

# **BETTER ASSET MANAGEMENT PLANNING AND DELIVERY – LESSONS FROM THE NEW ZEALAND ROAD MAINTENANCE TASK FORCE**

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## **Abstract**

*“If ... we (the sector) ensure that all road network management units are making sound road asset management decisions then the ... action will lead to an improvement in efficiency, effectiveness and whole of life value for money in delivery of road maintenance operations and renewals”*

During 2011 a Task Force was assembled by the New Zealand Minister of Transport to identify improvement opportunities in road maintenance through New Zealand. Within a budget of around \$900 million per year, ensuring operations and maintenance investment is correctly focussed and savings are sought was seen as a priority.

Given Asset Management Practice provides a process to determine ‘what is required, how it will be provided, and how it will be funded’. Asset Management Planning was selected as core area of investigation by the Task Force.

This paper presents the challenges faced by the Road Maintenance Task Force’s Asset Management Working Group, the recommendations developed and the lessons learnt. This includes

- Key messages and results from the Task Force assessment and report
- How is the sector performing?
- Do Asset Management processes recognise the economic context that asset management and long term planning occurs in?
- What scenarios should we consider?
- Is more direction needed to produce integrated results?
- How will Asset Management help us go further as we aim for greater effectiveness and efficiency?
- Going forward – implementing the learnings

Key Words: Infrastructural Asset Management Road Maintenance NZTA

## Introduction

This paper provides an overview of the objectives, process and findings of the New Zealand Government Road Maintenance Task Force (RMTF) which was established in 2011 and reported back to the Minister of Transport and sector in mid-2012. The RMTF Report and supporting study reports are all available on the New Zealand Transport Agency website

<http://www.nzta.govt.nz/resources/rmtf-report/>

## Background: The Establishment and Objectives of the RMTF

In July 2011 the New Zealand Government established a Road Maintenance Task Force with the objective being to drive value for money and seek opportunities to reduce costs for roading authorities around the country.

In announcing the establishment of the Road Maintenance Task Force (RMTF) Transport Minister Steven Joyce said *the taskforce has been set up alongside the new Government Policy Statement on Land Transport Funding to encourage initiatives in the road maintenance and renewals area that save money without sacrificing quality...*

*The task force will identify opportunities for efficiencies in road maintenance and renewals. It will also identify innovative products and best practice methods of procurement, and encourage their uptake through the country. It's important to know that the large amounts spent on roading each year will not only be invested sensibly, but that we are seeking to increase the return on every dollar spent. The task force will be made up of individuals from local government, industry, and the NZ Transport Agency (NZTA), and will be convened by the NZTA".*

Responsibility for the roading networks is shared between the New Zealand Transport Agency Highway Networks Operations Group, which operates the

State Highways, and Local Authorities who manage local roads. Collectively these organisations are referred to as Road Controlling Agencies (RCAs). On average, State Highways are fully funded while local roads are 50% funded from the National Land Transport Fund (NLTF). The balance of the funding for local roads is raised through rates within that local authority area.

NZ Roading Networks				
Road Type	km	% of Total Roads	VKT (Billions)	Funding Source
State Highways	10,894	12	18	NLTF
Local Roads	79,889	88	18	NLTF & Rates
<b>Total</b>	<b>90,783</b>	<b>100</b>	<b>36</b>	

(Source: <http://www.infrastructure.govt.nz/plan/mar2010/31.htm>)

The 2012-15 National Land Transport Programme (NLTP) represented the highest level of investment ever made in the New Zealand Transport Sector, this expenditure being funded by the pay-as-you-go fully hypothecated fund (the NLTF). This fund continues to be under pressure as vehicles become more fuel efficient, while the length and quality of the network increases and asset growth continues. In line with the Government's Business Growth Agenda, investment is targeted to best support economic growth and safety.

Indicative of NZTA Increased Spend 2012-15 NLTP Compared to 2009-12 NLTP		
	Increase in NZTA contributions	
	Current	Published
<b>State Highways</b>		
Maintenance & Operations	2.7%	5.95
Renewals	2.3%	5.15
<b>Local Roads</b>		
Maintenance & Operations	2.3%	5.1%
Renewals	2.3%	2.3%

Refer to Appendix for Figure 1 – Operations and Maintenance Expenditure 2001/2-2010/11.

## The RMTF Work Groups

To progress the objectives of the RMTF, four Technical Working Groups were established:

1. Better Asset Management, Planning and Delivery  
(The purpose discussed later)
2. Collaboration and clustering amongst road controlling authorities  
To review the current extent of collaboration and clustering amongst RCAs and investigate the optimum application of both in New Zealand.
3. Cost drivers for road maintenance operations and renewals  
To analyse costs, to gain a full understanding of what drives current costs and to identify opportunities to reduce whole of life costs.
4. Documentation, Procurement and Markets  
To identify smart buyer best practice in contract documentation; to determine the advantages and disadvantages of the various procurement delivery models available and to identify issues and propose solutions that will ensure a healthy supply chain.

From these work-streams the overall Road Maintenance Task Force Report was prepared. This was available to the sector to comment on through a period of consultation. A roadshow introduced the report to the sector and feedback was sought from attendees prior to the publication of the final report in October 2012.

## The Asset Management Research

### Introduction

Waugh Infrastructure Management Ltd were invited to assist the Task Force through the preparation of the “Better Asset Management, Planning and Delivery” research report. The challenge set within this research scope was to consider the hypothesis:

*“If ... we (the sector) ensure that all road network management units are making sound road asset management decisions then the above action will lead to an improvement in efficiency, effectiveness and whole of life value for money in delivery of road maintenance operations and renewals”*

Effectiveness and efficiency are consistent with NZTA’s Investment and Revenue Strategy, which also adds the ‘strategic fit’ criteria. To optimise whole of life costs strategic fit criteria requires timely interventions to meet agreed levels of service for a safe, secure and resilient transport network.

The understanding of what whole of life means is based on NZTA’s Investment and Revenue Strategy.

*A whole of life assessment considers the social, environmental, cultural and economic impacts of the outputs, any on-going maintenance and operational costs of the asset or service, and costs associated with its disposal.*

As the majority of Road Controlling Authorities (RCA) are Territorial Local Authorities, much of the Asset Management undertaken is directed by Local Government drivers including the Local Government Act 2002 (and amendments) framework. Local authorities have ‘powers of general competence’ that enables them to ascertain community outcomes and undertake planning and programmes that seek to achieve the wants and needs of their community.

The Land Transport Management Act 2003 (and amendments) provides specific direction to all RCAs as to the management of transportation infrastructure and serves along with the regime for central government funding.

In line with the philosophy of both pieces of key legislation, guidance is provided to RCAs but NZTA does not specifically direct them on how to undertake Asset Management Planning or manage their networks. This means differing levels of service may be developed across the country and the mechanism for delivering programmes and monitoring the impact of those programmes varies. In turn this often causes some tension as the expectations of RCAs is for NZTA to accept and support the levels of service and delivery methodologies they have developed.

Asset Management (AM) practice provides the platform for long-term planning across strategic, tactical and operational levels. “Joined up” planning that considers the drivers of central and local government is essential to demonstrate that outcomes are targeted and appropriate programmes are in place to deliver those outcomes.

Transportation Asset Managers are often cautious to offer alternative approaches or savings. This limits the value of the AM process as discussion in Asset/Activity Management Plans (AMP) on options is rare.

In developing AMPs, Asset Managers are aware that they will be competing for funding from their own community (ratepayers) and from NZTA. At a local level the community has a wide portfolio of activities and desires and NZTA has similar tensions both across the country and with the priority of new projects against maintenance and renewal works. Therefore it should be acknowledged that AMPs and Council’s Long Terms Plans will reflect the best argument an Asset Manager can offer for their objectives and programmes.

### ***Context and International Application*** **Road maintenance – international perspectives**

A literature review was undertaken as part of the Task Force’s work. This confirmed that achieving greater efficiency in road maintenance is also a high priority in many other countries, with governments facing growing budget constraints and needing to obtain better value for money from their expenditure (Audit Commission 2012). While work is underway to identify opportunities for improvement, for example the United Kingdom Highways Maintenance Efficiency Programme, proposed solutions suggested to date are either already in practice or known in New Zealand.

### **Capital Expenditure relationships with Asset Operations, Maintenance and Renewal**

This Road Maintenance Taskforce report is tasked with examining asset management practice within the context of maintenance and renewal programmes and expenditure. However renewal and maintenance expenditure does not occur in a vacuum, and once capital expenditure programmes have created assets, then to deliver sustained service they must be operated, maintained and ultimately renewed.

(For further detail refer to “Better Asset Management Planning and Delivery” section 6)

### ***What Does Good Practice Look Like and How Is The Sector Performing?***

#### **Overview**

Best practice is often referred to and is the goal of many organisations; those with a thorough understanding of their context will develop a strategy driven approach with an objective of determining and targeting best appropriate practice. Best appropriate practice considers the organisation’s needs and tailors an approach that is ‘fit for purpose’; accordingly the AM Practice itself is optimised.

Over the last decade in times of a more buoyant economy, AM practice was striving to meet higher standards and influencing organisations including the Office of the Auditor General and NZTA regularly signalled that improvement was expected. 'Raising the bar' and mandatory use of optimised decision making tools were an expectation and many organisations had large improvement plans in mind to eventually reach an advanced level of AM sophistication.

These programmes in turn form the basis of the funding requested of a local authorities residents (rates), NZTA (subsidies) and road users for specific services (fees and charges). Programmes detail the operations & maintenance, renewal and improvement (new capex) requirements deemed necessary by each organisation and the implementation approach that is proposed for the programmes.

Given its role in 'demonstrating the need', AMPs are central to appropriate AM practice, and it is reasonable to regard the AM plan as the indicator of the quality of AM practice.

Observations to date indicate some organisations may have good practice processes in place, but demonstrate them poorly through AMP.

### **Integrated Planning and Solutions**

To be most effective, organisations cannot operate in isolation. Transportation services are not limited by Local Authority boundaries or NZTA and Local Authority delegations.

Joined-up planning that encompasses national, regional and local drivers along with joint management across organisations should be clearly demonstrated. Tensions are likely to exist, and these should be worked through the AM process.

### **AM Information Systems**

AM information systems exist to support and facilitate good decisions. New

Zealand has a well-developed suite of systems and asset data collection has been undertaken for many years. The combination of relevant software and robust data provides an excellent foundation for asset management and is the envy of Transportation Asset Managers from other parts of the world.

### **2008 AMP Review (GHD)**

In 2008 NZTAs predecessor Land Transport New Zealand (LTNZ) engaged GHD Ltd to undertake an assessment of the standard of Asset Management Plans used across the transportation sector. The assessment utilised an AM assessment tool developed by LTNZ and MWH.

Refer to Appendix for Figure 2 Summary of RCA Asset Management Plan Results

From the report it can be deduced that a wide range of practice existed and that there were numerous AM components where Councils failed to meet a minimum or core level.

Variations were observed in demand management practice between metropolitan authorities and smaller rural authorities. Lifecycle management was reasonably well understood, and the quality of the analysis was linked to the quality of underlying asset data.

Refer to Appendix for Figure 3 - Overview of AMP Results.

There was a clear indication to RCAs that the standard was not as high as it could be. However target practice was not identified in the review, therefore to many the report indicated that the highest level of practice was the standard that should be aspired to. Improvement programmes, risk management and the process of development scored poorly across the country illustrating the Asset Management process was not as mature as expected. If re-analysed as a proportion of "appropriate practice achieved" the result is likely to show smaller authorities with less complex issues in a more positive manner.

## 2011/12 NZ Road Maintenance Task Force Stakeholder Survey

In December 2011, the Technical Working Group conducted a survey of 67 road controlling authorities to contribute to this study using the online application “Survey Monkey”. The aim of the survey was to achieve an understanding of the maturity level of AM in the sector, the benefits, if any, of change and the challenges faced in that pursuit.

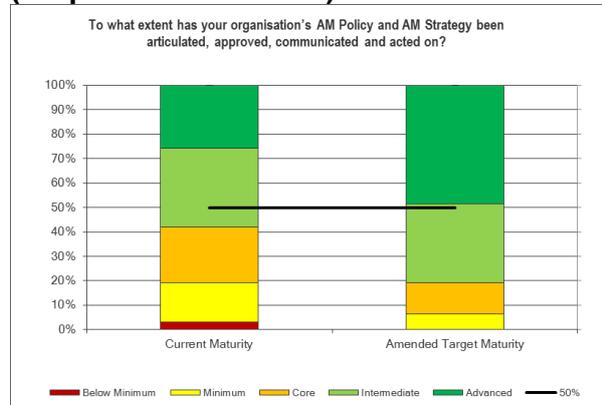
Responses were received from 27 Road Controlling Authorities, which represents 40% of RCAs as detailed below.

## Summary of Stakeholder Survey Results

Survey Responses Received	
NZTA	1
Local Authority RCAs	
Total	27/67 (40%)
Population Represented	1.4 of 4.3 million (24%) 1,038,525 of 4,268,375
2011 Maintenance Expenditure Represented	\$493M of \$1,425M 35%
North Island/ South Island Split	North 15 South 12
District/City Council Split	District Councils 23 City Councils 4

Current and target levels of maturity were surveyed using the 2011 IIMM AM index steps. Key results are discussed below and the full survey results are available within “Better Asset Management Planning and Delivery” section 3.2.

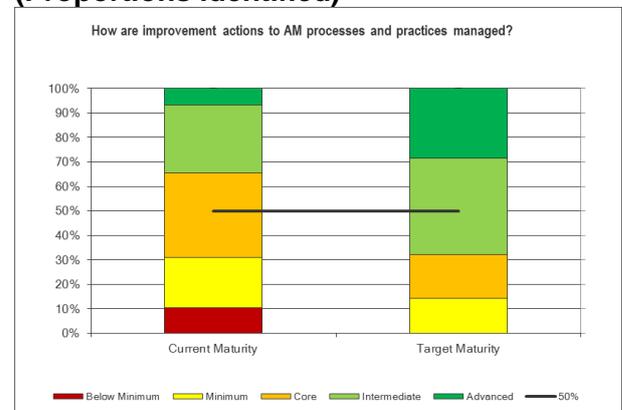
## Extent of AM Policy and Strategy (Proportions identified)



## Appropriate and Effective AM Processes and Practices (Proportions identified)



## Managing AM Improvement Actions (Proportions identified)



Overall, while a range of responses was received, in general RCAs would regard themselves as currently being at a core to intermediate level of AM practice, and targeting core, intermediate or advanced practice. This is reassuring and should reflect an appropriate level of practice. The biggest range was shown in effective processes and practices and managing improvement actions, which may challenge the answers provided earlier in the survey. How can we believe we are doing a good job when our processes and practices require improvement?

These results are key indicators of the learning that is still needed, particularly in the areas of understanding our objectives, measuring achievement and providing a feedback loop for improvements and learnings.

Along with questions on current and target Asset Management practice, survey participants were asked where they believed savings would result from improved AM.

Refer to Appendix for Figure 4 - Results of Reduction in Total Spend Estimates Average Scores within each question asked.

Participants identified few areas where even moderate (more than 2%) reductions in total spend could be achieved. This may reflect the risk adverse and financially cautious nature of Asset Managers more than the potential savings.

Where there was a large shift identified between current practice and target practice, this shift represents effort and cost. Real benefits should be identified before unnecessary effort and cost is employed. Guidance may be required to ensure effort in reaching the higher levels of practice is undertaken by those where real benefits will be gained.

#### ***The Office of the Auditor General***

#### **The Office of the Auditor General – Long Term Council Community Plans**

The Office of the Auditor General's Report on the 2009-19 Long Term Council Community Plans provides a useful commentary on the standard of AM in place. While the comments relate more to the LTCCP documents which are required under the Local Government Act 2002, the underpinning AMPs and processes are included in the audit process.

*Although we can clearly see progress in long-term planning, local authorities still need to improve their practices supporting long-term planning.*

(Office of the Auditor General (2010). Matters arising from the 2009-19 long-term council community plans)

#### **The Office of the Auditor General - 2011 NZTA Maintenance and Renewal Work on the State Highway Network**

In 2011 the Office of The Auditor General published "NZTA Delivering Maintenance and Renewal Work on the state highway network". This report assesses how

effectively NZTA is running and renewing the State Highway network.

- Core information on asset inventory and condition is fundamental to AM and decision making - good information supports good decisions. Linking long-term and day to day planning is needed to ensure the focus is on the most essential work
- Communication with stake holders enables all parties to increase their knowledge and understanding
- A feedback loop to assess how well quality and cost-effectiveness have been delivered supports learning and accountability

#### **Overall Observations and Findings**

There are a number of common threads through the information reviewed, and these have been developed into the findings of the RMTF report.

- The 2008 GHD review of AMPs indicated that level of AM practice was highly variable and few RCAs were approaching an advanced level of practice. At this stage, the emphasis was on improving practice to high standards and the implementation of dTIMS was regarded by many organisations as essential to secure NZTA funding
- The 2011 IIMM places a greater emphasis on determining and targeting a level of AM practice that suits the needs of an authority. This is consistent with the result of many of the levels of target practice identified in the 2011 Stakeholder Survey
- The survey of RCAs revealed a range of achieved and targeted asset management maturity
- Survey participants identified few areas where even moderate reductions in total spend could be achieved. The ability to measure AM performance is difficult given the lack of an effective monitoring approach and feedback loop
- The Office of the Auditor General and the Ministry of Transport see

scope for improvement in AM practice, the key areas include clarification of levels of service and alignment of financial forecasts with the objectives set

### ***Directed or Organic Development?***

If better asset management is to deliver the benefits identified, the operating environment of Asset Managers needs to be conducive to change.

There are a range of options available to deliver agreed levels of service, and alongside the funding required, there is a level of risk in the ability or inability to deliver that level of service.

The AM practice change recommended is to move to an options based asset management approach discussing relevant scenarios and methodologies that apply to these scenarios.

Historically Asset Managers have aimed to maximise the funding assistance provided by the NLTF in order to maintain (or improve) the transportation network provided to their local community. Frequently, AM practice focussed on presenting a robust case for the level of funding deemed necessary for one management regime. For an options based approach to be effective, Asset Managers may have to be incentivised to offer realistic alternative strategies and be able to do so without fear of risking adequate funding support from either their community or NZTA.

Current and projected fiscal environments preclude a business-as usual approach. Part of the change process is for RCA Asset Managers to acknowledge the national context of transportation planning and management as well as the choices made by central Government and the priorities it determines through the AM process. AM practices based around “protecting one’s budget” show a lack of understanding of the wider context and cohesion across national, regional and local government. The statements in the National Infrastructure Plan and Government Policy Statement on Land

Transport Funding illustrates where central government sees the issues and the priorities.

Improved alignment of strategic planning through national, regional and local sectors will require clear direction. Without honest dialogue and an alignment of objectives the asset management process will fail to deliver a beneficial result across the transportation sector.

### **Leadership to drive change**

Four recommendations were made to the RMTF to enable change.

One: Prepare guidance documentation to direct and integrate regional planning and RCA AM Practice. There is a need for joined-up planning which reflects Strategic-Tactical-Operational and National-Regional-Local continuums with impacts within the immediate planning horizon.

Two: Incentivise the development of options and trade-offs through AM practice

Three: Encourage and provide leadership to enable study teams and technical working parties to identify and implement more efficient and effective maintenance practices.

Four: AM peer audits should be considered to improve the standard of AM practice.

Regional clusters, workshops for peer mentoring, shared services and greater skills transfer could be used.

Documentation of appropriate practice case studies would provide reinforcement for those performing well and guidance for others.

## Implementation: What is being done and what are the challenges to success?

### ***RMTF Report Published***

The RMTF final report was published in October 2012 and upon its release, Transport Minister Gerry Brownlee said:

*"This Government is making a huge investment in transport, and we want to ensure we get the best possible return on that investment for all New Zealanders. Through the Road Maintenance Task Force we've brought together the knowledge and expertise of the entire sector to identify how best to increase efficiency and value for money.*

*While New Zealand manages its road networks very well, and compares favourably with international standards, there are also clear opportunities to do things better.*

*The task force has successfully brought the roading sector together to identify how best to increase value for money and mitigate cost increases – essentially, saving money without sacrificing quality," The Task Force has identified four general areas for improvement:*

- *Adopting business models that utilise greater collaboration;*
- *Improving procurement practices, to standardise documentation and clarify risk allocation;*
- *Utilising more sophisticated prioritisation methods in decision-making through level of service differentiation;*
- *And, advancing asset management planning that optimise the long term effectiveness and efficiency of work programmes."*

The Task Force made 17 specific recommendations that they believe will provide opportunities to improve the effectiveness of road maintenance. Key recommendations include the following:

- Establish a cross-sector Road Maintenance Task Force

Implementation Group to champion the changes

- Create a national asset management framework.
- Establish a national roading classification
- Promote high-quality asset management
- Communicate expectations that collaboration and clustering is investigated between road controlling authorities and incentivised to occur
- Pursue improved procurement methods and delivery models where necessary

The findings and recommendations were presented with a focus on achieving sustainable improvements in the efficiency and effectiveness of the areas concerned. Following the publication of the RMTF Report, implementation groups were established to progress these actions.

The specific recommendations made in terms of Asset Management planning included:

- Challenge and build on existing integrated planning (including financial planning) approaches, as an element of the national asset management framework
- Provide and promote on-going access for all RCAs to high-quality asset management advice and mechanisms for continuously improving practice
- Develop and communicate expectations, incentives and guidance that minimise practices that emphasise short-term over whole-of-life costs, e.g. changing the incentive, the FAR rate and/ or the discount rate
- Review existing data acquisition methods and standards and compile a nationally consistent data acquisition, performance measurement, benchmarking and management framework that will support enhanced road asset management and sound investment decision-making,

monitoring of outcomes and continuous improvement, as an element of the national asset management framework

- Review the RCA monitoring and auditing role as currently performed by the NZTA, including the way in which NZTA audit and monitoring findings, conclusions and recommendation are reported and acted on, and make recommendations for change as appropriate

### **Role of Asset Management Highlighted**

The role of Asset Management was highlighted and a platform laid for improvements in AM practice.

*The Task Force believes that planning and delivery could be improved to enable greater efficiency and effectiveness, and better address risk. This will require the alignment of levels of service and the economic value of different parts of the network with maintenance, renewals and operational expenditure. The economic analysis must also recognise the cultural and social aspects of the road network. Enhanced Asset Management is seen as the key to improving this.*

### **Levels of Service**

The critical issue irrespective of the number of asset management organisations is the importance of the RCAs to identify the level of service they wish assets to perform to.

Levels of service are the fundamental building blocks of asset management. Once established, non-financial performance measures and targets are used to demonstrate how the organisation is achieving the levels of service and how financial measures are to be used to monitor efficiency, etc.

There is a significant opportunity to further differentiate levels of service on each part of the total road network. Such differentiation must be linked to a classification system that recognises the economic and social value of component

parts. Road classification is acknowledged as a cornerstone of any network strategy.

### **AM Practice Improvements and Collaboration**

The report/review concluded that the key to achieving least whole-of-life cost for the network, in addition to having sound long term strategies, is strong asset management practice, which includes enabling the use of innovative services, products and methods of procurement. This requires:

- Effective planning and delivery to achieve value for money objectives, e.g. early tendering opportunities, awareness of the annual programme and better timing of works
- Improved knowledge sharing
- A consistent road classification system and levels of service across the whole network
- Greater collaboration between asset owners

Systematic asset management is well understood and described in New Zealand, yet research has concluded that good practice in asset management is not being consistently applied.

The Task Force technical team charged with identifying opportunities to improve both efficiency and effectiveness in the planning of maintenance, operations and renewals considers that this slowing of progress is symptomatic of a systemic failure shown through:

- Disconnected strategic and tactical direction across the many delivery chains in the sector
- Operational practices and systems that work adequately but with development could deliver a significant improvement in outcomes
- A wide disparity in programme results (in terms of value for money and service delivered) at regional and national levels for both state highways and local roads

- Diversity of performance monitoring approaches throughout the asset management cycle
- Insufficient incentive for improved practice or insufficient consequence for poor practice at all levels
- Limited use of available sector expertise through mechanisms such as collaboration, shared services, or clustering of asset management resources
- Resources being diverted from essential planning to management of reactive operational issues

To achieve better value for money through better asset management in New Zealand, the Task Force considers that some key frameworks need to be developed and implemented. Comprehensive and cohesive frameworks encompassing asset management, levels of service, performance measures, and competencies for asset managers would enable an integrated approach to asset management, supporting practices that are more consistent, efficient and effective. Such a comprehensive framework would need to be developed progressively. The Task Force views the following proposed initiatives as individually sound and that together they will improve the management and planning of infrastructure investments. Specific initiatives proposed are the development of:

- A transport-specific national asset management framework that provides specific asset management guidance appropriate to the sector
- A national framework for 'levels of service' that provides a single classification system for road categories and a common set of services
- A framework for measuring, monitoring and comparing network consumption trends
- A competency framework for RCA transport asset management personnel to help ensure adequate capability

NZTA policies and processes would need to be aligned with this asset management framework.

One of the related opportunities is for a New Zealand-wide 'asset management group'. This could involve sharing professional services, staff and funding contracts through to forming jointly owned council controlled organisations (CCOs).

There are opportunities to improve the collective performance of the industry. However, we need to develop a strategy for improving performance measurement and management in order to gain a better understanding of the effectiveness of any changes made.

There is also an increasing concern around people and capability. This relates especially to an ageing workforce, training and the number of people entering the industry, which is limiting the ability of RCAs to obtain value for money. To build capability, careers in the maintenance and operations area need to seem more attractive.

### **Performance Management**

To support good asset management and planning, good performance measures are needed. While a large quantity of data is collected on assets and their management there are consistency and quality issues. This means the data is not always able to inform future decisions and asset management practices. Moreover it does not permit objective benchmarking of good practice performance.

The Task Force commissioned research into the roles of performance measures identified a number of common themes including the need for:

- A common national performance framework
- Focus upon measuring the effectiveness of road maintenance interventions
- Learning through communities of practice

- Enhancing the capability of people to work in a different way
- Support by leadership, engagement, focus and commitment

Achievement of these issues would be supported by the use of common data protocols and standards on levels of service; enhanced measures and improved data infrastructure.

The Task Force considers that both national and local performance measurement and management frameworks should be reviewed. Performance measurement must support systematic and consistent measurement of the condition of assets and their rate of deterioration through a comprehensive set of measures to be applied by all parts of the sector, where relevant. Standards for each measure would be developed with variations for different road categories, and specific tolerances determined for each measure and road category.

The Task Force recommends that the NZTA convene a user group or an established group (e.g. a National Strategic Asset Management Group), drawn from across the sector to develop requirements for improved data input, transformation of the data into useful, repeatable and meaningful information, dissemination, and effectiveness in the use of data, focusing on areas such as:

- Requirements for data, data-based systems and technology platforms
- Measurements to assess the effectiveness of different road maintenance projects and new materials
- Measures of asset consumption and its causes
- Measurement to enable better timing of interventions
- Road classification

## **Conclusion - Have the objectives been achieved?**

The establishment of the Road Maintenance Task Force as a Ministerial directive highlighted the role of road maintenance to the nation and its communities. In a context of fiscal restraint 'new ways' are needed to improve value for money to customers and improve asset management practices.

With wide ranging sector input, and teams actioning a raft of recommendations there are good reasons to be optimistic about the gains that can be made. At the same time the sector faces on-going change from central government reviews and initiatives, these are a distraction and drain on already stretched resources.

The two areas identified as having the greatest potential were asset management and collaboration across organisations' service delivery mechanisms.

Real momentum is already occurring as discussions occur and a greater range of future options are considered.

Collaborative effort across organisations' asset management was also identified as being a key criteria to achieve integrated results.

In terms of achieving the objectives, it is too early to report fully. However with discussions on improved practice, collaborative effort and a stronger drive in achieving value for money occurring there is progress.

## Acknowledgements

The authors would like to acknowledge the input of the Road Maintenance Task Force Governance Group, the Better Asset Management Planning and Delivery Technical Group, New Zealand Transport Agency staff and Waugh Infrastructure Management Ltd staff into the Road Maintenance Task Force and this summary paper.

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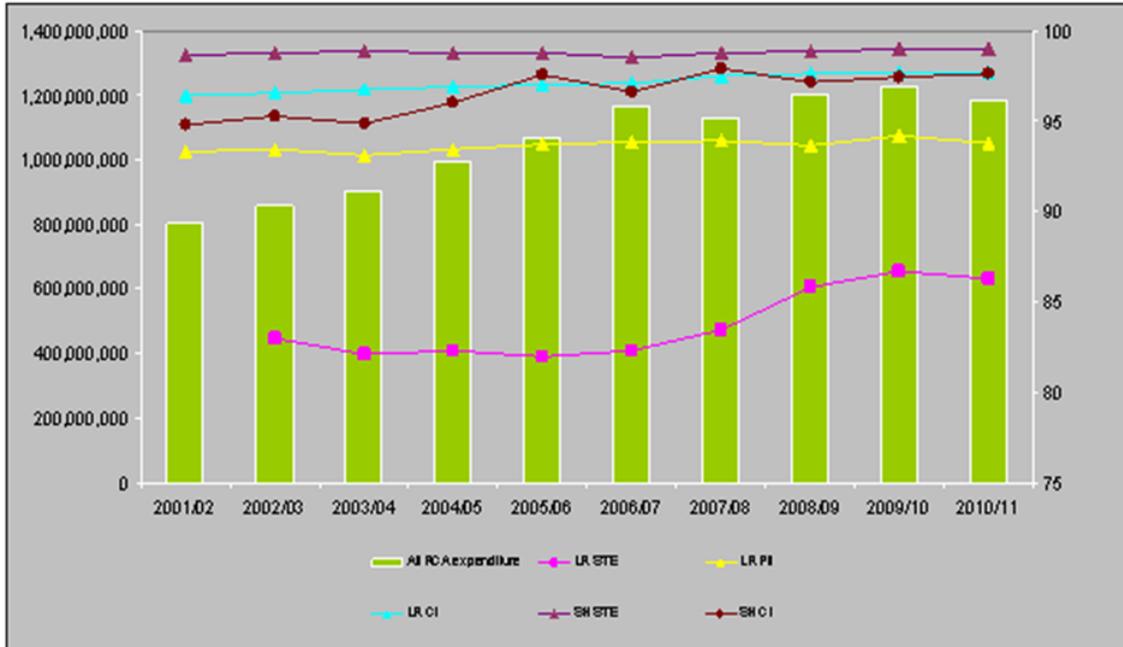
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## Appendices

The following graphics have been referred to within the body of this paper.

**Figure 1 - Operations and Maintenance Expenditure 2001/2-2010/11**

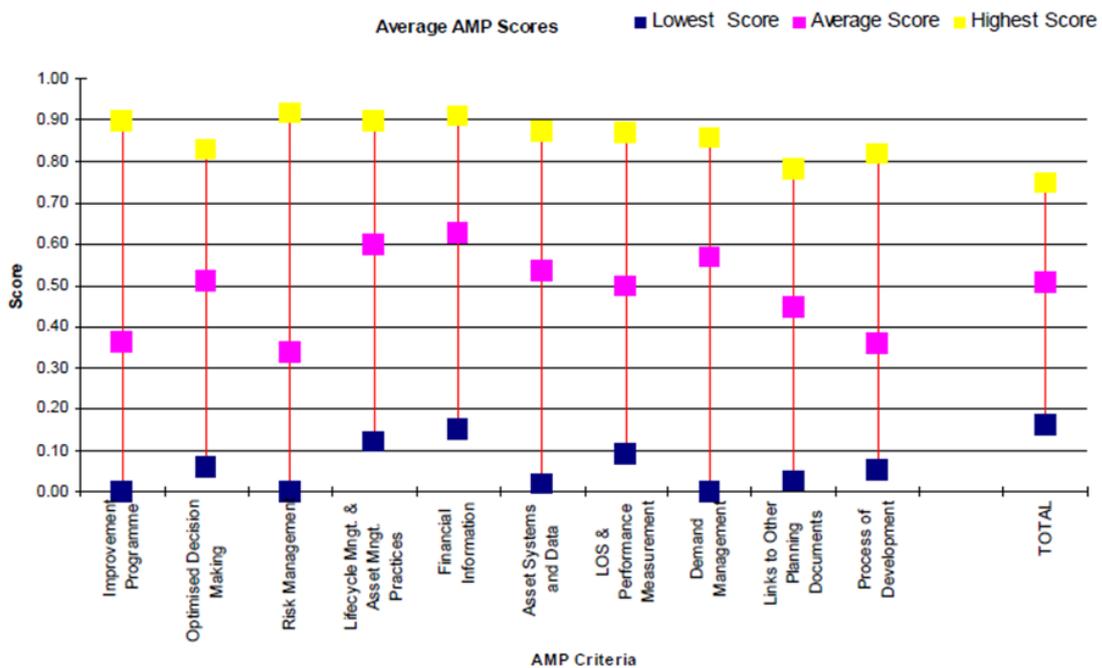


**Figure 2 - Summary of RCA Asset Management Plan Results**

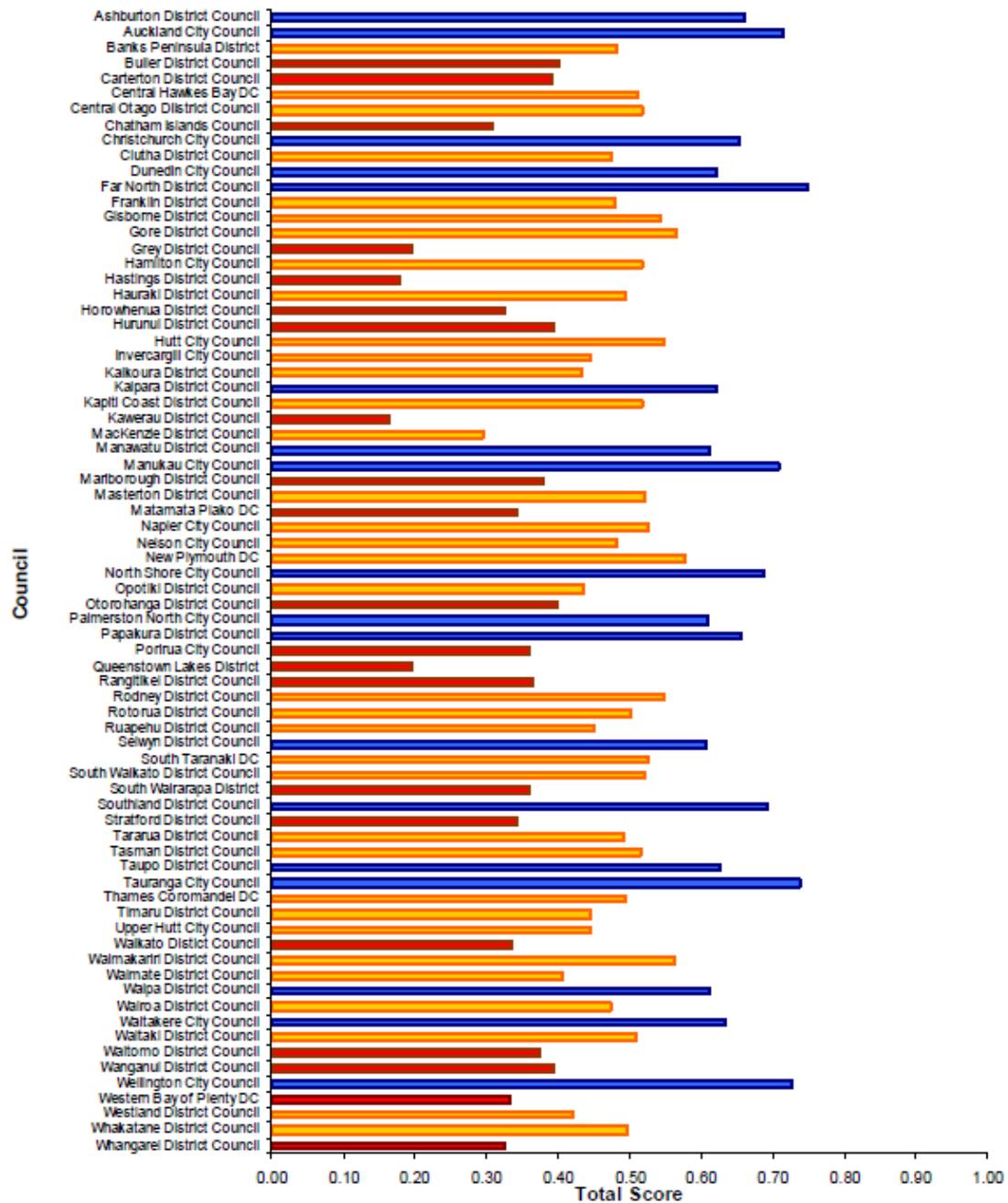


### 1.2.5 National Summary

The following figure shows the overall results for the 74 RCA's.



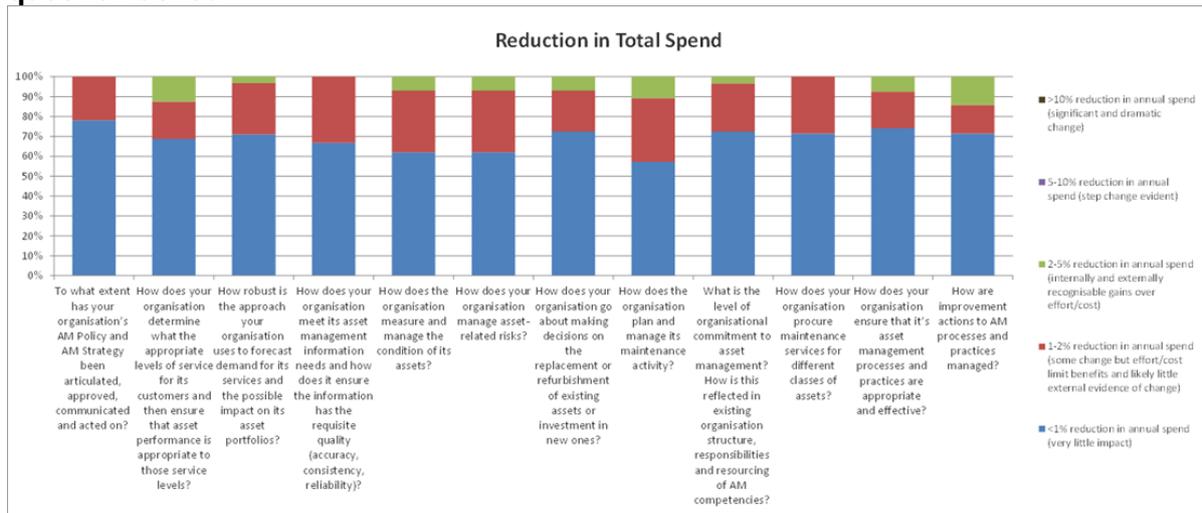
**Figure 3 - Overview of AMP Results**



**Key to Scoring Crossbar for Overall Results**

0.00	-	0.40	AMP is considered to be poorly developed and very Basic (Poor). The AMP doesn't outline the basic asset management practices, systems or information necessary to manage the roading network.
0.41	-	0.60	AMP is considered to be Basic, however with intermediate aspects at the higher end (Moderate). Although the AMP outlines asset management practice systems and information it does so in a perfunctory way indicating there is no depth to the analysis. There is limited confidence in the robustness of long term financial forecasts and the decision making analysis.
0.61	-	0.80	AMP is considered to be at an Intermediate level, with advanced aspects at the higher end (Good). There is a clear articulation of most asset management practices. There is reasonable confidence that long term financial forecasts are robust and decision making is sound.
0.81	-	1.00	AMP is considered to be Advanced (Excellent). The AMP information is strong and convincing in all aspects. There is high confidence in long term financial forecasts and the way options are analysed and decisions made.

**Figure 4 - Results of Reduction in Total Spend Estimates Average Scores within each question asked**



### **Biography: Janice Brass**

Janice is currently employed by the New Zealand Transport Agency as Principal Evaluation Analyst. She has primary responsibility for the national co-ordination of the assessment of the maintenance and operations investment on both state highways and local roads. The delivery of optimal benefits from this \$900 million/year investment is strongly linked to best practise in infrastructural asset management. Janice lead the Road Maintenance Task Force's working group on better asset management planning and delivery, as part of the government's recent cross-sector review.



### **Biography: Grant Holland**

Grant Holland has been employed by Waugh Infrastructure Management Ltd since August 2004 and works with a range of Local Authorities throughout New Zealand. Prior to that, Grant was an Area Engineer at the Southland District Council and the Chairman of the New Zealand Hansen User Group. Grant's is an Asset Management Specialist; his work is frequently at a strategic level, assisting clients with long term planning and advising on the implementation of plans. Grant holds Bachelor of Surveying Degree and a Post Graduate Certificate in Executive Management.

