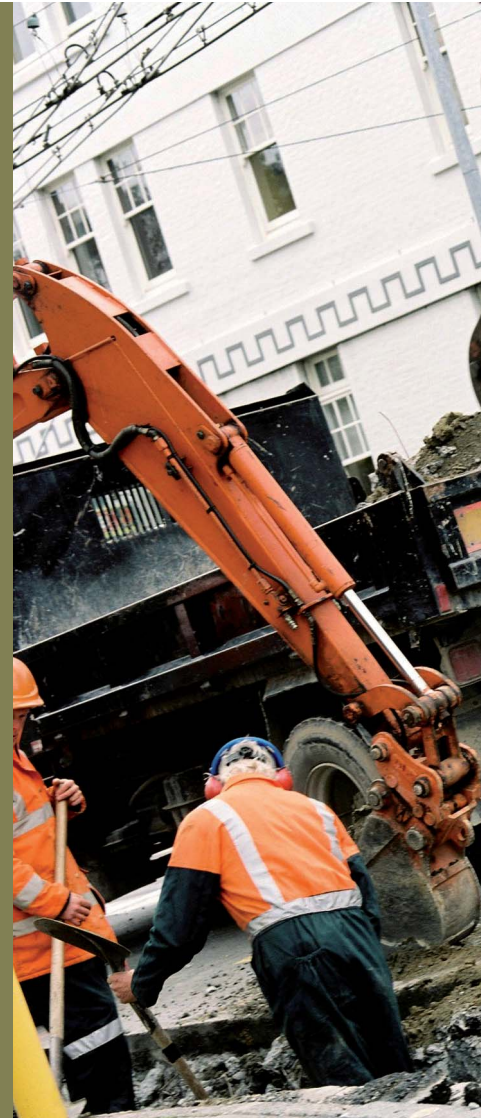




Performance audit report

New Zealand
Transport Agency:
Delivering
maintenance and
renewal work on
the state highway
network





Office of the Auditor-General
PO Box 3928, Wellington 6140

Telephone: (04) 917 1500
Facsimile: (04) 917 1549

Email: reports@oag.govt.nz
Website: www.oag.govt.nz

New Zealand Transport Agency: Delivering maintenance and renewal work on the state highway network

This is an independent assurance report about a performance audit carried out under section 16 of the Public Audit Act 2001.

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Auditor-General's overview

This is the second of two performance audit reports by my staff into how effectively the New Zealand Transport Agency (NZTA) is maintaining and renewing the state highway network. New Zealand's state highways run from the bottom of the South Island to the top of the North Island and include roads, bridges, tunnels, and many other structures. Our state highways carry about half of New Zealand's annual road traffic and are vital to the country's economic growth and productivity. As well as being a primary means for people to drive to work each day in many of our cities, state highways also connect communities throughout the country. So, it is important that they are effectively maintained.

State highways are valued at almost \$29 billion, and the Government plans significant further investment. NZTA spends about \$430 million a year on maintaining and renewing the state highway network, and employs a range of consultants and contractors to maintain and renew the network on its behalf. Through cost-effective maintenance and renewal, NZTA aims to improve road safety, the efficiency of freight movement, and the effectiveness of public transport.

Our second audit examined how well maintenance and renewal work is being delivered. It followed my first audit report on this subject, published in September 2010, which examined how well NZTA uses information and plans for maintenance and renewal work. For both audits, my staff examined how well NZTA delivered maintenance and renewal work in five areas – Northland, Auckland Harbour Bridge, Auckland Motorway, Wellington, and Southland.

Overall, NZTA effectively and efficiently maintains the state highway network to the required condition by ensuring that quality and timely maintenance and renewal is completed on the network.

NZTA seeks to achieve cost-effectiveness by using a range of different service delivery models to employ consultants and contractors. Different models are needed because each region of the network has unique characteristics, including size, geography, and traffic volumes. NZTA's service delivery models include traditional contracting and alliancing, where NZTA and the consultants and contractors work together to deliver maintenance work.

NZTA has a clear long-term approach, and detailed strategies and guidance for purchasing services. It has a good understanding of its supplier market and has been responsive to recent market conditions. For example, in December 2009, NZTA introduced a price measure for assessing the viability of professional services tenders to deter unsustainable tender prices, which it had been receiving at the time.

NZTA has strong relationships with its consultants and contractors, has detailed systems and processes to regularly monitor how well they are performing, and is very customer-focused. Although we identified some detailed issues relating to the performance of some of NZTA's consultants and contractors, they were generally performing well in the areas we visited. This means that most consultants and contractors delivered work to the required levels of service, within budget, and to the planned time frames.

The general condition of state highway roads and structures is good. NZTA is working to address issues with road condition that have been identified in recent years. Specialist consultants regularly inspect state highway bridges, tunnels, and other structures, and NZTA has a detailed upgrade and replacement programme to address any safety concerns for those structures. NZTA's surveys of road users show that overall satisfaction with the state highway network has improved in recent years, with most road users rating the network positively.

I have made five recommendations in this report to help NZTA get additional value from maintenance and renewal work. By better understanding the relative quality and cost-effectiveness it delivers through the different service delivery models, over time NZTA should be able to adjust the balance of the models it uses to secure ongoing value-for-money improvements. NZTA should also encourage more suppliers into maintenance and renewal work, where possible, and improve the consistency of its monitoring of consultants and contractors.

In Part 5, I have also brought together the findings of my two audits to present some observations on what NZTA could usefully focus on as it continues to improve how it uses information, and plans and delivers maintenance and renewal work.

NZTA has responded positively to both of my audits. In 2012, I will report on NZTA's progress in implementing the recommendations from the two audits as part of my annual review of how public entities are implementing my recommendations.

I thank NZTA staff for their help and co-operation during both audits.



Lyn Provost
Controller and Auditor-General

13 September 2011

Our recommendations

Our recommendations are listed in the order that they appear in this report.

Recommendations about designing and selecting service delivery models

We recommend that the New Zealand Transport Agency:

1. prepare, and review on an ongoing basis, specific strategies to encourage more suppliers into professional services work for maintenance and renewal where more competition will increase the quality and value for money of the services provided; and
2. review at a national level the quality and value for money that the range of service delivery models is delivering throughout the network and determine the circumstances in which each model is likely to promote quality and value-for-money services.

Recommendations about maintaining relationships and monitoring contracts

We recommend that the New Zealand Transport Agency:

3. introduce measures to ensure that all requirements for the completion of contract performance evaluations are carried out in a consistent and timely way;
4. carry out a detailed review toward the end of each contract to assess how well the delivery model has delivered in terms of quality and value for money, and to identify any wider lessons that could be drawn from the management and monitoring of the contract and applied to the management of other contracts; and
5. introduce, and adhere to, procedures to more consistently respond in a timely way to resolve performance issues with its consultants and contractors.

Part 1

Introduction

- 1.1 In this Part, we describe:
- the purpose of our audit;
 - how we carried out our audit;
 - what we did not audit; and
 - the structure of this report.

The purpose of our audit

- 1.2 We carried out a performance audit to assess how well the New Zealand Transport Agency (NZTA) delivers maintenance and renewal work on the state highway network (the network).
- 1.3 NZTA spends about \$430 million a year on maintaining and renewing the state highway network. NZTA employs consultants and contractors in 25 sub-networks – called “network management areas” (areas) – to maintain and renew the network on its behalf. NZTA manages these consultants and contractors through a range of different service delivery models.
- 1.4 NZTA’s network management consultants carry out the day-to-day management of the network, including annual and long-term works planning, information management, preparing and monitoring physical works contracts, and superficial inspections of structures on the network. Physical works contractors carry out a range of maintenance and renewal work. In general, there is one network management consultant for each area, and numerous physical works contractors working for each network management consultant. There are also regional bridge consultants, working throughout the country in nine regions. They are responsible for carrying out detailed inspections of bridges and other structures on the network.
- 1.5 This is the second of two reports presenting the findings of our performance audits on NZTA’s maintenance and renewal of the network. Our first report – *New Zealand Transport Agency: Information and planning for maintaining and renewing the state highway network* – focused on NZTA’s information and planning for maintaining and renewing the network. That report was published in September 2010. We split our work into two consecutive audits because good information and planning is an important precursor to delivering effective maintenance and renewal work.

How we carried out our audit

- 1.6 We examined relevant documents, plans, and reports and spoke to NZTA staff, including:
- national office staff and managers from NZTA's Highways and Network Operations Group (HNO group), responsible for maintaining and operating the network; and
 - other HNO group staff, and the network management consultants, physical works contractors, and regional bridge consultants responsible for five areas – Northland, Auckland Motorway, Auckland Harbour Bridge, Wellington, and Southland.¹
- 1.7 We examined NZTA's procurement planning and contracts for maintenance and renewal work in these areas. We also examined NZTA's relationships with, and performance monitoring of, its consultants and contractors in these areas. Figure 1 provides an overview of the five areas we focused on during the audit.

Figure 1
Overview of the five areas that we focused on during our audit

Area	Network length (kilometres)	Vehicle kilometres travelled 2009/10 (million)	Maintenance and renewal expenditure 2010/11 (\$million)	Service delivery model*
Northland	750.8	947	28.0	Traditional
Auckland Harbour Bridge	1.7	98	5.0	Performance Specified Maintenance Contract
Auckland Motorway	317.4	3650	48.8	Alliance
Wellington	292.8	1663	24.1	Hybrid
Southland	805.0	589	20.3	Traditional

*See Figure 3 under paragraph 2.19 for an explanation of these models.

- 1.8 For each area, we present case studies to show the sorts of day-to-day issues and challenges we identified during our audit and how NZTA could learn from these experiences.

What we did not audit

- 1.9 We did not audit:
- the appropriateness of the level of funding for state highway maintenance and renewal;

¹ These were the same areas we visited as part of our first audit into NZTA's information and planning for maintaining and renewing the state highway network.

- new and improved capital infrastructure or upgrade work, or disposals of assets on the state highway network; or
- the maintenance and renewal and funding of local roads managed by local authorities.

The structure of this report

- 1.10 In Part 2, we describe how NZTA designs and selects service delivery models for maintenance and renewal work. Part 3 describes how NZTA maintains relationships with its consultants and contractors, and monitors their performance, and Part 4 describes how NZTA understands the quality and value of the maintenance and renewal work being delivered. Part 5 sets out our key overall observations from this audit and the previous audit (report published in September 2010) about how NZTA could improve the cost-effectiveness of maintenance and renewal work.

Part 2

Designing and selecting service delivery models

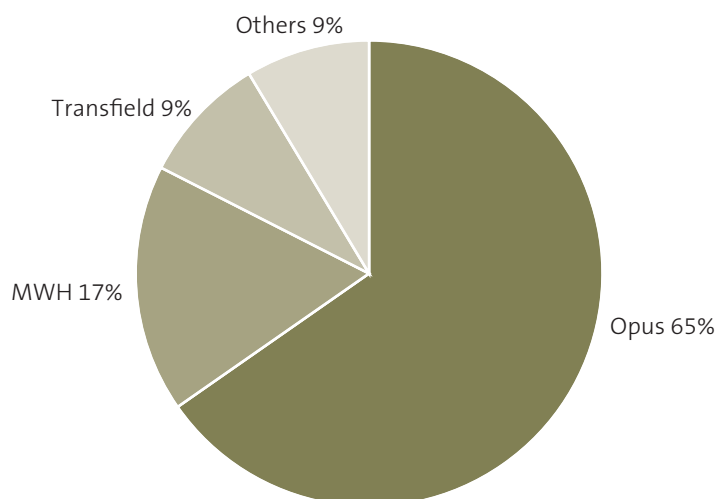
- 2.1 In this Part, we set out our findings about how NZTA:
- understands its supplier market for maintenance and renewal work;
 - plans and provides guidance for its maintenance and renewal procurement in the long term; and
 - selects appropriate service delivery models for the work.
- 2.2 In this Part, we make two recommendations.

Understanding the supplier market

NZTA has a clear understanding of its supplier market and has been responsive to recent market conditions. However, NZTA needs to prepare, and review on an ongoing basis, specific strategies to encourage more suppliers into some maintenance and renewal work that is dominated by a very small number of large suppliers. In our view, more competition is likely to increase the quality and value for money of the services provided.

- 2.3 NZTA's supplier market for maintenance and renewal work is dominated by a small number of large national and international suppliers. Although there is a broader range of local and regional physical works suppliers, there is a limited number of professional services suppliers nationally. This is shown in Figure 2, which breaks down the percentage of professional services contracts for general road maintenance and renewal of the state highway network by supplier. It shows that Opus International Consultants Limited (Opus) held nearly two-thirds of the professional services contracts in early 2011.

Figure 2
Distribution of professional services contracts for highway maintenance and renewal, by supplier, as at March 2011



- 2.4 The dominance of Opus in professional services work for the inspection and management of bridges and other structures on the network is even more pronounced. In early 2011, it held 78% of NZTA's contracts by number for the inspection and management of bridges and other structures.
- 2.5 NZTA liaises closely with suppliers at national and regional levels, and understands the nature and characteristics associated with its supplier market. In its *State Highway Portfolio Procurement Strategy 2010* (the Strategy), NZTA recognises that the current maintenance and renewal supplier market is characterised by a small number of dominant national suppliers, with a range of other prospective suppliers battling to retain their presence in the market. NZTA staff we spoke to described the supplier market as “relatively narrow”.
- 2.6 NZTA notes in the Strategy that it is difficult to define what constitutes a healthy and sustainable supply market. But it considers that the answer is to have at least three national or inter-regional suppliers actively involved in its business, each with a reasonable share of its work and/or a reasonable share of other works within the land transport sector. The number of NZTA's current professional services suppliers for general road maintenance and renewal aligns closely with this goal. It was not clear from the Strategy how NZTA determined that at least three national or inter-regional suppliers constitute a healthy and sustainable supply market. However, NZTA staff told us that three suppliers is a good mix because it provides competition in a demanding environment where, to be effective, suppliers need strong management competency, systems, capacity, and staff.
- 2.7 In recent years, NZTA has been responsive to supplier market conditions. In December 2009, NZTA introduced a price deviation adjustment for considering professional services tenders to deter the unsustainable tender prices it had been receiving. The price deviation adjustment penalises tenderers for submitting prices less than 90% of the median of the tendered sums. Also, between September and October 2010, NZTA carried out a physical works sector health check and capability review to focus on the effect of the market downturn and opportunities to assist the industry. The outcomes of the review emphasised the need for funding certainty, continuity of work within each area, and opportunity for suppliers to grow capability and capacity.
- 2.8 NZTA understands its dominant role in the supplier market at a national level. Because of its level of expenditure on maintenance, operations, and capital improvement on the network, NZTA recognises in the Strategy that it is a “leader and shaper” of the supply industry. NZTA is mindful of the effects its actions have on the overall health and sustainability of the supply industry.

- 2.9 At a regional level, NZTA is only one of a number of road controlling authorities that also includes local authorities, which are responsible for maintaining local roads. Any assessment of the condition of regional supply markets needs to take into account local authority arrangements. Although there are clear benefits through efficiencies of scale that can come from the existing market share, NZTA is concerned about long-term value for money if a supplier's market share were to extend to the point where a monopoly or duopoly was created.
- 2.10 As a result, NZTA is aware of the need to minimise any barriers to entry into the maintenance and renewal market and to look at strategies that may encourage a greater range of suppliers. Although NZTA did not conclude that specific measures were required at the time the Strategy was prepared, it has identified some initiatives that could encourage a greater range of suppliers. These initiatives are largely focused on the procurement process and include changing the proportions of each of the non-price attributes in tender evaluations - for example, a greater weighting on the personnel non-price attributes or a lesser weighting on company experience could be appropriate in some cases. Other examples include using different supplier selection methods, and considering using new delivery models.
- 2.11 We recognise that maintaining and renewing the state highway network is demanding work that requires competent and skilled suppliers. We also acknowledge that not all suppliers will have the capability or capacity to work on the network. However, the dominant share of maintenance and renewal work on the network by some large suppliers has created near monopolies and duopolies in some maintenance and renewal work, particularly for professional services work. In our view, NZTA should prepare, and review on an ongoing basis, specific strategies to encourage more suppliers into those markets. These strategies could follow a review of the health of the overall supplier market and be used to promote more competition in these areas by ensuring the sustainability of small to medium-sized suppliers within particular maintenance and renewal areas or regions.

Recommendation 1

We recommend that the New Zealand Transport Agency prepare, and review on an ongoing basis, specific strategies to encourage more suppliers into professional services work for maintenance and renewal where more competition will increase the quality and value for money of the services provided.

Long-term procurement planning and guidance

NZTA has clear accountabilities and responsibilities for long-term procurement and a clear procurement approach for the delivery of maintenance and renewal work. NZTA also has comprehensive and detailed guidance for purchasing services and contract management.

- 2.12 NZTA has clear accountabilities and responsibilities for long-term procurement activities. NZTA's *Contract Procedures Manual* sets out a clear delegation schedule for NZTA's HNO group for a range of procurement activities associated with professional services and physical works. This includes delegations for approving procurement strategies, advertising tenders and open price envelopes, and awarding and varying contracts. This includes NZTA Board approval of contracts worth more than \$50 million.
- 2.13 NZTA also has clear accountabilities and responsibilities for long-term procurement planning as an "approved organisation" to receive funding for land transport activities under the Land Transport Management Act 2003 (the Act). Under its own *Procurement Manual for activities funded through the National Land Transport Programme* (the Procurement manual), NZTA is required to have a procurement strategy that documents its long-term approach to procuring transport sector activities funded under the Act. The Project Service team within the HNO group (based in NZTA's national office) was responsible for preparing the Strategy. This was approved by the NZTA Board in July 2010.
- 2.14 NZTA's long-term procurement approach for the delivery of maintenance and renewal work is clearly outlined in the Strategy. The Strategy updated the Long Term Procurement Plan previously published by Transit New Zealand in June 2005. The Strategy covers both maintenance and renewal, and improvement work. Its purpose is to establish a long-term approach to implementing asset management and improvement projects on the network. The Strategy has specific objectives to:
- aid the engagement of suppliers who can deliver quality and value for money, and meet the needs of NZTA's customers;
 - ensure that appropriate whole-of-life considerations are made in the way procurement is carried out;
 - encourage competition and sustainable, efficient markets; and
 - encourage supplier innovation.
- 2.15 The Strategy outlines contextual detail about the Government policy statement on land transport funding and the National Land Transport Plan (NLTP). It references NZTA's Investment and Revenue Framework that links the Government policy statement and the NLTP, and demonstrates how the NLTP gives effect to the

Government policy statement. The Strategy sets out a range of delivery models for both asset management (maintenance and renewal) and asset improvement (new and improvement work) activities and sets out guidance about supplier selection methods, and contract forms and processes.

- 2.16 NZTA guidance for purchasing and contract management activity is comprehensive and detailed, and outlined in a number of manuals. The Procurement manual contains specific procurement procedures approved by NZTA for use when purchasing infrastructure, planning and advice, and public transport services. The Procurement manual sets out how value for money is achieved when purchasing goods or services to deliver activities. It provides guidelines on the steps that (if followed) will maintain or enhance value for money through the procurement process.
- 2.17 The *Contract procedures manual* details NZTA's procedures for procuring professional services and physical works. The HNO group uses these procedures to implement the requirements of the Procurement manual. NZTA also has the *State highway professional services contract proforma manual*, which sets out standard specifications for professional services contracts, including specifications for state highway network management, contract management, and the management, surveillance, and quality assurance of physical works contracts.

Selecting service delivery models

NZTA uses a range of models for the delivery of maintenance and renewal work, and prepares procurement strategies to determine which approach and model is the most appropriate in specific areas and regions. However, NZTA needs an up-to-date national assessment of the quality and value for money that the range of models is delivering.

- 2.18 NZTA uses a range of models to deliver maintenance and renewal work on state highway roads, and state highway bridges and other structures. Generally, these involve procuring consultants for professional services, and contractors for physical works services, in the 25 areas, and for the specialist inspection and management of bridges and other structures in the nine regions. Each area and region has its own complexities and demands.
- 2.19 NZTA uses four main service delivery models — traditional, hybrid, Performance Specified Maintenance Contracts (PSMC), and alliancing. Figure 3 outlines each model in more detail.

Figure 3
Service delivery models used by NZTA with contractors and consultants

Delivery model	Summary description
Traditional	<p>Service contracts are separated between professional services (consultants) and physical works (contractors).</p> <p>All contracts for specialist professional services for the inspection and management of bridges and other structures are carried out under traditional contracts.</p> <p>Physical works contracts vary from three to five years.</p>
Hybrid	<p>Service contracts are predominantly separated between professional services and physical works, but portions of the professional services (especially for the short-term life of the asset) are the responsibility of the physical works contractor.</p> <p>Contracts are for five years and are partially performance based.</p>
Performance Specified Maintenance Contract	<p>One service contract is used for professional services and physical works.</p> <p>Contracts are for 10 years and are fully performance based.</p>
Alliance	<p>NZTA and the professional services and physical works contractors all work together as an integrated team to deliver specific works and projects under a contractual framework where their commercial interests are aligned to project outcomes.</p> <p>Only one alliance model for maintenance and operations is currently in use, for the Auckland motorway network. This alliance agreement is for 9.75 years (divided into three periods of 3.75, 3, and 3 years) and is partially performance based.</p>

- 2.20 The rationale for the delivery models in place at a national level is based on an historic approach of promoting a balanced mix of models. This approach has been in place since 2000 when Transit New Zealand managed the network.
- 2.21 In 2005, *Transit New Zealand's Long Term Procurement Plan* noted that an assessment of the relative value for money each model offered at the time (which included traditional, hybrid, and PSMC models) had been carried out but that the results had been inconclusive at that stage. Data was readily available on the costs for each model, but, at the time, data about functional performance was difficult to extract from existing sources. On balance, Transit New Zealand considered that no one model displayed better results than any other in terms of performance on the network. On this basis, Transit New Zealand decided to stay with the mix of models that were then in place. In 2008, an alliance procurement model was implemented for the operation, maintenance, and renewal of the Auckland motorway network.

- 2.22 As at early 2011, 50% (12) of the 24 service delivery models for state highway maintenance and renewal services were traditional. A further 29% of contracts were hybrid (seven contracts), and 17% used the PSMC model (four contracts). The Auckland Motorway Alliance is the only alliance currently in place for maintenance and renewal work on the network.² Although there is more of a mix of models in place throughout the network when the total value of each contract delivery model is taken into account, in practice the current distribution of delivery models by number of contracts differs from the historic promotion of a balanced mix of models.
- 2.23 At a regional level, before new contracts go out to tender, the merits of different delivery models and contract performance are taken into consideration. However, since 2005, there have been no further formal national assessments of the relative value for money or performance of the delivery models in place across the network.
- 2.24 NZTA considers that there is an appropriate mix of delivery models in place. For NZTA, the value of the supplier market consists of some key aspects, including among others, the skills and capacity of their people and the market, the size and complexity of the work involved, and the degree of design and risk that can be transferred to their suppliers. NZTA considers that a mix of delivery models delivers the best value for money across these aspects.
- 2.25 NZTA's Strategy does not outline a rationale or target for the future mix of procurement models at a national level. Instead, when each maintenance contract comes up for renewal, NZTA's approach is to analyse the attributes associated with maintenance delivery models and the various key specific area characteristics as part of the delivery model selection process. This includes considering the network's size and shape, the network's complexity, supplier market conditions, the level of client involvement, their flexibility to deal with change, innovation potential, risk profile, stakeholder involvement and customer requirements, and focus on non-cost areas.
- 2.26 The Strategy also notes that all activities involving procurement will have their own specific procurement strategies that are consistent with the Strategy and that consider the specific detail and characteristics of the activity. During our audit, we found that there were specific procurement strategies prepared for new professional services contracts for maintenance and renewal for the Northland and Southland areas. Each strategy provided an outline of the performance of the previous supplier, an assessment of the local market of professional services suppliers and pricing environment, and the procurement process and model to secure a new supplier.

² There are 25 areas with 24 service delivery models in place because one traditional contract covers two areas – Gisborne and Hawke's Bay.

- 2.27 For the Auckland Harbour Bridge, NZTA was in the process of preparing a procurement strategy for a new maintenance contract at the time of our visit. More detail about NZTA's planning and preparation for a new maintenance contract for the Auckland Harbour Bridge is outlined in case study 1.

Case study 1: Auckland Harbour Bridge – Planning for a new contract

As the most significant structure on the state highway network, the Auckland Harbour Bridge (the bridge) is managed by NZTA as a distinct area for maintenance and renewal purposes. NZTA operates a Performance Specified Maintenance Contract (PSMC) model for the maintenance and renewal of the bridge. The current contract is due to expire in November 2011.

Under the current PSMC contract and separate work instructions with other consultants and contractors, Total Bridge Services Limited is responsible for the protective coatings and painting work on the bridge, day-to-day maintenance and repair work, resurfacing the outer lanes of the bridge, forward works planning, and carrying out annual detailed inspections. The original PSMC contract was extended in 2008 and varied in 2009 to include the box girder strengthening work. Other consultants and parties also have responsibilities for the bridge. Under separate contracts, Beca Infrastructure Limited provides specialist structural engineering advice, and the Auckland Motorway Alliance is responsible for the moveable lane barrier and re-surfacing the four centre lanes of the bridge.

NZTA is in the process of preparing for a new maintenance and renewal contract for the bridge. One of the major changes anticipated is the introduction of some level of containment for the existing maintenance and painting of the bridge to meet environmental requirements. This change is being introduced as part of the renewal of existing resource consents. The current consents for maintenance work on the bridge were granted in 2001, with several permits authorising the discharge of contaminants into the air, ground, and water. Total Bridge Services is responsible for preparing these consents, which are due to expire in October 2011.

Because containment could add considerable costs to current maintenance processes, NZTA has investigated various types of containment and paint systems used on comparable structures internationally and on other steel structures across the country. This work has been done as part of preparing a procurement strategy for the future maintenance of the bridge. The current procurement strategy emphasises the need for a long-term strategy for the life of the bridge, a long-term 10-year contract period with reviews after years three and six of the contract to align with anticipated funding streams, targets and performance checks at regular intervals, and a single contract for maintenance activities. An alliance model is proposed as the most appropriate contract type to give the strategy effect. The target award date for the new contract is October 2011.

This case study highlights some aspects for NZTA to consider in planning to manage new requirements and preparing for a new contract – in particular, the need for:

- clear contractual requirements for relevant consultants and contractors to be responsible for preparing and processing new or renewed consents for maintenance and renewal operations;
- where relevant, close alignment of the timing of procurement processes with consent renewal, particularly where new consent conditions or requirements could affect maintenance and renewal operations; and
- where relevant, investigating comparable and relevant maintenance and renewal operations and approaches elsewhere as part of procurement processes.

- 2.28 Although the procurement strategies we considered for new professional services contracts were detailed and thorough, our Wellington and Northland case studies (see Part 3) highlighted a number of practical aspects NZTA could consider at an area level when changing delivery models. These include more detailed communication and engagement with tenderers about the new model during the selection process, ensuring that the contract management approach and governance structure is appropriate, and reviewing staff and organisational capacity to ensure that the right skills and experiences are in place to manage the new contract.
- 2.29 The Strategy notes that NZTA is aware that, for many networks throughout the country, the delivery model has not changed for some time. NZTA considers that there are opportunities to complete a more in-depth analysis of the performance of the delivery models used on several networks and test whether it would be better served by using them in a different way. NZTA is also aware that the current approach, which divides the state highway network into separate networks, is also due for detailed review. NZTA anticipates that there will be changes to the overall proportion of delivery models in the next three years.
- 2.30 Because the nature and characteristics of each area of the state highway network are varied throughout the country, taking a criteria-based approach to selecting new delivery models makes practical sense. But the basic rationale for the current range of delivery models is more than 10 years old and needs review. This review will ensure that the criteria-based approach to selecting delivery models and the preparation of specific procurement strategies is better informed by an up-to-date assessment of the quality and value for money the range of models is delivering. The review should also determine the circumstances in which each model is likely to promote quality and value-for-money services.
- 2.31 This review could be used to inform adjustments to the delivery models in the future to ensure that they continue to deliver quality and value-for-money maintenance and renewal work. The review could take place as part of a detailed review of the way NZTA has divided the state highway network into areas and regions for maintenance and renewal purposes.

Recommendation 2

We recommend that the New Zealand Transport Agency review at a national level the quality and value for money that the range of service delivery models is delivering throughout the network and determine the circumstances in which each model is likely to promote quality and value-for-money services.

Part 3

Maintaining relationships and monitoring contracts

- 3.1 In this Part, we set out our findings about how NZTA:
- manages relationships with its consultants and contractors;
 - monitors their performance;
 - extends contracts; and
 - responds to issues that arise.

- 3.2 In this Part, we make three recommendations.

Managing relationships with consultants and contractors

NZTA has clear accountabilities and responsibilities for managing relationships and monitoring contracts, and had generally maintained good working relationships with its consultants and contractors in the areas we visited.

- 3.3 NZTA's Senior Asset Managers from the HNO group are based in NZTA's regional offices throughout the country. Senior Asset Managers are responsible for managing the relationship between NZTA and its consultants and contractors within each area and for procuring, managing, and monitoring contracts. As a result of staff shortages in some of the areas we visited, NZTA had engaged additional consultants to provide advice and support to manage the Auckland Harbour Bridge and structures more generally at a national level.
- 3.4 NZTA's network management consultants are responsible for preparing, evaluating, and administering physical works contracts for maintenance and renewal work, as well as their management, surveillance, and verification. These responsibilities are outlined in NZTA's contract documents with its network management consultants and in standard professional services specifications.
- 3.5 NZTA's regional bridge consultants are responsible for identifying any routine or structural maintenance required as a result of their inspections. They are required to forward a schedule of routine maintenance identified from inspections to the network management consultant responsible for programming the work to be carried out. For structural maintenance projects, the regional bridge consultant is responsible for preparing an offer of service; for investigation, design, and/or contract preparation; and for managing the project. If projects are required to be tendered, the regional bridge consultant is responsible for preparing the appropriate contract documents.
- 3.6 In the areas we visited, NZTA's network management consultants, regional bridge consultants, and physical works contractors all considered they had a good working relationship with NZTA's Senior Asset Managers and other

regional NZTA office staff. Although issues arose in some of the areas we visited (more detail is outlined in case studies 3 and 5), consultants and contractors generally commented that NZTA's staff were supportive and co-operative, and communicated with them in an open and transparent manner. In the areas we visited, NZTA staff were customer-focused (in line with one of NZTA's strategic priorities) and worked very closely with their consultants and contractors to ensure that they worked with the perspective of road users and other important stakeholders in mind.

- 3.7 In all areas we visited, the primary means of communication between NZTA and its consultants and contractors were regular formal monthly meetings. Detailed progress reports from consultants and contractors were circulated before the meeting, and tabled and discussed at the meeting. There was also a range of more frequent informal communication between NZTA's Senior Asset Managers and consultants and contractors through email and telephone conversations, which often occurred daily. Weekly catch-ups between NZTA's Senior Asset Managers and its consultants and contractors were considered valuable as a way of "front-footing" issues.

Monitoring the performance of consultants and contractors

NZTA regularly monitors the performance of its consultants and contractors through monthly reporting processes, performance evaluation reviews, and from time to time contract management and "lessons learnt" reviews. NZTA needs to be more consistent in carrying out its performance evaluations and carry out formal reviews toward the end of its contracts.

- 3.8 NZTA receives and discusses regular reports from its consultants and contractors. Monthly reports detail the past month's progress (including financial progress), highlighting the key milestones, summarising the current status of the contract, and comparing it with the overall maintenance and renewal programme. NZTA also regularly receives and reviews financial, public relations, accident (when relevant), and construction reports from its consultants and contractors.
- 3.9 The Auckland Motorway Alliance had its own specific key results areas, which were regularly monitored and measured. More detail about how performance and innovation is measured and reported in the Auckland Motorway Alliance is outlined in case study 2.

Case study 2: Auckland Motorway Alliance – Measuring performance and innovation

In October 2008, the Auckland Motorway Alliance (AMA) took over responsibility for the maintenance of the Auckland Motorway network and State Highway 22 for almost 10 years. The AMA was set up under an alliance agreement and is made up of NZTA and alliance partners Fulton Hogan Limited, Opus International Consultants Limited, Beca Infrastructure Limited, Resolve Group Limited, and Armitage Systems Limited. The alliance model was chosen for this part of the state highway network for its potential to deliver a high level of service and value for money, and give all the alliance participants incentives to innovate.

The AMA has five specific key result areas (KRAs) for the purposes of measuring the AMA achievements. The KRAs relate to the AMA's five overall objectives. The AMA's objectives are:

- maximise network efficiency;
- customer and stakeholder driven organisation;
- positive legacy;
- value for money; and
- healthy organisation.

Each KRA score is calculated by measuring the performance against key performance indicators to determine performance, which ranges from unsatisfactory, through business as usual, to breakthrough. The KRA scores contribute to an overall performance score, calculated on an annual basis. The AMA's progress against its KRAs is reported monthly to the Alliance Leadership Team.

The AMA annual report for the year ended 30 June 2010 outlined its performance in achieving value for money against its objectives for the year. It also reviewed the progress made during the second year of the AMA. The annual report emphasises that delivering enhanced value for money for the AMA is about five key components:

- target outturn cost (the budget set and agreed by alliance partners for a defined period*);
- forward works programme;
- levels of service;
- KRAs; and
- risk.

In terms of the AMA's performance against its key value-for-money components, the calculated provisional savings made against the target outturn cost for the period to 30 June 2010 were \$3.67 million. Also, the AMA's forward works programme was delivered, levels of service were delivered in most areas, and all programmable risks had mitigation strategies in place despite some risks eventuating. The AMA also demonstrated a range of innovative approaches to its work systems and practices, including (but not limited to) capturing and using detailed asset management information to enable asset managers to more accurately forecast cash flows, and opportunities to optimise investment and making pavement resurfacing decisions lane by lane (instead of the entire width of the road), resulting in longer average surface life. At present, these innovations and good practice lessons are only informally disseminated throughout NZTA.

The AMA achieved a lower than anticipated overall KRA score of 57.99% in its first full year of measurement. This was from a baseline of 50% and against a commitment to achieve 65%. The overall score was adversely affected by a high number of fatalities and serious injuries from motor vehicle accidents and low travel time reliability on the network, mainly as a result of new capital projects starting that the AMA was not responsible for. In November 2010, a clear strategy to improve the AMA's performance against its KRAs was agreed. The strategy involved "champions" within AMA staff being assigned to prepare an improvement plan for each KRA measure. The strategy sets the overall KRA target score to be achieved in June 2011 as 67.7%. In the March 2011 quarter, the AMA achieved 62.9%.

The AMA has a clear performance framework, is generally performing well across the wide range of its performance measures, and is demonstrating innovation in its work systems and

practices. However, improvement is required to lift its performance against its KRAs. This case study highlights some aspects for NZTA to consider when measuring performance and promoting innovation – in particular, the need for:

- continuing to closely monitor, on an ongoing basis, performance against key result areas;
- ensuring that improvement plans identify what is required to improve those targets and who is responsible for making sure targets are met; and
- capturing, disseminating, and, where applicable, having a process to formally implement innovative work practices and approaches from regions and network management areas throughout NZTA.

* Three target outturn cost (TOC) periods have been defined for the AMA contract as follows: TOC 1 – the first 3.75 years, TOC 2 – 3 years and TOC 3 – 3 years.

- 3.10 NZTA formally monitors the performance of its consultants and contractors by carrying out regular performance evaluations through its Performance Assessment by Coordinated Evaluation (PACE) system. The PACE system is a database that records all the performance evaluations of NZTA's consultants and contractors on a central register. NZTA's Senior Asset Managers or its consultants (measuring the performance of contractors) generally carry out performance evaluations against four key criteria relating to management, production, health and safety, and administration. For each criterion, grades are given that add up to an overall evaluation score.
- 3.11 For those carrying out performance evaluations, there is guidance outlining when the evaluations are required to be done and what is involved. However, except for recent workshops outlining the improvements made to the PACE system, there has been limited training for those carrying out performance evaluations. Also, although NZTA head office staff have from time to time published and circulated PACE evaluation scores across areas, there is also no formal or regular review or evaluation of scores at a national level.
- 3.12 Although they generally considered it to be fair, most consultants and contractors we spoke to considered NZTA's performance evaluation scoring to be subjective and the weighting of criteria confusing in some areas. Some considered that the performance evaluation scores reflected the relationship the consultant and contractor has with NZTA. Others commented that the scoring was inconsistent throughout the country, with some NZTA areas considered more generous than others.
- 3.13 We examined a range of NZTA's performance evaluations of its consultants and contractors from the areas we visited. The overall performance evaluation scores of the consultants and contractors generally met or exceeded their contractual

requirements.³ The average overall evaluation scores ranged from 61% to 86%, with the average scores from Northland, Auckland Harbour Bridge, and the Auckland Motorway Alliance generally being higher than those from Wellington and Southland.

- 3.14 We found that the evaluations varied in the depth of explanation or comment about the scores. Some evaluations provided explanation about why scores were given (particularly if there had been a change in score since the last evaluation), while others provided very little or no explanation. Also, for the Southland, Wellington, Auckland Harbour Bridge, and Northland areas, performance evaluations were not always carried out as frequently as required.
- 3.15 NZTA was aware of some of these issues. In February 2010, it set up an internal working group to review and improve the PACE system. Issues with the PACE system identified by the group included the inconsistency of assessments, the need for better use of PACE outputs, limited understanding of some aspects of the system by staff, pressures exerted by suppliers to improve or negotiate better assessments, and meeting the required frequency of evaluations. The group introduced a number of changes, including clarifying the objectives, frequency, and overall ratings of performance evaluations and updating the guidance available on performance evaluation.
- 3.16 From time to time, NZTA also carries out contract management and “lessons learnt” reviews. Contract management reviews evaluate the compliance and effectiveness of management systems against contractual requirements and plans for maintenance work. “Lessons learnt” reviews evaluate the effectiveness of contract and project management measures and key outcomes to identify positive outcomes, common issues, and trends. NZTA regional offices nominate projects and programmes to be reviewed as part of the contract management and “lessons learnt” review processes, which are conducted by an independent consultant working alongside relevant NZTA staff.
- 3.17 There were five contract management reviews (three focused on professional services contracts, including two in the Wellington area, and two on physical works contracts) and one “lessons learnt” review conducted in the areas we visited from 2006 to 2010. Although some contract management reviews found some detailed non-compliance and made improvement recommendations to address these, in general the reviews highlighted that the contracts were being appropriately managed and administered.
- 3.18 However, one review of the professional services contract from the Wellington area identified issues with the consultant’s delivery, asset management, and information, and some relationship and communication problems within

³ PACE performance evaluation scores between 60% and 70% mean that contractual requirements are fully met, and scores between 71% and 85% mean that requirements are exceeded.

the wider team. More detail about the issues that arose in the performance evaluations and contract management review and how they were addressed is outlined in case study 3.

Case study 3: Wellington Network Management Area – Monitoring performance

Since 2007, NZTA has operated a hybrid model for the maintenance and renewal of the Wellington network management area. Previously, there had been a traditional model in place. Under the current hybrid contract, MWH New Zealand Limited (MWH) provides professional services, and Fulton Hogan Limited provides physical works services. Both are contracted by NZTA until 2012.

From the beginning of the contract, a number of issues arose from a lack of recognition that the hybrid model represented a new way of working that involved new requirements, different performance expectations, and more collaboration among all parties. Some of the main issues that arose were:

- a poor understanding by the consultant and contractor about some contract deliverables in their contract documents relating to asset management and Roading Assessment and Maintenance Management (RAMM) data collection and validation;
- poor quality and late reporting by the consultant;
- poor handling of contract variations by the consultant;
- multiple points of contact for the consultant, contractor, and NZTA;
- the same staff within the consultant's organisation and NZTA who worked together on the previous contract operating in the same way despite the change in contract; and
- poor communication and team work between all parties.

At the time, NZTA's contract management performance evaluations and contract management reviews identified similar issues relating to the late delivery of some deliverables, poor response times to addressing issues, the accuracy and integrity of RAMM data, and the need for NZTA to formalise the approval of contract variations and processes of accepting contract deliverables from the consultant. There was also recognition that joint relationships and understandings between all parties had been an area of concern. As a result of the ongoing issues, the management board for the contract arranged a two-day partnering workshop with an independent facilitator in February 2009. The workshop provided an open environment for issues to be raised and discussed, and a detailed work plan for addressing the issues was prepared.

NZTA extensively reviewed MWH's deliverable and reporting requirements, and actively monitors MWH against these. Also, a more conscious split in the management of the contract was put into place so the senior management team focuses on high-level issues and the technical management team focuses on operational issues. Regular formal and informal meetings with MWH and Fulton Hogan were also put in place. NZTA also realigned the responsibilities of some staff within its office and created a single point of contact for both MWH and Fulton Hogan. NZTA also implemented clearer processes to better track and record finances generally.

MWH focused on improving the quality and timeliness of its reporting. It also realigned the responsibilities of some staff within its organisation and brought in staff capacity and expertise from other areas within its organisation to help facilitate performance improvements. It spent time and effort resolving outstanding issues, particularly around the accuracy and integrity of RAMM data. Fulton Hogan focused on improving the accuracy and integrity of RAMM data and realigned the responsibilities of some staff within its organisation.

All parties recognise that considerable improvements have been made and acknowledge that performance is only now where it should have been at the beginning of the contract. This case

study highlights some aspects for NZTA to consider when entering into new delivery models – in particular, the need for:

- clear communication and close engagement during the tendering process about the overall objectives of the procurement model, performance expectations, and how performance will be measured;
- a contract management approach and governance structure in line with the overall objectives of the procurement model and contract;
- a review of staff and organisational capacity to ensure that staff with the right mix of skills and experiences are responsible for management of the contract in line with the overall objectives of the procurement model and contract; and
- a clear and timely process to resolve performance issues in an open and transparent way.

- 3.19 The one “lessons learnt” review between 2006 and 2010 for the areas we visited focused on network management in Southland. It highlighted some clear practical lessons about prioritising work, progressing projects, the importance of information management, and the role of the consultant relevant for areas across the network that experience lower traffic volumes.
- 3.20 A contract was extended twice in the Southland area. For all maintenance contracts with extension periods, NZTA is required to carry out contract extension performance evaluations before the extension date. More detail about the contract extensions is outlined in case study 4.

Case study 4: Southland Network Management Area – Extending contracts

NZTA operates a traditional model for the maintenance and renewal of the Southland network management area. Under the current model, Opus International Consultants Limited (Opus) provides professional services and a range of network contractors in Southland provide physical works services. These contractors include Downer EDI, which manages the maintenance and renewal of the Milford Road. Opus is contracted by NZTA until 2015.

Opus was the network management consultant for the previous traditional professional services contract from 2005 to 2010. That contract was for five years (3 years + 1 year + 1 year), allowing for two extension periods, which were approved by NZTA in September 2008 and September 2009. NZTA’s approval of the extension periods was based on the consultant successfully completing the first three years of the contract, ongoing good performance, and performance evaluation scores averaging 61% for the first extension and 63% for the second extension.

Although it was a straightforward process of extending the previous professional services contract, NZTA was required to carry out a contract extension performance evaluation before awarding the contract extensions. This did not occur before the extensions were granted in 2008 or 2009. Also, NZTA did not do the required quarterly evaluations for the contract.

Although the consultant was performing and justifiably had their contract extended twice, this case study highlights some aspects for NZTA to consider when extending a contract – in particular, the need for:

- carrying out contract extension performance evaluations before awarding contract extensions;
- consistent quarterly evaluations of the performance of consultants and contractors to monitor and track performance issues and trends over time; and
- clear documentation and reporting of the rationale for granting or declining contract extensions.

- 3.21 Although it was clear that the consultant was performing well and justifiably had their contract extended twice in the Southland case study, it is important that performance evaluations are carried out before contracts are extended to demonstrate the rationale for extending the contract.
- 3.22 We recognise that NZTA has recently improved the performance evaluation process and that there will always be some level of subjectivity to evaluations that will create a range of scores. But as NZTA's formal monitoring process, performance evaluations need to be carried out consistently and as frequently as required throughout the whole contract period to accurately track and monitor the performance of NZTA's consultants and contractors. Greater consistency could be achieved through a range of measures, including more frequent and targeted training for those carrying out the performance evaluations, and more frequent monitoring and review of the performance evaluation requirements and scores at a national level.
- 3.23 NZTA has noted that, in most instances, there is a high-level review of the performance of previous contracts as part of preparing procurement strategies. However, we consider that there would be value in a detailed review toward the end of each contract to assess how well the delivery model has delivered quality and value for money, and to identify any wider lessons that could be drawn from NZTA's management and monitoring of the contract and applied to the management of other contracts.

Recommendation 3

We recommend that the New Zealand Transport Agency introduce measures to ensure that all requirements for the completion of contract performance evaluations are carried out in a consistent and timely way.

Recommendation 4

We recommend that the New Zealand Transport Agency carry out a detailed review toward the end of each contract to assess how well the delivery model has delivered in terms of quality and value for money, and to identify any wider lessons that could be drawn from the management and monitoring of the contract and applied to the management of other contracts.

Responding to issues

There were performance issues with NZTA's consultants and contractors in two areas we visited. Although the issues were appropriately resolved in both areas, NZTA needs to be more responsive and timely in the way it resolves performance issues with its consultants and contractors.

- 3.24 Performance issues can be identified through a range of ways, including monthly reporting processes, performance evaluation reviews, and contract management and “lessons learnt” reviews.
- 3.25 For below average or unacceptable performance identified through performance evaluation and contract management review processes, NZTA's consultants and contractors are generally required to prepare and agree with NZTA improvement plans and corrective actions.
- 3.26 There were performance issues with NZTA's consultants and contractors in the Wellington (see case study 3) and Northland areas that we visited as part of the audit. More detail about the issues in Northland and how they were addressed is outlined in case study 5.

Case Study 5: Northland Network Management Area – Responding to issues

NZTA currently operates a traditional model for the maintenance and renewal of the Northland network management area. Under the current model, Opus International Consultants Limited (Opus) provides professional services and there are two different physical works contractors in the northern and southern parts of the area. Opus and the physical works contractors are contracted by NZTA until 2014.

Before 2011, the Northland network management area operated under a 10-year Performance Specified Maintenance Contract (PSMC) model. A number of issues arose from the beginning of the PSMC contract, including:

- an unsustainably low tender price for the work, based in part on cost assumptions made from incomplete asset information and capital improvement work outlined that was proposed but never occurred;
- some contract specifications held unrealistic expectations, particularly in relation to a low “financial cap” set for the 10-year period;
- poor response times to contract deliverables;
- minimal preventative maintenance done; and
- NZTA managing the contract in a prescriptive way despite having a longer-term and more flexible procurement model and approach in place.

By 2005, NZTA reports highlighted that implementation of the PSMC model in Northland was unsound, contract obligations were not being delivered, and the network asset was at risk of deteriorating. As a result of the issues that arose, NZTA and its consultant made changes to the staff managing the contract. A stronger team-based approach with greater trust between parties was adopted, with NZTA taking a more flexible approach to considering legitimate contract variations.

Initial work to prepare a procurement plan for a new contract in 2010 also identified lessons learnt from the tender evaluation method, tender prices, co-operative relationship and NZTA

contract structure, asset deterioration, and additional works associated with the PSMC. Also, there were other matters NZTA considered when preparing the new contract for Northland. These included the reduction in size and sustainability of the bordering Auckland North area (as a result of the establishment of the Auckland Motorway Alliance), the wish to align contract terms with financial year dates, the ability to introduce a longer-term strategy in 2014, and ongoing discussions with local authorities to explore the benefits of combining the management of state highways and local roads.

NZTA considered a three-year traditional model the best approach to address the issues with the previous contract, combining the Northland and Auckland North areas and giving time to prepare for a sustainable long-term strategy for the northern area in the future. Components of the traditional model were put in place by NZTA to address some of the key issues with the previous contract. These included making area-wide treatments part of the design and build requirements, establishing management boards between NZTA and its consultants and contractors for two distinct areas within the network and the network as a whole, providing for an independent auditor to provide increased quality assurance, and prioritising data collection to better understand the condition of the network.

Although there was an acknowledgment that lessons had been learnt from the previous contract, this case study highlights some things for NZTA to consider when entering into new delivery models – in particular, the need for:

- clear communication during the tendering process about the quality and completeness of asset information and the status of capital improvement work proposed on the network;
- a contract management approach and governance structure in line with the overall objectives of the procurement model and contract;
- a review of staff and organisational capacity to ensure that staff with the right mix of skills and experiences are responsible for management of the contract in line with the overall objectives of the procurement model and contract;
- a clear and timely process to resolve performance issues in an open and transparent way; and
- a flexible approach to procurement planning that allows consideration of other relevant matters for a new contract.

- 3.27 Although the performance issues were complex and a range of important wider issues were resolved effectively and lessons learnt by NZTA and its consultants and contractors in the Northland and Wellington case studies, in both cases it took almost half the contract period (in the Wellington area two years and in the Northland area five years) for appropriate actions to be put in place to address the issues identified.
- 3.28 We recognise that maintaining good working relationships with its consultants and contractors requires NZTA at times to make difficult practical judgements about how best to motivate and encourage performance improvement. We also acknowledge that there were some complex contractual, performance, and

relationship management issues that arose in the Northland and Wellington case studies.

- 3.29 However, in our view, in these instances it took too long for NZTA to address some of the key issues that arose, particularly issues around communication, engagement, and team working. NZTA needs to introduce, and adhere to, procedures to be more consistent, responsive, and timely in the way it resolves performance issues with its consultants and contractors.

Recommendation 5

We recommend that the New Zealand Transport Agency introduce, and adhere to, procedures to more consistently respond in a timely way to resolve performance issues with its consultants and contractors.

Part 4

Understanding the quality and value of the work being delivered

- 4.1 In this Part, we set out our findings about how NZTA:
- gathers information to determine how well its consultants and contractors are performing;
 - uses that performance information; and
 - learns from experience.

Gathering performance information

NZTA gathers a wide range of information relevant to determining how well consultants and contractors are delivering quality and cost-effective maintenance work.

- 4.2 At a regional level, the information NZTA gathers focuses on those quality and cost-effective requirements within contract deliverables and key performance measures outlined in monthly and accrual reports prepared by NZTA's consultants and contractors. These reports include information about traffic and maintenance operations, asset management, safety incidents, finances, and the status of the contract against the overall programme. Consultant and contractor performance information is gathered and maintained in the PACE system and as part of specific contract management and "lessons learnt" processes.
- 4.3 At a national level, the information NZTA gathers generally focuses on the wider performance of the network. This includes information about road condition from an annual survey that assesses a range of condition measures and annual RAMM rating surveys that test a sample of the network. It also includes information about vehicle crashes, safety, and road user experience of the network through annual surveys.

Using performance information

NZTA regularly assesses how well its consultants and contractors are delivering against their contract deliverables and key performance measures. Although NZTA has recently done some benchmarking, information about the performance of each area in the network could be better used to inform how well NZTA's service delivery approaches and models are performing.

- 4.4 At a regional level, NZTA regularly assesses and evaluates information focused on those quality and cost-effective requirements outlined in contract deliverables or key performance measures of its consultants and contractors through a range of different activities and measures. As previously outlined, these include monthly

and accrual reporting by consultants and contractors, performance evaluation reviews through the PACE system, and contract management and “lessons learnt” reviews.

- 4.5 NZTA has recently done some national-level trend analysis of road pavement surfacing and structure condition in each area in the network. The analysis showed that there was a consistent steadying or improving trend in all areas against most condition measures, except for those relating to rutting, which showed signs of deterioration.
- 4.6 In general, NZTA does not systematically or consistently assess information at a national level about the wider quality and performance of maintenance and renewal work in areas in the network, to understand differences, trends, and the reasons for them. NZTA has recently begun some initial work to compare maintenance and renewal costs between areas with similar traffic volume characteristics.
- 4.7 We analysed the available NZTA data for the areas we visited to see if there was any identifiable relationship between the service delivery model used and indicators of the value delivered through maintenance and renewal work, such as road condition indicators. Our limited analysis did not identify any obvious relationships between the value delivered and the delivery model used.
- 4.8 In our view, NZTA should regularly assess information throughout the network, including comparative costs and broader indicators of value for money such as road safety and traffic congestion trends, to inform its understanding about how the delivery approaches and models are performing in each area and region in terms of quality and value for money.
- 4.9 We consider that this information would be essential to inform any assessment at a national level of the quality and value for money of the maintenance and renewal work that the range of models is delivering (see recommendation 2) and formal reviews toward the end of a contract (see recommendation 4).

Learning from experience

NZTA uses performance evaluations to assess tenderers, and internal value added teams are in place to promote best practice and innovation.

- 4.10 NZTA’s performance evaluations of its consultants and contractors are used in future tender processes for maintenance and renewal work. An objective of NZTA’s performance evaluations is to provide an historical database to assist in assessing track records in tender evaluations. In this way, the performance evaluations

maintained in the PACE system are specifically used by NZTA's tender evaluation teams to evaluate a tenderer's performance, as part of their non-price attribution evaluation.

- 4.11 NZTA's internal value added teams (VATs) promote best practice throughout the business. VATs within the HNO group are made up of expert staff in key functional areas. One of the key activities of the VATs is to identify best practice and embed it into the business. There are VATs in the areas of safety, property, asset management, customer service, project development and delivery, Roads of National Significance, and value for money.
- 4.12 The asset management VAT is specifically responsible for considering a range of performance reviews, and promulgating and promoting best practice in the HNO group. NZTA staff we spoke to as part of the audit indicated that a new Value for Money VAT had recently been established to more systematically identify and promote cost-effective innovations in the HNO group.
- 4.13 Internal teams focused on promoting best practice and lessons learnt in the HNO group are an important mechanism for ongoing improvement throughout the business. Although elements of good practice occur across the range of different areas and regional offices, the Auckland Motorway Alliance case study (see case study 2) identified a number of important operational innovations that, where relevant, could be promoted and applied throughout the network by these teams.

Part 5

Improving the cost-effectiveness of maintenance work

- 5.1 In this Part, we set out our observations about how NZTA could improve the cost-effectiveness of maintenance and renewal work, through:
- using information to improve the effectiveness of maintenance work;
 - planning maintenance work to target the most important areas for the long-term condition and use of state highways; and
 - refining the ways it delivers maintenance work.
- 5.2 This Part brings together the findings of this report on NZTA's delivery of maintenance and renewal work and the findings from our first report, published in September 2010, which examined how well NZTA uses information and plans for maintenance and renewal work. Based on the findings in both reports, there are three areas that we consider are important for NZTA to continue to work on to improve the overall cost-effectiveness of maintenance and renewal work.

Using information to improve the effectiveness of maintenance work

- 5.3 Our audits highlighted the importance of NZTA having more complete information about the condition of the state highway network (particularly for bridges, tunnels, and other structures) and consistently monitoring the performance of consultants and contractors. These are important for NZTA to know what the key issues affecting the condition of state highways are, and whether those issues are being adequately addressed by the maintenance work of its consultants and contractors.
- 5.4 NZTA has been working to improve the completeness of its information about the nature and condition of state highway bridges, tunnels, and other structures. It has also introduced measures to improve the consistency of its monitoring of consultants and contractors.
- 5.5 In our view, continuing to focus on, and refine over time, information about the condition of state highways and the performance of consultants and contractors will help NZTA to ensure that it plans and delivers high quality and cost-effective maintenance work.

Planning maintenance work to target the most important work for the long-term condition and use of state highways

- 5.6 Our audits highlighted the importance of having clearer links between long-term and day-to-day maintenance planning. They also highlighted the importance of NZTA regularly engaging with road users on what they expect from state highways. These are important for NZTA to know that its work is focused on the most essential work for both the long-term condition and use of state highways.
- 5.7 NZTA has made improvements. For example, NZTA has prepared an interim asset management plan for state highways and is planning to publish a revised plan by September 2011. The interim plan introduced a stronger connection between what the different levels of service for maintenance mean for road users (for example, keeping the roughness of a state highway's road surface below certain levels) and what they would expect to experience as a result (for example, how the levels of roughness could affect the smoothness or comfort of their ride). Our second audit highlighted that NZTA staff were very customer-focused – a strategic priority – in the areas we visited. They communicated closely and regularly with a range of road users and the transport industry on maintenance planning and operational matters.
- 5.8 In our view, continuing to review and improve its planning and engagement with road users will help NZTA to ensure that its work is focused on the most important aspects of maintenance for both the long-term condition of state highways and what road users need from it now and in the future.

Refining the ways maintenance work is delivered on state highways

- 5.9 Our audits highlighted the importance of NZTA reviewing some of its approaches to determining what type of maintenance work needs to be done. For example, some levels of service for maintenance – and the national balance of ways maintenance work is contracted across the state highway network – have been in place for many years without review. Our second audit also highlighted the importance of NZTA regularly reviewing maintenance work toward the end of contracts to assess how well quality and cost-effectiveness have been delivered, and to identify any wider lessons from the contract that could be applied to other work.

- 5.10 Reviews are important so that NZTA can learn lessons about what works best and refine its approach to delivering maintenance work on state highways on an ongoing basis. NZTA has been improving how maintenance work is being delivered through its asset management and procurement planning.
- 5.11 In our view, continuing to refine how maintenance work is delivered will help NZTA ensure that the right maintenance is being done in the best way to delivery high quality and cost-effective work.

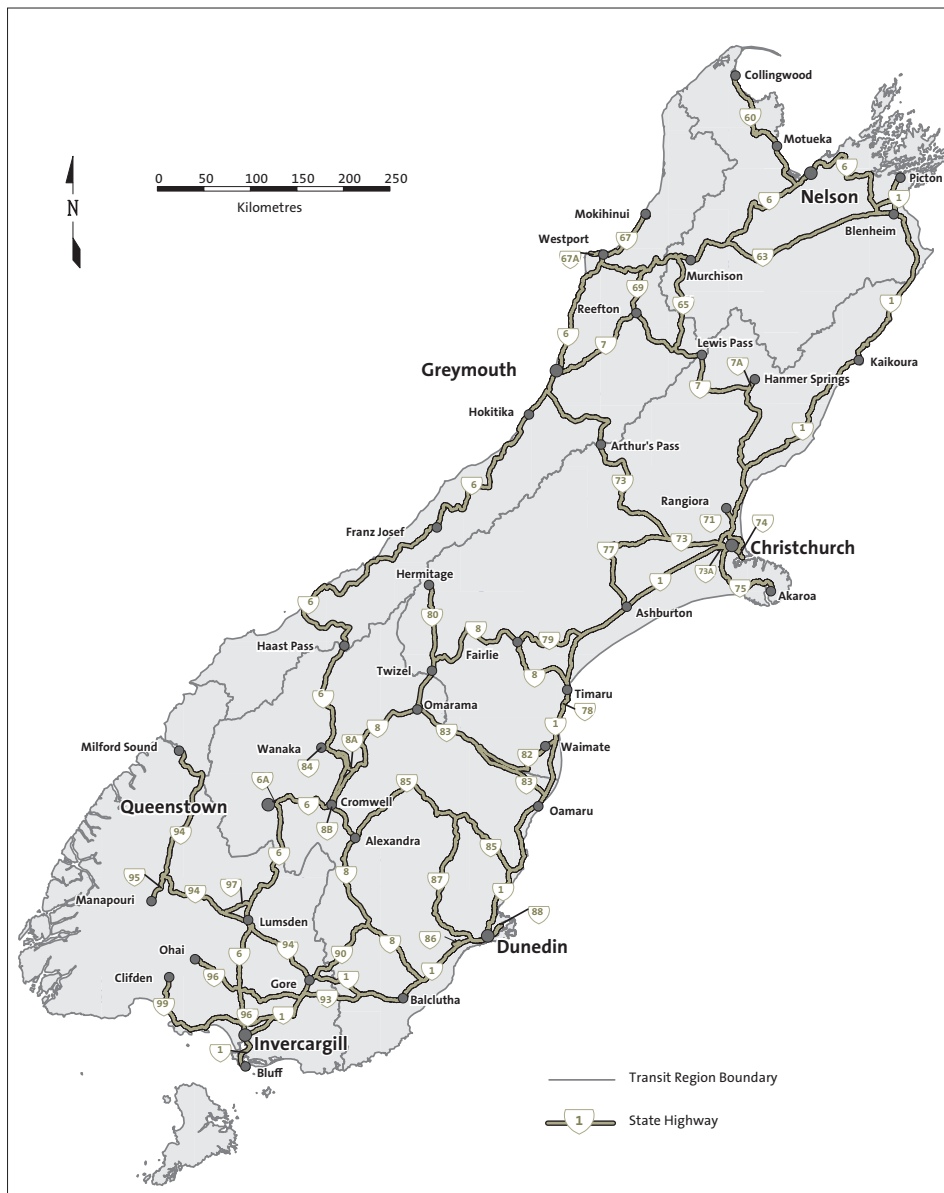
Appendix

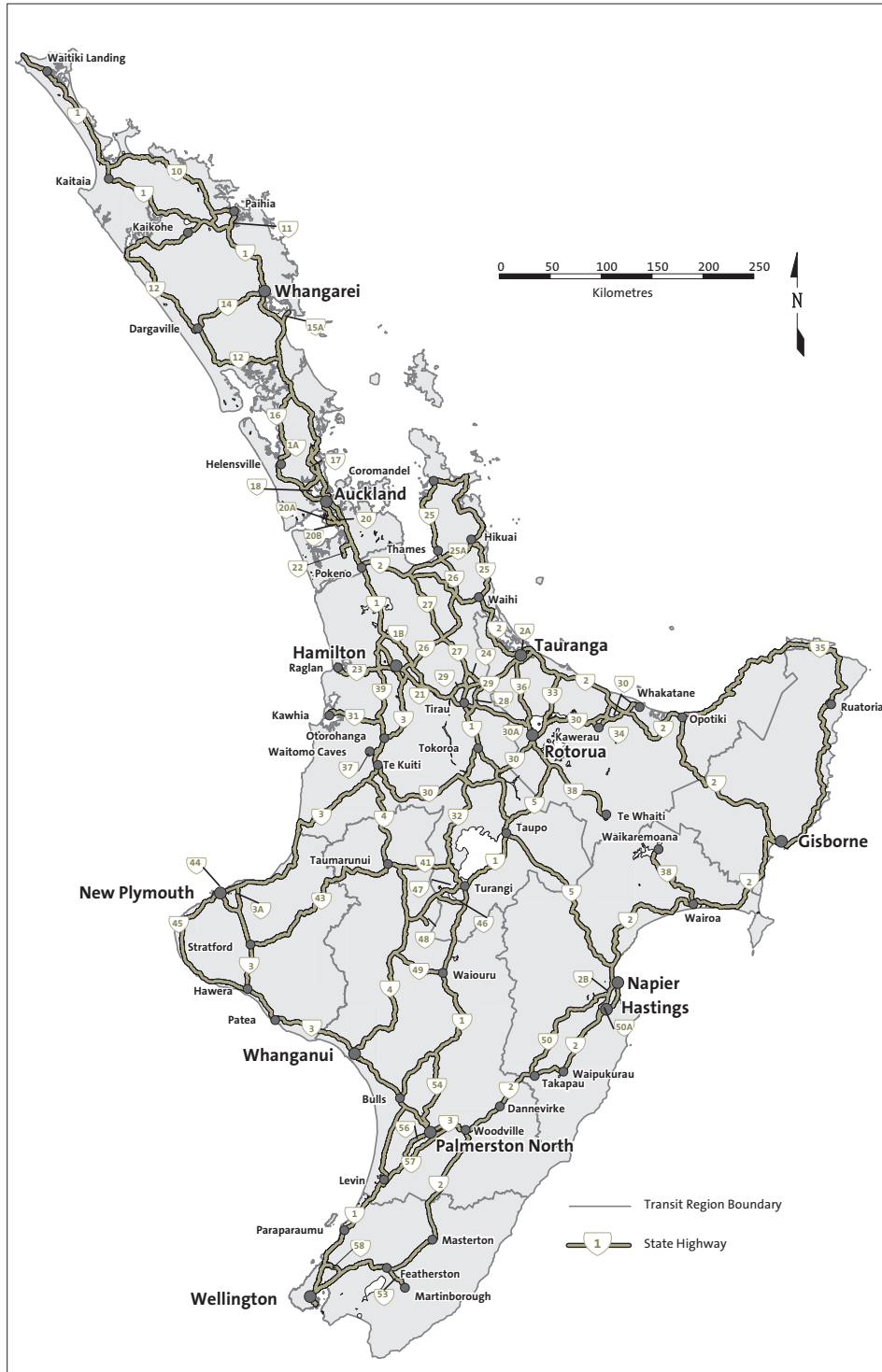
The state highway network

The state highway network (the network) covers the length of New Zealand. The rural part of the network is made up mainly of two-lane sealed highways, with some sections of multi-lane highway and motorway.

The urban network varies. It includes two-lane urban carriageways, multi-lane carriageways, and multi-lane motorway systems in Auckland, Wellington, Christchurch, and Dunedin. Figure 4 (continued overleaf) shows a map of the network.

Figure 4
Map of the state highway network





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Office of the Auditor-General
PO Box 3928, Wellington 6140

Telephone: (04) 917 1500
Facsimile: (04) 917 1549

Email: reports@oag.govt.nz
Website: www.oag.govt.nz