop, implement and continuously improve maintenance standards and systems to reflect O&M Best Practices, including performance and interventions standards, appropriate response times and management and control systems.

Recommendations Five to Eight: the M4 Handback

The RTA is already well on the way to delivering the road improvement works referred to in recommendations five and six.

Work on the James Ruse Drive off ramp is at an advanced state, and the conversion of the T2 transit lane near Cumberland Highway to a general traffic lane (with the installation of variable message signs and traffic detector loops) commenced in October 2009.

With respect to recommendations seven and eight, the RTA agrees that it should implement a communication campaign to inform motorists of the expected congestion and travel time impact of the toll removal.

While the recommended timeframe would be desirable at most times, a deferral to around the middle of January would be more appropriate given the reduced efficacy of such campaigns over Christmas and New Year periods.

The RTA agrees that it should communicate the impact of the toll removal to those who travel during peak periods, including those who travel between the city and Parramatta.

(signed)

*Michael Bushby
Chief Executive*

Dated: 13 October 2009

Key findings

1. Will the M4 be in a satisfactory condition and fit for purpose at handback?

Will the M4 require major repairs in the next five years?

The project deed created a number of problems for the RTA. It did not specify how to determine repairs needed to bring the road to a satisfactory condition on handback. The deed did not require condition and maintenance approaches be kept up-to-date with industry standards and best practice. It did not establish a simple method to cover the cost of any repairs the operator may fail to make.

Despite the shortcomings in the deed, the sections of the M4 built and maintained by SWR should be in satisfactory condition when handed back, not requiring major repairs to the pavement or substantial structures (such as bridges) in the next five years.

This outcome can be attributed to good management and good will between RTA and SWR. Such a scenario cannot be relied upon in all PPPs, so it is important to address the shortcomings described above in future deeds.

M4 project deed signed in 1989

The M4 project deed was signed by SWR and the Government on 15 December 1989. The deed:

- specified the design life, and remaining life at handback, of the tollway
- required SWR to develop a 'Maintenance Manual' including maintenance procedures
- outlined some surface condition requirements to be achieved during operation and handback.

Handback provisions not adequate

The M4 project deed did not spell out an appropriate inspection and testing program to determine repairs required to bring the road up to a satisfactory condition at handback.

The RTA's most recent deed, for the M7 Western Sydney Orbital, better deals with this. For example, handback requirements and timing are specified in a 'Handover mechanism from Westlink'. No such mechanism was in the M4 deed.

NSW Treasury now recommends agencies follow these handback principles:

- at transfer of a road to Government, the private party (at its cost) is to ensure the road meets the Government's return conditions
- the private party and Government must carry out joint inspections of the road before the end of the contract term
- the parties must use their reasonable endeavours to agree the works required from the date of the inspections until contract expiry
- the private party will carry out the final maintenance and refurbishment works in accordance with the agreed program
- if the private party does not carry out agreed works, the Government may do so and the cost incurred will be a debt due and payable by the private party to Government.

This is similar to the approach adopted in the United Kingdom.

Exhibit 1: Handback clauses in UK road PPPs

Each United Kingdom project deed has specific clauses regarding handback, designed to ensure that the road is returned in a fit condition for service not requiring major repairs. The deeds specify:

- a required residual life for each element of the road
- five years prior to handback, the Highways Agency and the operator will carry out detailed inspections of the major elements of the road and agree a program of repairs
- eighteen months prior to handback, a similar procedure covering all road elements will be undertaken to ensure agreed work has been done and assess any other repairs needed.

Source: UK Department of Highways

Condition standards could have been better defined

The M4 project deed did not adequately specify condition standards nor establish a method to revise these standards over time to meet contemporary requirements. For example:

- some condition standards in the deed were vague
- some were linked to industry or RTA standards of the day (1989) without any requirement to update standards over the PPP term
- no method was specified to measure remaining life.

PPP projects are typically long and industry standards and approaches inevitably change during their life. It is important that the standards required of tollways should not lag behind the rest of the network.

The M4 project deed focused on defining appropriate maintenance procedures. In practice, asset deterioration is strongly influenced by unpredictable factors such as the weather. Since 1989, maintenance approaches have changed. More emphasis is now placed on measuring the actual condition and rate of deterioration, and using this information to determine what repairs to undertake and when. Future deeds could be written to encourage such an approach.

The RTA's most recent deed was the M7 Western Sydney Orbital. That deed better deals with asset condition and management. It more clearly specifies condition standards. For example, it sets out the maximum allowable level of roughness based on recognised industry standards and the maximum time the operator can take to complete repairs. The M7 deed also commits the operator to:

- adopt best maintenance practices
- continually improve the standards and quality of maintenance
- maintain the road consistent with the overall road network systems and standards.

The M4 project deed included a dispute settlement clause the RTA can activate if it cannot agree repairs with SWR. This clause has not been needed yet. The RTA will rely on the obligations under the project deed and the legally enforceable warranties provided by the operator should such an event arise.

Securing repair costs

Deeds used elsewhere require funds to be put aside as security to cover the cost of handback related repairs.

Exhibit 2: Protecting funds for repairs
In the UK, during the five year period prior to handback, 40 per cent of the cost of agreed remedial works is deposited into an account upon which only the Agency can draw until contract end. This money can be used by the Agency to carry out any work that the operator fails to complete. Once the contract ends and all such repairs have been made, any money remaining in the account is paid to the operator.

Source: UK Department of Highways

NSW Treasury recommends that for future PPPs, agencies should consider requiring the operator to pay a performance bond or appropriate security to cover the cost of repairs at handback.

RTA monitored condition

In the course of the PPP, the RTA:

- routinely monitored the structural condition of the road and its rate of deterioration
- routinely monitored the surface condition against its motorway standards and the deed's particular requirements
- ensured inspections and testing were undertaken by suitably qualified experts.

Between 2007 and 2008, SWR upgraded the surface to the M4 tollway between Coleman Street, Mays Hill and the Eastern Creek Service Centres, and between James Ruse Drive and the toll plaza. SWR reports this work cost about \$15 million. This new surface was constructed to RTA's current standards and has an expected design life of ten years.

RTA has managed the handback well

For handback, the RTA:

- formed steering and work groups including SWR and key RTA personnel
- developed a risk register and documented risk mitigation actions
- is undertaking comprehensive final assessments including the inspection and testing of all physical assets
- is well advanced in agreeing repairs with SWR.

The RTA and SWR have developed a good working relationship in this PPP. Much of what SWR has done to assist RTA with the handback has been voluntary, rather than a deed requirement.

In different circumstances, with a less cooperative operator, the result may have been less positive. It is obviously better to cover handback, asset condition and repairs in the deed.

Given the evolution of project deeds, current guidance from NSW Treasury, and the RTA's learning from this handback, there may be benefit in the RTA looking at existing deeds for its other PPPs to determine whether it should re-negotiate handback arrangements.

Are arrangements in place for ongoing maintenance of the M4?	<p>Arrangements are in place for ongoing maintenance of the road after handback.</p> <p>SWR currently maintains its part of the M4.</p> <p>The RTA's Sydney Division will take responsibility for the road when handed back, and has been closely involved in handback discussions. Initially the RTA will use an internal business unit to maintain the road after handback. Members of this unit are also involved in the handback. Joint RTA/SWR inspections are being undertaken which should ensure information about asset condition is captured.</p> <p>The RTA has budgeted for maintenance of the M4 PPP sections after they are handed back.</p>
Recommendations	<p>To ensure that future PPPs deal adequately with handback, we recommend that the RTA:</p> <ol style="list-style-type: none"> 1. ensure deeds spell out an appropriate inspection and testing program to determine repairs required to bring roads up to a satisfactory condition at handback 2. ensure deeds link condition standards and maintenance approaches to changing industry standards and approaches over the life of the PPP 3. consider including in deeds a requirement that operators provide a performance bond or similar security over the cost of handback repairs <p>To ensure that existing PPPs deal adequately with handback, we recommend that the RTA:</p> <ol style="list-style-type: none"> 4. review the lessons learnt from the M4 tollway handback and determine whether it should seek to negotiate changes to existing tollway deeds to better deal with handback, by June 2010.
2. Will the handback impact on motorists?	
Will toll removal increase use of the M4?	<p>Toll removal will increase the number of vehicles using the M4 and surrounding roads, and increase queuing.</p> <p>The Government's policy to remove the toll on handback has been in place since its election in 1995. The RTA has used an appropriate method to model the effect of toll removal on traffic volumes and travel times on the M4 and some surrounding roads.</p>
Increased use of M4	<p>Removing the toll will increase use of the M4. The RTA advises that the M4 is near capacity in the peak directions with the toll in place. Therefore, there is not much room for extra vehicles to get on.</p>
Queuing will increase	<p>Queuing will be longer in the peak periods after the toll is removed, and it will take longer to get on to the M4. The number of motorists who want to use the M4 will be well in excess of those who can fit on to it. RTA's modelling indicates that by 2011 demand in the M4 corridor will increase by approximately 2,000 vehicles per hour. Of these, 500 will result from toll removal and 1,500 will result from natural growth.</p>

The increase in demand will be greater than the flow increase, resulting in increased queuing. At the time of the audit, the RTA could not say how much more queuing there will be at particular locations as it has not modelled this.

Is the RTA taking steps to cushion the effect of toll removal?

The RTA is taking steps to cushion the effect of toll removal on M4 traffic flow. These include changes to the lane configuration, additional capacity on some off ramps, changes at key intersections, traffic management system changes such as additional variable message signs, and a public education campaign.

These should be finished before handback, or where they cannot start until the RTA has possession of the road, soon thereafter.

Planned improvements

The RTA is planning to enhance the M4 to limit the impact of increased traffic. The RTA has used an appropriate method to identify, evaluate and prioritise enhancements to the M4. The projects will:

- change lane alignments through the toll plaza area
- lengthen the southbound right turn bay extension at the intersection of Homebush Bay Drive and the M4
- remove the Mays Hill east-bound transit lane on the M4 and provide a dedicated lane for the on ramp from Cumberland Highway
- provide an additional lane on the westbound off ramp to James Ruse Drive and improvements to the intersection of James Ruse Drive and the M4.

The RTA is also planning to implement traffic management system changes to assist traffic flow, including variable message signs, closed circuit television cameras, and traffic signal phase and sequencing adjustments.

Will toll removal impact on M4 users?

The RTA predicts that toll removal will have significant impacts, particularly in the morning peak, where travel times on the M4 will be significantly longer and stopping in the M4 corridor will be more frequent.

In assessing the impact of toll removal on M4 users, the RTA did not look at the impact on the entire journey to, or from the city.

Travelling in the peak directions

The RTA's modelling indicates that even with the planned improvements, removing the toll will add 6.5 minutes (27 per cent) to travel times heading towards the city on the M4 in the morning peak between Cumberland Highway, Wentworthville and the eastern end of the motorway at Strathfield where it joins Parramatta Road near Concord Road.

Exhibit 3: M4 median travel time - eastbound in the morning peak	
Toll retained, no traffic flow changes	24 minutes
No toll, no traffic flow changes	31 minutes
No toll, with traffic flow changes	30.5 minutes

Source: RTA 2009

After the toll is removed, the main cause of the extra travel time in the morning will be more congestion where traffic has to merge at the Granville Viaduct, and where the traffic is exiting the motorway at Parramatta Rd, Strathfield.

In the afternoon peak, westbound travel time is predicted to be about the same (28 minutes) whether the toll is removed or not. The main delay, as at present, is likely to be getting onto the M4.

The RTA advised us that in assessing the impact of toll removal on M4 users, it did not look at the impact on the entire journey to or from the city. We asked three questions which the RTA could not answer:

- how much longer will it take westbound vehicles to get onto the M4 at Strathfield in the evening peak?
- how much further back will queues be for westbound vehicles trying to get onto the M4 at Strathfield in the evening peak?
- how much longer will the journey take from the City to the M4 in the evening peak?

The RTA's modelling has focused on assessing infrastructure solutions, and not necessarily on the information needs of motorists. People are likely to be more interested in the effect on total travel time to and from the city than on the M4 section alone. People need to know the effect on their total trip time to inform decisions about when to travel, their route, and whether they should instead use public transport.

Travelling against the peak

The RTA's modelling indicates its flow improvements will have most effect on traffic heading opposite the peak direction (eastwards) in the afternoon.

Exhibit 4: M4 median travel time - eastbound in the afternoon, against the peak	
Toll retained, no traffic flow changes	13 minutes
No toll, no traffic flow changes	30 minutes
No toll, with traffic flow changes	16 minutes

Source: RTA 2009

When the toll is removed, motorists heading east in the afternoon are likely to take more short trips and many will leave using one of the off-ramps. RTA's modelling indicates that with current off-ramp capacity, some of the extra traffic resulting from toll removal would queue back onto the motorway. This would impede other vehicles and increase travel time. The RTA modelling indicates that its traffic flow improvements will reduce the effect of this 'queue back' on afternoon eastbound travel time.

Westbound morning travel is predicted to take five minutes longer without a toll.

Frequency of stopping

The RTA advises that its flow changes will have an overall network benefit. The RTA’s modelling of the number of times vehicles stop (i.e. slow to five km/h or less) on the M4 and surrounding networks supports this. The number of times vehicles stop is an indicator of congestion.

Exhibit 5: Number of vehicle stops on M4 and surrounding roads network		
Scenario	AM peak	PM Peak
No toll, no traffic flow changes	48% increase	24% increase
No toll with traffic flow changes	36% increase	4% decrease

Source: RTA 2009

Modelling limitations

The RTA’s modelling predictions are for the situation once traffic patterns settle down after handback. It is not possible to reliably predict what will happen in the first few days after handback as motorists become accustomed to the M4 being free. Significant additional delays for motorists are likely during this initial period.

It is important to note that the RTA’s modelling has limitations. Whilst the approach RTA adopted was sound and appropriate, traffic modelling is far from an exact science. The modelling may also overstate the effect of the RTA’s traffic flow improvements. It assumed the RTA would increase the capacity of the eastbound off ramp to Silverwater Road. This will not occur before handback, although the RTA will monitor the effect of toll removal to assess whether such work is needed.

Public education campaign

The RTA is also planning to undertake a public education campaign to advise motorists to expect slower trips after handback and encourage them to continue to use alternative routes.

No further enhancements to the M4 are currently planned

The RTA is not currently planning further enhancements to the M4. The motorway ends at the already congested Parramatta Road at Strathfield. The RTA has developed proposals to extend the M4 to the east beyond Strathfield but there is no approval to build this. It has advised that in the absence of an M4 East extension, further enhancements to the M4 would not be cost-effective as they would only move congestion further along the roadway.

Traffic congestion can also be influenced in other ways such as improved public transport. The recent creation of a ‘super’ agency, the Department of Transport and Infrastructure, presents an opportunity to consider a broad range of potential solutions and to address congestion in Western Sydney in a more integrated, inter-modal way.

Will the change from tolled to untolled motorway be completed on time?

Planning for the RTA’s improvement works is well advanced. Current indications are that those works:

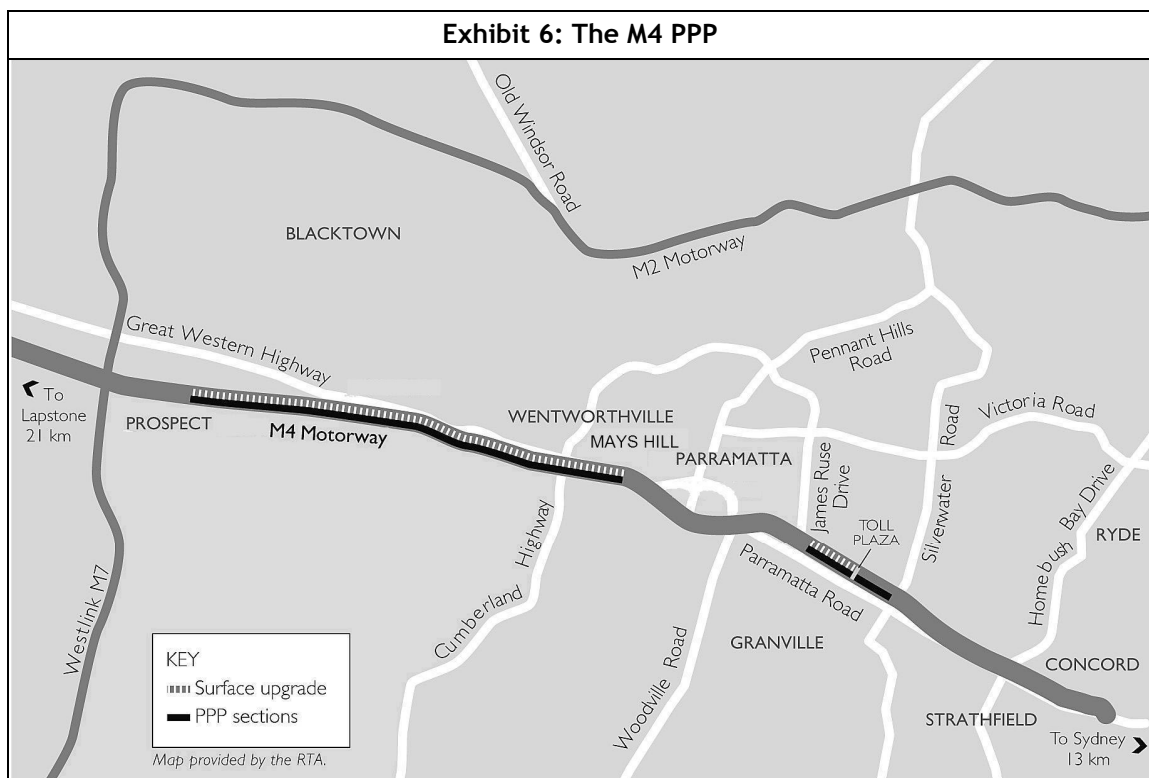
- that can be completed before handback will be in place and that the toll will be removed from midnight 15 February 2010
- that cannot be completed until the RTA takes possession of the road and the toll is removed will be completed shortly after handback.

Will construction works impact on M4 users?	<p>Construction works should not impact significantly on M4 users.</p> <p>The RTA will adopt its normal practices on these works to minimise disruption, such as working during the night.</p>
Recommendations	<p>To limit the impact of removing the M4 toll, we recommend that the RTA:</p> <ol style="list-style-type: none">5. complete planned M4 road works on time, and no later than 31 March 20106. implement planned traffic management system changes on time, and no later than 31 March 20107. communicate to motorists the likely effect of toll removal on congestion and travel time by the end of 20098. determine the effect of toll removal on motorists travelling between the city and Parramatta during peak periods, and advise motorists before handback.

Appendices

Appendix 1: Facts and figures about the M4 PPP

The M4 Public Private Partnership (PPP) sections are 12.2 km long in total, including 2.2km between Silverwater Road and James Ruse Drive and 10.0 km between May's Hill and Prospect.



Note: Surface upgrade undertaken between 2007 and 2008 by SWR reported to cost about \$15 million.

Cost of the M4

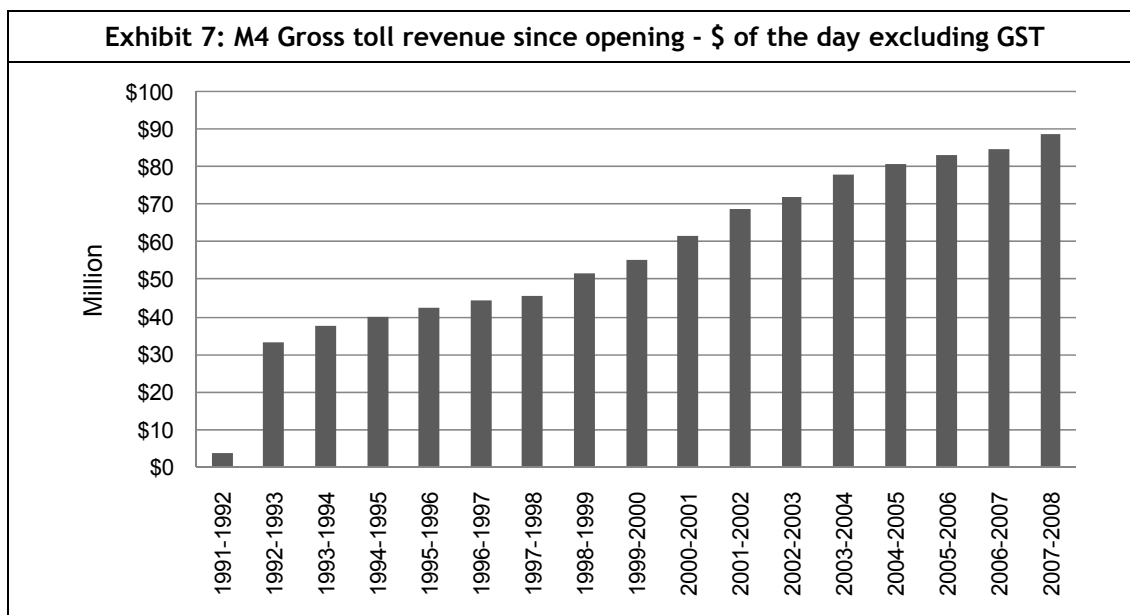
The Audit Office does not audit private sector companies like SWR, so we cannot comment on the actual costs to SWR of the PPP. Our 1994 performance audit, *Private Participation in the Provision of Public Infrastructure - The Roads and Traffic Authority*, gives an indication of the scale of the project. That audit reported:

- the estimated total cost of the M4 PPP was \$246 million (1988 dollars) including construction, interest, operations, maintenance, and taxation (this would equate to \$453 million in 2008 prices)
- the estimated construction cost was \$110 million (1988 dollars)
- SWR was to make a one-off payment of \$46.6 million in rent for the land on which the tollway was built
- if the internal rate of return exceeded 17.64 per cent at any time, the lease term would be reduced or the formula for increasing tolls revised.

The RTA advised us that:

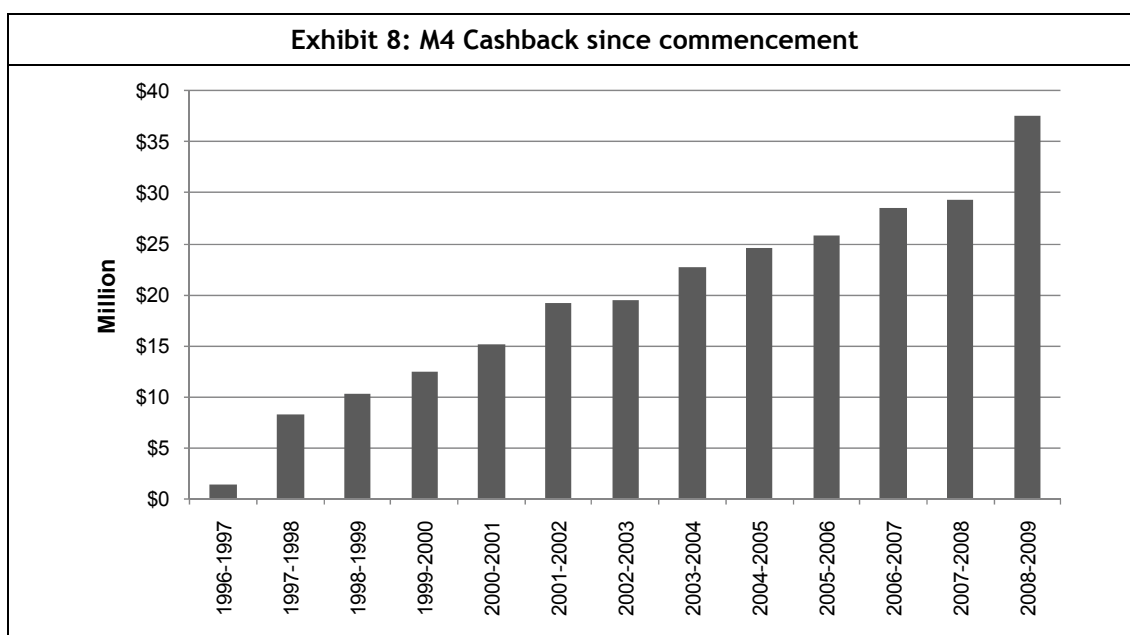
- the internal rate of return has not and is not likely to exceed 14.73 per cent
- SWR paid the \$46.6 million in rent
- during the course of the PPP, the deed was amended with SWR undertaking additional roadworks in exchange for an increase in the toll (the cost would have added to the \$246 million).

Toll revenue The current toll is \$2.75 for cars and bikes and \$6.60 for large vehicles. SWR received \$88.5 million in gross revenue from M4 tolls in 2008, and \$970 million in gross revenue up to June 2008.



Source: RTA 2009

Cashback scheme Labor Party policy since 1995 has been to remove the toll from the M4 and the M5 Motorways. Following its election, it found it could not do so until the end of the PPP arrangements. Instead, it implemented a ‘Cashback’ scheme in 1997. Under the ‘Cashback’ scheme, motorists driving NSW privately registered vehicles on the M4 and M5 Motorways can claim a refund of the tolls paid (excluding GST) from the NSW Government. In 2008-09, \$37.5 million in tolls were claimed by M4 users. As at the end of 2008-09, the Government had reimbursed M4 users \$255 million

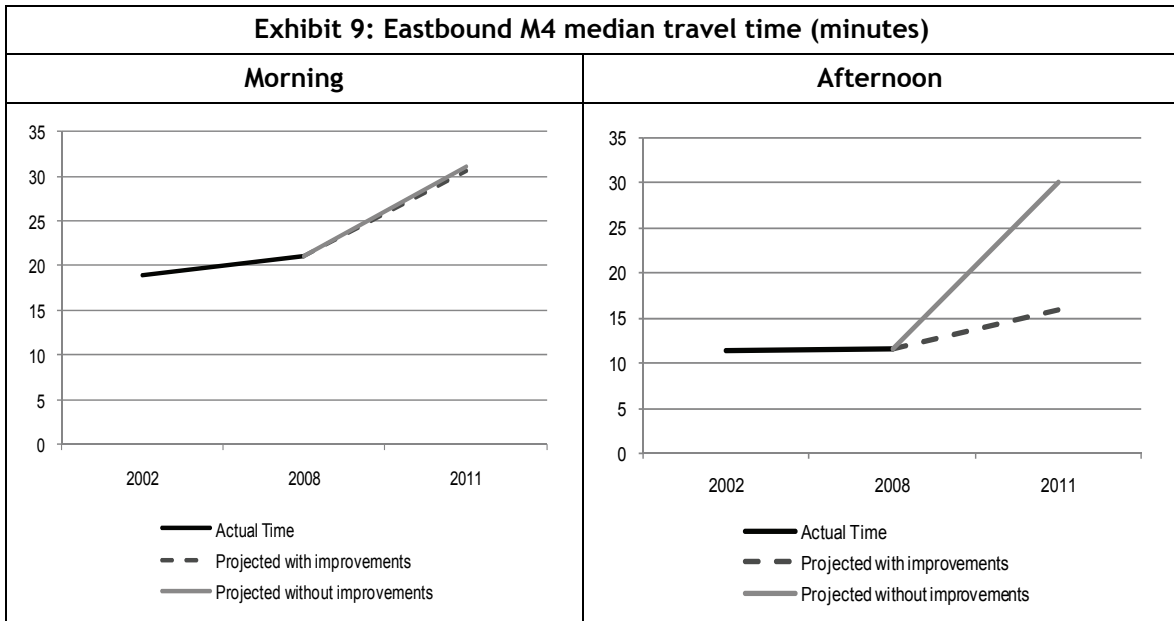


Source: RTA 2009

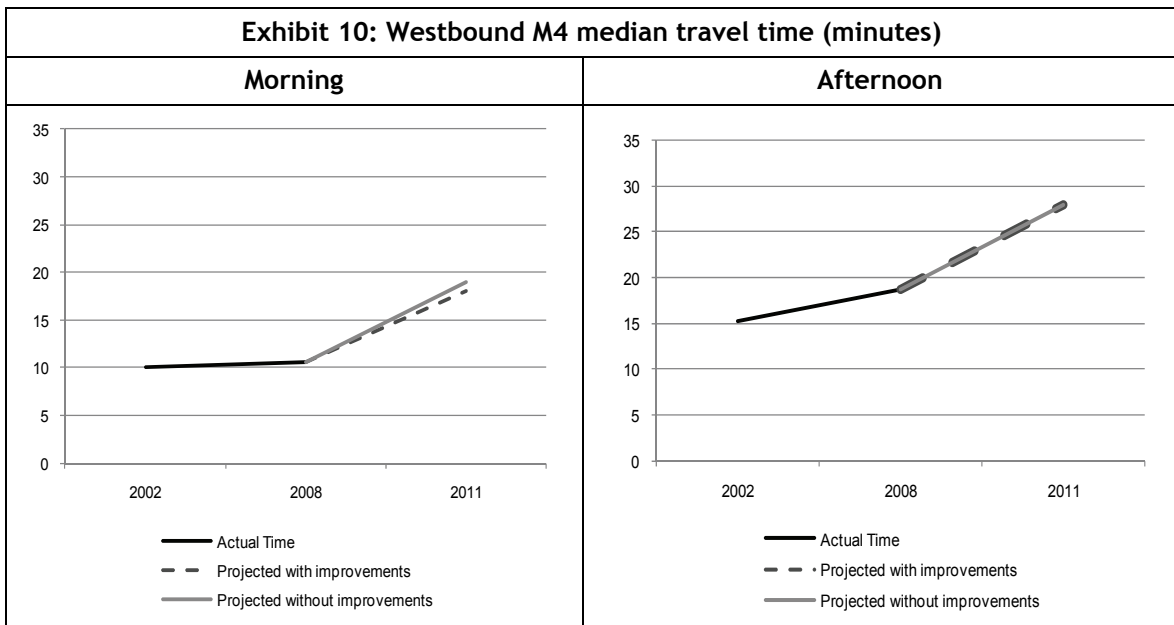
At midnight on 15 February 2010, the PPP contract finishes and SWR will hand the road back to the RTA. The Government will then be able to remove the toll and end the M4 Cashback. It will continue on the M5. Cashback does not apply to other tolled motorways.

Effect of toll removal on traffic flow

The following charts show in more detail the effect of toll removal and the RTA's traffic flow changes on travel between Wentworthville and Strathfield on the M4.



Source: RTA 2009



Source: RTA 2009

Appendix 2: Handback of PPPs in NSW

Exhibit 11: Next 10 NSW PPPs to be handed back			
PPP	Contract signed	Hand back	Estimated Cost ¹ (\$ million)
M4 Motorway	1989-90	2010	246
Hawkesbury Hospital	1994-95	2014	47
Illawarra and Woronora Water Treatment Plant	1994-95	2020	150
Macarthur Water Filtration Plant	1993-94	2021	125
Prospect Water Filtration Plant	1993-94	2021	215
Sydney Harbour Tunnel	1986-87	2022	670
M5 Motorway	1990-91	2023	415
Airport Rail Link (or "New Southern Railway")	1994-95	2025	716
Colongra Gas Transport & Storage Facility	2007-08	2026	70
Eastern Creek Waste Treatment Plant	2002-03	2027	70

Note 1: Estimated cost at time of the deed was signed. Cost in dollars of the day.

Source: NSW Treasury 2009

Notes:

- The Hawkesbury Hospital is a Social Infrastructure PPP. The project was refinanced by T-Corp in 2000 - effectively being brought back into Government ownership. It continues as an operating contract to 2014. The Government partner was the Western Area Health Service.
- Prior to 1993, Sydney's drinking water supply was not filtered. The Water Board had insufficient capital to finance all of the identified programs, and so let PPP contracts for four plants (Prospect, Macarthur, Illawarra and Woronora) worth \$490m to construct.
- The Sydney Harbour Tunnel was the first PPP in NSW. The Sydney Harbour Tunnel Company (SHTC) owns, operates and will maintain the Harbour Tunnel until August 2022 when it will be transferred to public ownership.
- The M5 is a 22km long Motorway in South-Western Sydney now operated by Interlink Roads P/L. The Transurban Group is the major (50%) shareholder in Interlink.
- The Airport Rail Link PPP was to build the stations only (the underground rail track was built by Government). The company went into administration after patronage fell below predicted levels. The administrators negotiated a new Stations Agreement in 2005.
- The Colongra Gas Transport & Storage Facility PPP provides for building and operating a 42-inch, nine kilometre, pipeline and compressor station which transports and stores gas for Delta Electricity's 667 Megawatts Colongra gas-fired turbine facility on the Central Coast. It is being built by Jemena (formerly Alinta), now a wholly-owned subsidiary of Singapore Power.
- The Eastern Creek Waste Treatment Plant PPP provides for the financing, design, construction and operation of an alternative waste treatment facility on the Eastern Creek land-fill site. The facility will sort recyclables, compost waste and convert waste to energy, reducing the amount of household waste going to land-fill. The provider is Global Renewables Eastern Creek Pty Limited (a subsidiary of Global Renewables Limited). The Government partner was Waste Services NSW.
- Other PPPs, for example the Lane Cove Tunnel, will be handed back after 2027.

Appendix 3: About this audit

Audit objective The objective of this audit was to assess how well the RTA is managing the handback of the M4 to ensure the road is in a satisfactory condition and to limit impact on road users.

Lines of inquiry In reaching an opinion against the objective, we wanted to find out whether the RTA was taking appropriate steps to:

1. ensure the privately owned and operated sections of the M4 will be handed back in satisfactory condition and fit for purpose
2. limit the impact of toll removal on road users.

Audit criteria For line of inquiry 1, the audit criteria were:

- Assets are in a satisfactory condition not requiring major repairs within the next five years.
- Capital works needed to change from tollway to motorway will be completed at handover or shortly after.
- Arrangements are being put in place for ongoing maintenance of the M4.

For line of inquiry 2, the audit criteria were:

- Construction works for handover are not impacting significantly on road users.
- Handover (including toll removal) will not impact significantly on road users.

Audit scope The audit's scope covered the transfer of the privately owned and operated M4 road segments from Statewide Roads to the RTA, due to occur in February 2010. The audit examined management of the road assets and traffic management associated with the handback. The audit did not:

- assess whether the PPP was the best delivery method
- duplicate any reviews already conducted
- consider legal or commercial issues associated with the handover.

Audit approach We acquired subject matter expertise through:

- interviews and examination of relevant documents including project deed, guidelines, reports, studies, strategies and reviews relating to the project
- discussions with relevant staff
- engaging suitable consultants to provide relevant expertise on asset management and traffic management
- comparisons where appropriate with other States and countries
- discussions with other audit offices
- government and best practice guidelines relevant to the above.

This report incorporates expert advice provided by consultant engineers Mr Geoff Youdale on asset management and Mr Bruce Fishburn on traffic management.

- Audit selection** We use a strategic approach to selecting performance audits which balances our performance audit program to reflect issues of interest to Parliament and the community. Details of our approach to selecting topics and our forward program are available on our website.
- Audit methodology** Our performance audit methodology is designed to satisfy Australian Audit Standards AUS 806 and 808 on performance auditing, and to reflect current thinking on performance auditing practices. Performance audits commencing after 1 January 2009 comply with the Standard on Assurance Engagements ASAE3500 Performance Engagements.
- We produce our audits under a quality management system certified to International Standard ISO 9001. Our processes have also been designed to comply with the auditing requirements specified in the *Public Finance and Audit Act 1983*.
- Acknowledgement** We gratefully acknowledge the co-operation and assistance provided by the RTA. In particular, we wish to thank our liaison officers and staff in the Motorways Management Branch who participated in interviews, assisted with document review or provided other material relevant to the audit.
- Audit team** Our team leader for this performance audit was Rod Longford, who was assisted by Rod Plant. Jane Tebbatt provided direction and quality assurance.
- Audit cost** Including staff costs, printing costs and overheads the estimated cost of the audit is \$194,500.

Performance Audits by the Audit Office of New South Wales

Performance Auditing

What are performance audits?

Performance audits determine whether an agency is carrying out its activities effectively, and doing so economically and efficiently and in compliance with all relevant laws.

Performance audits may review a government program, all or part of a government agency or consider particular issues which affect the whole public sector.

Where appropriate, performance audits make recommendations for improvements.

If you wish to find out what performance audits are currently in progress, visit our website at www.audit.nsw.gov.au.

Why do we conduct performance audits?

Performance audits provide independent assurance to Parliament and the public that government funds are being spent efficiently and effectively, and in accordance with the law.

Performance audits seek to improve the efficiency and effectiveness of government agencies so that the community receives value for money from government services.

Performance audits also assist the accountability process by holding managers to account for agency performance.

What are the phases in performance auditing?

Performance audits have three key phases: planning, fieldwork and report writing.

During the planning phase, the audit team will develop audit criteria and define the audit field work.

At the completion of field work we will meet with agency management to discuss all significant matters arising out of the audit. Following this, we will prepare a draft performance audit report.

We meet with agency management to check that facts presented in the report are accurate and that recommendations are practical and appropriate. Following this, a formal draft report is provided to the CEO for comment. The relevant Minister is also provided with a copy of the final

report. The final report, which is tabled in Parliament, includes any comment made by the CEO on the conclusion and the recommendations of the audit.

Depending on the scope, performance audits can take several months to complete.

Copies of our performance audit reports can be obtained from our website or by contacting our Office.

How do we measure an agency's performance?

During the planning phase, the team develops the audit criteria. These are standards of performance against which the agency or program is assessed. Criteria may be based on best practice, government targets, benchmarks, or published guidelines.

Do we check to see if recommendations have been implemented?

Agencies are requested to report actions taken against each recommendation in their annual report so that we can monitor progress.

The Public Accounts Committee (PAC) may conduct reviews or hold inquiries into matters raised in performance audit reports. These inquiries are usually held 12 months after the report is tabled.

Who audits the auditors?

Our performance audits are subject to internal and external quality reviews against relevant Australian and international standards. This includes ongoing independent certification of our ISO 9001 quality management system.

The PAC is also responsible for overseeing the activities of the Audit Office and conducts a review of our operations every three years.

Who pays for performance audits?

No fee is charged for performance audits. Our performance audit services are funded by the NSW Parliament and from internal sources.

Further information

Further information can be obtained from our website www.audit.nsw.gov.au or by contacting us on 9275 7277.

Performance Audit Reports

No	Agency or Issues Examined	Title of Performance Audit Report or Publication	Date Tabled in Parliament or Published
193	Roads and Traffic Authority of NSW	<i>Handback of the M4 Tollway</i>	October 2009
192	Department of Services, Technology and Administration	<i>Government Licensing Project</i>	7 October 2009
191	Land and Property Management Authority Maritime Authority of NSW	<i>Administering Domestic Waterfront Tenancies</i>	23 September 2009
190	Department of Environment, Climate Change and Water NSW Environmental Trust	<i>Environmental Grants Administration</i>	26 August 2009
189	NSW Attorney General's Department NSW Department of Health NSW Police Force	<i>Helping Aboriginal Defendants through MERIT</i>	5 August 2009
188	NSW Department of Health	<i>Tackling Cancer with Radiotherapy</i>	23 June 2009
187	Roads and Traffic Authority of NSW	<i>Improving Road Safety - Heavy Vehicles</i>	13 May 2009
186	Grants	<i>Grants Administration</i>	6 May 2009
185	Forests NSW	<i>Sustaining Native Forest Operations</i>	29 April 2009
184	NSW Police Force	<i>Managing Injured Police</i>	10 December 2008
183	Department of Education and Training	<i>Improving Literacy and Numeracy in NSW Public Schools</i>	22 October 2008
182	Department of Health	<i>Delivering Health Care out of Hospitals</i>	24 September 2008
181	Department of Environment and Climate Change	<i>Recycling and Reuse of Waste in the NSW Public Sector</i>	11 June 2008
180	Follow-up of 2003 Performance Audit	<i>Protecting Our Rivers</i>	21 May 2008
179	NSW Office of Liquor, Gaming and Racing; NSW Police Force	<i>Working with Hotels and Clubs to reduce alcohol-related crime</i>	23 April 2008
178	Greyhound and Harness Racing Regulatory Authority	<i>Managing the Amalgamation of the Greyhound and Harness Racing Regulatory Authority</i>	3 April 2008
177	Office of the Director of Public Prosecutions	<i>Efficiency of the Office of the Director of Public Prosecutions</i>	26 March 2008
176*	Better Practice Guide	<i>Implementing Successful Amalgamations</i>	5 March 2008
175	Department of Commerce Department of Primary Industries	<i>Managing Departmental Amalgamations</i>	5 March 2008
174	Department of Education and Training	<i>Ageing workforce - Teachers</i>	13 February 2008
173	NSW Police Force	<i>Police Rostering</i>	5 December 2007
172	Department of Primary Industries	<i>Improving Efficiency of Irrigation Water Use on Farms</i>	21 November 2007
171	Department of Premier and Cabinet Department of Commerce	<i>Government Advertising</i>	29 August 2007

No	Agency or Issues Examined	Title of Performance Audit Report or Publication	Date Tabled in Parliament or Published
170	RailCorp	<i>Signal Failures on the Metropolitan Rail Network</i>	15 August 2007
169	NSW Police Force	<i>Dealing with Household Burglaries</i>	27 June 2007
168	Ministry of Transport	<i>Connecting with Public Transport</i>	6 June 2007
167	Follow-up of 2001 Performance Audit: Ambulance Service of New South Wales	<i>Readiness to Respond</i>	6 June 2007
166	Follow-up of Performance Audit Department of Education and Training	<i>Using Computers in Schools for Teaching and Learning</i>	9 May 2007
165	Homelessness	<i>Responding to Homelessness</i>	2 May 2007
164	Department of Juvenile Justice NSW Police Force	<i>Addressing the Needs of Young Offenders</i>	28 March 2007
163	Legal Aid Commission of NSW	<i>Distributing Legal Aid in New South Wales</i>	13 December 2006
162	NSW Health	<i>Attracting, Retaining and Managing Nurses in Hospitals</i>	12 December 2006
161	Follow-up of 2003 Performance Audit	<i>The Police Assistance Line</i>	6 December 2006
160	NSW Health	<i>Helping Older People Access a Residential Aged Care Facility</i>	5 December 2006
159	NSW Health	<i>Major Infectious Disease Outbreaks: Readiness to Respond</i>	22 November 2006
158	Department of Education and Training	<i>Educating Primary School Students with Disabilities</i>	6 September 2006
157	Roads and Traffic Authority	<i>Condition of State Roads</i>	16 August 2006
156*	Fraud Control	<i>Fraud Control Improvement Kit: Meeting Your Fraud Control Obligations</i>	20 July 2006
155	Follow-up of 2002 Performance Audit	<i>Regulating the Clearing of Native Vegetation</i>	19 July 2006
154	Follow-up of 2002 Performance Audit	<i>Managing Sick Leave in NSW Police and the Department of Corrective Services</i>	June 2006
153	Performance Information	<i>Agency Use of Performance Information to Manage Services</i>	21 June 2006

* Better Practice Guides

Performance audits on our website

A list of performance audits tabled or published since March 1997, as well as those currently in progress, can be found on our website www.audit.nsw.gov.au.

If you have any problems accessing these reports, or are seeking older reports, please contact our Office Services Manager on (02) 9275 7116.