

NATSPEC



Local Government Specification

AUS-SPEC Benchmark Survey 2011

Prepared by

NATSPEC

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AUS-SPEC Asset Benchmark Survey 2011

AUS-SPEC is the Local Government Specification for minor civil works. Since 1997, approximately 270 Local Councils have used AUS-SPEC to provide quality and consistency in asset management.

AUS-SPEC's major service is the comprehensive national specification system for the life-cycle management of assets. AUS-SPEC is a national, quality document, which is consistent, uniform, effective and efficient and makes provision for implementing local requirements.

The annual AUS-SPEC Asset Benchmark Survey is to assist Local Councils to determine priority action for asset management by measuring key performance indicators. The survey results will allow councils to benchmark their performance against others. AUS-SPEC also encourages councils to communicate through groups such as the IPWEA, National Asset Management Strategy (NAMS.AU) Committee and Local Government associations to benefit from shared experiences.

The latest AUS-SPEC Benchmark Survey was conducted in June this year when 64 Local Councils from both urban and rural areas participated.

Some 23 new questions were included for the 2011 survey, in addition to the ones used for the 2009 survey. A comparison of 2009 and 2011 results has been carried out for all common questions and has been presented in a graphical form.

Council Details

1. The Australian Classification for Local Government (ACLG)

Urban	Capital City	Metropolitan Developed	Regional towns/city	Fringe	Total
	2	17	18	4	41
Rural	Significant Growth	Agricultural	Remote		
	6	13	3		22

There was also one Council with unidentified category.

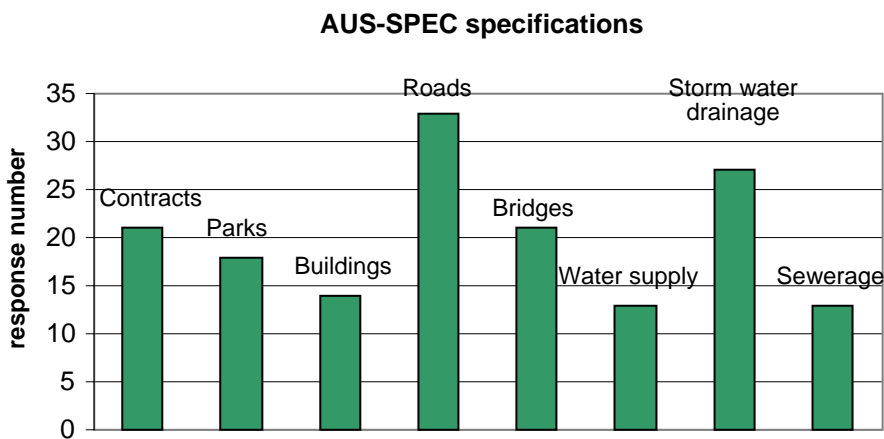
2. Number of Participating Councils by State

	Survey 2009	Survey 2011
NSW	28	25
QLD	12	9
SA	8	4
TAS	8	1
VIC	12	14
WA	7	8
Anonymous	-	3
Total number	75	64

3. Do you use the current AUS-SPEC update service?

53% of Councils reported to use the current AUS-SPEC update service.

4. For which of the following do you use AUS-SPEC specifications?



Note: Data from 49 Councils.

General

1. What is the percentage of Council staff engaged in Asset Management?

0-25%	85
25-50%	9
50-75%	4
75-100%	2

In 2009 survey this question was formulated differently. However, most of the Councils reported that 0-25% of Council staff was engaged in asset management.

2. Do you consult with customers on the levels of service of different assets e.g. customer satisfaction survey?

Greater than 24 months	26%
Every 24 months	14%
Every 18 months	2%
Every 12 months	42%
No	16%

3. Do you use video surveying for road inventory or condition assessments?

Yes	31%
Considering for the future	38%

4. Do you use Geographic Information System (GIS) for asset management?

Yes	87%
Considering for the future	11%

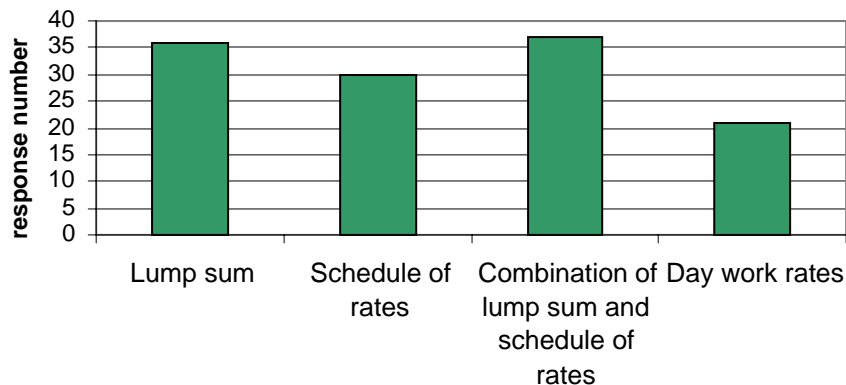
5. Are your Asset Management practices core or advanced?

Core	86%
Advanced	8%
Don't know	6%

Contracts and quality

1. What types of construct only contracts does your Council use?

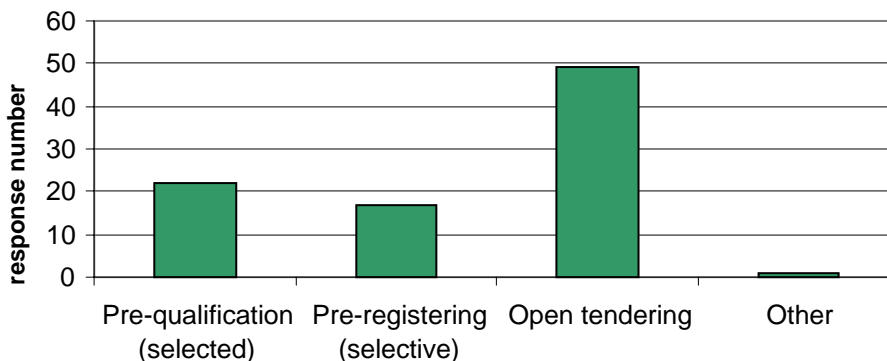
Contracts - method of payment



Notes: Data from 50 Councils.
Multiple types of contracts are used by many Councils.

2. What types of tendering process does your Council make use of?

Types of tendering process



Notes: Data from 50 Councils.
Multiple types of tendering process are used by many Councils.
Other type used by one Council in NSW: Reverse auction (used for supply of electricity for street lighting).

3. What General Conditions of Contract are used for compilation of contracts?

	% of Councils in 2009	% of Councils in 2011
AS 2124	79%	72%
AS 4000	49%	49%
NPWC3	2%	5%
GC21	5%	5%
Other	7%	18%

Other standards used in 2009: AS 4300, AS 4912, AS 4122, AS 4905, Adelaide City Council Conditions of Contract, In house, Local Government Association and Local Government Association Works Contract.

Other standards used in 2011: Modified AS 2124, AS 4905, In house, Own general conditions written up by Council Lawyers, Commercial building contract, Council standard template.

Notes: Data from 43 Councils.
Multiple standards are used by many Councils.

4. What type(s) of contracts are used for design, construction, maintenance and supply?

Design, construction, rehabilitation	60%
Service Level Agreement (SLA)	23%
No contract	17%
Partnering Agreement	13%
Design, build, operate (DBO)	13%
Other types	13%

Other types of contract used by Councils: External Lawyers, Annual Supply, EOI and Open Tender and Service Provision Contracts.

Note: Multiple types of contracts are used by many Councils.

5. Which contract type does your Council use?

	Construction	Supply	Supply and deliver	Supply, deliver, install/lay/place	Service	Period service	Period supply	Period supply and deliver	Period supply, deliver, install/lay/place
Mostly	49%	36%	40%	25%	25%	23%	19%	15%	15%
Sometimes	47%	55%	53%	59%	64%	49%	47%	47%	40%
Never	2%	6%	4%	10%	6%	13%	15%	17%	23%

6. How does Council make standard drawing and design/construction specifications available to developers?

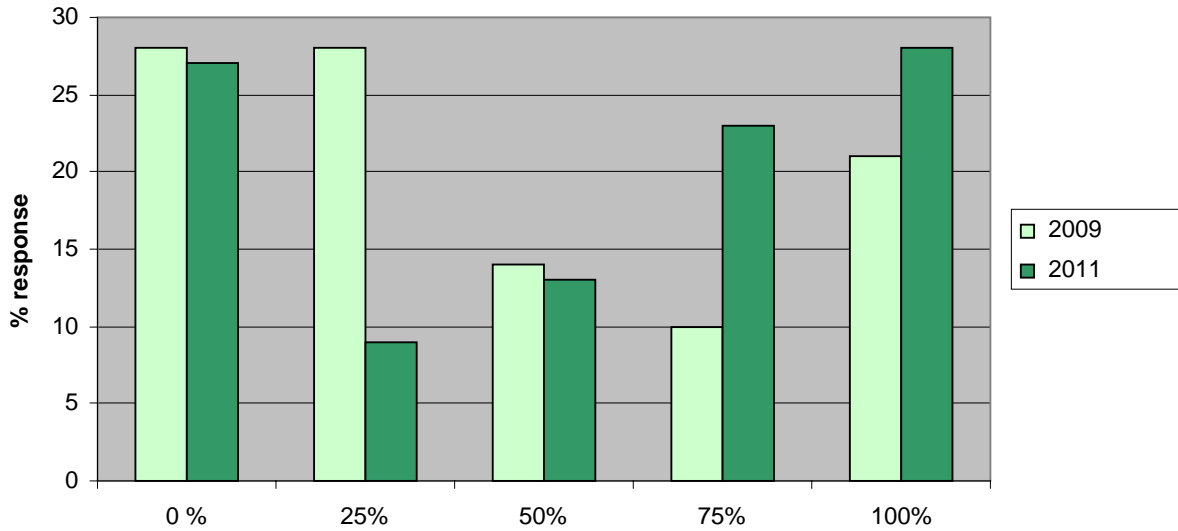
Downloadable from Council's website	45%
Available to purchase from Council's office	18%
Available free from Council's office	33%
No standard drawings or specifications available	4%

7. How does your Council control quality?

Quality Management	% Response
Quality plan required from the Contractor and all costs paid by the Contractor	53%
Integrated management system including quality, environment and OHS	27%
Quality control, test and sampling arranged by Council and paid by Council	11%
No quality requirements other than those required by legislation	9%

Parks

1. For parks, what is the progress with the drafting of asset management plans?



2. How often do you conduct condition assessments of your park assets?

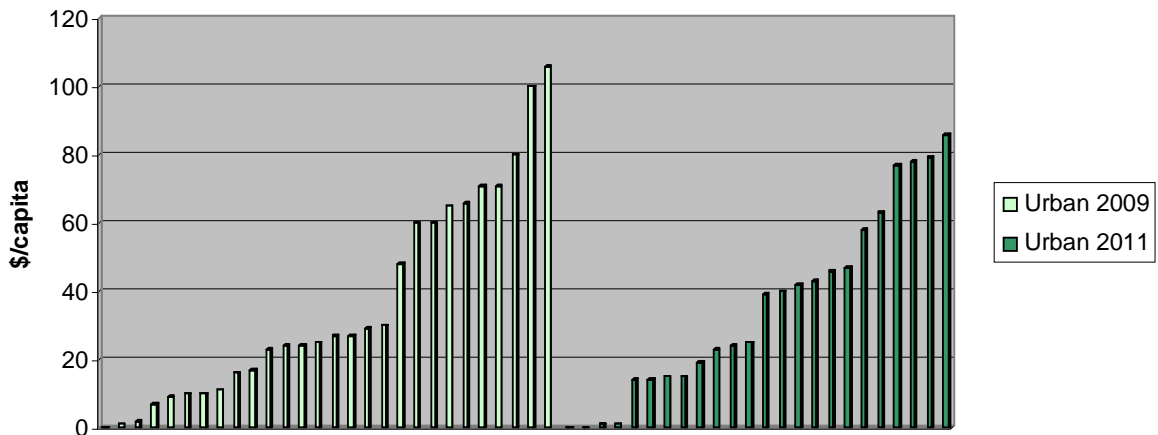
Greater than 24 months	27%
Every 24 months	16%
Every 18 months	2%
Every 12 months	37%
Every 6 months	7%
Every 3 months	9%
No assessment	2%

3. What is the average weekly frequency of mowing - playing fields and passive areas?

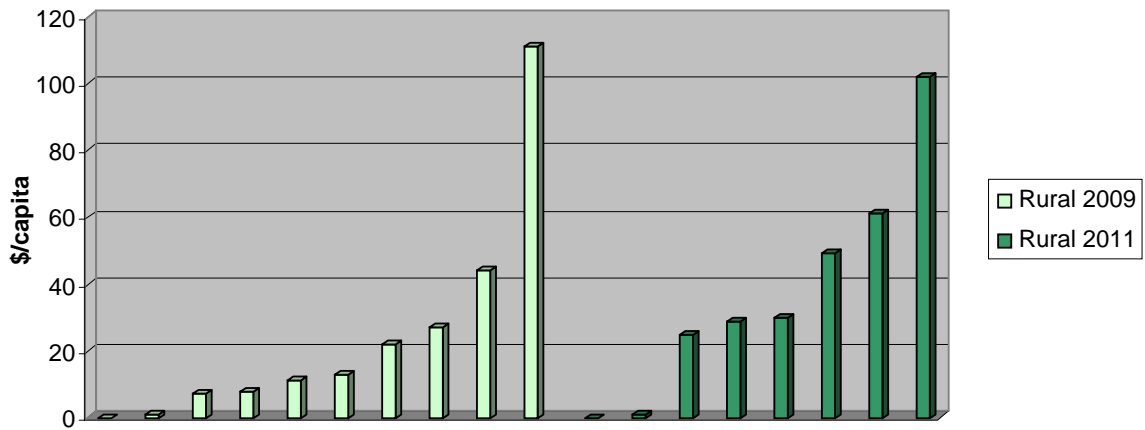
Every week	24%
Every 2 weeks	52%
Every 3 weeks	21%
More than every 3 weeks	3%

4. What is the capital expenditure per capita for parks?

Capital expenditure for parks – Urban

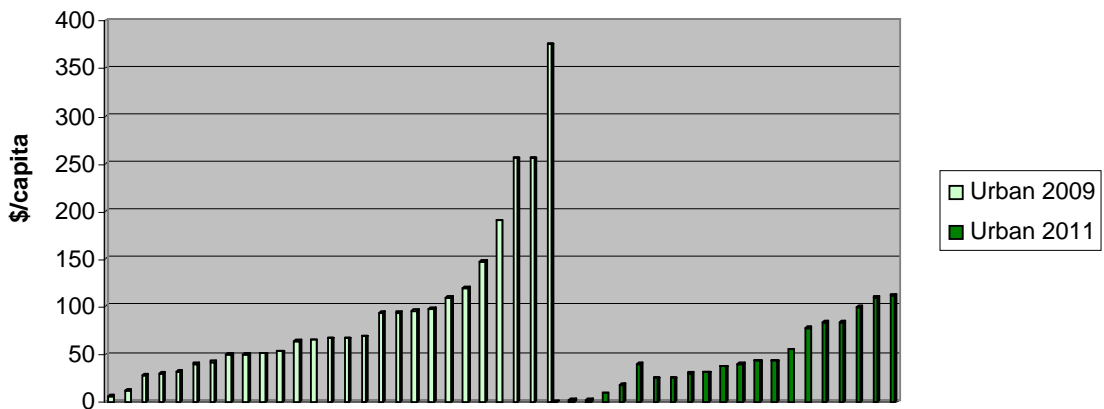


Capital expenditure for parks - Rural

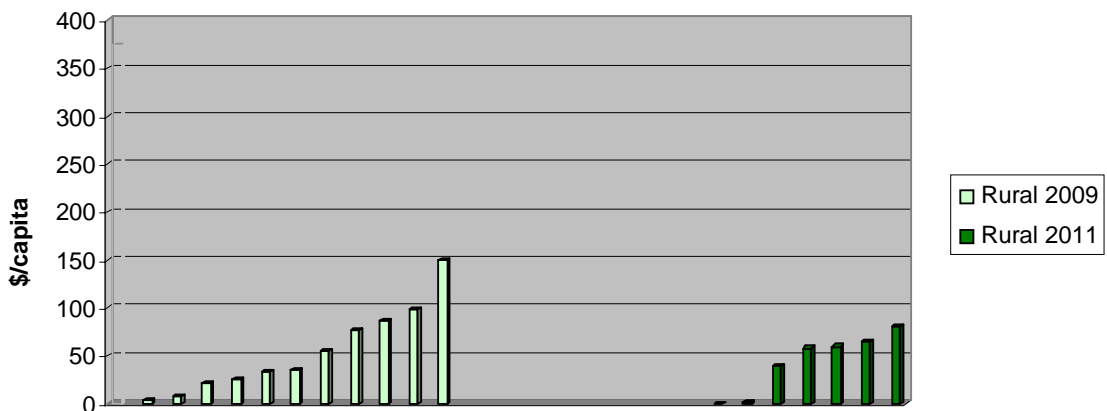


**5. What is the maintenance expenditure per capita for parks?
Note: Parks includes passive parks, sport fields and ovals**

Maintenance expenditure for parks - Urban

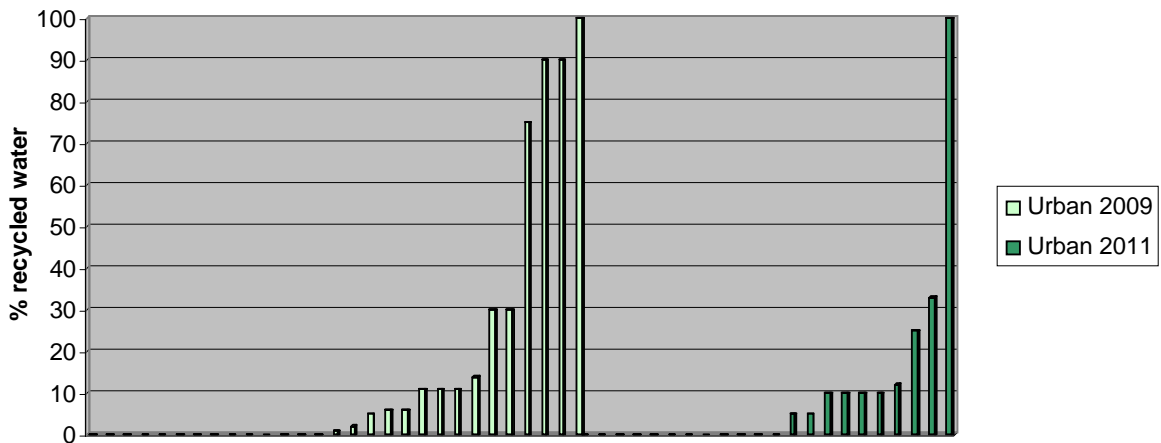


Maintenance expenditure for parks - Rural

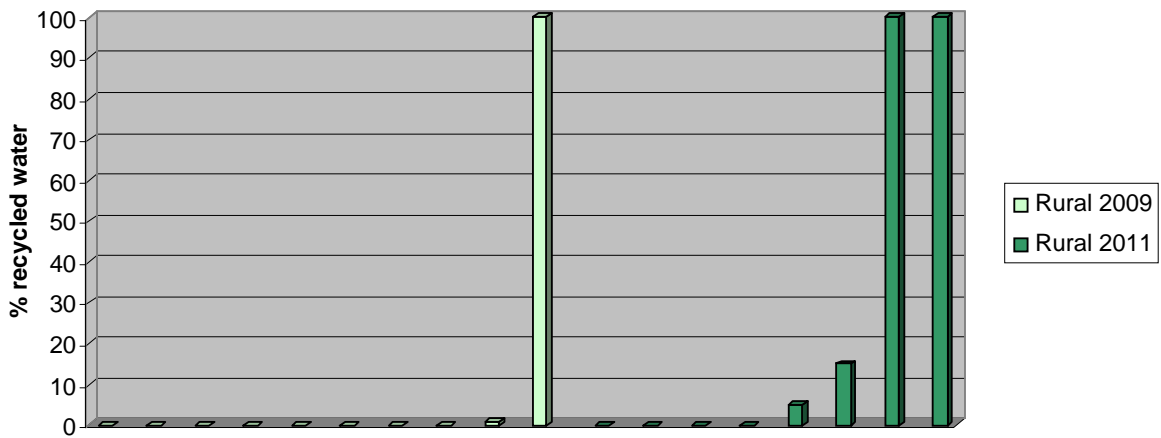


6. What percentage of recycled water is used for irrigation?

Recycled water- Urban

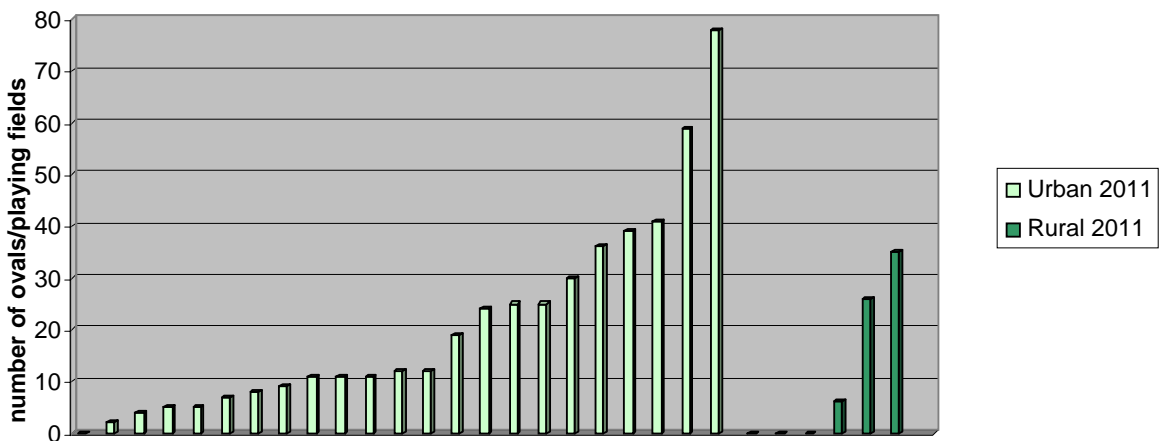


Recycled water - Rural



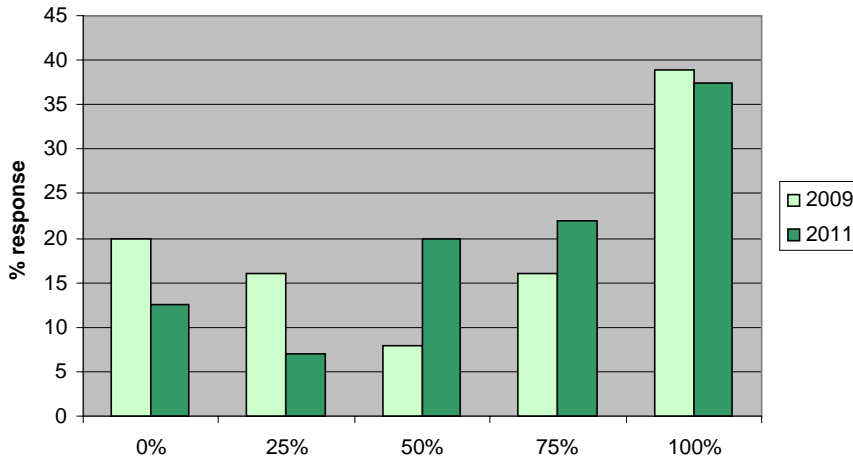
7. What number of ovals/playing fields are equipped with irrigation systems?

In 2009 this question was not in the survey. 2011 results are shown below.

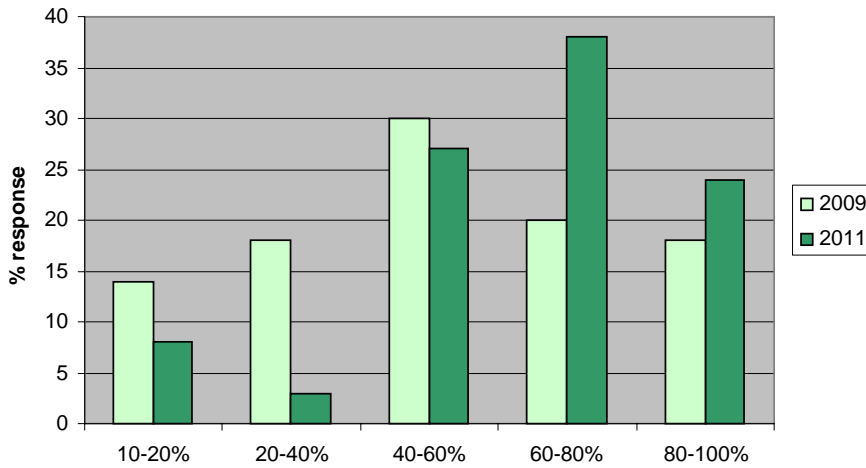


Buildings

1. For buildings, what is the progress with drafting of asset management plans?



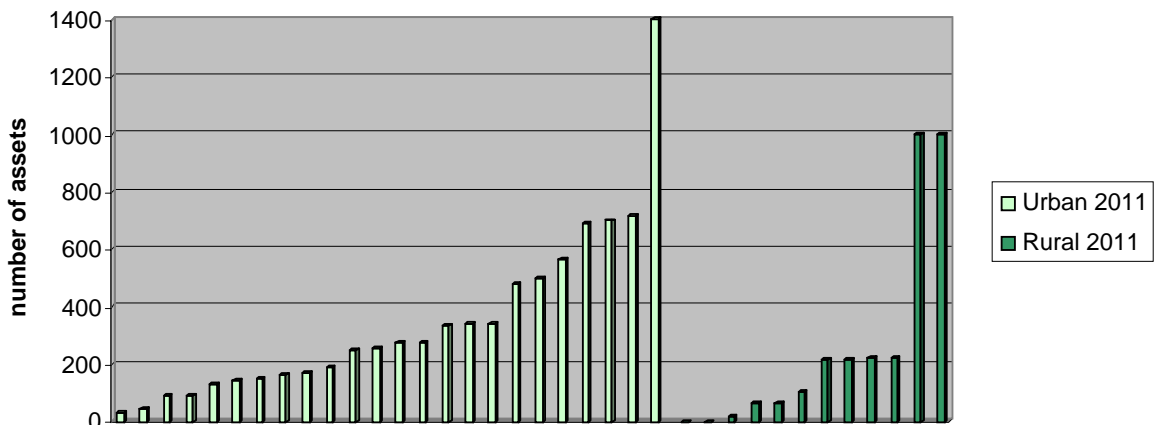
2. What is the approximate percentage of accuracy of the available conditions data?



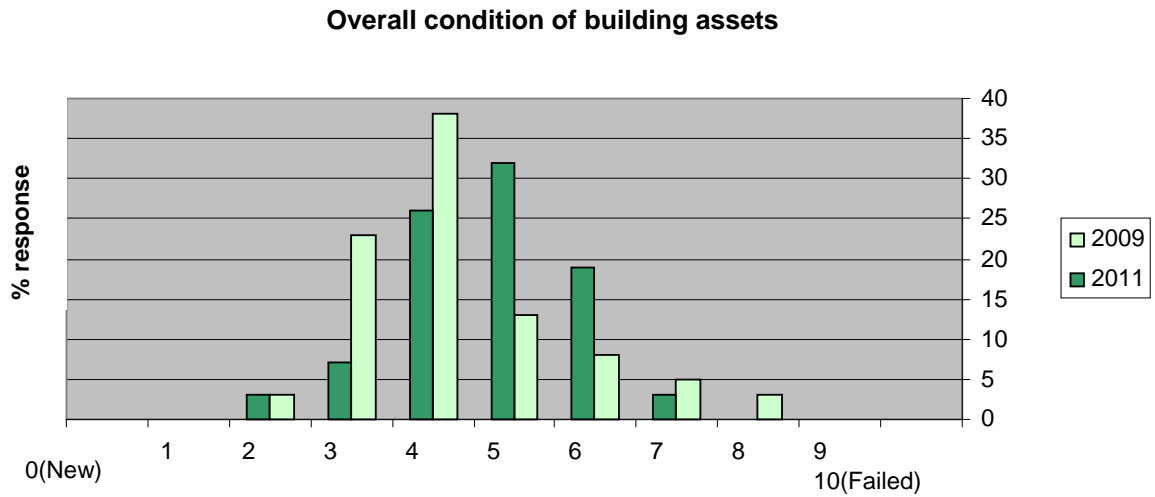
3. What is the total number of building assets?

2011 results shown. 2009 results similar.

Number of building assets - 2011

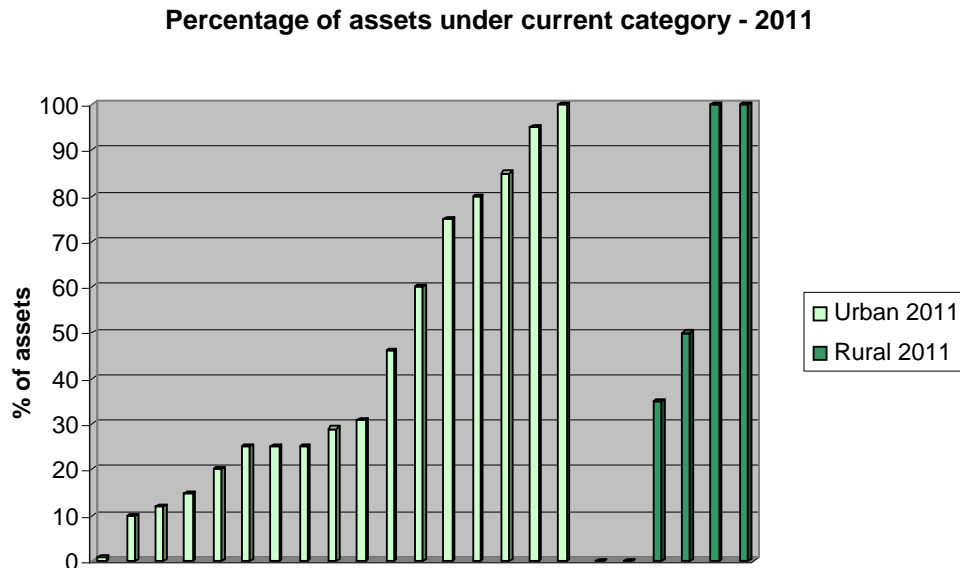


4. What is the overall condition rating of building assets?



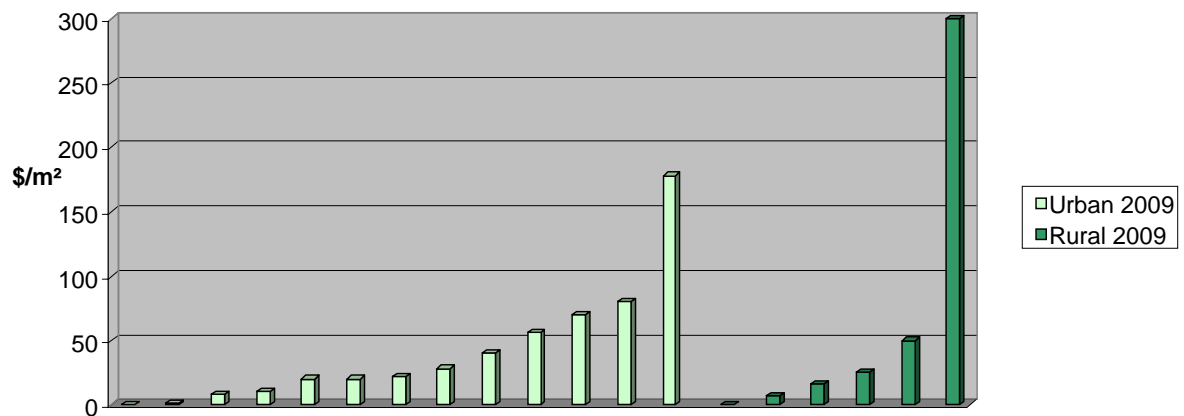
5. What is the percentage of assets under the current condition assessment category?

2011 results shown. 2009 results similar.



6. What is the annual maintenance cost/m²?

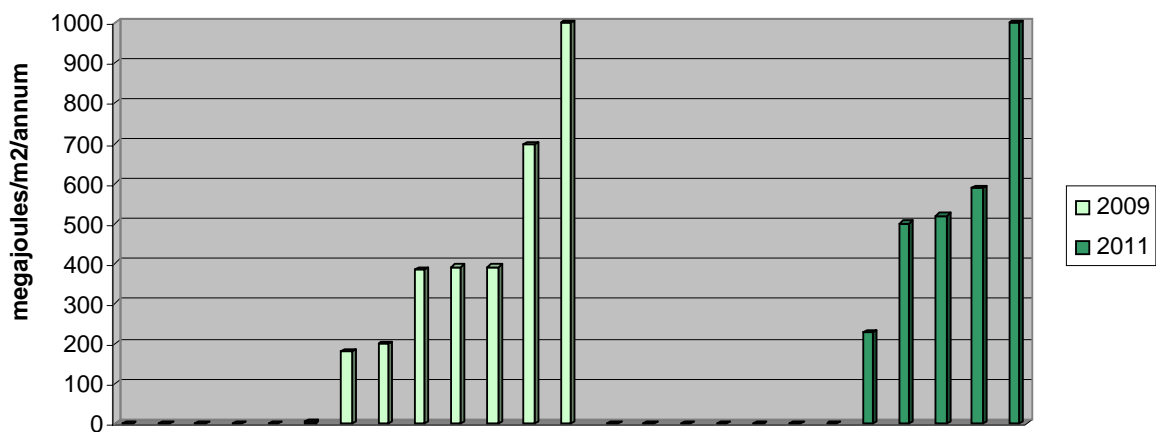
Annual maintenance cost of building assets - 2009



2009 results shown. 2011 results were insufficient.

7. What is the annual energy consumption/m² of your building assets? Megajoules/m²/annum

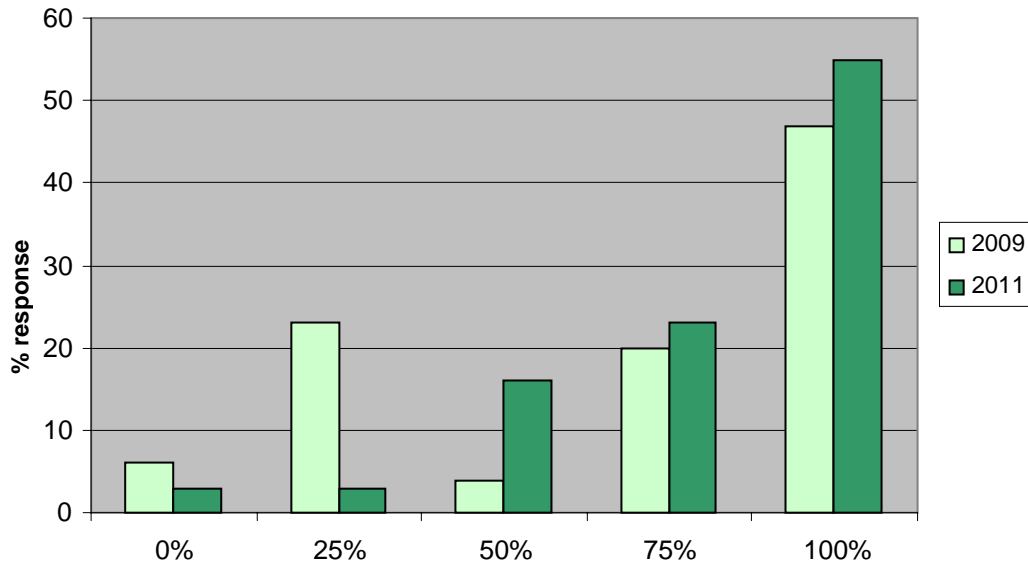
Annual energy consumption of building assets



The above graph shows results from mostly urban Councils. Only one rural Council responded to this question both in 2009 and 2011.

Roads

1. For roads, what is the progress with the drafting of asset management plans?



2. How often do you conduct condition assessment and performance monitoring of your road assets?

Greater than 24 months	49%
Every 24 months	8%
Every 18 months	3%
Every 12 months	24%
Every 6 months	13%
No assessment	3%

3. What type of road hierarchy do you use?

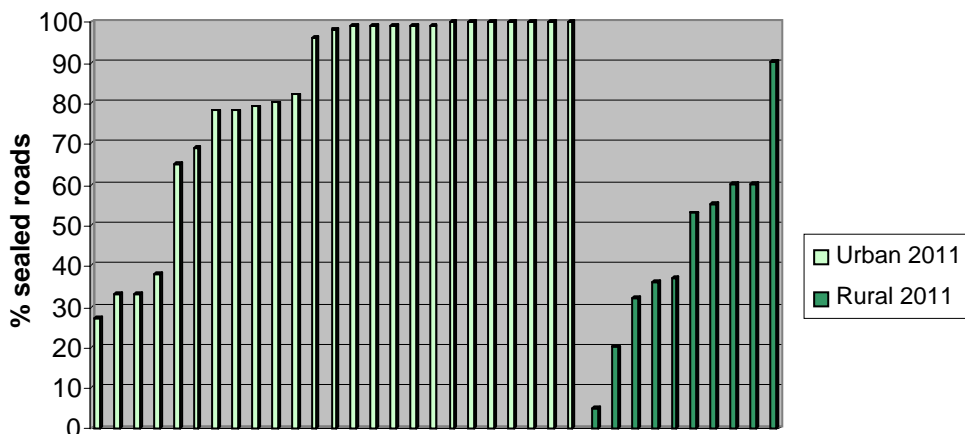
Customized	57%
Functional classification to Austroads	34%
Other	9%

(Other types include Main Roads WA and combination of customized and functional classification).

4. What is the percentage network of sealed roads?

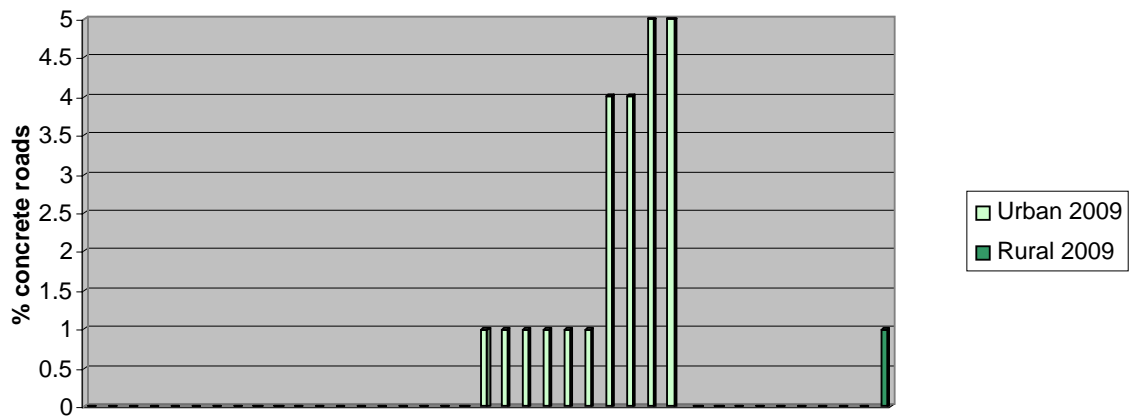
2011 results shown. 2009 results similar.

Sealed roads in 2011



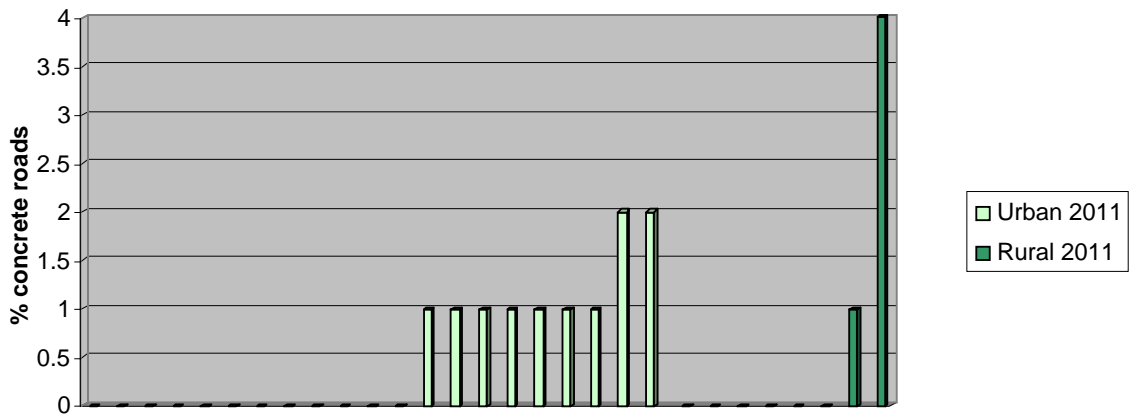
5. What is the percentage network of concrete roads?

Concrete roads in 2009



In 2009 one council in NSW reported concrete roads covered 82% of road network.(Kogarah Council not shown)

Concrete roads in 2011

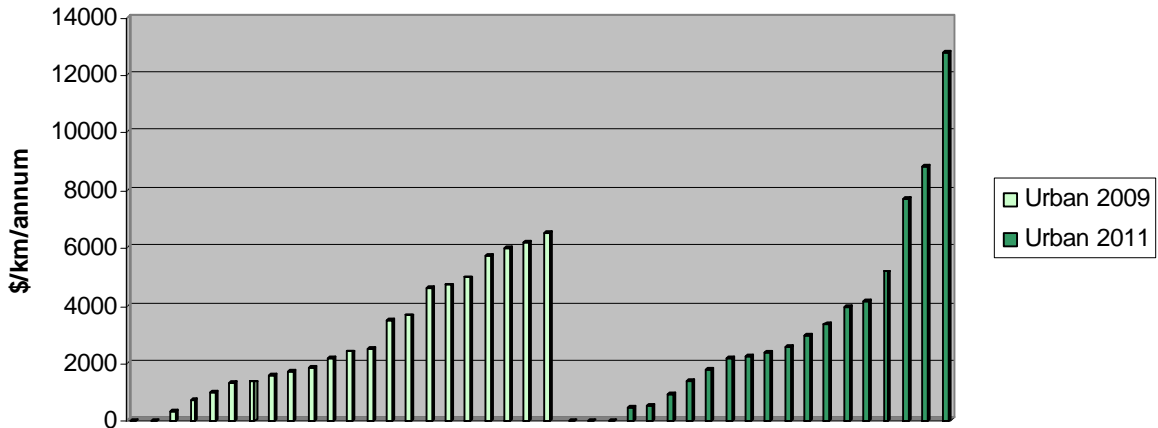


In 2011 one council in NSW reported concrete roads covered 18% of road network.(Strathfield Council not shown)

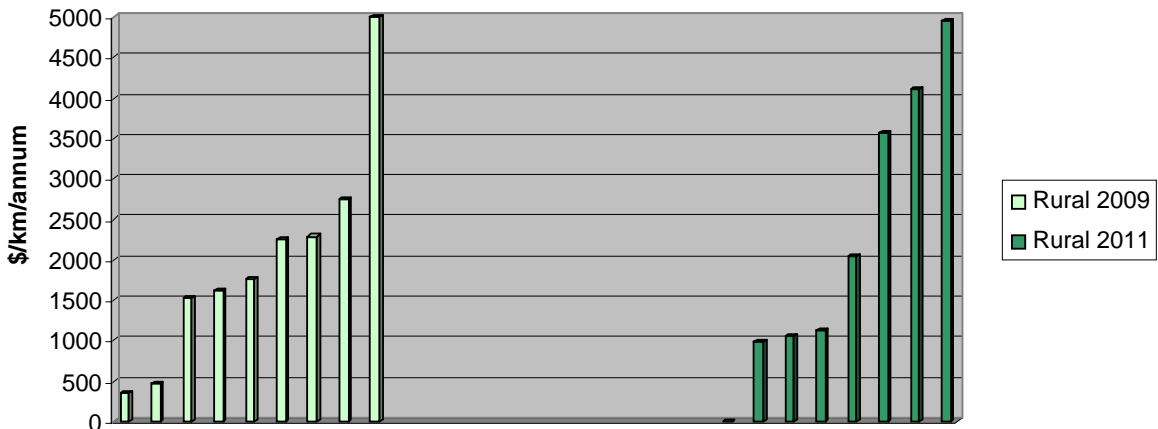
6. What is the maintenance cost/km/annum of sealed roads?

Note: The maintenance cost refers to the entire length of the road network for sealed roads

Maintenance of urban roads

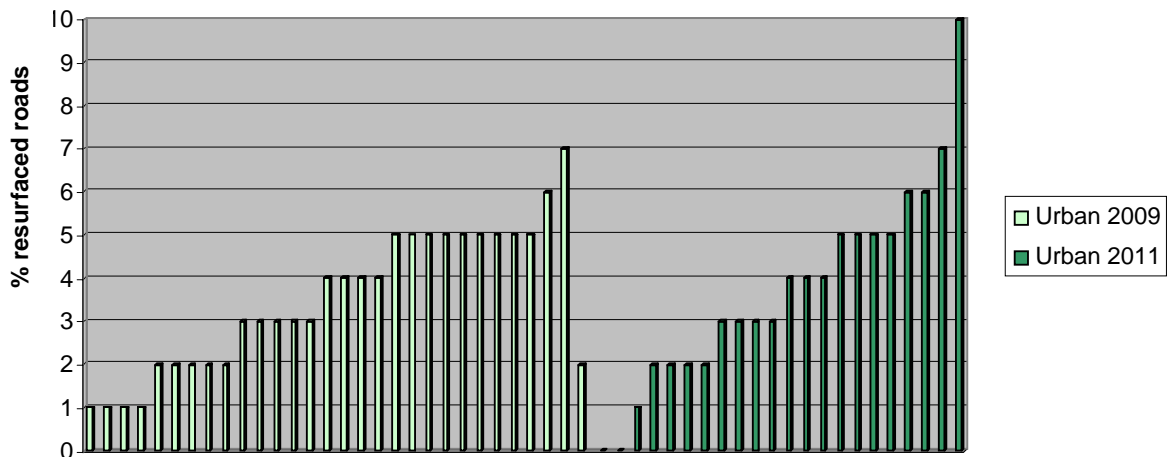


Maintenance of rural roads

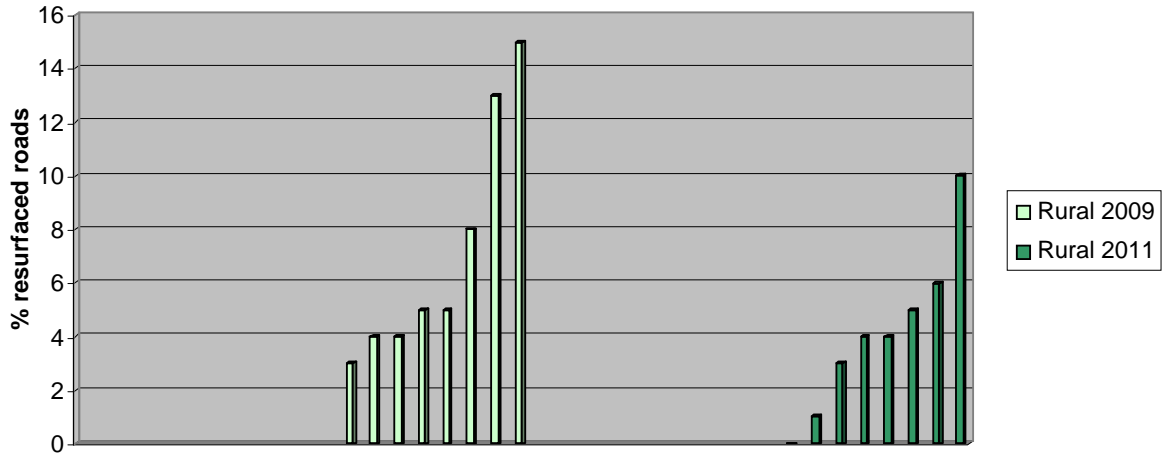


7. What is the percentage of road network resurfaced each year?

Urban road network resurfaced each year



Rural road network resurfaced each year

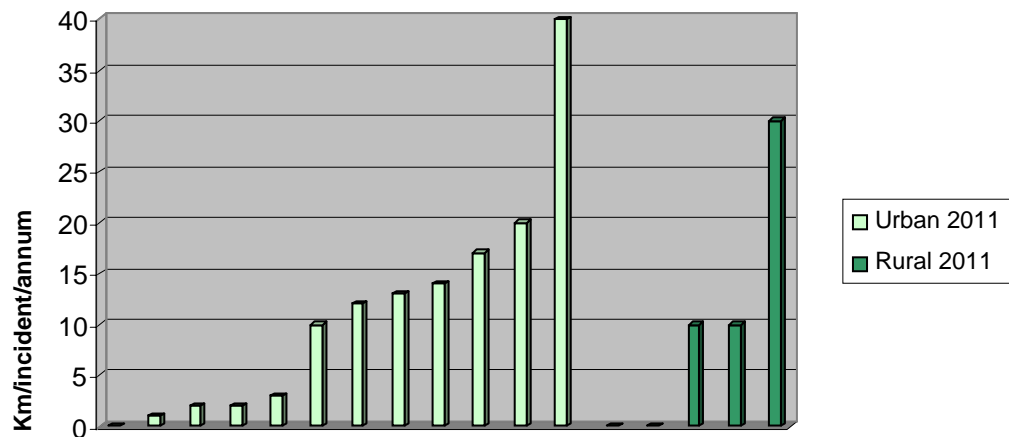


8. What is the km of footpath per incident per annum?

Note: This refers to the number of incidents of reporting unsafe footpaths.

2011 results shown. 2009 results similar.

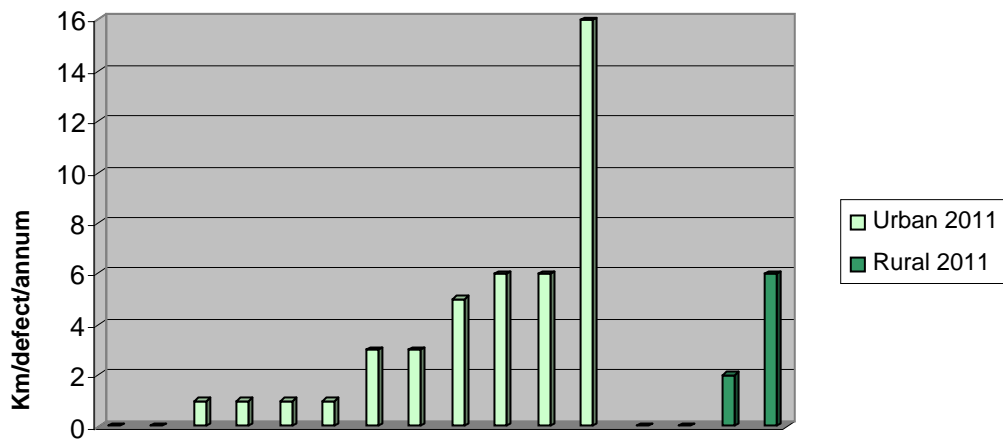
km of footpath per incident in 2011



9. What is the km per defect request of roads per annum?

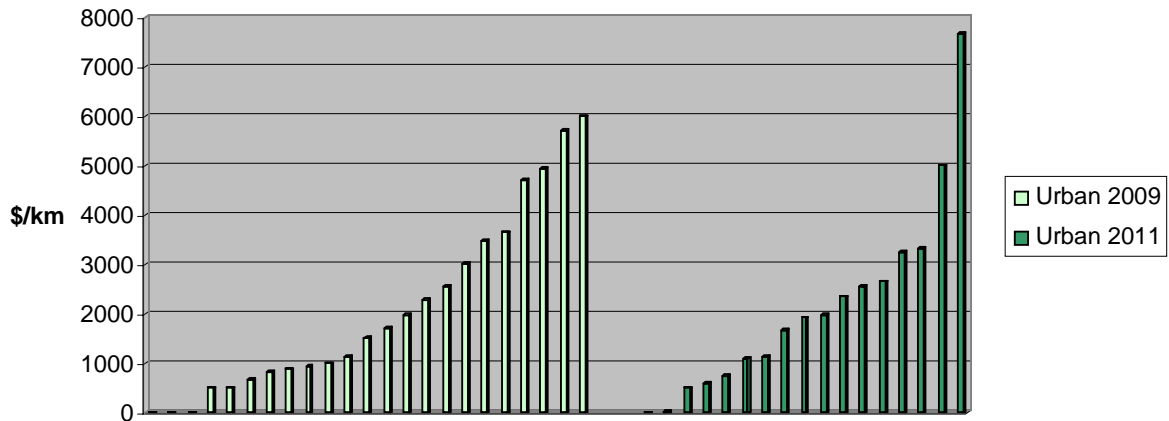
2011 results shown. 2009 results similar.

km per defect requests of roads in 2011

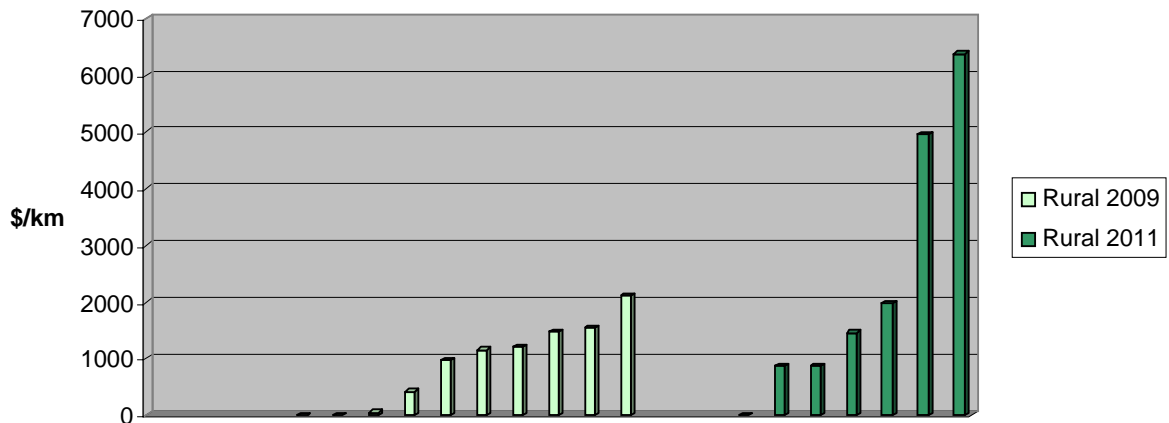


10. What is the cost/km on the routine road maintenance?

Routine road maintenance - Urban

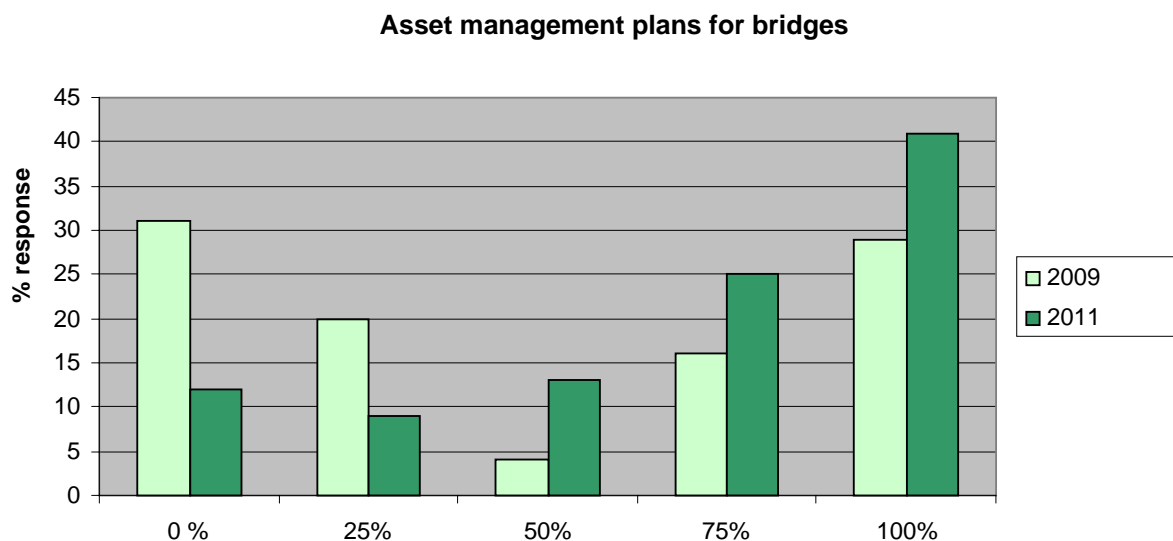


Routine road maintenance - Rural



Bridges

1. For bridges, what is the progress with drafting of asset management plans?



2. What is the percentage of different types of bridges?

In 2009 this question was not in the survey.

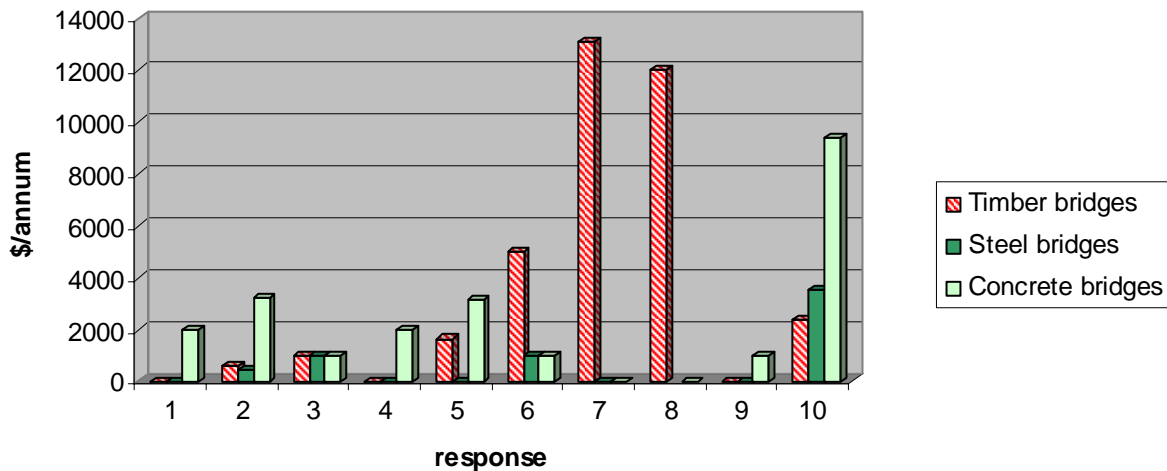
In 2011, 26 Councils responded. Individual results are shown in the table below.

Response	% of Timber bridges	% of Steel bridges	% of Concrete bridges
Urban Councils	28	16	56
	20	80	0
	55	3	42
	0	0	100
	0	20	80
	46	0	54
	0	20	80
	29	57	14
	76	3	21
	0	0	100
	68	0	32
	20	20	60
	15	0	85
	5	15	80
	24	1	75
	20	5	75
35	0	65	
25	0	75	
Rural Councils	0	0	50
	5	10	85
	1	1	98
	6	0	94
	0	0	100
	5	75	20
	71	0	29
	47	0	53

3. What is the average maintenance cost per annum for bridges?

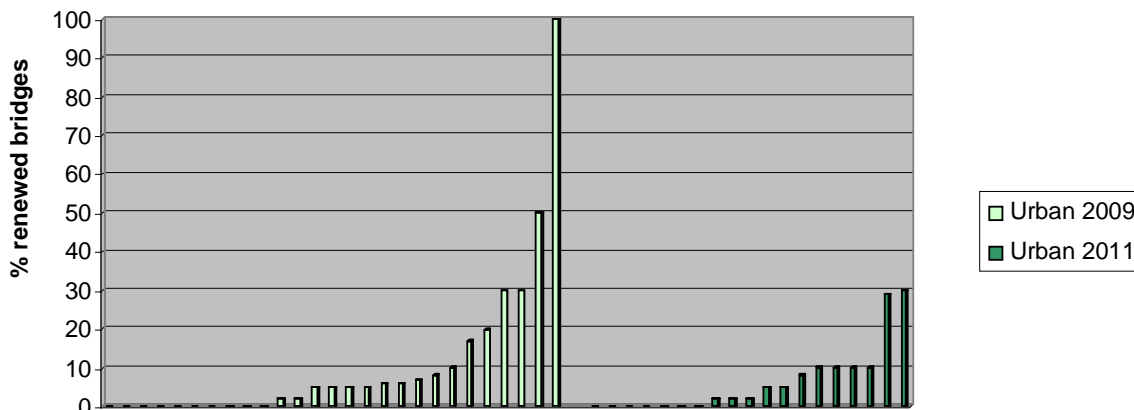
2011 results shown. 2009 results were insufficient.

Maintenance cost of bridges

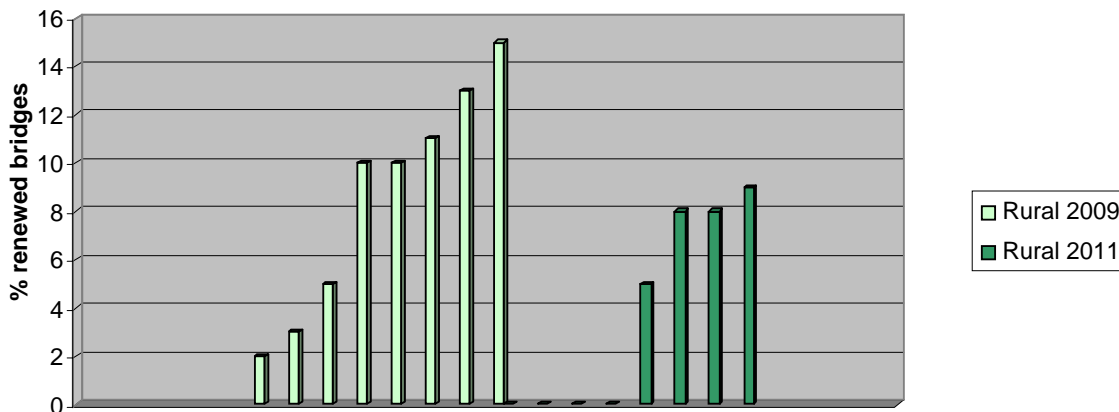


4. What is the percentage of bridges renewed in the past 5 years?

Urban bridges renewed in the last 5 years

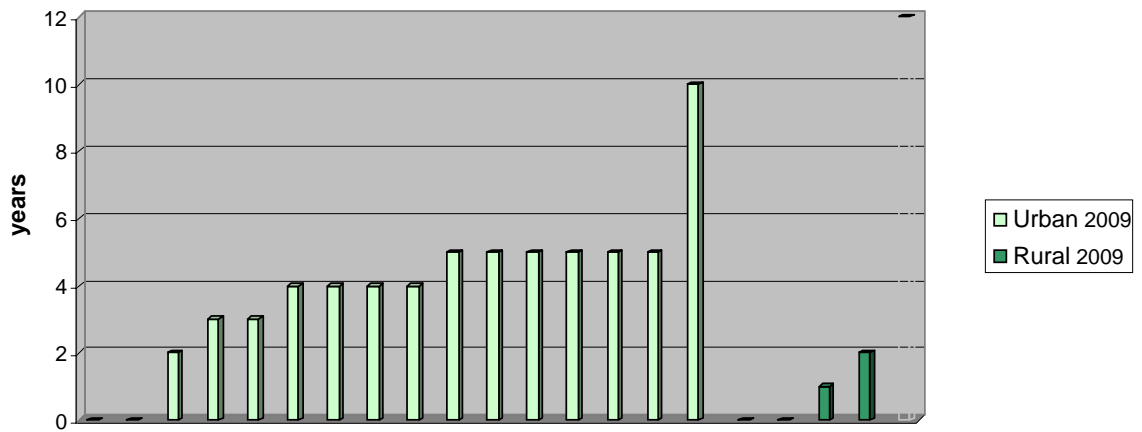


Rural bridges renewed in the last 5 years

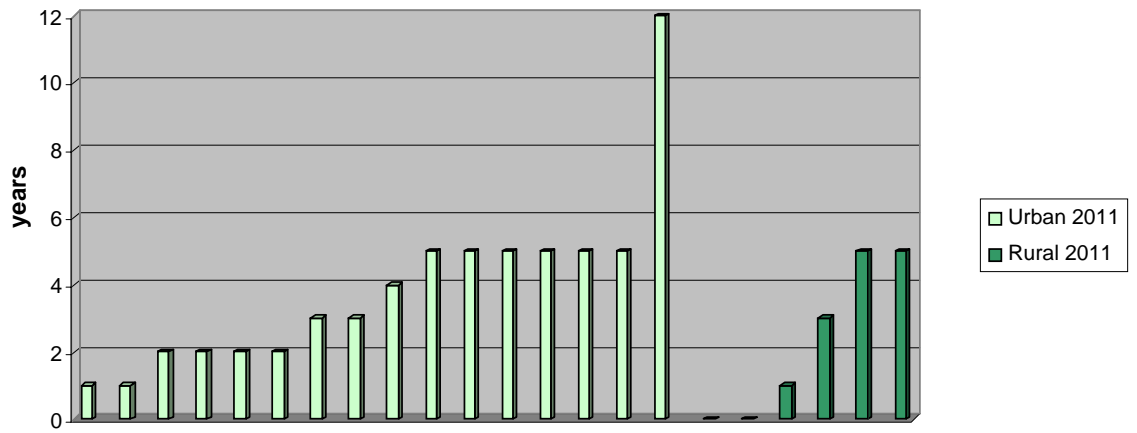


5. What is the frequency of bridge structural certification in years?

Frequency of structural bridge certification - 2009



Frequency of bridge structural certification - 2011



6. Do you outsource bridge inspections?

In 2009 yes

69%

In 2011 yes

65%

Water Supply

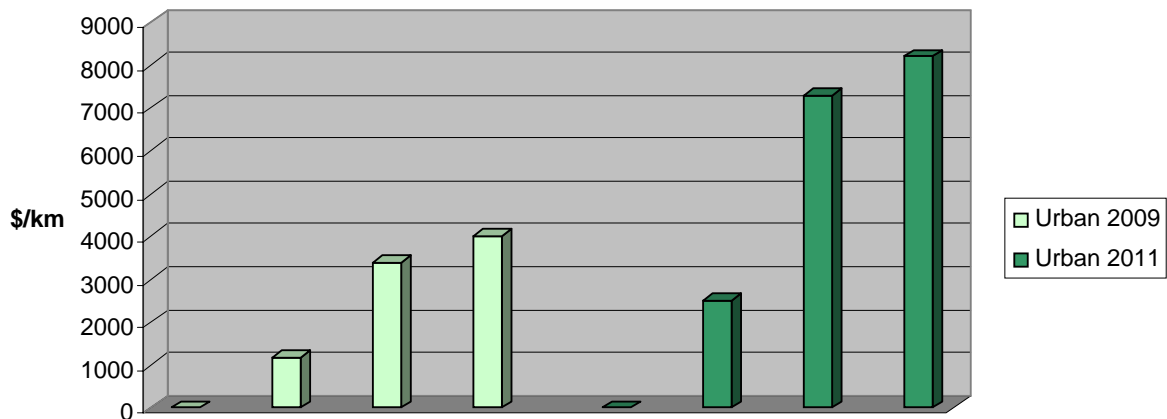
1. Is the local Council responsible for water supply systems?

In 2009 yes 67%
 In 2011 yes 25%

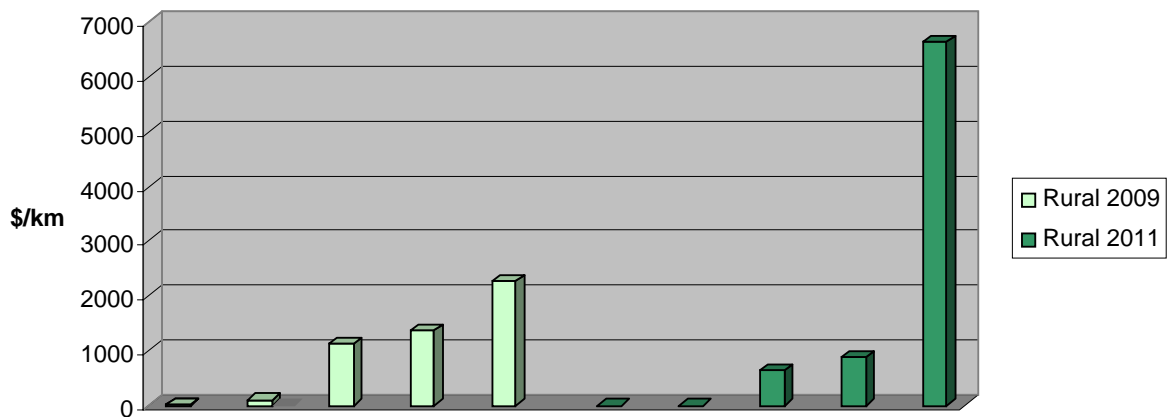
In 2011, 36 Councils responded to this question. Only 9 were responsible for water supply. (3urban and 6rural)

2. What is the maintenance cost/km for water supply systems?

Maintenance cost for water supply - Urban



Maintenance cost for water supply - Rural



3. Do you have an in-line pressure booster pumping station?

In 2009, this question was not in the survey.

In 2011, 10 Councils responded. 2 urban and 4 rural Councils reported to have an in-line pressure booster pumping station.

Sewerage Systems

1. Is the local Council responsible for sewerage systems?

Yes in 2009 63%

Yes in 2011 30%

In 2011, there were 36 responses to this question. Only 11 Councils were responsible for sewerage. (3 urban and 8 rural). 7 of those were from NSW, 3 from QLD and one anonymous)

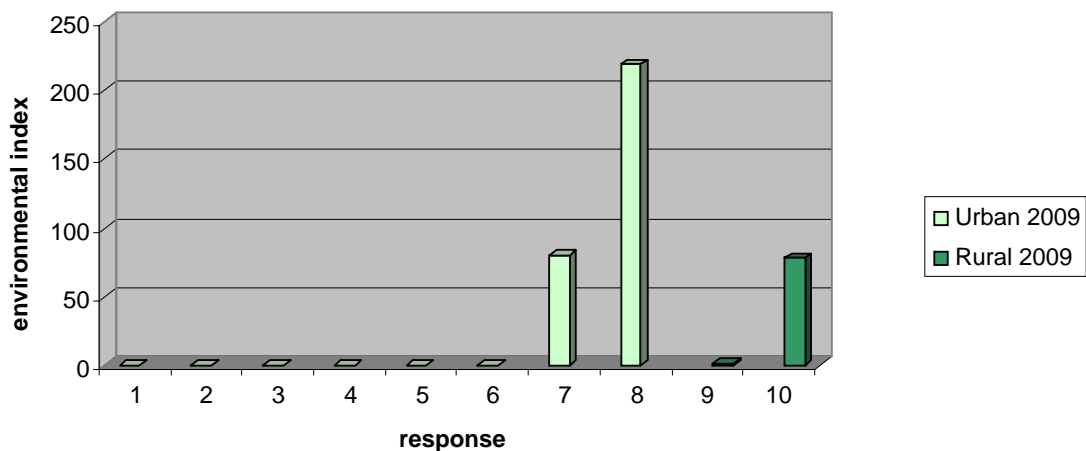
2. What type of sewerage system is used for sewerage disposal?

In 2009 this question was not in the survey.

In 2011, 7 Councils responded. 3 Councils reported pressure system and 4 reported gravity system.

3. What is the Environmental index (Pollutant discharge per capita) of the sewerage system?

Environmental index for sewerage systems in 2009



In 2011 most Councils omitted this question. Only one rural Council in NSW reported an index of 80.

4. What is the effluent water for reuse index (Volume of effluent captured/potable water supplied)?

In 2009 one Council reported an index of 70.

In 2011 two Councils reported values of 51 and 100.

5. What percentage of your network has CCTV inspection types and reporting?

In 2009 this question was not in the survey.

In 2011, 9 Councils responded. Only 2 urban and 2 rural Councils reported to be using CCTV with results of 12%, 45%, 1% and 3% respectively.

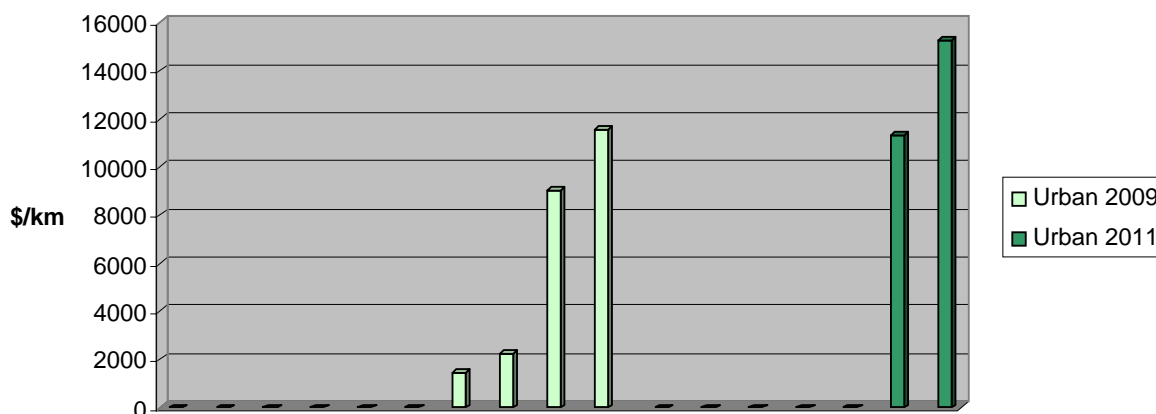
6. Do you have in-line pressure booster pumping station?

In 2009 this question was not in the survey.

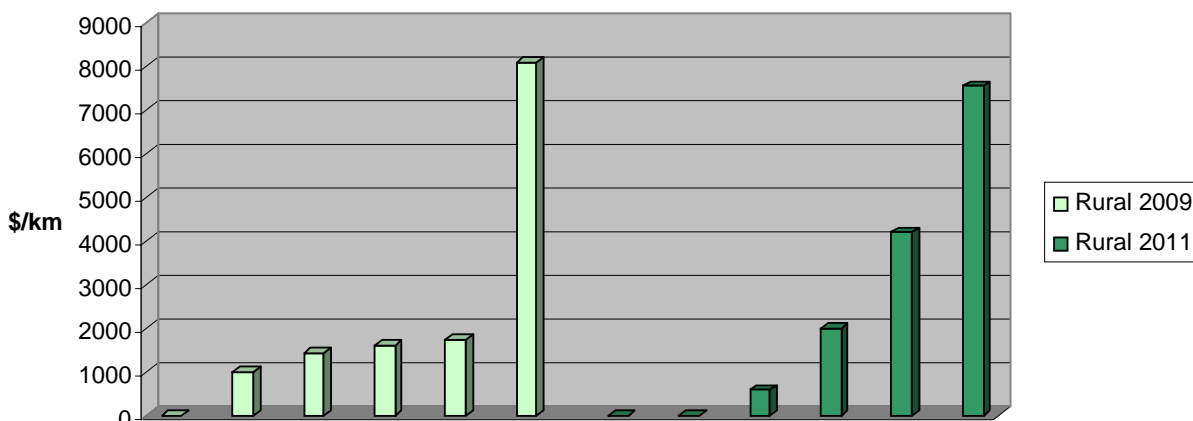
In 2011, 11 Councils responded. 6 Councils have in-line pressure booster pumping station.

7. What is the maintenance cost/km for sewerage systems?

Maintenance cost for sewerage - Urban



Maintenance cost for sewerage - Rural



8. What is the percentage of different types of pipe material used for sewerage systems?

4 Rural Councils answered this question and the results for each individual Council are shown bellow.

	% of ABS pipes	% of Ductile iron pipes	% of Steel pipes	% of GRP pipes	% of PE pipes	% of Copper pipes	% of PP pipes	% of VC pipes	% of Reinf. concrete pipes
Rural Councils	0	0	0	0	5	0	25	70	0
	0	0	0	0	30	0	1	68	1
	0	0	0	0	0	0	27	58	15
	0	50	0	0	0	0	0	0	50

ABS Acrylonitrile butadiene styrene
 GRP Glass reinforced thermoplastics
 PE Polyethylene
 PP Polypropylene
 VC Vitrified clay

9. Do you use trenchless technology for installation of and renovation of pipes?

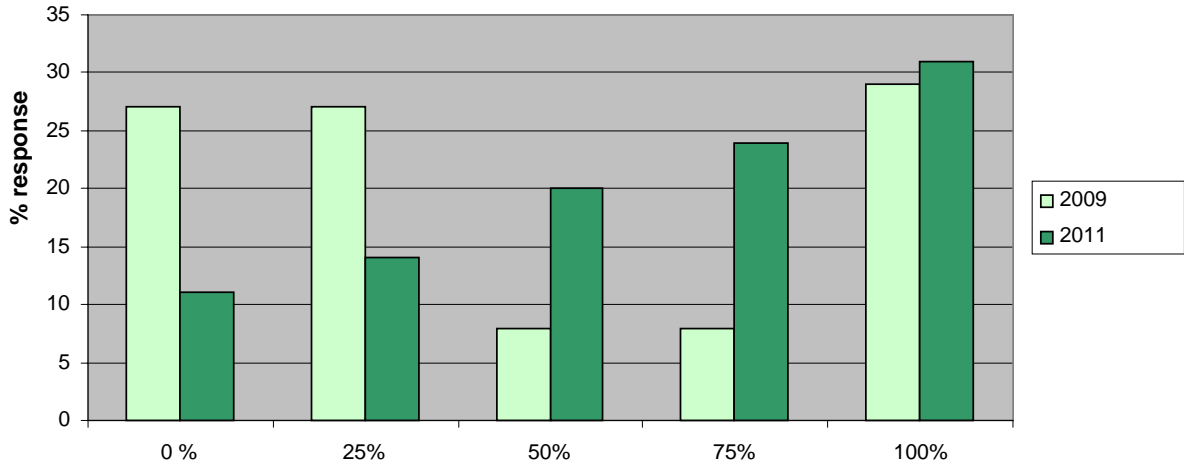
In 2009 this question was not in the survey.

In 2011, 11 Councils responded. 6 Councils use trenchless technology.

Stormwater Drainage

1. For stormwater drainage, what is the progress with drafting of Asset Management Plans?

Progress of asset management plans for stormwater drainage



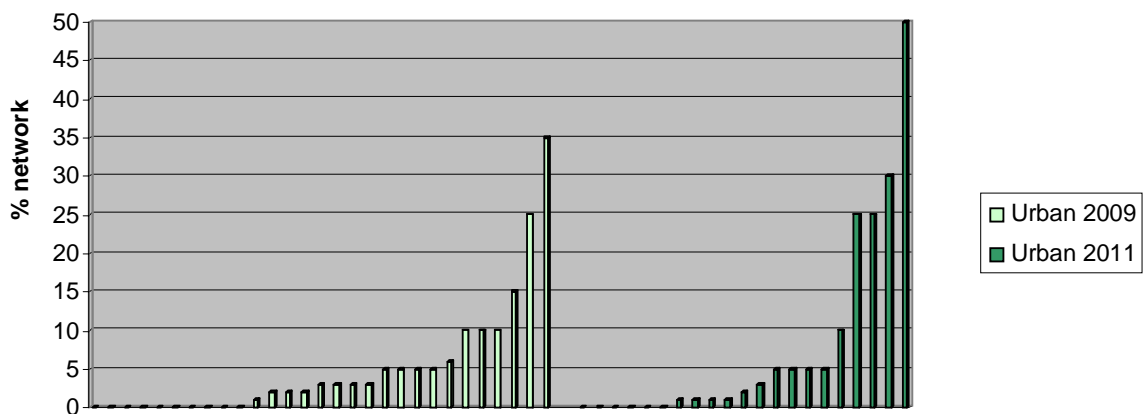
2. Has your Council adopted WSUD (Water Sensitive Urban Design) as a standard?

In 2009 yes 54%
 In 2011 yes 60%

In 2011, 30 Councils responded to this question and 18 reported to have adopted WSUD. Only one of those was rural Council.

3. What percentage of your network has CCTV info?

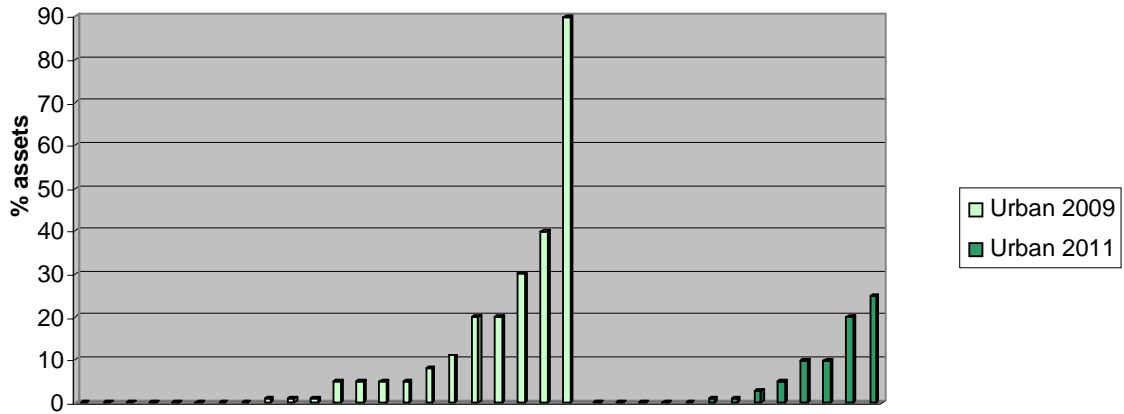
CCTV - Urban



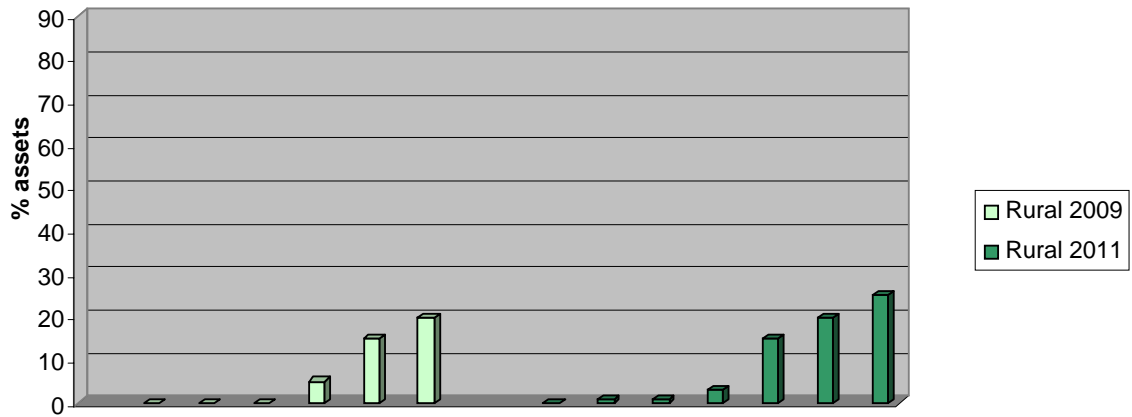
Only few rural Councils reported CCTV and results are not shown here.

4. What is the percentage of stormwater assets requiring renewal?

Stormwater assets requiring renewal - Urban

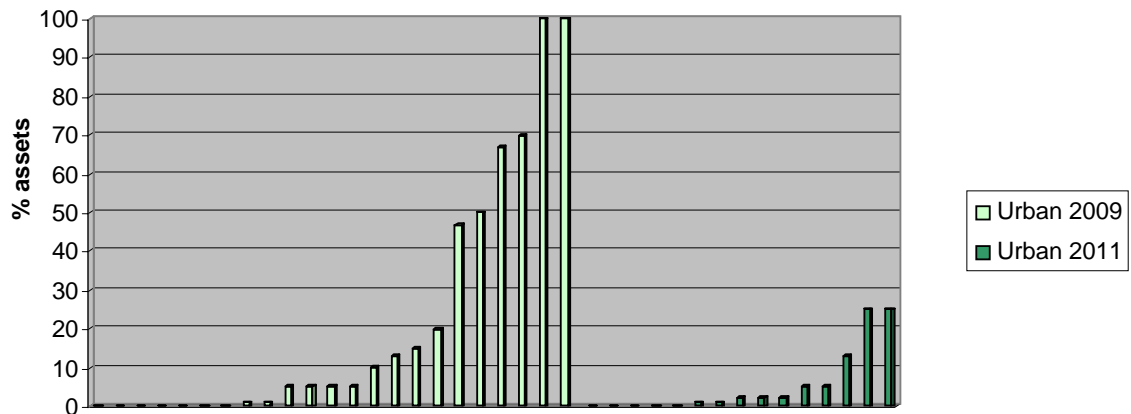


Stormwater assets requiring renewal - Rural

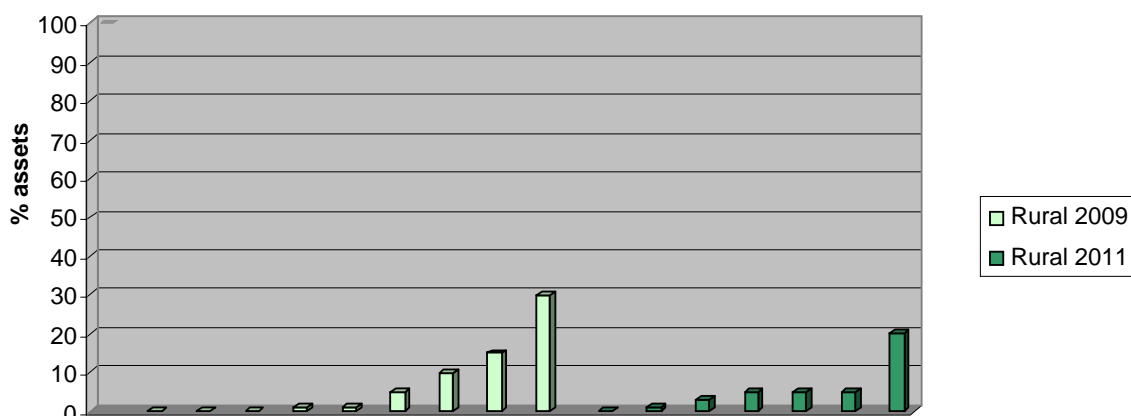


5. What is the percentage of assets with SQID (Stormwater Quality Improvement Devices)?

Assets with SQID - Urban



Assets with SQID - Rural



6. What is the stormwater capture for reuse index (i.e. Volume of stormwater capture/potable water supplied)?

In 2009, 3 Councils responded and reported values of 1,20 and 50.

In 2011, 3 Councils responded and reported values of 3,15 and 30.

7. Does your Council have its own Handbook for drainage design criteria?

In 2009 this question was not in the survey.

In 2011, 29 Councils responded. 40% of those reported to have drainage design handbook.

8. What is the percentage of the different types of pipe material?

15 Councils responded to this question and individual results are shown bellow.

	% of Precast reinforced concrete	% of Fibre reinforced concrete	% of Corrugated steel	% of Corrugated aluminium	% of PE (Polyethylene)	% of PVC (Polyvinyl chloride)	% of Proprietary flexible plastic	% of Precast box culverts
Urban Councils	81	5			2	9		3
	67	20	3			10		
	82	15				3		
	75	20						5
	100							
	79					21		
	98	1				1		
	89			6		4	1	
	30	60			2		3	5
	95		1					4
Rural Councils	94					5		1
	95					2		3
	20		5			15		60
		98						2
	89		1					10

Participating Councils - 2011

A – Z

Adelaide City Council
Armidale Dumaresq Council
Ashfield Council
Bankstown City Council
Bathurst Regional Council
Bayside City Council
Benalla Rural City Council
Broken Hill City Council
Cairns Regional Council
Central Coast Council
City of Belmont
City of Fremantle
City of Marion
City of Perty
City of Subiaco
Colac Otway Shire Council
Dubbo City Council
East Gippsland Shire Council
Goondiwindi Regional Council
Goulburn Mulwaree Council
Greater Dandenong
Greater Hume Shire Council
Hinchinbrook Shire Council
Holroyd City Council
Hunter's Hill Council
Kangaroo Island Council
Knox City Council
Ku-Ring Gai Council
Lachlan Shire Council
Loddon Shire Council
Manly Council
Maranoa Council
Monash City Council
Mornington Peninsula Shire
Moyne Shire Council
Nillumbik Shire
Parkes Shire Council
Port Macquarie Hastings Council
Scenic Rim Regional Council
Shire of Ashburton
Shire of Campaspe
Shire of Capel
Shire of Menzies
Town of Kwinana
Shoalhaven City Council
Strathfield Municipal Council
Sunshine Coast Council
Tamworth Regional Council
Temora Shire Council
The Hills Shire Council
Toowoomba Regional Council
Town of Gawler
Townsville City Council
Wagga Wagga City Council
Wentworth Shire Council
Western Downs Regional Council
Wingecarribee Shire Council
Wollongong City Council
Yarra City Council
Yarra Ranges Council
Yass Valley Council

3 Councils did not provide contact details.

NSW

Armidale Dumaresq Council
Ashfield Council
Bankstown City Council
Bathurst Regional Council
Broken Hill City Council
Dubbo City Council
Goulburn Mulwaree Council
Greater Hume Shire Council
Holroyd City Council
Hunter's Hill Council
Ku-Ring Gai Council
Lachlan Shire Council
Manly Council
Parkes Shire Council
Port Macquarie Hastings Council
Shoalhaven City Council
Strathfield Municipal Council
Tamworth Regional Council
Temora Shire Council
The Hills Shire Council
Wagga Wagga City Council
Wentworth Shire Council
Wingecarribee Shire Council
Wollongong City Council
Yass Valley Council

QLD

Cairns Regional Council
Goondiwindi Regional Council
Hinchinbrook Shire Council
Maranoa Council
Scenic Rim Regional Council
Sunshine Coast Council
Toowoomba Regional Council
Townsville City Council
Western Downs Regional Council

SA

Adelaide City Council
City of Marion
Kangaroo Island Council
Town of Gawler

TAS

Central Coast Council

VIC

Bayside City Council
Benalla Rural City Council
Colac Otway Shire Council
East Gippsland Shire Council
Greater Dandenong
Knox City Council
Loddon Shire Council
Monash City Council
Mornington Peninsula Shire
Moyne Shire Council
Nillumbik Shire
Shire of Campaspe
Yarra City Council
Yarra Ranges Council

WA

City of Belmont
City of Fremantle
City of Perth
City of Subiaco
Shire of Ashburton
Shire of Capel
Shire of Menzies
Town of Kwinana

BENCHMARKING AND ASSET MANAGEMENT WITH AUS-SPEC

Richard Choy, CEO, NATSPEC

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Abstract

It is essential for any organisation to identify appropriate asset management practice for a sustainable future. For Local Councils this includes reviewing the organisation's current asset management practice, assessing appropriate practice, identifying the gaps, and the preparation and implementation of an improvement plan. Benchmarking is one tool that Local Councils may use. AUS-SPEC in fulfilling its role also needs to understand these issues.

This presentation will give an insight into how Councils may use the 2011 AUS-SPEC Asset Management Benchmark Survey to identify priority actions.

AUS-SPEC is the national Local Government specification system for minor civil works developed by IPWEA and updated by NATSPEC. Local Councils use AUS-SPEC to provide quality and consistency for the life cycle management of various assets. AUS-SPEC is a national document that delivers consistency, and a uniform approach to design decisions, construction and maintenance across Australia.

Key Words: Asset Management, Benchmark, Best Practice, Construction, Design, Documentation, Local Government, Maintenance, Quality, Specification, Sustainability

Introduction

The AUS-SPEC Benchmark Survey enables Local Councils to identify gaps and assist the Councils in improving their management of assets. A Council is considered sustainable if its infrastructure capital and financial capital is able to be maintained over the long term. A 2006 PricewaterhouseCoopers report prepared for the Australian Local Government Association concluded that 35% of Local government Councils are not financially sustainable. The national renewal backlog was estimated at \$14.6 billion. Additional funding required to clear this backlog and cover underspending on renewals is estimated at \$3.1 million per Council per annum.

A national approach to infrastructure delivery is not only vital to the national economy, and the lives of all Australians, but is common sense.

*Michael Deegan,
Infrastructure Australia*

The provision of infrastructure services in a financially sustainable manner requires an integrated approach to asset and financial management.

National consistency framework

The Local Government and Planning Minister's Council (LGPMC) has developed the following three nationally consistent

frameworks on local government asset and financial management:

- Assessing local government financial sustainability
- Asset planning and management
- Financial planning and reporting.

This initiative is to assist Councils to improve their asset management performance and financial sustainability.

A recent paper written by the Australian Rural Road Group (ARRG) *Going nowhere: The rural local road crisis, its national significance and proposed reforms*, suggests that road asset management is a far more confronting issue in rural areas than for urban local government Councils. For rural Councils, asset management is primarily road management. The initial cost of infrastructure accounts for only 20% of its lifetime costs. The remaining 80% of costs arise from operating, maintaining and renewing the infrastructure. The paper also highlights the major challenges of haphazard local government asset management planning and lack of national reporting obligation for local road infrastructure.

Linking infrastructure asset management plans to the Councils' financial plans is the best way forward for managing the local government assets. AUS-SPEC, through its national standardized and quality documentation system can assist Councils in managing their assets.

Infrastructure asset management

The main aim of infrastructure asset management is to meet the required level of service, in the most cost effective manner, through the management of assets for present and future customers. The key elements of infrastructure asset management are taking a life cycle approach and developing cost-effective management strategies for the long term.

Asset management is the systematic and coordinated activities and practices through which an organisation optimally manages its physical assets and their associated

performance, risks and expenditures over their lifecycle for the purpose of achieving its organisational strategic plan.

- PAS 55

Asset management planning is a comprehensive process to ensure that delivery of services from infrastructure is provided in a financially sustainable manner. Asset management plans, risk management plans and a long term financial plan provide the tools to look at future investments and consider levels of service, risks, costs and community needs and affordability in providing services.

Many local government Councils have made considerable progress through the adoption of:

- The International Infrastructure Management Manual (IIMM)
- The principles of National Asset Management Strategy Group of IPWEA (NAMS.AU)
- Australian infrastructure financial management guidelines.

IPWEA has been proactive in developing the necessary tools and providing training to asset managers in delivering good asset management practice.

Lifecycle asset management

Life cycle of an asset is the time interval that commences with the identification of the need for an asset and terminates with the decommissioning of the asset or any liabilities thereafter.

The life cycle of an infrastructure asset covers five stages:

- Planning
- Design
- Construction
- Operation
- Replacement/renewal/disposal.

2010 Engineers Australia's Infrastructure report card

The 2010 Australian Infrastructure Report Card provides an up-to-date strategic overview of Australia's infrastructure. It highlights the issues relating to Australia's physical infrastructure, outlining key themes and areas for improvement. The report card provides a baseline for future analysis and benchmarking so that the progress can be assessed and priorities evaluated.

The report card discusses the need for ongoing maintenance and renewal, as well as new infrastructure to meet demands. Maintenance is essential in ensuring the longevity of any infrastructure asset. Infrastructure owners and managers improve the maintenance of existing assets through adequate funding and asset management plans. The overall results show that Australia's infrastructure is in need of some major improvements.

Councils are responsible for 85% of the road network in Australia. **Local roads** have been given an overall rating of **D+** which shows that the road network ranges from adequate to poor. This reflects the need for proper asset management strategies and a considerable amount of funding to upgrade the ailing infrastructure. AUS-SPEC, through its annual update service, has updated the roadworks design and construction specifications to the current industry standards and Austroads guides.

Water and wastewater have been rated **B-** which shows that these services are generally in good condition and effectively managed. AUS-SPEC water supply and sewerage specifications have been updated to the Water services association of Australia (WSAA) standards in 2010.

Stormwater has been rated **C** which reflects that major changes are required for it to be fit for its current and future purpose. It is also suggested that the implementation of water sensitive urban design (WSUD) principles and issues relating to climate change is critical.

WSUD principles, such as stormwater harvesting and re-use and stormwater quality

improvement devices have been included in the recent updates to the AUS-SPEC Public utilities package. The AUS-SPEC TECHnote DES 024 *Water sensitive urban design* has also been released for the benefit of the Councils.

Benchmarking

Benchmarking is a tool used to measure, analyse, assess and describe an organisation's performance against similar organisations. There are various forms of benchmarking that may be used in conjunction with one another:

- Process benchmarking: Analysing the activities and tasks that turn resource inputs into outputs and outcomes.
- Performance benchmarking: The comparative performance within and between organisations, against performance indicators that represent certain measures of efficiency and effectiveness.

These forms of benchmarking have been used for the AUS-SPEC Asset Management Benchmark Survey 2011.

Benchmarking with AUS-SPEC

The implementation of AUS-SPEC, facilitates improvement of the maintenance management system progressively, and provides the asset owner with the control and historical data that allows the organisation to competently improve the management of the assets. AUS-SPEC systems minimise risk and provide a sound asset management approach. Once implemented AUS-SPEC can be customised to further suit the organisation's in their asset management journey.

Asset management practices constantly change and regular benchmarking can help an organisation identify what it needs to examine. The main aim of the benchmarking is to discover how processes can be improved to achieve better results.

AUS-SPEC Benchmark Survey

The main purpose of the AUS-SPEC Asset management benchmark survey is to identify actions for their asset management.

The AUS-SPEC Benchmark Survey (provided as an Appendix) includes questions on the general corporate overview, asset management plans, asset condition analysis, asset information and performance measurement for each of the following asset groups:

- Contracts and quality
- Parks
- Buildings
- Roads
- Bridges
- Water supply
- Sewerage systems and
- Stormwater drainage.

Maintenance costs are a measure commonly used for benchmarking. Councils that have a proactive approach to maintenance activities, planning and scheduling will have comparatively lower costs than Councils with a reactive approach. AUS-SPEC documentation helps Councils to reduce reactive maintenance and instead plan maintenance as an integral part in ensuring best results. The survey results allow Councils to compare their performance with other Councils.

Conclusion

AUS-SPEC provides an aid to process benchmarking through its systematic approach and performance benchmarking through its consistent specifications within local governments Councils. The development of standard processes through AUS-SPEC documentation creates efficiencies and effectiveness in managing and upgrading infrastructure assets.

The AUS-SPEC Asset Management Benchmark Survey 2011, is intended to assist Local Councils to determine priority action for asset management by allowing them to compare their activities against other Councils.

References

Australian Rural Road Group, (Nov 2010), *Going nowhere: The rural local road crisis, its national significance and proposed reforms.*

AUS-SPEC Maintenance *TECHguides.*

Engineer's Australia, (2010), *Australian infrastructure report card.*

Institute of Public Works Engineering Australia (2009), *Australian Infrastructure Financial Management Guidelines.*

Institute of Public Works Engineering Australia (2006), *International Infrastructure Management Manual, Sydney.*

IPWEA Practice Note 3, (2009), *Building condition and performance assessment guidelines.*

PAS 55-1, (2008), *Asset management - Specification for the optimized management of physical assets.*

PricewaterhouseCoopers, (2006), *National Financial Sustainability of Local Government*, for Australian Local Government Association of Australia, Canberra.

South Australia Local Government, (2001), *A Wealth of Opportunities: A Study into Infrastructure Asset Conditions in South Australia.*

Author Biography



Richard Choy is the Chief Executive Officer of NATSPEC, publisher of the National building specification of Australia. An engineer by profession, he has been involved in the design and construction industry for over 30 years. Richard has been involved with most building types and building materials from both a design and construction supervision perspective. He was the inaugural Executive Director of the Steel Reinforcement Institute of Australia, Federal President of the Concrete Institute of Australia and Vice-President of the Building Science Forum of Australia. He has participated on MBA and Standards Australia Committees and has presented on a wide range of subjects both domestically and internationally.

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