



Tasmanian
Audit Office



**Report of the Auditor-General
No. 11 of 2014-15**

Road management in local government

May 2015

THE ROLE OF THE AUDITOR-GENERAL

The Auditor-General's roles and responsibilities, and therefore of the Tasmanian Audit Office, are set out in the *Audit Act 2008* (Audit Act).

Our primary responsibility is to conduct financial or 'attest' audits of the annual financial reports of State entities. State entities are defined in the Interpretation section of the Audit Act. We also audit those elements of the Treasurer's Annual Financial Report reporting on financial transactions in the Public Account, the General Government Sector and the Total State Sector.

Audits of financial reports are designed to add credibility to assertions made by accountable authorities in preparing their financial reports, enhancing their value to end users.

Following financial audits, we issue a variety of reports to State entities and we report periodically to the Parliament.

We also conduct performance audits and compliance audits. Performance audits examine whether a State entity is carrying out its activities effectively and doing so economically and efficiently. Audits may cover all or part of a State entity's operations, or consider particular issues across a number of State entities.

Compliance audits are aimed at ensuring compliance by State entities with directives, regulations and appropriate internal control procedures. Audits focus on selected systems (including information technology systems), account balances or projects.

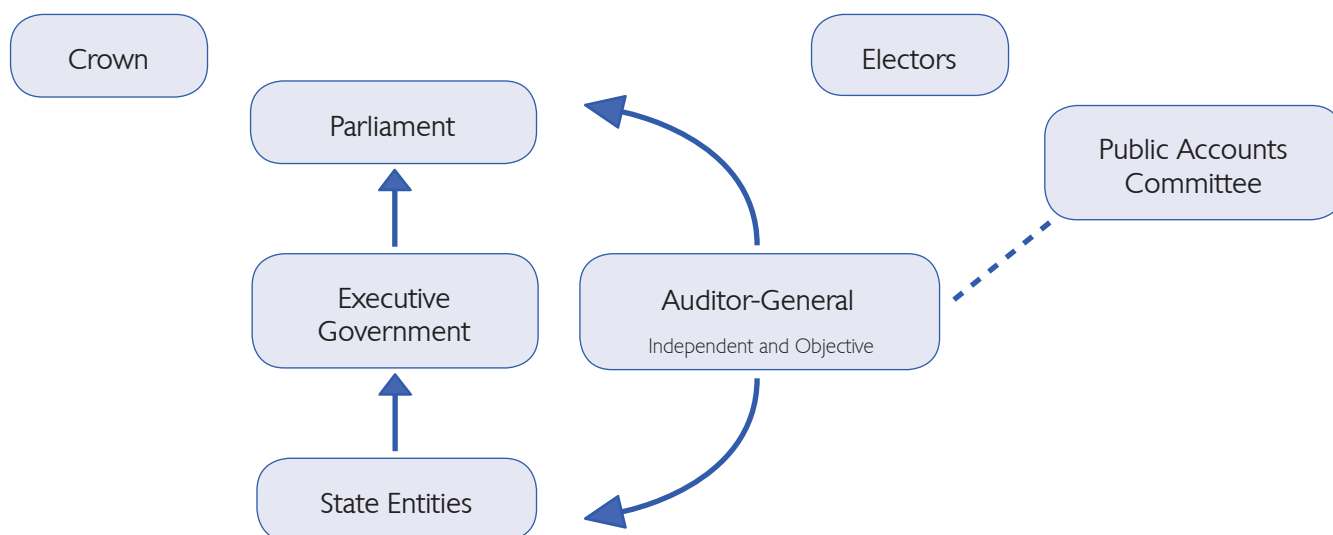
We can also carry out investigations but only relating to public money or to public property. In addition, the Auditor-General is now responsible for state service employer investigations.

Performance and compliance audits are reported separately and at different times of the year, whereas outcomes from financial statement audits are included in one of the regular volumes of the Auditor-General's reports to the Parliament normally tabled in May and November each year.

Where relevant, the Treasurer, a Minister or Ministers, other interested parties and accountable authorities are provided with opportunity to comment on any matters reported. Where they choose to do so, their responses, or summaries thereof, are detailed within the reports.

The Auditor-General's Relationship with the Parliament and State Entities

The Auditor-General's role as Parliament's auditor is unique.



2015

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2015

PARLIAMENT OF TASMANIA

**REPORT OF THE
AUDITOR-GENERAL
No. 11 of 2014–15**

Road management in local government

May 2015

Presented to both Houses of Parliament in accordance with the provisions of the Audit Act 2008

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26 May 2015

President
Legislative Council
HOBART

Speaker
House of Assembly
HOBART

Dear Mr President
Dear Madam Speaker

REPORT OF THE AUDITOR-GENERAL
No. 11 of 2014–15: Road management in local government

This report has been prepared consequent to examinations conducted under section 23 of the *Audit Act 2008*. The objective of the audit was to express an opinion on whether local governments were managing the construction and maintenance of Tasmanian council-owned roads effectively and efficiently.

Yours sincerely



H M Blake
AUDITOR-GENERAL

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Foreword

In recent years, the financial audit staff in my Office have played a very strong role in identifying improvements to financial reporting by, and assessments of financial sustainability of, our 29 local government councils. While this performance audit covered some similar areas, its objective differed by focussing on effectiveness and efficiency and, in this case, on the construction and maintenance of roads managed by four councils.

Measuring efficiency and effectiveness required consideration of various factors and systems which we analysed by posing a number of questions of the selected councils such as whether or not they had effective maintenance, renewal and upgrade programs, were roads in reasonable condition for their required use, were road network costs comparable with other local government councils and was the public kept informed about the state of council roads.

From an effectiveness perspective I was pleased to conclude that all four councils' roads were either in reasonable or good condition for their required use although, in some cases, improvements were needed on reporting on road conditions and of road networks, dealing in a timely manner with complaints raised by the public about roads and associated documentation.

To measure efficiency we devised a model that took into account three factors we thought likely to affect costs:

- percentage of road network that was sealed
- population per road kilometre (as a proxy for level of road traffic)
- road kilometres per square kilometre of area (as a measure of the dispersion of the road network).

It is pleasing to report that, based on this model; the four councils were reasonably efficient compared to other Tasmanian councils.

While this audit was of four councils, I urge the other 25 councils to consider the findings identified and recommendations made.

H M Blake
Auditor-General
26 May 2015

List of acronyms and abbreviations

CHC	Central Highlands Council
DCC	Devonport City Council
Km	Kilometre
LTAMP	Long-term asset management plan
NMC	Northern Midland Council
SGC	State Grants Commission
State Growth	Department of State Growth
WWC	Waratah-Wynyard Council

Executive summary

Executive summary

Background

Tasmania has approximately 24 000 km of roads, including state-owned roads, roads into national parks, reserves and forestry coups and council-owned roads. There are approximately 14 300 km of council-owned roads, with approximately half sealed and half unsealed.

Road infrastructure assets represented 69 per cent of total infrastructure held by local government and valued road infrastructure assets at \$3.243bn¹.

Councils generally use their staff to maintain roads and contractors to construct or renew roads, and acquire most new roads from property developers. Maintenance, renewals and upgrades are funded from councils' general revenue as well as grants from the Commonwealth Government.

In reports tabled since November 2012², we have argued for councils to:

- have long-term financial or asset management plans³
- adopt a consistent, systematic methodology to grade and report on the condition of their infrastructure⁴
- place greater focus on sustainability of assets⁵.

¹ Tasmanian Audit Office, *Report of the Auditor-General No.7 of 2014–15, Auditor-General's Report on the Financial Statements of State entities, Volume 4 Local Government Authorities and Tasmanian Water and Sewerage Corporation Pty Ltd 2013–14, Part I, Key Points, Joint Authorities, TasWater and Other Matters*, TAO, Hobart, 2015, p54.

² Tasmanian Audit Office, *Report of the Auditor-General No.4 of 2012-13, Volume 4 Part I, Local Government Authorities 2011–12*, TAO, Hobart, 2012, p46.

³ *Ibid.*

⁴ Tasmanian Audit Office, *Report of the Auditor-General's Report No. 5 of 2013–14: Infrastructure Financial Accounting in Local Government*, TAO, Hobart, 2013.

⁵ Tasmanian Audit Office, *Report of the Auditor-General No.7 of 2014–15, Auditor-General's Report on the Financial Statements of State entities, Volume 4 Local Government Authorities and Tasmanian Water and Sewerage Corporation Pty Ltd 2013–14, Part I, Key Points, Joint Authorities, TasWater and Other Matters*, TAO, Hobart, 2015, p45.

In February 2014, Ministerial Orders were gazetted requiring local government councils to develop long-term financial and asset management strategies and report sustainability indicators in the notes to annual financial statements⁶.

Audit objective

The objective of this audit was to express an opinion on whether local governments were managing the construction and maintenance of Tasmanian council-owned roads effectively and efficiently.

Audit scope

We examined the management of sealed and unsealed roads (excluding bridges) by the following local government councils:

- Central Highlands Council (CHC)
- Devonport City Council (DCC)
- Northern Midlands Council (NMC)
- Waratah-Wynyard Council (WWC).

Detailed audit conclusions

Central Highlands Council

CHC's roads were in reasonable condition for required use. CHC had achieved this largely by annual re-grading of the 85 per cent of its unsealed roads.

It was also likely that CHC was relatively efficient compared to other Tasmanian councils and was appropriately maintaining its road network.

On the other hand, CHC did not have effective processes to ensure that complaints were actioned in a timely manner or ensure the timely renewal and upgrade of ageing assets. In addition, CHC was providing little information to the public regarding average road condition, sustainability of the network or roads in poor condition.

⁶ Tasmanian Audit Office, *Report of the Auditor-General No.9 of 2013–14, Auditor-General's Report on the Financial Statements of State entities, Volume 5 State entities 30 June and 31 December 2013, matters relating to 2012–13 audits and key performance indicators*, TAO, Hobart, 2014, p33.

Devonport City Council

Based primarily on independent condition assessments, DCC roads were in a reasonable state. DCC had effective processes to identify and fix maintenance issues and to identify and program required renewals and upgrades. It was also likely that DCC was reasonably efficient compared to other Tasmanian councils and was performing an appropriate level of maintenance.

On the other hand:

- there were some indications of a need to review the level of renewal and upgrade to sustain the quality of the road network in the future
- DCC had not kept the public adequately informed about the state of its road network.

Northern Midlands Council

Based primarily on independent condition assessments, NMC roads were in good condition and had been well managed over at least the past decade. In particular, there had been an improvement since 2009 in the condition of its unsealed roads, which represented 42 per cent of its road network.

NMC's maintenance and renewal programs were effective and its road works were relatively efficient.

On the other hand, there had not been adequate reporting of the overall quality and sustainability of its roads.

Waratah-Wynyard Council

Based primarily on independent condition assessments, WWC roads were in a satisfactory condition. WWC had effective processes to identify and fix maintenance issues and to identify and program required renewals and upgrades.

It was also likely that WWC was relatively efficient compared to other Tasmanian councils and was performing an appropriate level of maintenance, upgrade and renewal of its road network.

On the other hand:

- there were some indications of a need to review the level of renewals and upgrades in order to sustain the quality of its road network into the future
- documentation of the complaints, inspection and renewal programs was deficient

- WWC had not kept the public adequately informed about the condition and sustainability of its road network.

Recommendations made

The Report contains the following recommendations:

Rec	Section	We recommend that ...
1	1.2	... CHC re-establishes procedures to ensure the complaints system is an effective component of the maintenance program.
2	1.3	... CHC include dates for the end of remaining useful life of each asset in the asset register.
3	1.3	... CHC review condition assessments in the asset register to ensure they reflect reality.
4	1.7	... CHC provide indicators of road condition and commentary on sustainability ratios in its annual report.
5	1.7	... CHC provide regularly-updated information on its website about hazards and roads in poor condition.
6	2.2	... DCC monitor and document progress of its roads inspection program.
7	2.3	... DCC update and revise its 2011 asset management plan in order to improve long-term planning.
8	2.4	... DCC review the expenditure level on renewal and upgrade of its roads. That review should also consider the estimated lives of roads, because of their impact on sustainability ratios.
9	2.7	... DCC provide indicators of road condition and commentary on sustainability ratios in its annual report.
10	3.7	... NMC provide indicators of road condition and commentary on sustainability ratios in its annual report.
11	4.2	... WWC improve the system used to record complaints and action requests and investigate ways to reduce resolution times.
12	4.2	... WWC monitor and document progress of its inspection program.

Rec	Section	We recommend that ...
13	4.3	... WWC document decisions to defer capital works and update subsequent renewal dates in the asset register.
14	4.4	... WWC review the level of renewals. That review should also consider the estimated lives of roads, because of their impact on sustainability ratios.
15	4.7	... WWC provide indicators of road condition and commentary on sustainability ratios in its annual report.

Audit Act 2008 section 30 — Submissions and comments received

Audit Act 2008 section 30 — Submissions and comments received

Introduction

In accordance with section 30(2) of the *Audit Act 2008*, a copy of this Report was provided to the state entities indicated in the Introduction to this Report.

A summary of findings, with a request for submissions or comments, was also provided to the Minister for Planning and Local Government, who is also the Treasurer.

Submissions and comments that we receive are not subject to the audit nor the evidentiary standards required in reaching an audit conclusion. Responsibility for the accuracy, fairness and balance of these comments rests solely with those who provided the response. However, views were considered in reaching review conclusions.

Section 30(3) of the Act requires that this Report include any submissions or comments made under section 30(2) or a fair summary of them. Submissions received are included in full below.

Central Highlands Council

Thank you for your review into Central Highlands Council's management of roads.

The audit was conducted in a very professional, organised and efficient manner. The Auditors sought opinions, answers and feedback from all of our relevant staff. The ability to participate in the review of the draft reports was appreciated.

In response to the recommendations contained within the report, we would like to comment as under:

Recommendation 1.

The Public Request Register will be re-launched in July 2015 and all public requests and complaints will be entered into the Register. These will be monitored to ensure that they are signed off as reviewed and actioned as applicable.

Recommendation 2.

The Roads Asset Register will be reviewed and the remaining useful life of each asset will be recorded.

Recommendation 3.

The recent review of road conditions by Moloney's will be used as the catalyst to record actual conditions of roads within our municipality.

Recommendation 4.

The recent Moloney's review will be used to record indicators of road conditions and commentary on sustainability ratios in future annual reports.

Recommendation 5.

We will consider putting some general information about roads on our website. We have insufficient resources to be able to monitor and update the website on a daily basis but we will add links to other sites which display road closures and adverse conditions, such as Tasmania Police, DIER, SES, Tas Fire, etc.

Where advanced notice is available, planned road closures will continue to be advertised in the Mercury Newspaper and we will include the details on our website where possible.

Lyn Eyles
General Manager

Devonport City Council

Thank you for a draft copy of the report to Parliament regarding the performance audit on Local Government Road Management. The following management responses are provided in reply to your recommendations:

"Section 2.2 Recommendation 6: We recommend that DCC monitor and document progress of its roads inspection program."

The recommendation is noted and Management intend to implement a system to report on the progress of scheduled inspections.

"Section 2.3 Recommendation 7: We recommend DCC update and revise its 2011 asset management plan in order to improve long-term planning."

Council is planning to review its transport asset management plan in 2016 and this action will be recorded in Council's 2015/16 Annual Plan document.

“Section 2.4 Recommendation 8: We recommend DCC review the expenditure level on renewal and upgrade of its roads. That review should also consider the estimated lives of roads, because of their impact on sustainability ratios.”

The recommendation is noted and a review of the estimated lives of road assets is planned during 2016.

“Section 2.5 Conclusion: It was likely that DCC was reasonably efficient and was performing a satisfactory level of maintenance and capital expenditure of its road network.”

Management notes the conclusion, and while it is not unfavorable is of the view that the methodology used is not an accurate measure of efficiency, due to the inclusion of capital expenditure. If Council were to increase renewal expenditure as suggested in recommendation 8, this measure of efficiency would be negatively impacted, regardless of any changes in how efficiently Council undertakes its road services.

“Section 2.7 Recommendation 9: We recommend that DCC provide indicators of road condition and commentary on sustainability ratios in its annual report.”

Management agree the inclusion of indicators and additional commentary on ratios would add value to Council’s Annual Report and are looking at including this information where possible, as Council asset data matures.

Paul West
General Manager

Northern Midlands Council

Northern Midlands Council was pleased to participate in this road audit process. The findings from the audit are noted, and Council will take on board the recommendation to improve community reporting on its road asset sustainability and the very good results of indicators on its road condition.

Maree Bricknell
Acting General Manager

Waratah-Wynyard Council

Waratah-Wynyard Council welcomes the findings of the Tasmanian Audit Office's Local Roads Performance Audit. Of all the services provided by Local Government, local roads is the major expense. Waratah-Wynyard Council congratulates the Tasmanian Audit Office for taking an interest in this area of service provision, particularly in the current fiscal environment and the significant progress that is currently underway with Strategic Asset Management Planning and Long Term Financial Planning.

All the conclusions drawn as a result of the audit are consistent with our understanding of the maturity status of our internal strategic asset management, and are identified in our forward improvement program as issues to be addressed.

Michael Stretton
General Manager

Introduction

Introduction

Background

Tasmania has approximately 24 000 km of roads, including state-owned roads, roads into national parks, reserves and forestry coups and council-owned roads. There are approximately 14 300 km of council-owned roads, with approximately half sealed and half unsealed.

Road infrastructure assets represented 69 per cent of total infrastructure held by local government and valued road infrastructure assets at \$3.243bn⁷.

Councils generally use their staff to maintain roads and contractors to construct or renew roads, and acquire most new roads from property developers. Maintenance, renewals and upgrades were funded from councils' general revenue as well as grants from the Commonwealth government.

In reports tabled since November 2012⁸, we have argued for councils to:

- have long-term financial or asset management plans⁹
- adopt a consistent, systematic methodology to grade and report on the condition of their infrastructure¹⁰
- place greater focus on sustainability of assets¹¹.

⁷ Tasmanian Audit Office, *Report of the Auditor-General No.7 of 2014–15, Auditor-General's Report on the Financial Statements of State entities, Volume 4 Local Government Authorities and Tasmanian Water and Sewerage Corporation Pty Ltd 2013–14, Part I, Key Points, Joint Authorities, TasWater and Other Matters*, TAO, Hobart, 2015, p54.

⁸ Tasmanian Audit Office, *Report of the Auditor-General No.4 of 2012-13, Volume 4 Part I, Local Government Authorities 2011–12*, TAO, Hobart, 2012, p46.

⁹ *Ibid.*

¹⁰ Tasmanian Audit Office, *Report of the Auditor-General's Report No. 5 of 2013–14: Infrastructure Financial Accounting in Local Government*, TAO, Hobart, 2013.

¹¹ Tasmanian Audit Office, *Report of the Auditor-General No.7 of 2014–15, Auditor-General's Report on the Financial Statements of State entities, Volume 4 Local Government Authorities and Tasmanian Water and Sewerage Corporation Pty Ltd 2013–14, Part I, Key Points, Joint Authorities, TasWater and Other Matters*, TAO, Hobart, 2015, p45.

In February 2014, Ministerial Orders were gazetted requiring local government councils to develop long-term financial and asset management strategies and report sustainability indicators in the notes to annual financial statements¹².

Audit objective

The objective of this audit was to express an opinion on whether local governments were managing the construction and maintenance of Tasmanian council-owned roads effectively and efficiently.

Audit criteria

Audit criteria included:

1. Was there an effective annual maintenance program?
2. Was there an effective renewal and upgrade program?
3. Were roads in reasonable condition for their required use?
4. Were road network costs comparable with other local government councils?
5. Were councils taking up available funding opportunities?
6. Was the public kept informed about the state of council roads?

Audit scope

We examined the management of sealed and unsealed roads (excluding bridges) by the following local government councils:

- Central Highlands Council (CHC)
- Devonport City Council (DCC)
- Northern Midlands Council (NMC)
- Waratah-Wynyard Council (WWC).

Audit approach

The audit involved reviewing documents, interviewing staff and analysing data.

¹² Tasmanian Audit Office, *Report of the Auditor-General No.9 of 2013–14, Auditor-General's Report on the Financial Statements of State entities, Volume 5 State entities 30 June and 31 December 2013, matters relating to 2012–13 audits and key performance indicators*, TAO, Hobart, 2014, p33..

For the purposes of this audit, performance auditors compared visual observations with councils own road condition assessments. We did not engage engineers specifically for this audit.

We also relied on asset sustainability ratios¹³, as follows:

Indicator	Formula	Benchmark	Description
Asset sustainability ratio	Renewal and upgrade expenditure on existing assets divided by depreciation on existing assets	At least 100%	Comparison of the rate of spending on existing infrastructure (through renewing, restoring and replacing existing assets) with depreciation. Ratios higher than 100% indicate spending on existing assets is greater than the depreciation rate.
Asset renewal funding ratio	Future (planned) asset replacement expenditure divided by future asset replacement expenditure (actual) required	At least 90%	Measures capacity to fund asset replacement requirements. Inability to fund future requirements will affect revenue, expenses, debt, or service levels.
Asset consumption ratio — roads	Depreciated replacement cost divided by current replacement cost	> 60% ¹⁴	Shows the depreciated replacement cost of an entity's depreciable assets relative to their 'as new' (replacement) value. Represents the average proportion of new condition left in assets.

¹³ Tasmanian Audit Office, *Report of the Auditor-General No.7 of 2014–15, Auditor-General's Report on the Financial Statements of State entities, Volume 4 Local Government Authorities and Tasmanian Water and Sewerage Corporation Pty Ltd 2013–14, Part I: Key Points, Joint Authorities, Tas Water and Other Matters*, TAO, Hobart, 2015, pp. 45–48.

Internal audit

The *Local Government (Miscellaneous Amendments) Act 2013* requires councils to maintain an audit panel. All of the four selected councils had appointed or were in process of appointing an audit panel.

Timing

Planning for this audit began in August 2014. Fieldwork was completed in February 2015 and the report was finalised in May 2015.

Resources

The audit plan recommended 1100 hours and a budget, excluding production costs, of \$163 131. Total hours were 1211 and actual costs, excluding production, were \$190 905, which was in excess of our budget.

Why we did this audit

An audit of road management was first included in our 2007–08 annual plan. However, an audit of road management in local government was only decided at the commencement of this audit. The audit was undertaken because local government manages much of Tasmania's road network.

¹⁴ *Ibid.* Report No. 7 of 2014–15 further explains that asset consumption ratio below 40 per cent is regarded as high risk and below 60 per cent is regarded as moderate risk.

1 Central Highlands Council

1 Central Highlands Council

1.1 *Background*

Central Highlands is situated in the middle of Tasmania. With an area of 8010 km², the municipality has just 2216 residents. Whilst Central Highlands has 752 kms of roads, only 114 km are sealed. It is classified as a small council.

1.2 *Was there an effective annual maintenance program?*

Our expectation was that an effective maintenance program would involve:

- a complaints system (to identify problems)
- regular inspection (to identify problems)
- register of work required (to list identified problems and ensure all receive attention within a reasonable timeframe)
- sufficient funding to provide a timely response to all maintenance issues.

However, we discovered that CHC had been able to achieve effective maintenance over most of its network by annual grading of all of its gravel roads. CHC argued that ‘the most effective way to identify work required on such weather-affected roads was to run the grader over them’. We confirmed that the annual grading program had occurred and were thus satisfied that problems with gravel roads had been consistently identified and corrected within 12 months.

Notwithstanding the annual grading program, our view was that there was still a need for systemised maintenance processes; at least to deal with non-gravel roads and serious problems that could not safely be left until the road is next graded.

We noted that a complaints register (Public Request Register) existed, although some complaints had not been signed off as actioned and CHC acknowledged that the complaints system had ‘faltered’.

With regard to inspections, we confirmed that all roads had received inspection and/or maintenance in recent years.

We found that maintenance budgets in recent years were substantially underspent (33 per cent in 2012–13 and 19 per cent in 2013–14). Notwithstanding the underspend, annual reports showed all but three per cent of CHC's road network had received routine maintenance over the review period. In

addition, internal and external condition assessments had found the road network in fair overall condition (refer Section 1.4).

Section 1.2 conclusion

CHC had effective processes to maintain most of its road network most of the time, but the complaints system needed improvement.

Recommendation 1

We recommend that CHC re-establishes procedures to ensure the complaints system is an effective component of the maintenance program.

1.3 *Was there an effective renewal and upgrade program?*

In this Section, we discuss renewals and upgrades, which is the more substantial work needed to deal with the long-term deterioration of road assets. Unanticipated degradation to roads can occur at any time, requiring an immediate renewal or upgrade. However to minimise long-term costs, renewals and upgrades should be systematically programmed over time. A key component of systematic renewal is realistic assessment of the useful lives of all roads, supported by physical inspections.

We assessed the effectiveness of the renewal and upgrade processes by examining, whether:

- long-term asset management plans and supporting asset registers identified assets for renewal or upgrade, based on useful lives and condition assessments
- long-term asset management plans informed annual plans of work, and/or works schedules
- there was a systematic process to ensure roads were renewed over time to minimise long-term costs
- adequate funding plans existed to support planned work.

We found that CHC had a long-term asset management plan, which listed road locations for future capital work. We were also able to align the work listed in the asset management plan with capital works listed in annual plans over the three years, 2011–14.

The asset management plan was largely based on condition assessments for each road in CHC's asset register. Some minor inconsistencies were found and CHC acknowledged the need to

review the asset records. As part of that improvement process CHC had engaged contractors, who had performed a survey of road conditions in November 2014. The survey was to be used to update the asset register.

We also noted that although CHC's asset register listed the remaining useful life of assets (e.g. 20 years), it did not indicate the date of that assessment or when the expected life would elapse. As a consequence, the asset register was of little use as a basis for a systematic process to ensure timely renewal of roads in order to minimise long-term costs.

To some extent, this was less of a concern at CHC since 85 per cent of roads were gravel, which have very long lives when regularly graded. Nonetheless, we found no evidence of a process to ensure timely renewal of roads before their projected end of life.

Renewal and upgrade funding

We reviewed the asset renewal ratio for roads as a measure of the extent to which CHC had allocated sufficient funds to perform scheduled road works. Ratios had only been calculated for 2013 and 2014 but in those years the ratio had averaged 141 per cent, which exceeded the benchmark of at least 90 per cent.

We also confirmed that capital works plans over three years had been achieved and that funding had been more than sufficient to perform required maintenance.

Section 1.3 conclusion

While CHC's current processes and records were sufficient to respond to identified service deficiencies, they do not provide for timely renewal and upgrade of ageing assets.

Recommendation 2

We recommend that CHC include dates for the end of remaining useful life of each asset in the asset register.

Recommendation 3

We recommend that CHC review condition assessments in the asset register to ensure they reflect reality.

1.4 *Were roads in reasonable condition for their required use?*

We examined indicators to see whether the road network was in a reasonable condition and considered:

- internal and external condition assessments

- customer satisfaction surveys and complaints
- outstanding maintenance tasks
- remaining useful lives of roads.

Internal and external condition assessments

Table 1 shows how CHC measured the condition of roads in its asset register.

Table 1: Internal assessment of surface condition

Condition Score	Level of remaining service potential	Unsealed roads	Sealed roads
0	Very high — roads in new condition	3	20
1	High	7	24
2	Adequate	103	108
3	Adequate, but action needed in short to medium term	122	21
4	Barely adequate — action needed in short term	2	12
5	Unacceptable — should be closed or renewed.	0	0
6	End of life	0	0
Average surface condition		2.26	1.90

Source: CHC Road Asset Register 30 June 2014

Table 1 shows that the internal assessment of the average surface condition of CHC roads was 2.26 for unsealed roads and 1.9 for sealed roads, which indicated that roads were generally adequate. In addition, no roads were considered to be unacceptable or at the end of their useful lives.

Some senior CHC officers advised they had little confidence in the data having identified inconsistencies between the accounting records and physical condition of some roads. In particular, inspections had shown some roads were in good condition despite being listed as requiring renewal.

CHC engaged contractors to undertake a road condition survey before the end of 2014, in order to update information in their asset management systems. That survey gave the road network an average score of 3 on a scale of 0 (excellent) to 10 (terrible).

That rating meant that the contractors regarded the road network as being in reasonable condition and provided support — at least, on average — for the internal ratings recorded in the asset management system.

Customer satisfaction

We found CHC had not conducted any customer satisfaction surveys in relation to roads. We also examined the complaints system and noted that the number of complaints and public requests relating to roads had declined from six items in 2012 to one item in 2014, which suggested people were generally satisfied with the road network.

Outstanding maintenance tasks

As noted in Section 1.2, we confirmed that all roads had received inspection and/or maintenance in recent years.

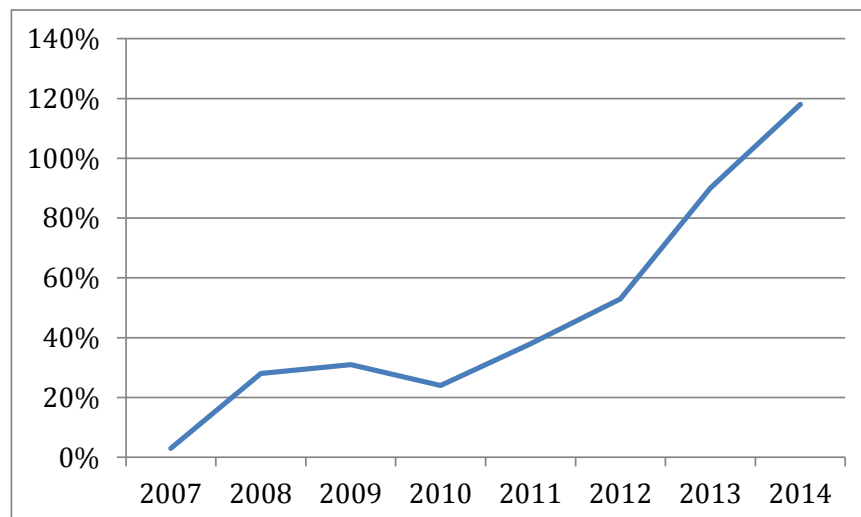
Remaining useful lives of roads

The asset consumption ratio (depreciated value divided by full replacement cost) measures the remaining useful life of assets. Our (widely accepted) benchmark is that the ratio should be kept above 60 per cent. Also relevant is the asset sustainability ratio which measures the extent to which renewal and upgrade expenditure on existing assets is keeping up with depreciation. A ratio below 100 per cent in any year will lead to a fall in the remaining useful life of assets.

We found that the asset consumption ratio had averaged 74 per cent over eight years; more than enough to meet our benchmark of 60 per cent, which indicated the remaining useful life of CHC assets was adequate.

The eight-year average of the asset sustainability ratio¹⁵ was 48 per cent, which was below our benchmark of 100 per cent. This indicated spending on renewal and upgrade of assets was less than the depreciation rate, which could lead to degradation of assets over time. We also reviewed the trend in the ratio over time to determine whether CHC was increasing its expenditure on roads relative to depreciation, as shown in Figure 1.

¹⁵ Tasmanian Audit Office, *Report of the Auditor-General No.7 of 2014–15, Auditor-General's Report on the Financial Statements of State entities, Volume 4 Local Government Authorities and Tasmanian Water and Sewerage Corporation Pty Ltd 2013–14, Part I: Key Points, Joint Authorities, Tas Water and Other Matters*, TAO, Hobart, 2015, p52.

Figure 1: CHC Asset sustainability ratio 2007–14

Source: Tasmanian Audit Office

Figure 1 shows that there had been a steady increase in the ratio and that the ratio was well above the benchmark in 2014.

Section 1.4 conclusion

CHC assets were in reasonable condition for their required use.

1.5 *Were road network costs comparable with other local government councils?*

A simple comparison of average cost per kilometre across municipalities was considered inappropriate since it fails to take into account the many factors that impact on average costs that are unrelated to councils' efficiency.

We devised a model that took into account three factors we thought likely to affect costs. These being:

- percentage of road network that was sealed
- population per road kilometre (as a proxy for level of road traffic)
- road kilometres per square kilometre of area (as a measure of the dispersion of the road network).

We performed regression analysis using those factors to attempt to explain the variations in the cost per kilometre (maintenance and capital from 2009–10 to 2013–14) across the 29 councils. The three factors listed above, explained 77 per cent of the variation and allowed us to derive an estimation of what the average 'should' be for each council. In doing so, we

recognised that many additional factors were not represented in our model such as terrain, geology, weather and an unusually high proportion of capital work in our sample period.

In addition, some of the 29 councils were unable to provide data that was net of non-road costs such as footpaths, tree maintenance and signage.

Nonetheless, the reasonably high level of variation explained by our model suggests that costs substantially above those predicted by our model were a possible indication of inefficiency or excessive maintenance and capital expenditure.

In the case of CHC, we noted that the five-year average of \$15 012 per kilometre was only 58 per cent of our estimated cost.

Section 1.5 conclusion

It was likely that CHC was relatively efficient and was performing a satisfactory level of maintenance and capital expenditure of its road network.

1.6 *Were councils taking up available funding opportunities?*

Aside from road safety programs, which were outside the scope of this audit, councils had funding opportunities for road works, in two forms:

- Financial Assistance Grants distributed by the State Grants Commission
- Commonwealth Government Roads to Recovery Grants.

Roads to Recovery funding was allocated by the Commonwealth Government in five-year schedules under the *Nation Building Program (National Land Transport) Act 2009*.

The Australian Government had set total Financial Assistance Grants for Tasmanian roads to \$37.3m a year for the next three years. Every three years, the State Grants Commission reviewed the methodology and cost adjusters it used to allocate the grants to councils.

We found that CHC had received expected allocations of both forms of funding.

Section 1.6 conclusion

CHC had taken up available funding opportunities.

1.7 *Was the public kept informed about the state of council roads?*

Provision of information about council roads can provide information about risky road conditions, assist the public to form an opinion about the performance of their council and be an incentive for better performance.

We examined whether there was effective public reporting of:

- the quality and sustainability of the road network
- hazards and roads in poor condition
- scheduled work.

For this criterion, we focused on information provided on CHC's public website, and linked documents, including annual reports, annual plans and council minutes.

Quality and sustainability of the road network

As discussed in Sections 1.3 and 1.4, CHC maintained internal condition assessments for each road and had engaged a consultant to conduct a road condition survey in November 2014. However, no indicators of road condition were provided on the website or linked documents.

Asset sustainability ratios discussed in Section 1.4 were included in financial statements appended to the annual report. However, no other commentary regarding the sustainability of road assets was found.

Hazards and roads in poor condition

In Section 1.4, we noted that the CHC asset register listed 12 road segments for which the road surface was categorised internally as 'barely adequate — action needed in short-term'.

We found no reporting on the website of hazards or indications of any roads in poor condition. The website did include a section for public notices, which could be used to advise the public of problems with roads.

Our view was that as gravel roads were more likely to quickly deteriorate, CHC had a higher need to keep the public informed.

Scheduled work

The 2012–13 annual report provided high-level descriptions of regular activities such as ‘regular inspections of council roads’. In addition, the report included a small number of specific works, such as:

Major capital roadwork during 2012/2013 included reconstruction and resealing works on Ellendale Road, Hollow Tree Road, Arthurs Lake and parts of Hamilton and Bothwell township roads.

Works schedules were listed in annual plans, and linked council meeting minutes recorded discussion of works scheduled for the next month.

Section 1.7 conclusion

We were not satisfied there was adequate reporting of overall quality, sustainability or roads in poor condition.

Recommendation 4

We recommend that CHC provide indicators of road condition and commentary on sustainability ratios in its annual report.

Recommendation 5

We recommend that CHC provide regularly-updated information on its website about hazards and roads in poor condition.

1.8 *Conclusion*

CHC roads were in reasonable condition for required use. CHC had achieved this largely by annual re-grading of the 85 per cent of its unsealed roads.

It was also likely that CHC was relatively efficient compared to other Tasmanian councils and was appropriately maintaining its road network.

On the other hand, CHC did not have effective processes to ensure that complaints were actioned in a timely manner or ensure the timely renewal and upgrade of ageing assets. In addition, CHC was providing little information to the public regarding average road condition, sustainability of the network or roads in poor condition.

2 Devonport City Council

2 Devonport City Council

2.1 *Background*

Devonport is located at the mouth of the Mersey River on Tasmania's North West Coast. With an area of 114 km², the municipality has 26 000 residents. All but 12 kms of Devonport's 264 kms of roads are sealed. It is classified as medium-sized.

2.2 *Was there an effective annual maintenance program?*

Our expectation was that identification of roads in need of maintenance would involve:

- a complaints system (to identify problems)
- regular inspection (to identify problems)
- register of work required (to list identified problems and ensure all receive attention within a reasonable timeframe)
- sufficient funding to provide a timely response to all maintenance issues.

Complaints system

Complaints were managed through DCC's action request system. We examined requests received over a 12-month period and found they had been actioned appropriately. All but one request had been dealt with.

Inspection schedules

DCC had an inspection schedule outlined in its *Roads and Stormwater — Service Level 2014/15*. Hand held devices were used to upload the results of inspections including hazard ratings and photographs.

We were provided with one month's inspection data from 2013, which included details of faults noted and action requests. However, we were unable to obtain inspection data to confirm that inspection schedules had been consistently carried out over recent years.

In order to establish that a substantial inspection program was being performed we examined six months of minutes taken from the 2013–14 roads and stormwater monthly meetings and confirmed that inspections of rural and urban roads were occurring regularly.

Register of required work

DCC maintained an action request system. We found 387 requests listed over a 12-month period and confirmed that all but one had been resolved.

Maintenance funding

As noted above, we were satisfied that all maintenance requirements were being met, through the action request system. We also noted that:

- DCC had increased maintenance spending over the last five years
- DCC officers were satisfied with the level of funding allocated to maintenance
- a 2013 survey of Devonport residents found they were generally happy with the state of their roads.

Section 2.2 conclusion

Despite some areas where documentation could be improved, we were satisfied that DCC had a reasonable process to identify roads in need of maintenance and ensure that work was scheduled.

Recommendation 6

We recommend that DCC monitor and document progress of its roads inspection program.

2.3 *Was there an effective renewal and upgrade program?*

In this Section, we discuss renewals and upgrades, which is the more substantial work needed to deal with the long-term deterioration of road assets. Unanticipated degradation to roads can occur at any time, requiring an immediate renewal or upgrade. However, to minimise long-term costs, renewals and upgrades should be systematically programmed over time. A key component of systematic renewal is realistic assessment of the useful lives of all roads, supported by physical inspections.

We assessed the effectiveness of the renewal and upgrade processes by examining, whether:

- long-term asset management plans and supporting asset registers identified assets for renewal or upgrade, based on useful lives and condition assessments

- long-term asset management plans informed annual plans of work, and/or works schedules
- there was a systematic process to ensure roads were renewed over time to minimise long-term costs
- adequate funding plans existed to support planned work.

Assets identified for renewal or upgrade

We found that DCC had a long-term asset management plan (LTAMP) similar to those used by other councils. The plan was supported by the asset register, which recorded the expected lives and expiry dates for roads.

Annual plans of work

We were unable to align information in the LTAMP, which was dated November 2011, with works listed in either the annual plan or the five-year work program. However, we verified that DCC used reports drawn from the asset register to schedule candidate projects for renewals and upgrades. This process, informed the DCC work schedules and annual work plans.

We accepted that annual plans and work schedules were based on the asset register and at least partially aligned with the LTAMP. However, we considered there was a need to update and revise the 2011 LTAMP in order to improve long-term planning.

Renewal and upgrade funding

We reviewed the asset renewal ratio for roads as a measure of the extent to which DCC had allocated sufficient funds to perform scheduled road works. We found that DCC's average renewal funding ratio from 2011 to 2014 was 101 per cent, which exceeded the benchmark of at least 90 per cent.

We also examined DCCs short-term annual plans together with its longer-term planning documents and verified that the cost of renewals and upgrades for scheduled work was factored into financial budgets.

Finally, we compared three years of planned capital road works with recorded expenditure in the annual reports and found that 89 per cent of planned capital road works had been completed, with other works, either in progress or intentionally deferred.

Section 2.3 conclusion

DCC had an effective renewal and upgrade program.

Recommendation 7

We recommend that DCC update and revise its 2011 asset management plan in order to improve long-term planning.

2.4 *Were roads in reasonable condition for their required use?*

We examined indicators of whether the road network was in a reasonable condition and considered:

- internal and external condition assessments
- customer satisfaction surveys and complaints
- outstanding maintenance tasks
- remaining useful lives of roads.

Internal and external condition assessments

In 2014, DCC engaged contractors to conduct a road condition survey, which included evaluation of the pavement condition, between 1 (new condition) and 5 (requires renewal or replacement).

We noted that the average condition was 2.2, which indicated the road network was in reasonable condition. We also noted that 40 (15 per cent) road segments were rated as requiring renewal or upgrade. Of those, 13 were scheduled for work in the 2014–15 financial year.

Customer satisfaction

We examined community research conducted on behalf of DCC in 2013, and found that residents were moderately satisfied with local roads.

Outstanding maintenance tasks.

DCC records maintenance requirements in its action request system. We found 387 records over a 12-month period and confirmed that all had resolutions recorded.

We also noted that DCC had increased maintenance spending over the last five years and that DCC officers were satisfied that sufficient funding was allocated to maintenance.

Remaining useful lives of roads

The asset consumption ratio (depreciated value divided by full replacement cost) measures the remaining useful life of assets. Our (widely accepted) benchmark is that the ratio should be kept above 60 per cent. Also relevant is the asset sustainability ratio which measures the extent to which renewal and upgrade expenditure on existing assets is keeping up with depreciation. A ratio below 100 per cent in any year will lead to a fall in the remaining useful life of assets.

We found that DCC's asset consumption ratio for roads averaged 45 per cent between 2007 and 2014, which we categorised as moderate risk. The average asset sustainability ratio in that period was also below benchmark at 85.6 per cent and below benchmark at 81 per cent in 2014. In our opinion, the remaining useful life of roads at DCC was too low and had been in decline.

Section 2.4 conclusion

On average, DCC roads were in a reasonable state, but there was evidence in the asset sustainability ratios that the level of renewal and upgrade may need to be increased in the future.

Recommendation 8

We recommend that DCC review the expenditure level on renewal and upgrade of its roads. That review should also consider the estimated lives of roads, because of their impact on sustainability ratios.

2.5 *Were road network costs comparable with other local government councils?*

As discussed in Section 1.5, we devised a simple model that took into account three factors we thought likely to affect costs.

These being:

- percentage of road network that was sealed
- population per road kilometre (as a proxy for level of road traffic)
- road kilometres per square kilometre of area (as a measure of the dispersion of the road network).

We performed regression analysis using those factors to attempt to explain the variations in the cost per kilometre (maintenance and capital from 2009–10 to 2013–14) across the 29 councils. The three factors listed above, explained 77 per cent of the variation and allowed us to derive an estimation of

what the average 'should' be for each council. In doing so, we recognised that many additional factors were not represented in our model such as terrain, geology, weather and an unusually high proportion of capital work in our sample period.

In addition, some of the 29 councils were unable to provide data that was net of non-road costs such as footpaths, tree maintenance and signage.

Nonetheless, the reasonably high level of variation explained by our model suggests that costs substantially above those predicted by our model were a possible indication of inefficiency or excessive maintenance and capital expenditure.

In the case of DCC, we noted that the five-year average of \$58 140 per kilometre was just two per cent greater than the cost estimated by our model.

Section 2.5 conclusion

It was likely that DCC was reasonably efficient and was performing a satisfactory level of maintenance and capital expenditure of its road network.

2.6 *Were councils taking up available funding opportunities?*

Aside from road safety programs, which were outside the scope of this audit, councils had funding opportunities for road works, in two forms:

- Financial Assistance Grants distributed by the State Grants Commission
- Commonwealth Government Roads to Recovery Grants.

Roads to Recovery funding was allocated by the Commonwealth Government in five-year schedules under the *Nation Building Program (National Land transport) Act 2009*.

The Australian Government had set total Financial Assistance Grants for Tasmanian roads to \$37.3m a year for the next three years. Every three years, the State Grants Commission reviewed the methodology and cost adjusters it used to allocate the grants to councils.

We found that DCC had received expected allocations of both forms of funding.

Section 1.6 conclusion

DCC had taken up available funding opportunities.

2.7 *Was the public kept informed about the state of council roads?*

Provision of information about council roads can provide information about risky road conditions, assist the public to form an opinion about the performance of their council and be an incentive for better performance.

We examined whether there was effective public reporting of:

- the quality and sustainability of the road network
- hazards and roads in poor condition
- scheduled work.

For this criterion, we focused on information provided on DCC's public website, and linked documents, including annual reports, annual plans and council minutes. We also examined DCC's use of social media.

Quality and sustainability of the road network

Performance indicators of the quality of roads were not reported on the DCC website, or in linked documents. In its 2014 annual report, DCC acknowledged its need to

Investigate opportunities to measure/analyse data to achieve a reliable condition assessment of road assets to increase understanding of remaining life and strategic performance of Council's road network.

Asset sustainability ratios were included in financial statements appended to the annual report. However, no other commentary regarding the sustainability of road assets was found.

Hazards, roads in poor condition and scheduled work

DCC uses social media as well as its website and letter box drops to advise the public of hazards and road closures in the municipality. An after-hours contact number was provided on the website, as was access to the council's action request system.

On the other hand, 15 per cent of road segments were rated by external consultants to be in poor condition. No information was provided regarding these road segments on the website or social media.

Section 2.7 conclusion

We were not satisfied with the adequacy of reports to the public on the quality and sustainability of roads, but satisfactory information was provided on hazards and scheduled road works.

Recommendation 9

We recommend that DCC provide indicators of road condition and commentary on sustainability ratios in its annual report.

2.8 *Conclusion*

Based primarily on independent condition assessments, DCC roads were in a reasonable state. DCC had effective processes to identify and fix maintenance issues, and to identify and program required renewals and upgrades. It was also likely that DCC was reasonably efficient compared to other Tasmanian councils and was performing an appropriate level of maintenance.

On the other hand:

- there were some indications of a need to review the level of renewal and upgrade to sustain the quality of the road network in the future
- DCC had not kept the public adequately informed about the state of its road network.

3 Northern Midlands Council

3 Northern Midlands Council

3.1 *Background*

Northern Midlands is situated in the central north of Tasmania. The municipality, with an area of 5130 km², has 12 500 residents, is classified as a medium-sized council. Northern Midlands has 566 kms of sealed roads and 413 km of unsealed roads.

3.2 *Was there an effective annual maintenance program?*

Our expectation was that identification of roads in need of maintenance would involve:

- a complaints system (to identify problems)
- regular inspection (to identify problems)
- register of work required (to list identified problems and ensure all receive attention within a reasonable timeframe)
- sufficient funding to provide a timely response to all maintenance issues.

Complaints system

NMC maintained a complaints/request system, from which a monthly listing of all items relating to infrastructure (including roads) was produced.

We tested a selection of these monthly reports and were satisfied that 90 per cent of items recorded in 2014 had been actioned. Items not actioned consisted of complaints within the last month or items for which council had received insufficient information.

Inspection schedules

NMC advised that it performed annual inspections of all the roads in NMC. The resultant report, which listed assets with approaching expiry dates and identified roads requiring attention, was used to schedule works as required.

We tested 2013 and 2014 inspection data against a list of all roads in the municipality and found dates on which 73 per cent of all road segments had been inspected. Whilst we could not confirm that all road segments had been inspected, we were satisfied that the rate of inspection was reasonable.

Register of required work

Maintenance issues were identified on NMC's inspection report. We found 42 issues identified on the 2013 report, of which 41 (98 per cent) had been actioned within that year. We concluded that the inspection system was working adequately to ensure required work was performed.

Maintenance funding

As already noted, we were satisfied that all maintenance requirements were being met. We also noted that annual plans included maintenance spending over the previous 12 months and resources required for future maintenance.

Section 3.2 conclusion

NMC had an effective annual maintenance program.

3.3 *Was there an effective renewal and upgrade program?*

In this Section, we discuss renewals and upgrades, which is the more substantial work needed to deal with the long-term deterioration of road assets. Unanticipated degradation to roads can occur at any time, requiring an immediate renewal or upgrade. However to minimise long-term costs, renewals and upgrades should be systematically programmed over time. A key component of systematic renewal is realistic assessment of the useful lives of all roads, supported by physical inspections.

We assessed the effectiveness of the renewal and upgrade processes by examining, whether:

- long-term asset management plans and supporting asset registers identified assets for renewal or upgrade, based on useful lives and condition assessments
- long-term asset management plans informed annual plans of work, and/or works schedules
- there was a systematic process to ensure roads were renewed over time to minimise long-term costs
- adequate funding plans existed to support planned work.

Assets identified for renewal or upgrade

We found that NMC had a LTAMP similar to those used by other councils. The plan was partly based on the asset management

system, which recorded the expected life of road assets. It identified assets coming up for renewal based on age and condition. The capital works program was verified by annual visual assessment. NMC advised that scheduling of road works was based primarily on the condition of roads rather than age. That said, information from condition surveys was also used to update assets' useful lives, so that scheduling of road works was consistent with both useful lives data and condition assessments.

Annual plans of work

We tested whether LTAMPs had informed annual plans of work, and works schedules. We reviewed spreadsheets maintained in NMC's asset management system, annual plans 2011–12 to 2012–13, and its LTAMP. We found reasonable alignment between the LTAMP, annual plans and work schedules.

We also observed that the infrastructure manager used data recorded in the asset management files to inform annual plans of work and schedule works.

Renewal and upgrade funding

We reviewed the asset renewal ratio for roads as a measure of the extent to which NMC had allocated sufficient funds to perform scheduled road works. We found that NMC's average renewal funding ratio from 2012 to 2014 was 103 per cent, which exceeded the benchmark of at least 90 per cent.

Examination showed NMC factored the cost of renewals, upgrades and maintenance into its planning documents and financial budgets. This was supported by the 2014 road condition report, which considered the level of renewal expenditure planned for the next ten years to be at an appropriate level.

We also compared capital works listed in three years' annual plans (2011–12, 2012–13 and 2013–14) against the corresponding annual reports. Our comparison showed that 82 per cent of the projects listed had been completed within the year planned, with another 13 per cent of projects in progress.

Section 3.3 conclusion

NMC had an effective renewal and upgrade program.

3.4 *Were roads in reasonable condition for their required use?*

We examined indicators of whether the road network was in reasonable condition and considered:

- internal and external condition assessments
- customer satisfaction surveys and complaints
- outstanding maintenance tasks
- remaining useful lives of roads.

Internal and external condition assessments

In 2005, 2009 and 2014, NMC engaged an independent contractor to review the condition of its roads. The contractor's report stated that NMC road assets were in very good overall condition and had been very well managed over the last 13 years.

Summary results are provided in Table 2. Note that a 0 to 10 scale is used with 0 being perfect and 10 un-driveable, so that the lower the scores the better the condition of the roads.

Table 2: Average condition of sealed and unsealed roads

Weighted average condition	2005	2009	2014
Sealed pavement	3.55	3.69	3.65
Sealed surface	3.02	3.01	3.04
Unsealed pavement	3.37	3.02	2.15

Table 2 confirms that roads were in good condition, and that there had been an improvement in unsealed roads since 2009.

Customer satisfaction

No recent customer surveys had been performed. We noted that only 21 complaints related to road defects were received in 2014, which we considered to be sufficiently low to indicate at least reasonable satisfaction from road users.

Outstanding maintenance tasks.

We tested whether current maintenance schedules were being met, by comparing listed requirements with records of work completed, ongoing or in progress in the 2013–14 annual report. Of the 14 items listed that were within the scope of this audit, nine were complete, three were in progress, and two still required action.

Remaining useful lives of roads

The asset consumption ratio (depreciated value divided by full replacement cost) measures the remaining useful life of assets. Our (widely accepted) benchmark is that the ratio should be kept above 60 per cent. Also relevant is the asset sustainability ratio which measures the extent to which renewal and upgrade expenditure on existing assets is keeping up with depreciation. A ratio below 100 per cent in any year will lead to a fall in the remaining useful life of assets.

We found that NMC's asset consumption ratio for roads averaged 69 per cent from 2007 and 2014. The average asset sustainability ratio in that period was 108 per cent, which was also above our benchmark.

Section 3.4 conclusion

NMC roads were in good condition and had been well managed over at least the past decade.

3.5 *Were road network costs comparable with other local government councils?*

As discussed in Section 1.5, we devised a simple model that took into account three factors we thought likely to affect costs.

These being:

- percentage of road network that was sealed
- population per road kilometre (as a proxy for level of road traffic)
- road kilometres per square kilometre of area (as a measure of the dispersion of the road network).

We performed regression analysis using those factors to attempt to explain the variations in the cost per kilometre (maintenance and capital from 2009–10 to 2013–14) across the 29 councils. The three factors listed above, explained 77 per cent of the variation and allowed us to derive an estimation of

what the average ‘should’ be for each council. In doing so, we recognised that many additional factors were not represented in our model such as terrain, geology, weather and an unusually high proportion of capital work in our sample period.

In addition, some of the 29 councils were unable to provide data that was net of non-road costs such as footpaths, tree maintenance and signage.

Nonetheless, the reasonably high level of variation explained by our model suggests that costs substantially above those predicted by our model were a possible indication of inefficiency or excessive maintenance and capital expenditure.

In the case of NMC, we noted that the five-year average of \$17 853 per kilometre was only 88 per cent of the estimate from our model.

Section 3.5 conclusion

It was likely that NMC was relatively efficient and was performing a satisfactory level of maintenance and capital expenditure of its road network.

3.6 *Were councils taking up available funding opportunities?*

Aside from road safety programs, which were outside the scope of this audit, councils had funding opportunities for road works, in two forms:

- Financial Assistance Grants distributed by the State Grants Commission
- Commonwealth Government Roads to Recovery Grants.

Roads to Recovery funding was allocated by the Commonwealth Government in five-year schedules under the *Nation Building Program (National Land transport) Act 2009*.

The Australian Government had set total Financial Assistance Grants for Tasmanian roads to \$37.3m a year for the next three years. Every three years, the State Grants Commission reviewed the methodology and cost adjusters it used to allocate the grants to councils.

We found that NMC had received expected allocations of both forms of funding.

Section 3.6 conclusion

NMC had taken up available funding opportunities.

3.7 *Was the public kept informed about the state of council roads?*

Provision of information about council roads can provide information about risky road conditions, assist the public to form an opinion about the performance of their council and be an incentive for better performance.

We examined whether there was effective public reporting of

- the quality and sustainability of the road network
- hazards and roads in poor condition
- scheduled work.

For this criterion, we focused on information provided on NMC's public website, and linked documents, including annual reports, annual plans and council minutes.

Quality and sustainability of the road network

Annual plans included sustainability ratios and some efficiency measures. On the other hand, the website and linked documents did not include indicators of road condition. Also, no commentary regarding the sustainability of road assets was found on the website or in linked documents.

Interestingly, we noted that NMC had 'good news' to report, had it chosen to do so, with strong sustainability ratios and a positive report on road condition from its independent consultant.

Hazards, roads in poor condition and scheduled work

NMC uses social media as well as its website and letter box drops to advise the public of hazards and road closures. No information was provided regarding road segments in poor condition on the website or social media.

Section 3.7 conclusion

We were not satisfied with the adequacy of reports to the public on the quality and sustainability of roads, but satisfactory information was provided on hazards and road works.

Recommendation 10

We recommend that NMC provide indicators of road condition and commentary on sustainability ratios in its annual report.

3.8 Conclusion

Based primarily on independent condition assessments, NMC roads were in good condition and had been well managed over at least the past decade. In particular, there had been an improvement since 2009 in the condition of its unsealed roads, which represented 42 per cent of its road network.

NMC's maintenance and renewal programs were effective and its road works were relatively efficient.

On the other hand, there had not been adequate reporting of the overall quality and sustainability of its roads.

4 Waratah-Wynyard Council

4 Waratah-Wynyard Council

4.1 *Background*

Waratah-Wynyard is situated to the west of Burnie on Tasmania's North West Coast. The municipality, with an area of 3500 km², has a population of 13 500 and is classified as a medium-sized council. Waratah-Wynyard has a total of 540 kms of roads with 286 km sealed.

4.2 *Was there an effective annual maintenance program?*

Our expectation was that identification of roads in need of maintenance would involve:

- a complaints system (to identify problems)
- regular inspection (to identify problems)
- register of work required (to list identified problems and ensure all receive attention within a reasonable timeframe)
- sufficient funding to provide a timely response to all maintenance issues.

Complaints system

We found evidence of a system for recording and responding to complaints and action requests. However, due to the difficulty of extracting reports from the system we were only able to examine performance for three-months, based on records manually extracted by WWC staff for the audit.

We found 96 per cent of the extracted requests had been addressed, but noted that 20 per cent of requests took longer than 60 days to be resolved.

Inspection schedules

WWC had no detailed inspection schedule. Instead, grading of gravel roads was undertaken from east to west or vice versa, depending on the condition of roads at the end of summer.

We were advised that all sealed roads were inspected annually. There was some evidence of numerous inspections being performed in the form of individual inspection reports. However, in the absence of a schedule we were unable to ascertain what proportion of the road network had been subject to recent inspection.

Register of required work

No register was used for required work at WWC.

For sealed roads, reports completed after each inspection were used to add action requests to the complaints and action request system. We were unable to check whether all matters raised in inspection reports had been added to the action request system since there was no way of knowing whether we had all the inspection reports.

Also, as previously noted, the action request system did not facilitate checking that actions had been addressed because of the difficulty of extracting reports. Based on the records manually extracted by WWC officers, we concluded that 96 per cent of requests had been actioned. In our view, the system did not readily allow for internal checks that work was performed or whether it had been done in a timely manner.

Maintenance funding

We found maintenance spending had declined slightly over the last five years.

However, a condition assessment report of sealed roads concluded pavements in WWC were on average in a good to fair condition (this is further discussed in Section 4.4). We also noted above that a high proportion of complaints had been actioned.

Section 4.2 conclusion

WWC appeared to have performed effective maintenance of its road network, although the documentation of its processes was deficient.

Recommendation 11

We recommend that WWC improve the system used to record complaints and action requests and investigate ways to reduce resolution times.

Recommendation 12

We recommend that WWC monitor and document progress of its inspection program.

4.3 *Was there an effective renewal and upgrade program?*

In this Section, we discuss renewals and upgrades, which is the more substantial work needed to deal with the long-term deterioration of road assets. Unanticipated degradation to roads

can occur at any time, requiring an immediate renewal or upgrade. However, to minimise long-term costs, renewals and upgrades should be systematically programmed over time. A key component of systematic renewal is realistic assessment of the useful lives of all roads, supported by physical inspections.

We assessed the effectiveness of the renewal and upgrade processes by examining, whether:

- long-term asset management plans and supporting asset registers identified assets for renewal or upgrade, based on useful lives and condition assessments
- long-term asset management plans informed annual plans of work, and/or works schedules
- there was a systematic process to ensure roads were renewed over time to minimise long-term costs
- adequate funding plans existed to support planned work.

Assets identified for renewal or upgrade

We found that WWC had a LTAMP similar to those used by other councils. The plan was supported by the asset register system, which recorded the expected lives and dates for roads.

The asset register also recorded estimated renewal dates that were used for forward works programming. We were advised that field inspections were scheduled for roads approaching the estimated end of their useful lives. We tested records for road segments which were approaching the end of their expected lives and found that in at least 90 per cent of cases inspections had occurred and renewal dates recorded in the asset register.

We concluded that there was an effective process to routinely identify roads in need of renewal or upgrade.

Annual plans of work and work schedules

We were advised that the LTAMP and underlying asset register was a key input to the ten-year plan for capital works. However, the qualification was made that WWC uses the most recent inspection data to schedule road works rather than the 'snapshot' view available from the LTAMP which was dated 2012. WWC acknowledged that its LTAMP was out of date and advised that an update was planned within the year.

We tested records for 180 road segments which had a recorded renewal date prior to 2019 to determine whether those roads had been scheduled for work in the ten-year plan for capital works. We found that:

- 13 per cent of those records had an already elapsed renewal date
- 75 per cent of those road segments with a renewal date between January 2014 and December 2018 (five years) were included in the ten-year plan for capital works.

We considered that the 75 per cent rate of inclusion of road segments that were nearing their renewal date represented a reasonable correlation, since we would expect there to be cases where the renewal date was overly conservative. However, we were concerned that there was no documentation of decisions to defer renewal or revision of renewal dates in the assets register.

Renewal and upgrade funding

We reviewed the asset renewal ratio for roads as a measure of the extent to which WWC had allocated sufficient funds to perform scheduled road works. We found that WWC's renewal funding ratio, from 2012 to 2014, averaged 86 per cent which was just below our benchmark of 90 per cent.

On the other hand, it appeared that WWCs annual plans and its longer-term planning documents had factored the cost of renewals and upgrades into its financial budgets. We verified that almost all capital works listed in annual plans for 2011–12, 2012–13 and 2013–14, had been completed or commenced as scheduled. There was no evidence of delays caused by funding shortfalls.

We concluded WWC had adequately funded scheduled work.

Section 4.3 conclusion

Despite some areas where documentation could be improved, we were satisfied that WWC had a reasonable process to identify roads in need of maintenance and ensure that work was scheduled.

Recommendation 13

We recommend that WWC document decisions to defer capital works and update subsequent renewal dates in the asset register.

4.4 *Were roads in reasonable condition for their required use?*

We examined indicators of whether the road network was in reasonable condition and considered:

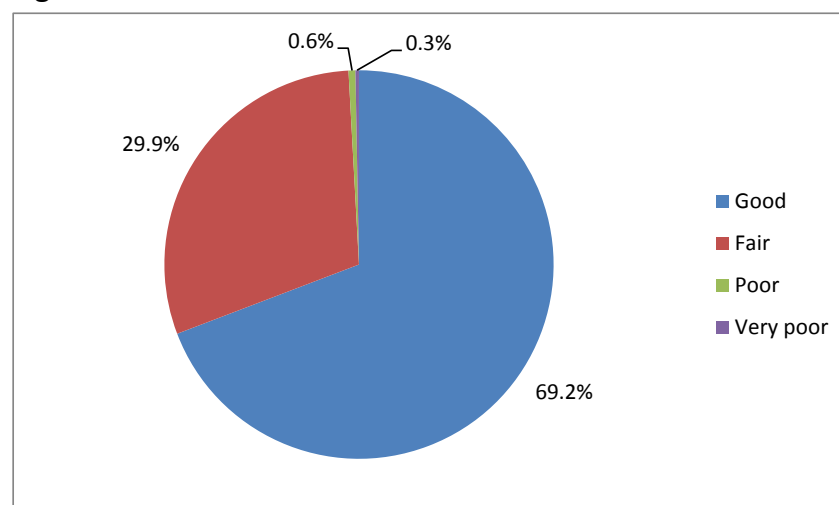
- internal and external condition assessments
- customer satisfaction surveys and complaints
- outstanding maintenance tasks
- remaining useful lives of roads.

Internal and external condition assessments

As previously noted, all of WWC's unsealed roads were graded annually.

In 2014, WWC engaged a consultant to review the condition of its sealed roads. Figure 2 summarises the results from that review.

Figure 2: Condition of WWC's sealed roads



Source: consultant's report for WWC.

Figure 2 shows that almost all of WWC's sealed roads were in at least fair condition. The consultant's report listed a number of high priority roads with 'structural or functional distresses'. We checked these against WWC's ten-year plan for capital works and found that all of the listed roads had been scheduled for work.

Customer satisfaction

WWC performed a community survey in 2014, which included questions about roads. The survey results had limited references to roads but did note that rural unsealed roads were one of the largest concerns of the Waratah-Wynyard community.

However, we accept that the council's approach of annually re-grading all of its unsealed roads will inevitably lead to some discontent amongst road users in the latter months of each road's 12-month period between re-grades.

Outstanding maintenance tasks

Due to the difficulty of extracting reports from the system used to manage complaints and action requests at WWC (as discussed in Section 4.2) we were only able to examine performance over three months. However, we found that 96 per cent of the matters had been addressed.

Remaining useful lives of roads

The asset consumption ratio (depreciated value divided by full replacement cost) measures the remaining useful life of assets. Our (widely accepted) benchmark is that the ratio should be kept above 60 per cent. Also relevant is the asset sustainability ratio which measures the extent to which renewal expenditure on existing assets is keeping up with depreciation. A ratio below 100 per cent in any year will lead to a fall in the remaining useful life of assets.

We found that between 2007 and 2014, WWC's asset consumption ratio for roads averaged 52 per cent, which we categorised as moderate risk. The asset sustainability ratio averaged 91 per cent, which was also below our benchmark. In our opinion, the remaining useful life of roads at WWC was too low and had been in decline.

Section 4.4 conclusion

WWC roads were in reasonable condition — based primarily on independent condition assessments — but financial asset ratios indicated that the level of renewal and upgrade may need to be increased.

Recommendation 14

We recommend that WWC review the level of renewals. That review should also consider the estimated lives of roads, because of their impact on sustainability ratios.

4.5 *Were road network costs comparable with other local government councils?*

As discussed in Section 1.5, we devised a simple model that took into account three factors we thought likely to affect costs.

These being:

- percentage of road network that was sealed
- population per road kilometre (as a proxy for level of road traffic)
- road kilometres per square kilometre of area (as a measure of the dispersion of the road network).

We performed regression analysis using those factors to attempt to explain the variations in the cost per kilometre (maintenance and capital from 2009–10 to 2013–14) across the 29 councils. The three factors listed above, explained 77 per cent of the variation and allowed us to derive an estimation of what the average ‘should’ be for each council. In doing so, we recognised that many additional factors were not represented in our model such as terrain, geology, weather and an unusually high proportion of capital work in our sample period.

In addition, some of the 29 councils were unable to provide data that was net of non-road costs such as footpaths, tree maintenance and signage.

Nonetheless, the reasonably high level of variation explained by our model suggests that costs substantially above those predicted by our model were a possible indication of inefficiency or excessive maintenance and capital expenditure.

In the case of WWC, we noted that the five-year average of \$20 456 per kilometre was only 62 per cent of our estimated cost.

Section 4.5 conclusion

It was likely that WWC was relatively efficient and was performing a satisfactory level of maintenance and capital expenditure of its road network.

4.6 *Were councils taking up available funding opportunities?*

Aside from road safety programs, which were outside the scope of this audit, councils had funding opportunities for road works, in two forms:

- Financial Assistance Grants distributed by the State Grants Commission
- Commonwealth Government Roads to Recovery Grants.

Roads to Recovery funding, was allocated by the Commonwealth Government in five-year schedules under the *Nation Building Program (National Land transport) Act 2009*.

The Australian Government had set total Financial Assistance Grants for Tasmanian roads to \$37.3m a year for the next three years. Every three years, the State Grants Commission reviewed the methodology and cost adjusters it used to allocate the grants to councils.

We found that WWC had received expected allocations of both forms of funding.

Section 4.6 conclusion

WWC had taken up available funding opportunities.

4.7 *Was the public kept informed about the state of council roads?*

Provision of information about council roads can provide information about risky road conditions, assist the public to form an opinion about the performance of their council and be an incentive for better performance.

We examined whether there was effective public reporting of:

- the quality and sustainability of the road network
- hazards and roads in poor condition

- scheduled work.

For this criterion, we focused on information provided on WWC’s public website, and its linked documents, including annual reports, annual plans and council minutes.

Quality and sustainability of the road network

We found no public information regarding the overall quality of WWC roads, such as performance measures.

Asset sustainability ratios were included in financial statements appended to the annual report. However, no other commentary regarding the sustainability of road assets was found.

Hazards and roads in poor condition

Information regarding road hazards was posted on the ‘Latest News’ section of the website, and similar information was available on social media.

Scheduled work

Road works were listed on the council’s website. WWC also used advertisements in the local newspaper, the council website and social media to alert the public about traffic disruptions and road closures.

Section 4.7 conclusion

We were not satisfied there was adequate reporting of overall quality and sustainability of the WWC road network.

Recommendation 15

We recommend that WWC provide indicators of road condition and commentary on sustainability ratios in its annual report.

4.8 *Conclusion*

Based primarily on independent condition assessments, WWC roads were in a satisfactory condition. WWC had effective processes to identify and fix maintenance issues and to identify and program required renewals and upgrades.

It was also likely that WWC was relatively efficient compared to other Tasmanian councils and was performing an appropriate level of maintenance, upgrade and renewal of its road network.

On the other hand:

- there were some indications of a need to review the level of renewals and upgrades in order to sustain the quality of its road network into the future
- documentation of the complaints, inspection and renewal programs was deficient
- WWC had not kept the public adequately informed about the condition and sustainability of its road network.

Independent auditor's conclusion

Independent auditor's conclusion

This independent conclusion is addressed to the President of the Legislative Council and to the Speaker of the House of Assembly. It relates to my performance audit on how well local councils maintain their roads.

Audit objective

The objective of this audit was to express an opinion on whether local governments were managing the construction and maintenance of Tasmanian council-owned roads effectively and efficiently.

Audit scope

I examined the management of sealed and unsealed roads (excluding bridges) by the following local government councils:

- Central Highlands Council (CHC)
- Devonport City Council (DCC)
- Northern Midlands Council (NMC)
- Waratah-Wynyard Council (WWC).

Responsibility of the General Managers of the Councils selected for audit

Respective council General Managers are responsible for managing efficiently and effectively maintenance and upgrade programs for their road networks.

Auditor-General's responsibility

In the context of this performance audit, my responsibility was to express a conclusion on how efficiently and effectively the audited councils were managing the construction and maintenance of their roads.

I conducted my audit in accordance with Australian Auditing Standard ASAE 3500 *Performance engagements*, which required me to comply with relevant ethical requirements relating to audit engagements. I planned and performed the audit to obtain reasonable assurance as to whether the councils were efficiently and effectively managing the construction and maintenance of their roads.

My work involved obtaining evidence of efficient and effective road maintenance programs, as well as ensuring councils were renewing their road networks at the optimal time and

adequately recording road information in their asset management systems.

I believe that the evidence I obtained was sufficient and appropriate to provide a basis for my conclusion.

Auditor-General's conclusion

Based on the audit objective and scope, and for reasons outlined in this Report, it is my conclusion that:

- all four councils' roads were either in reasonable or good condition for their required use
- the councils were reasonably efficient compared to other Tasmanian councils.
- none of the four councils adequately reported on road conditions or the sustainability of their road networks
- CHC did not have effective processes to ensure that complaints were actioned in a timely manner or for ensuring the timely renewal and upgrade of ageing assets.
- DCC and WWC need to review the level of renewal and upgrade to sustain the quality of their road networks in the future
- WWC's documentation of the complaints, inspection and renewal programs was deficient.

My report contains 15 recommendations aimed at addressing my conclusions.

H M Blake
Auditor-General
26 May 2015

Recent reports

Recent reports

Tabled	No.	Title
Feb	No. 7 of 2013–14	Police responses to serious crime
Feb	No. 8 of 2013–14	Financial Statements of State entities, Volume 4 — Analysis of the Treasurer's Annual Financial Report 2012–13
May	No.9 of 2013–14	Financial Statements of State entities, Volume 5 — State entities 30 June and 31 December 2013, matters relating to 2012–13 audits and key performance indicators
May	No.10 of 2013–14	Government radio communications
May	No.11 of 2013–14	Compliance with the Alcohol, Tobacco and Other Drugs Plan 2008–13
June	No.12 of 2013–14	Quality of Metro services
June	No. 13 of 2013–14	Teaching quality in public high schools
Aug	No. 1 of 2014–15	Recruitment practices in the Tasmanian State Service
Sep	No. 2 of 2014–15	Follow up of selected Auditor-General reports: October 2009 to September 2011
Sep	No. 3 of 2014–15	Motor vehicle fleet management in government departments
Nov	No. 4 of 2014–15	Financial Statements of State entities, Volume 3 — Government Businesses 2013–14
Nov	No. 5 of 2014–15	Financial Statements of State entities, Volume 2 — General Government and Other State entities 2013–14
Dec	No. 6 of 2014–15	Financial Statements of State entities, Volume 1 — Analysis of the Treasurer's Annual Financial Report 2013–14
Feb	No.7 of 2014–15	Financial Statements of State entities, Volume 4 — Local Government Authorities, Joint Authorities and Tasmanian Water and Sewerage Corporation Pty Ltd 2013-14
Mar	No.8 of 2014–15	Security of information and communications technology (ICT) infrastructure
Mar	No.9 of 2014–15	Tasmanian Museum and Art Gallery: compliance with the National Standards for Australian Museums and Galleries
May	No.10 of 2014–15	Number of public primary schools

Current projects

Current projects

The table below contains details performance and compliance audits that the Auditor-General was conducting and relates them to the *Annual Plan of Work 2014–15* that is available on our website.

Title	Audit objective is to...	<i>Annual Plan of Work 2014–15</i> reference
Vehicle fleet usage and management in government businesses	... review the efficiency and effectiveness of the use of motor vehicles, and testing compliance with applicable guidelines by: government businesses, University of Tasmania and the Retirement Benefits Fund. In addition, it will include the management of vehicle workshops.	Page 20 Topic No. 5
Capital works programming and management	... assess the effectiveness of the state's capital works and ICT budgeting program and departmental asset, including ICT assets, management processes.	Page 18 Topic No. 6
Provision of social housing	... form conclusions as to the effectiveness, efficiency and economy of the provision of social housing and other government assistance provided by Housing Tasmania and non-government organisations to Tasmanians in housing stress	Page 21 Topic No. 7
Follow up audit	... ascertain the extent to which recommendations contained in the <i>2013 Tasmanian Bushfires Inquiry</i> have been implemented. In addition, follow up the implementation of recommendations contained in <i>Special Report 99 Bushfire management</i> and those recommendations contained in <i>Financial Audit Services Report No. 11 of 2012–13</i> that relate to the Department of Health and Human Services and the three Tasmanian Health Organisations.	Page 22 Topic No. 9

AUDIT MANDATE AND STANDARDS APPLIED

Mandate

Section 17(1) of the *Audit Act 2008* states that:

‘An accountable authority other than the Auditor-General, as soon as possible and within 45 days after the end of each financial year, is to prepare and forward to the Auditor-General a copy of the financial statements for that financial year which are complete in all material respects.’

Under the provisions of section 18, the Auditor-General:

- ‘(1) is to audit the financial statements and any other information submitted by a State entity or an audited subsidiary of a State entity under section 17(1).’

Under the provisions of section 19, the Auditor-General:

- ‘(1) is to prepare and sign an opinion on an audit carried out under section 18(1) in accordance with requirements determined by the Australian Auditing and Assurance Standards
- (2) is to provide the opinion prepared and signed under subsection (1), and any formal communication of audit findings that is required to be prepared in accordance with the Australian Auditing and Assurance Standards, to the State entity’s appropriate Minister and provide a copy to the relevant accountable authority.’

Standards Applied

Section 31 specifies that:

‘The Auditor-General is to perform the audits required by this or any other Act in such a manner as the Auditor-General thinks fit having regard to –

- (a) the character and effectiveness of the internal control and internal audit of the relevant State entity or audited subsidiary of a State entity; and
- (b) the Australian Auditing and Assurance Standards.’

The auditing standards referred to are Australian Auditing Standards as issued by the Australian Auditing and Assurance Standards Board.



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