



ABN: 50 860 676 021

Your Ref: A288539  
Our Ref: 08/6412 (D12#56419)

Mr J Kobelke, MLA  
Chairman  
Public Accounts Committee  
Parliament House  
PERTH WA 6000

ATTENTION: PRINCIPAL RESEARCH OFFICER

Dear Mr Kobelke

In March 2011 you wrote to me requesting a further update from Main Roads as to the status of the implementation of recommendations identified in the Auditor General's Report No 6 – June 2009 "Maintaining the State's Road Network".

The attached report provides a detailed submission as to the actions my agency has taken in responding to each of these recommendations since our last report provided in June 2010.

I am confident that Main Roads continues to demonstrate its commitment to ensuring that we are taking every opportunity to continuously improve our management of the State's road network.

If you or your committee members require any further information please contact Alan Colegate on 9323 4594.

Yours sincerely

Menno Henneveld  
MANAGING DIRECTOR OF MAIN ROADS

27 FEB 2012

Enc

11. 103.



**mainroads**  
WESTERN AUSTRALIA

# **MAINTAINING THE STATE ROAD NETWORK**

**AN UPDATED STATUS REPORT FROM  
MAIN ROADS WESTERN AUSTRALIA  
TO THE PUBLIC ACCOUNTS COMMITTEE**

**MARCH 2012**

## CONTENTS

Executive Summary .....	1
Introduction.....	3
This report .....	3
THEME 1: LEVELS AND VALUE OF OVERDUE ROAD AND BRIDGE MAINTENANCE .....	4
OAG Report Recommendation 1: Accurately determine levels of overdue resurfacing and rebuilding maintenance, including a review of bridge maintenance estimates.....	4
OAG Report Recommendation 3: Fully cost the value of actual works of overdue maintenance and construct a plan on how the work will be done.....	4
THEME 2: ASSET MANAGEMENT INCLUDING MODELLING AND CRASH ASSESSMENT .....	6
OAG Report Recommendation 2 – Improve and validate predictive modelling for future planned maintenance needs .....	6
OAG Report Recommendation 4 – Determine when to do planned maintenance to minimise costs over the life of the road network (the ‘tipping point’) .....	6
OAG Report Recommendation 5: - Ensure effective management of its road asset through the identification, prioritisation and planning of maintenance works.....	6
OAG Report Recommendation 6: - Improve and update technical knowledge and skills to enable better road management.....	6
OAG Report Recommendation 7: - Improve maintenance management systems and integrate them with contractor’s systems.....	6
OAG Report Recommendation 9: - Develop and implement a comprehensive strategy to improve skid resistance across the network. ....	6
OAG Report Recommendation 10: - Standardise monitoring and evaluation of road maintenance work identified during fatal road crash investigations .....	6
THEME 3: INTEGRATED SERVICES ARRANGEMENTS.....	11
OAG Report Recommendation 8 - Apply lessons learned when developing and managing the new contracts.....	11
Conclusion .....	14

## EXECUTIVE SUMMARY

The Office of the Auditor General completed a review of maintenance on Western Australia's State road network during 2009. The focus of the review was to determine the condition of the State's roads; effectiveness of delivery of maintenance and prioritising safety related maintenance and minor works.

The review culminated in the tabling in State Parliament of *Report 6 – Maintaining the State Road Network* in June 2009. The report identified a range of key findings and 10 recommendations that were supported by Main Roads. In responding to the report Main Roads noted that the findings were consistent with its own research including results from an independent review commissioned by Main Roads in 2008. The findings also strongly supported the outcomes of a thorough "lessons learnt" analysis carried out on the now concluded Term Network Contracts (TNCs). This contributed significantly to the development of the new generation of Integrated Service Arrangements.

In June 2010, Main Roads provided the Public Accounts Committee with a status report identifying the actions that Main Roads had taken or had in place to address each of the Auditor General's recommendations. In March 2011 the Committee advised that it was "encouraged by Main Roads actions to date" and noted that the maintenance management system and bridge management system were still in development and that many of the new Arrangements had not yet been awarded. To that end the Committee requested a further status update be submitted by 5 March 2012 which is the purpose of this report.

The activities identified in this report continue to demonstrate that Main Roads is making significant advances in addressing the Auditor General's recommendations. The level and value of overdue road maintenance continues to be refined using Main Roads modelling calibrated against field based visual assessments carried out in accordance with approved and deployed guidelines.

Main Roads' success in securing an injection of additional short term funding combined with reprioritising existing maintenance funds to address the resurfacing backlog is a positive outcome that will reduce the magnitude by some 2 000 kilometres or 50% over the next four years. Main Roads continues to work with Government to secure maintenance funding for the future.

Interim Maintenance Management Information Systems (MMIS) are in place across the State pending the release of a single corporate MMIS. The interim systems provide a uniform coverage of data collection and management of maintenance data that meets Main Roads' immediate needs but are not considered ideal for the longer term. Approval and funding has been granted to develop a single corporate MMIS that will incorporate the captured data from the existing interim systems and be sustainable into the future.

During September 2011, Phase 1 of the Bridge Management System was released across the State incorporating functionality including condition data, inspection reports, gap analysis, options assessment and cost estimates. It also includes a wider range of asset management reports for use by Asset Managers across a spectrum of attribute and asset classes. The next enhancement is due late July 2012.

A significant initiative aimed at improving technical knowledge and skills was the creation of a Community of Practitioners established during 2009. This has now been expanded to include our Integrated Service Arrangement Partners, working together to contribute to developing and sharing best practice knowledge, skills, work practices and tools in Operational Asset Management and Network Operations. This group is progressing many of the improvement activities identified in the Auditor General's report.

Poor skid resistance is one factor that contributes to road crashes on the network. In responding to the need to identify whole of network skid resistance data to improve road safety a complete review of Main Roads approach was undertaken. Arising from the review has been a management plan in the form of Guidelines for Managing Road Surface Friction. This new Guideline has received corporate endorsement and was deployed to all Regions in August 2011. Funding has been made available to enable field testing using a specialised vehicle to update values for surface friction and this will be completed by mid 2012.

In September 2011 the last of the Integrated Service Arrangements (ISAs) was awarded bringing to a conclusion the four year project to replace the former Term Network Contracts. The ISAs are recognised as being innovative leading edge practice in delivery methodology and relationship contracting. The benefits of these new outcome focussed agreements, that offer greater flexibility and improved value for money will be felt by the entire State and represents one of the most significant changes in the way we deliver our services.

In recognition of the significant change an ISA Change Management Strategy has been developed to embed the ISA Objectives and Principles ensuring that the benefits to be gained from the ISAs are realised by Main Roads. In addition an ISA Assurance Framework has been established to ensure the ISAs are meeting their statutory, legal and ethical obligations and have the systems and processes in place to manage and mitigate risk and demonstrate achievement against the ISA objectives. The inclusion of the internationally recognised Australian Business Excellence Framework and performance evaluation methodology within the contract agreements is a breakthrough innovation in terms of putting in place mechanisms and tools to ensure that the ISAs build a culture of innovation, improvement and excellence.

This report demonstrates that Main Roads has deployed a wide range of initiatives, in some cases going beyond those identified in the Auditor General's report that clearly shows its ongoing commitment to the management and maintenance of the State's road network.



Menno Henneveld  
MANAGING DIRECTOR OF MAIN ROADS

## INTRODUCTION

During 2009 the Office of the Auditor General carried out a Performance Review on Main Roads maintenance of the road network concentrating on the:

- Condition of the State road network
- Delivery of maintenance on the network
- Link between maintenance and safety related issues

The review considered whether Main Roads management of road maintenance has been effective focusing on four key questions:

1. Does Main Roads have clear goals, policies and strategies for road maintenance?
2. Does Main Roads have appropriate information on the condition of the State road network?
3. Is Main Roads successful in maintaining the State road network including planning and processes, deferred road maintenance, contract management costs?
4. Does Main Roads prioritise and monitor safety related road maintenance?

The review culminated in the tabling in State Parliament of *Report 6 – Maintaining the State Road Network* in June 2009. The report identified a range of key findings and 10 recommendations which were supported by Main Roads. In responding to the report Main Roads noted that the findings were consistent with its own research including results from an independent review commissioned by Main Roads in 2008<sup>1</sup>. The findings also strongly supported the outcomes of a very thorough “lessons learnt<sup>2</sup>” analysis carried out on the then long term road maintenance contracts (TNCs) as part of the transition to a new generation of delivering maintenance services.

In June 2010, Main Roads provided the Public Accounts Committee with a status report identifying the actions that Main Roads had taken or had in place to address each of the Auditor General’s recommendations. In March 2011 the Committee advised that it was “encouraged by Main Roads actions to date”, and noted that the maintenance management system and bridge management system were still in development and that many of the new maintenance contracts had not yet been awarded. To that end the Committee requested a further status update to be submitted by 5 March 2012.

## THIS REPORT

This status report will address the three specific issues raised by the Committee and provide an update on all of the Auditor General’s Report Recommendations. The three specific issues raised were:

- Status of the maintenance management system (refer page 7)
- Status of the bridge management system (refer pages 7 – 8)
- Status of the award of the Integrated Service Arrangements (refer pages 11 – 13)

<sup>1</sup> ARRB Group Ltd Report WC72991-4 November 2007

<sup>2</sup> Main Roads WA Internal Report – Term Network Contracts Lessons Learnt Note: this report contains commercially confidential information and is NOT a public document

Rather than addressing each of the Auditor General's recommendation in turn, they have been grouped within three broad themes:

1. Levels and value of overdue road and bridge maintenance
2. Asset Management including modelling and crash assessment
3. Integrated Service Arrangements

#### THEME 1: LEVELS AND VALUE OF OVERDUE ROAD AND BRIDGE MAINTENANCE

OAG Report Recommendation 1: Accurately determine levels of overdue resurfacing and rebuilding maintenance, including a review of bridge maintenance estimates.

OAG Report Recommendation 3: Fully cost the value of actual works of overdue maintenance and construct a plan on how the work will be done.

#### CURRENT STATUS

The values of outstanding maintenance included in the Auditor General's report were based on modelling undertaken by Main Roads using pavement surfacing age and road condition data that is collected as part of an annual program, along with a range of other assumptions. The Auditor General acknowledged that the existing values of overdue resurfacing and rebuilding were based on predictive modelling and a more accurate analysis was required to validate the values identified by the modelling.

To more accurately determine the value of overdue maintenance in these areas, information has been collated for each Region by experienced practitioners using a combination of visual field assessment and validation of the modelling outputs. The visual field assessments were used as a mechanism to validate the outputs from the predictive modelling and provided the basis of the updated figures in the 2010 report to this Committee. Since that time further work has been done across the State to further validate the data including applying specialist knowledge to specific elements of the maintenance task. This more accurate field assessment has resulted in the maintenance backlog value as shown here.

Defect Type	OAG Report (\$ million)	June 2010 (\$ million)	June 2011 (\$ million)
Resurfacing	270	230	348
Rebuilding	300	250	273
Bridges	250	244	177
<i>Total reported by Auditor General</i>	820	724	798
Other Maintenance *	Not reported	250	361
<b>Total</b>		<b>974</b>	<b>1 159</b>

\* Other Maintenance activities were not included in the Auditor General's Report.

The following provides an explanation for the variations in each category:

*Resurfacing* – the Auditor General's report indicated that if there was not a significant change in the amount of resurfacing funding, this backlog could increase to \$437 million by 2012-13. Current funding enables less than 5% of the network to be annually resurfaced. In order to maintain the status quo at least 6% of the network needs to be resurfaced annually.

The increase in the estimated backlog of resurfacing is attributed to this shortfall, coupled with an increase in the confidence of the accuracy of the network visual assessment.



*Rebuilding* - although the amount has slightly increased since 2010, it is believed that this is due to more accurate assessments, including a more detailed and additional visual assessment.

*Bridge* - the decrease in the bridge backlog reflects an error in the original data provided whereby maintenance and enhancement to meet current standards were not clearly defined. This has since been corrected to exclude enhancements which are considered to be capital funded works and therefore not subject to this review.

*Other Maintenance* - was first reported in the 2010 Status Report to the Committee and was not included as part of the Auditor General's original findings. During the visual assessments Main Roads identified \$250 million of other maintenance works associated with ensuring the lowest whole of life cost cycle and ensuring a safe road network for all users. Since the 2010 data was gathered, further work has been done to validate the extent of work required, identifying a greater backlog in terms of shoulder reconstruction, drainage improvements and vegetation works (often related to shoulder condition).

## MAINTENANCE FUNDING

---

Main Roads has received an additional budget allocation of \$62.2 million over the period 2010 – 11 to 2014-15 and is rearranging maintenance appropriations to accelerate resurfacing activity and is seeking to reduce the magnitude of the resurfacing backlog by approximately 2 000 kilometres. However, this is a short term measure that will only temporarily reduce the resurfacing backlog.

In relation to rebuilding works the current maintenance budget provides minimal direct funding. The majority of current rebuilding works are undertaken as part of capital improvements during a planned upgrade of the asset.

The backlog of other maintenance works is being addressed as part of ongoing maintenance programming activities. However, they continue to outpace the available funding and represent an ongoing risk to road safety, fatigue management, increased vehicle operating costs, social amenity and diminished road asset life.

Main Roads is continuing to liaise with Government in relation to future maintenance funding needs and has submitted Business Cases to Government and included details of the maintenance issues in its 2012-13 Strategic Asset Management Plan submitted to the Department of Treasury.

## SUMMARY

---

Main Roads is continuing to validate the levels of overdue maintenance needs using visual assessments of the network by experienced practitioners. In addition significant work is being done to demonstrate to Government the importance of maintenance not only in the context of the impacts on road safety and road users but also in the ongoing management of an important community asset. Whilst there has been some success in securing additional funding for maintenance, Main Roads will be continuing to seek a longer term sustainable outcome that will ensure the ongoing management of the maintenance task to ensure minimum whole of life cost.

## THEME 2: ASSET MANAGEMENT INCLUDING MODELLING AND CRASH ASSESSMENT

OAG Report Recommendation 2 – Improve and validate predictive modelling for future planned maintenance needs

OAG Report Recommendation 4 – Determine when to do planned maintenance to minimise costs over the life of the road network (the 'tipping point')

OAG Report Recommendation 5: - Ensure effective management of its road asset through the identification, prioritisation and planning of maintenance works

OAG Report Recommendation 6: - Improve and update technical knowledge and skills to enable better road management

OAG Report Recommendation 7: - Improve maintenance management systems and integrate them with contractor's systems

OAG Report Recommendation 9: - Develop and implement a comprehensive strategy to improve skid resistance across the network.

OAG Report Recommendation 10: - Standardise monitoring and evaluation of road maintenance work identified during fatal road crash investigations

### INTRODUCTION

The importance of pavement modelling is an essential component of asset management and as advised in the 2010 Update Main Roads is continuing to calibrate its models and has initiated a number of projects to support this outcome. The following is the current status of the projects previously identified along with a number of new initiatives underway:

### STRATEGIC RISK BASED MODEL

Pavement modelling is a tool for identifying in a consistent and efficient manner network deficiencies and possible treatments and hence required budgets. Pavement modelling allows quick investigation of the impact of various funding scenarios on the remaining life of the asset. However, pavement modelling outputs do not provide the final answer and only represent a first step in identifying network needs and will always require local validation. Risk assessment principles are embedded in both the pavement modelling and field validation processes.

At a whole of network level the results of the pavement modelling process are close to the aggregated value of regional estimates. However, at a region by region level there are some significant differences. Although it is acknowledged that the outputs of the pavement modelling will never perfectly match regional estimates, a reasonable difference of around 20% would be desirable and can be achievable at both the network and regional level. These differences will be reduced by ensuring the modelling assumptions and regional processes are more closely aligned in terms of:

- Treatment triggers<sup>3</sup> and trigger values
- Treatments and how they are triggered
- Unit rates for treatments

<sup>3</sup> The term "trigger" is a term used to define initiation or activation of a maintenance response

- Consideration of the relationship between resurfacing, repairs, rehabilitation and reconstruction and the flow on effect of one activity to another
- Optimisation of potential treatments in the context of the Whole of Life Cost
- Prioritisation methods.

As part of addressing this area action is in progress to develop guidelines for the corporate pavement model including assumptions and functionality to more closely align with regional practices. This process is scheduled to be completed by December 2012 and will be further refined and calibrated as it is introduced into the Regions.

Guidelines for ongoing improvement action will be developed to ensure that the calibration process continues to be refined and updated to better reflect the actual behaviour of the pavement within each Region.

#### MAINTENANCE MANAGEMENT INFORMATION SYSTEM

---

The Corporate Maintenance Management Information System (MMIS) provides operational maintenance data for analysis and feedback to pavement performance models and whole of life cycle analysis. The 2010 report to this Committee identified that Main Roads had developed a business case supporting the development of a single corporate system along with a conceptual framework.

Pending the development of this new system Main Roads has approved the use of two interim maintenance management systems within the seven Integrated Service Arrangements. These interim systems are providing a uniform coverage of data collection and management of maintenance data. Whilst these systems can satisfy Main Roads immediate needs they are not considered appropriate for the longer term management of maintenance data in terms of information or longevity in the context of an information technology platform.

Approval has been granted to build a single corporate MMIS to be deployed across the entire State which will capture the data from the existing interim systems and will meet in full the ongoing needs for Main Roads to manage the data relating to maintenance activities on the State Road Network.

Proven pre-existing software platform developed by Microsoft has been selected and Feasibility, Proof of Concept and Functionality studies for the new MMIS have been finalised and accepted. Main Roads is now working closely with its Integrated Service Arrangement partners to deliver a working system over two phases.

Phase one includes inspection reports, defect logging, works order creation and capturing achievement records and is due for delivery by June 2012. Phase two allows program integration, data interpretation and higher order functionality including corporate reporting and asset management programming and is planned to be in place by December 2012.

#### BRIDGE MANAGEMENT SYSTEM

---

The implementation of a Bridge Management System (BMS) designed to complete the link between identified needs, program of works, works done and the cost of doing works resulting in a system that records the needs, work proposals and structures priorities in a transparent way in addition to ensuring consistency across the State is well underway.

The BMS consists of five modules including Asset Management, Heavy Vehicles, Data Access (or general enquires), Inspections and Bridge Inventory. As at September 2011 Phase 1 of the BMS has been released and is in use across the State. Prior to Phase 1 being implemented an interface was created with the Integrated Road Inventory System (IRIS) to enable all bridge inspection and inventory data to be captured, recorded and attributed efficiently.

The Phase 1 functionality includes the capture of condition data and inspection reports, gap analysis, options assessment and cost estimates. It also includes a wide range of program reports that can be used by Asset Managers across a spectrum of attributes including asset class, Region, Local Government, work types and so on. It should be noted that the bridge asset management function is based on a rolling ten year view consistent with the existing works program.

Further work is to be done on enhancing the programming approach within a corporate asset management and funding context. This enhancement will enable systematised State wide analysis, integration and prioritisation of proposed structures' works. This work is planned to be completed by late July 2012.

Release of Phase 2 will include the heavy vehicle component. This functionality will provide a route selector that will identify bridges assisting in the permit assessment for heavy vehicles ensuring that we get the right loads on the right roads. This new feature will significantly improve the efficiency of the current manual process providing better protection to the State's assets, improve asset management decision making and improve customer service. It is planned that this functionality will be available in June 2012.

The current deployment of the BMS and those planned by end of July 2012 will have seen a major advance in corporate systems support for bridge management.

#### GUIDELINES FOR CONDUCTING VISUAL ASSESSMENTS

---

Guidelines for conducting visual assessment of sprayed seal surfacing conditions were completed and deployed in 2010. The guidelines provide the detail of the process underpinning seal condition assessment and includes information, including photographs, on the criteria that the seals are scored against. This condition rating tool is designed to assist practitioners assess and record the current condition of sprayed seal surfaces and to help identify treatment needs according to priorities. The data generated by this process is used at a Regional and State wide level to:

- optimise the needs-based allocation of funds to Regions
- program maintenance treatments according to risk-profiles, within allocated budgets
- support improved pavement modelling and analysis
- develop improved strategic models and predictions of future needs
- report on funding needs, levels of deferred maintenance and the consequences of particular funding levels over time
- assist in the preparation of Business Cases for additional funding for resurfacing programs.

The visual assessment process utilises a limited number of criteria for assessment, focussing on those elements of the seal that can be realistically assessed using visual inspection. These elements provide indications of the need for a treatment and the urgency of that treatment, whilst acknowledging that there are many operational factors that also need to be taken into account when prioritising treatments including road class, traffic volumes, heavy vehicles volumes and ride quality.

A comprehensive State wide training program was used to deploy the new guidelines and was part of the regular construction and maintenance training activities undertaken within Main Roads. The outcome of the new guidelines is reflected in the change in values of overdue maintenance reported earlier in this document.

## IMPROVING CAPABILITY AND KNOWLEDGE

---

As part of developing the Integrated Service Arrangements a concerted effort has been placed on building in a mechanism that identifies and promotes maintenance best practice that can be shared State-wide between Main Roads employees and its Integrated Service partners. The focal point for achieving this was the establishment of the Community of Practitioners for Network Operations Management.

The Community is a collaborative forum bringing together Main Roads and Integrated Service Partner personnel to work together to contribute to Main Roads strategic objectives through the development and sharing of “best practice” knowledge, skills, work practices and tools in Operational Asset Management and Network Operations.

The Community has identified a range of current issues and created a list of initiatives. These have been prioritised into Tier 1 and Tier 2 Projects, Tier 1 projects carry a high corporate priority. It has been agreed that anyone assigned to work on these projects can be taken off line to solely undertake Tier 1 work. There are 10 Tier 1 projects ranging from initiatives relating to the Auditor General’s report through to improving the asset management process to improving modelling and data analysis. Whilst Tier 2 projects are recognised as being important anyone assigned from the Community to work on these initiatives does so in conjunction with their existing responsibilities.

Given the specialist nature and skills associated with management of bridges and related structures a sub-group within the Community has been created to focus on bridge asset management. This group convenes regularly and recently held a two day seminar addressing “best” structures asset management practice, updates on current national and state standards and procedures, promoting services available within the Structures Centre of Expertise and communication associated with the deployment of the Bridge Management System.

The activities of the Community are just one part of a suite of activities undertaken corporately to improve capability and knowledge management around operational asset management and network operations. These activities include competency based development, specific knowledge management activities focussed on operational asset management, workforce management planning and a range of leadership programs.

The pilot Asset Management Development Program which commenced in June 2009 concluded in September 2010. This program was delivered jointly by Chifley Business School and GHD, and resulted in participants being awarded the Vocational Graduate Certificate in Physical Asset Management.

## IMPROVING SKID RESISTANCE ACROSS THE NETWORK

---

The 2010 update to the Committee advised that Main Roads was developing a suite of documents including a Skid Resistance Policy, Management Plan, Data Collection Guidelines and a Communications and Training Plan. The current status on this initiative is:

- ARRB Group Ltd was engaged to complete a review of the skid resistance measurement and management activities currently undertaken by Main Roads on the State road network. The

output of this work was a report summarising current activities and strategies, both formal and informal. ARRB also produced an outline of a Skid Resistance Management Plan (SRMP) with the document template based on guidance from Austroads and recent work completed by the Department of Transport and Main Roads Queensland.

- A sub-committee consisting of the Project Manager, Materials Engineering and Regional Asset Management expertise has reviewed, reworked and renamed this document as “Guidelines for Managing Road Surface Friction” (in place of the proposed Management Plan). A working draft was endorsed by the Corporate Asset Management Steering Committee (AMSC) in August 2011.
- A proposal to manage skid resistance on the state road network through monitoring both surface texture (macro view) and surface friction (micro view) was supported. Field testing with a SCRIM (Sideways Force Coefficient Routine Investigation Machine) vehicle to update values for surface friction was also endorsed by the AMSC.
- Funding has been made available for the SCRIM vehicle to test selected parts of the network, with a risk management focus on the Metropolitan network (asphalt surfaces) and the South Western areas of the State in mid 2012

Whilst this project has not been finalised, significant progress is being made that will enable Main Roads to identify the network level of skid resistance.

#### DEPLOYING IDENTIFIED MAINTENANCE WORKS FOLLOWING CRASH INVESTIGATIONS

---

Improvements to the processes surrounding the identification of maintenance works following crash investigations were implemented prior to the submission of the 2010 report to this Committee. The only outstanding action relates to the integration of the existing interim workflow procedure within the corporate MMIS currently being developed.

An additional action taken last financial year was to allocate funds from the State Blackspot Program specifically to fund minor improvement works valued at less than \$50 000 arising from crash investigations. This approach was taken to fast track minor maintenance type improvement works on the State road network.

#### SUMMARY

---

A significant amount of work has been completed in addressing each of the recommendations within this theme it is. However, it is acknowledged that whilst there is still more to be done the majority of actions are progressing or scheduled for completion as soon as resources allow.

### THEME 3: INTEGRATED SERVICES ARRANGEMENTS

#### OAG Report Recommendation 8 - Apply lessons learned when developing and managing the new contracts

##### CURRENT STATUS

The application of a Lessons Learnt process has been the backbone of the development of the new maintenance delivery arrangements. The findings from that process have been invaluable in informing the processes and structures that underpin the new Integrated Service Arrangements. In September 2011 the last of the Integrated Service Arrangements (ISAs) was awarded bringing to a conclusion a four year project to replace the former Term Network Contracts.

In an announcement to all staff the Managing Director stated that “the ISAs are innovative and collaborative arrangements with select industry partners that are founded on relationship-based contracting principles to provide integrated, whole of life cycle operational asset management, network operations and road maintenance services. This new way of doing business has placed Main Roads at the leading edge of innovative relationship contracting. The ISAs will represent challenges in adjusting to the new way of delivering a wide range of services. However, there are considerable benefits and opportunities across Main Roads.

These new arrangements are an important mechanism to assist us in achieving priority 2k12 objectives including excellence in asset management and network operations, sustainable and efficient delivery, development opportunities for our people, enhanced relationships with our suppliers and partners and improving our business processes”.

##### ISA CHANGE MANAGEMENT STRATEGY

In recognition of the significant change the ISAs offer in the way Main Roads conducts its business a Change Management Strategy has been developed to embed the ISA Objectives and principles to ensure that the benefits to be gained from the ISAs are realised by Main Roads. Within the RO&DS<sup>4</sup> Process the context of this Strategy is ensuring the aims of the “Operate” Phase that includes:

- *Assess opportunity realisation:* This is ensuring that the objectives, principles and benefits of the ISA are realised by Main Roads. This will involve assessing the effectiveness of the procurement, developing methods to measure the implementation of the ISAs and agreeing a reporting regime to build confidence that the ISAs are functioning to deliver the stated benefits.
- *Business case benefit and cost re-evaluation:* This is ensuring the ISAs are providing value for money. This will involve a regular review of the ISA business case, assessing the cost/benefit ratio of the arrangements.
- *Measure performance:* There are two components of performance that will require measurement within the ISA contracts. The first is looking at the short term and will involve establishing the management of the Fee Modifier Regime or risk/reward approach, resulting in either a pain or gain payment to the ISPs. The second takes a longer term view focussing on the achievement of goals and objectives over the life of the agreement. It will involve the development and implementation of a Performance Assessment Framework that will result in either a cancellation or extension of the term of the contract. It is important to

<sup>4</sup> RO&DS stands for Recognising Opportunities and Delivering Solutions and is a Project Assurance Methodology provided at key critical decision points during the lifecycle of a project.

emphasise that while the outcome of the performance directly impacts the ISP, it is the performance of the ISA (Main Roads and ISP) that will be measured.

- *Evaluate and share results/lesson learnt:* The phased roll out of the ISAs in three tranches provided an opportunity to share lessons across the ISAs. It is recognised that in addition to a number of the regions sharing similar characteristics, there are many common outcomes required from regions and other branches, offering many opportunities for Main Roads to share lessons. This will involve conducting lesson learnt across the ISAs, the regions and branches on a regular basis to make use of the collective knowledge from the ISAs.
- *Post-implementation review report:* This will involve regular review of the progress of the ISA implementation. This will engage senior management from Main Roads as well as the members of the ISAs.
- *Assist ongoing contract development and management:* The ongoing development and management of the ISAs is critical to delivering the ISA objectives, principles and benefits. This will involve utilising tools such as the Australian Business Excellence Framework, Leadership Development and Team Coaching to name a few.

The success of this phase will be the recognition that the ISA function and operation are “Business as Usual” within Main Roads. This is being achieved through seven work streams aligned to current ISA development needs and are considered the key areas of focus in order achieve the ISA benefits. The work streams are Strategy and Governance; Operational Policy; People Integration; Technical Policy; Performance Improvement; Benefits Tracking and Stakeholders. A copy of the Change Strategy is available for the Committee to review.

#### ISA ASSURANCE FRAMEWORK

---

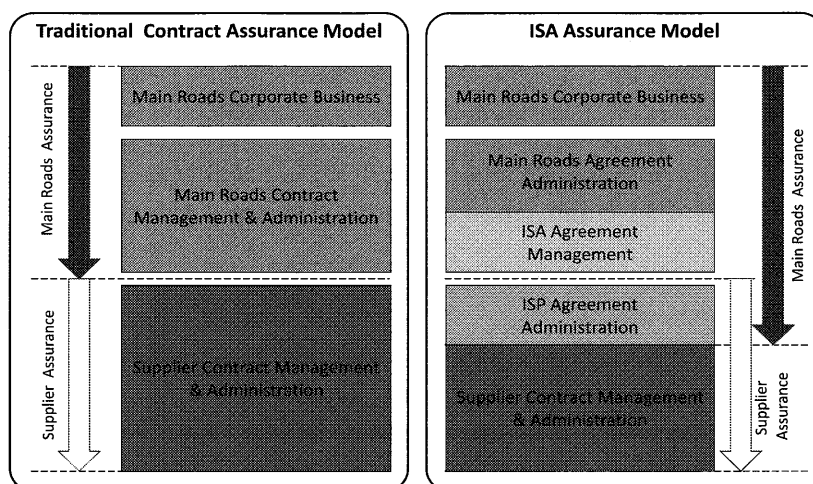
The ISA Assurance Framework ensures that assurance will be provided to stakeholders that the ISAs are meeting their statutory, legal and ethical obligations and have systems and processes in place to manage and mitigate risk and demonstrate achievement against the ISA objectives. At their heart, the ISAs ‘in-source’ private sector partners (known as ‘Integrated Services Providers’ – or ‘ISPs’) to work collaboratively with Main Roads to deliver the Services. This is a fundamental change in the way Main Roads will deliver long-term road network management.

As stated above these arrangements contain many new and different aspects to service procurement and hence there is the requirement to ensure that there are appropriate assurance mechanisms in place to provide a similar level of assurance as obtained under “traditional” contracting methods. Through its “traditional” contract assurance model Main Roads gains assurance of its corporate and regional business through well established management review and audit processes. Under this model, in addition to the usual management controls, Main Roads carries out audit and review of its controls, systems and processes but limits involvement in our various Contractors’ businesses to the extent specified under the relevant contract e.g. checking the application of standards and specifications, maintenance of certification and so on.

A major aspect of the ISAs is their full integration into Main Roads: they are not separate “businesses”. This aspect has significant ramifications to Main Roads’ approach to assurance. The following ‘ISA Assurance Model shows the ISAs in context of Main Roads’ business as a whole, in the context of already-embedded assurance practices and processes, and where a change in approach is required.



Firstly, it shows that a much of Main Roads' current approach to assurance will continue 'as is' at the corporate and regional level. However, it also identifies, at a high level, where review and a new approach to maintaining appropriate assurance is required as result of the ISA model. Each area of the ISA Assurance Model is briefly explained below

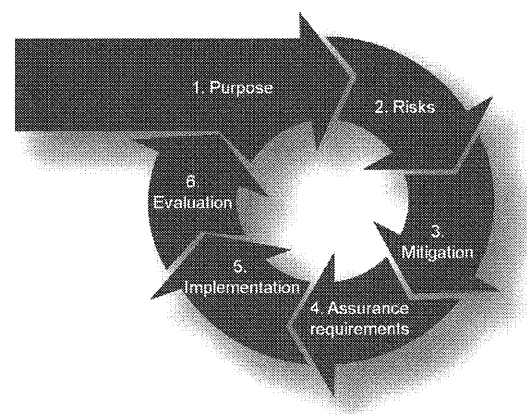


The ISA Assurance Framework will provide a mechanism for Main Roads, as the client for the services to be performed by the ISA Parties (both Main Roads and the ISP) under the ISA Agreement, to obtain reasonable assurance that governance and management controls and practices, with respect to the ISA objectives and compliance with other obligations and requirements, have been implemented and are operating effectively. The Framework is the structure to identify and develop the assurance practices and processes that will be included in the ISA Assurance Plan. It will include:

- The *key risks* to the achievement of the ISA objectives and other obligations and requirements
- The *controls* that will mitigate the risks identified (or where control gaps exist)
- The *assurance measures* that will be put in place to provide on-going assurance to stakeholders
- The *implementation and co-ordination* of assurance processes and practices.

The following diagram represents the six core elements that comprise the ISA Assurance Framework

1. *Purpose* - Defining the purpose of the ISA Assurance Framework.
2. *Risks* - Understanding the key risks that may prevent the achievement of the ISA objectives and other ISA requirements and obligations.
3. *Mitigation* – Understanding current or defining new control practices designed to mitigate identified risks associated with achieving the ISA objectives and meeting other ISA requirements and obligations.
4. *Assurance requirements* – Setting out the framework for ISA assurance activities and practices.
5. *Implementation* - Defining the approach for the development of the ISA Assurance Framework and the operation of the ISA Assurance Plan, including associated roles and responsibilities.
6. *Evaluation* - Defining the process to measure and review the effectiveness of, and identify improvements to, the ISA Assurance Framework and ISA Assurance Plan.



This framework is consistent with the Australian Business Excellence Framework ADRI approach in that it clearly defines an Approach, it Deploys that Approach, it will measure the Results and it includes an Improvement loop based on lessons learnt.

## SUMMARY

---

As stated in the opening paragraph of this Theme, the application of a thorough and rigorous lesson learnt analysis served as the foundation for development of the new Integrated Service Arrangements. It is evident from this update that Main Roads has in place or is developing a suite of mechanisms and tools to support the achievement of the ISA objectives being:

- Main Roads regaining influence and control over asset management decisions in respect of the network
- Achieving best practice in the operational asset management of the network
- Achieving best practice in network operations on the network
- Building and maintaining Main Roads capability and capacity
- Achieving innovation, ongoing improvement and outstanding performance in respect of the network
- Achieving value for money including through an appropriate sharing of risk

These ISA objectives form part of each ISA Agreement and achievement towards them form the foundation for Main Roads' decision making process in terms of granting extensions to the term of each arrangement. The internationally recognised Australian Business Excellence Framework has been adopted as one of the diagnostic tools to measure achievement against the ISA objectives and the adoption of a culture of continuous improvement and excellence.

## CONCLUSION

Main Roads continues to make significant progress in addressing the recommendations identified by the Auditor General. The awarding of the seven Integrated Service Arrangements and the accompanying supporting processes and procedures represent a significant achievement and puts Main Roads back in control of the operational asset management of the State's road network.

The work that has been done on improving procedures and guidelines underpinning operational asset and network management coupled with the wide ranging activities aimed at improving technical capability, capacity and knowledge management are already reaping strong demonstrable benefits.

The release of Phase 1 of the Bridge Management System and the proposed future enhancements to be deployed in mid 2012 is an exciting new outcome and represents the conclusion of more than five years of planning enabling improved management of more than 1 000 State owned bridges.

The adoption of interim Maintenance Management Information Systems (MMIS) pending the development and deployment of a single corporate MMIS addresses the immediate needs of both Main Roads and its delivery partners. The long term solution planned to be fully operational by December 2012 will close out this important element of achieving improved management of maintenance data.

This report demonstrates that Main Roads has deployed a wide range of initiatives, in some cases going beyond those identified in the Auditor General's report, which clearly shows its ongoing commitment to the management and maintenance of the State's road network.