

2010

Far North Queensland Regional
Organisation of Councils

Regional Asset Management Strategy

*(Infrastructure Asset Management
and Service Delivery)*



Far North Queensland Regional Organisation of Councils



JRA

Asset Management

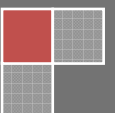



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1. Executive Summary

1.1 Purpose of Report

This strategy aims to provide a strategic asset management framework which will guide the planning, construction, maintenance, and operation of infrastructure essential to deliver the vision of the Council's and communities of the Far North Queensland region. This will promote the facilitation of a consistent, efficient and effective framework for responsible service delivery by Council's in the region.

This strategy is consistent with, and supports the development of a whole of Government approach to strategic asset management. This strategy addresses the issues raised by the objectives for structural reform of Local Government service delivery and funding of infrastructure assets.

Objectives for This Regional Strategy

1. Developing a Long Term Approach to Service Planning and Delivery at Council and Regional Level

The first objective for a regional strategy is Queensland's development of a rational and strategic approach to the planning, construction, maintenance, and operation of infrastructure. This requires not only planning and providing the infrastructure necessary for growth and economic prosperity, but also providing a framework for wise decision making across all tiers of Australian Government. This is particularly relevant for communities with static or declining populations associated with the ongoing urbanisation of Australian Society. In addition whole of Government service delivery will need to plan for, and manage, changes to community expectations for services and the cost and regulation of energy, water, waste, environmental custodianship, social and cultural harmony, and fairness. The Queensland Local Government Reform Commission identified the need for this rational and strategic approach in the report, "*Preparing Queensland local government for the challenges of the 21st century*", and this approach has now been effectively legislated in the *Local Government Act 2009*.

2. Consistency with a Whole of Government Approach.

The second objective for this regional strategy is that it supports the development of a National Framework for strategic asset management. The Local Government and Planning Ministers' Council (LGPMC) consists of Local Government and Planning Ministers from across Australia and New Zealand and the President of the Australian Local Government Association. The LGPMC provided final endorsement of nationally consistent framework for assessing financial sustainability, asset planning and management, and financial planning and reporting; they then agreed that each State and Territory government should apply the framework within the context of the relationships with their local government sectors.

This framework provides tools for all local government authorities that are consistent across the areas of financial sustainability, asset planning and management, and financial planning and reporting. A report on the progress of their application was provided back to the LGPMC in 2008. The LGPMC considered that a case for more funding through Financial Assistance Grants may be enhanced by jurisdictions implementing a nationally consistent approach to these issues.

The LGMPC framework includes the following sections:

Framework 1 - CRITERIA FOR ASSESSING FINANCIAL SUSTAINABILITY

Framework 2 - ASSET PLANNING AND MANAGEMENT

Framework 3 - FINANCIAL PLANNING AND REPORTING

This strategy recommends that each Council now develop a consistent and accountable strategy to plan, deliver, and fund services to their communities in accordance with these compatible and complimentary initiatives at the State and Federal Government level. Cooperation through FNQROC by the new regional Councils will enable the development of whole of government funding models that are capable of dealing with the significant changes to society that are likely to result from:

- energy and water pricing changes;
- waste and wastewater management;
- population distributions and age profiles; and
- the deterioration and renewal of infrastructure built during and after the baby boom period.

This project has already demonstrated that a regional approach to asset management is an effective method of developing the plans, policies, and procedures necessary for asset management. The input and attendance by the Council's in the region during this project has been very good and made possible by the coordination, support, and leadership of FNQROC. The voluntary cooperation of Council's within the region can provide a blueprint for cooperation at State and National level in the collection, analysis, and reporting of vital knowledge on how to better manage infrastructure for the benefit of the people of Australia.

1.2 Key Findings

In order to implement their respective Management Plans, each Council needs to put in place a management and administrative framework essential for planning, constructing, maintaining, and operating assets. The following findings are based on a series of workshops run from 2006 to 2008.

1.2.1 Link Policies and Strategies with Long Term Programme

The current level of expertise, and processes within the FNQROC has been highly variable but always focussed on delivering Council's adopted programmes. Each service area has developed good systems and processes to complete Council's adopted programme of works, however the programmes tend to be fragmented and focussed on short term service objectives (typically less than 5 years). Policies and strategies are variable but have improved extensively over the past 2 years and now are at a much higher standard, however there needs to be an improved process to integrate them into a long term implementation plan. The major weakness is the generally poor quality of asset registers and in particular, the reliability of asset lives (remaining and useful life) and asset costs (maintenance, operational, renewal and upgrade cost) of infrastructure assets for the desired levels of service. The Long Term Asset Management Plan should have a long term forward renewal plan that corresponds primarily with the Long-Term Community Plan and agreed levels of service, with consideration given to the remaining lives in the asset register.

1.2.2 Develop Infrastructure Service Delivery Plans and Long Term Financial Plans.

In the past, there has not been a good understanding by any level of Government of the long term cumulative consequences of decisions to build infrastructure projects. Under this Policy and Strategy, agreed levels of service performance will have an accompanying Long Term Financial Plan that aims to fully fund the capital, maintenance, and operating costs needed to sustain the service level targets. In order to achieve this, a number of service level scenarios and long term cash flows will be run to determine the optimum balance between environmental, economic, social and cultural objectives. These strategies are proposed in the Infrastructure Management and Service Delivery Development Programme set out in the following section and will address the key initiatives set out in the 2007 issues paper 6 by the QLD Department of Local Government.¹

Based on currently available information and current revenue arrangements, most individual pre amalgamation Councils were unlikely to be able to generate sufficient revenues from rates, fees and charges to sustain the current infrastructure in the long term. This makes the development of a transparent and accountable whole of Government funding model essential. The financial position for the next 10 years appears satisfactory, however this is difficult to quantify definitively because of the ongoing improvements to inventory and condition data. Interim data has been collated for all Councils in the region, however this should now be updated, aggregated by the new Regional

¹ *Assets, Financial and Infrastructure Management – Issues Paper 6, 2007*

Councils, and the model updated based on the March 2008 opening asset registers for the new Councils.

1.2.3 Develop Long Term Asset Management Plans Including Risk Management Plans

Most of the existing infrastructure in the region was built over the past 100 years under whole of Government policies that encouraged and funded infrastructure for growth. During this past period of rapid infrastructure expansion, little or no analysis was done to understand cumulative economic, social, environmental, and cultural consequences of decisions to build capital projects funded by the apparent abundance created by rapid growth.

Under this policy and strategy, Long Term Asset Management Plans² will be required to develop detailed asset construction, renewal, upgrade, maintenance, operating and disposal plans with corresponding Risk Management Plans. Service levels and performance targets should be set in the Long Term Asset Management Plans, funded by the Long Term Financial Plans. Performance indicators for sustainable environmental, social, cultural, and economic goals should be set in Long Term Asset Management Plans and monitored and reported under the decision support strategy.

Long Term Asset Management Plans should be prepared by each Council using the NAMS.Plus framework under the supervision of the recommended regional asset management group.

1.2.4 Build Asset Management Capacity Within Each Council.

Skills, processes and technology are needed in each Council to produce the following planning and accountability documents required under the Local Government Act 2009, Section 104(3)

- (a) an annual report;
- (b) a 5 year corporate plan;
- (c) an annual operational plan;
- (d) a long-term community plan (at least 10 years);
- (e) a long-term financial plan (at least 10 years);
- (f) a long-term asset management plan (at least 10 years);
- (g) a report on the results of an annual review of the implementation of the long term plans mentioned in this section.

These documents will require the organisational capacity and maturity to collect, collate, analyse and report the following:

1. Asset knowledge on;
 - a. Current and proposed asset service levels for each asset class including:
 - i. Asset condition
 - ii. Asset utilisation
 - iii. Asset demand
 - iv. Defect rectification history
 - v. Customer service request history
 - vi. Asset risk incident history and risk rating
 - b. Asset service delivery costs to maintain, operate and where applicable, renew or dispose assets for the duration of the service.
2. Service planning scenarios to link service objectives with the optimum mix of infrastructure assets that support those service objectives
3. Develop funding models to fund asset operation, maintenance, renewal and upgrade necessary to meet the service objectives
4. Links to the Long Term Community Plan

² As required by the Local Government Act 2009 – See Appendix 9.

1.2.5 Improve Asset Decision Support Knowledge.

The delivery of each Council's Corporate Plan will require a high level of knowledge of the life cycle consequences of existing infrastructure as well as proposed changes to infrastructure.

Asset knowledge is essential to understanding the cumulative consequences of decisions. This knowledge exists in a range of sources and the Infrastructure Decision Support System Strategy sets out the improvements to knowledge of infrastructure services and the systems used to manage this knowledge. Current knowledge tends to be fragmented in a wide range of systems, databases, records, and documents and a strategy is recommended to improve infrastructure decision support knowledge.

1.2.6 Substantial Changes in Mandatory Requirements for Asset Management

Some Council's still have a lot to do to bring their asset registers to a standard suitable for fair value revaluation and Long Term Financial Plans. All Council's will benefit from continuing to cooperate closely in the next 2 – 3 years. Asset Registers need to be the basis for Long Term Financial Plans. If each Council commences a Long Term Financial Plan in accordance with the LGPM national framework, the intent of the Local Government Act 2009 is likely to be met. This Asset Management Policy and Strategy is completely consistent with the measures proposed in the discussion paper and identified that the benefits of improving asset management apply to two broad areas:

- Policy Decision Support to provide information on the consequences of past decisions, predict the outcomes of current policy options and enable the optimum delivery of selected policy options;
- Operations decision support to ensure that tactics for service delivery, maintenance and renewal provide the lowest possible life cycle cost whilst controlling exposure to risk and loss.

Long Term Asset Management and Long Term Financial Plans should be consistent and reliable. It is suggested that Regional Asset Management Strategy Technical Committee members periodically share, review and discuss their Long Term Financial Plans and Long Term Asset Management Plans, to ensure that the Annual Reports based on these plans are consistent and provide reliable information to the community.

1.3 Policy

The Infrastructure Asset Management and Service Delivery Policy will provide an integrated and multidisciplinary approach to the sustainable management of the Council's assets. This Policy and the draft Sustainable Asset Implementation Strategy need to be integrated with each Council's strategic planning processes to:

1. Support a high quality of life and amenity for the community;
2. Promote quality urban and rural environments;
3. Demonstrate environmental leadership and stewardship; and
4. Plan and manage infrastructure needed to deliver the Strategic and Corporate Plans including the adopted aspects of the Council's Corporate Plan.

This policy covers all infrastructure service planning, the effective delivery of the services needed and the monitoring of all information needed to allow continued improvement as the environmental, social, economic and cultural trends change.

1.3.1. Vision

The objectives of FNQROC are to:

- address cross boundary issues;
- take forward the collective interest of Councils in the region and influence senior decision makers within Government and agencies;
- communication and information sharing;
- facilitate regional economic development and co-operation of mutual benefit to member councils, communities, and businesses;
- strategies for doing more with less;
- build effective partnerships with State and Federal departments/agencies which make decisions that affect our region.

Within this set of collective objectives for FNQROC, the vision for the Regional Asset Management Strategy is to better enable each Council plan, construct, maintain and fund the infrastructure essential to delivering services to communities in accordance with each Council's Long Term Community Plan.

1.3.2. Objectives and Principles

The objectives or purpose of Infrastructure Asset Management and Service Delivery Policy are to:

1. Provide infrastructure and services to deliver the objectives of each Council's Corporate Plan;
2. Implement a life-cycle approach to the management of the infrastructure assets of each community to achieve best value for that community;
3. Ensure that service delivery needs forms the basis of infrastructure asset management;
4. Provide a sustainable funding model that meets community needs;
5. Demonstrate environmental leadership and minimise the impact on the environment;
6. Develop and implement a consistent approach to asset decision support systems; and
7. Ensure a consistent and coordinated programme for compliance with legislative and Department of Local Government requirements.

The following principles form the overarching framework by which these regional objectives will be delivered and guide the fundamental direction by which systems, processes and plans will be based:

1. Outstanding Environmental Performance – all aspects of the management of the Council's assets will include criteria to achieve outstanding environmental performance.
2. Local Government Excellence – the infrastructure asset management practices in the region will move to an advanced level in the next 2 – 3 years.
3. Life-Cycle Asset Management Principles - apply a "whole of life" methodology for managing infrastructure assets including:
 - Planning;
 - Acquisition/creation;

- Operation;
 - Maintenance;
 - Renewal; and
 - Divestment.
4. Best Value – each Council will balance financial, environmental and social aspects to achieve best value for the community.
 5. Service Levels – asset service levels will be clearly defined and reflect the needs of each community, meet corporate policy objectives and balance capital investment and operational safety and costs.
 6. Long Term Financial Plans – asset practices, plans and systems will enable the development of long Term Financial Plans for asset classes.
 7. Asset Planning Strategies – each Council is committed to integrating long-term sustainability objectives into asset planning and project delivery. We recognise the need to strategically plan to meet the service delivery needs of stake holders.
 8. Asset Management Practices – each Council will adopt a consistent and standard methodology to the management of all classes of assets including the development of infrastructure Asset and Risk Management Plans for all asset classes.
 9. Asset Responsibility – the responsibility for all individual aspects of the management and use of each Council’s assets will be clearly defined by means of a responsibility matrix or decision chart.

1.4 Strategy

1.4.1 Objectives

A strategy is required to convert the objectives and principles in the policy to execution. The strategy is a set of specific actions the organisation will undertake to improve and enhance the asset management capability.

The strategy objectives are to:

1. Develop an Infrastructure Asset Management and Service Delivery Plan to plan infrastructure to meet short, medium and long term service objectives;
2. Renew existing infrastructure to meet service level requirements and minimise life cycle costs;
3. Upgrade existing infrastructure and build new infrastructure to meet each Council's Corporate Plan;
4. Maintain and operate existing infrastructure at lowest possible life cycle cost whilst controlling exposure to risk and loss of service;
5. Review operations of existing infrastructure in order to identify and dispose of infrastructure not necessary for realising Council's vision;
6. Provide a long term financial plan and funding model to fund the provision, maintenance and operations of infrastructure;
7. Prepare and implement a risk management plan to identify, manage and control the residual risk associated with the Infrastructure Asset Management and Service Delivery Plan and long term financial plan.

These 7 objectives form the basis of the infrastructure management and service delivery development programme set out in the following section and will address the key initiatives set out in the 2007 issues paper by the Department of Local Government.³

³ *Assets, Financial and Infrastructure Management – Issues Paper 6, 2007*

1.4.2 Key Recommendations

Recommendation 1

It is recommended that each Council formally adopt this Infrastructure Asset Management and Service Delivery Strategy as a guide to implementing asset management.

Recommendation 2

It is recommended that FNQROC support the continuation of FNQROC Regional Asset Management Strategy Technical Committee to facilitate implementation of the Infrastructure Asset Management and Service Delivery Policy and Implementation Plan.

Recommendation 3

It is recommended that infrastructure Long Term Asset Management Plans (including Risk Management Plans) are developed and used to link policies and strategies with a long term programme for asset construction, renewal, upgrade, maintenance, operation and disposal and matching long term financial plan as set out in sections 1.2.1, 1.2.2 and 1.2.3.

Recommendation 4

It is recommended that each Council implement the service delivery and infrastructure Asset Management Development Programme set out in section 1.2.4.

Recommendation 5

Expenditure on public works assets should be split into four categories:

- Operations and Maintenance
- Capital Renewal
- Capital Upgrade
- Capital Expansion.

Recommendation 6

It is recommended that Council implement improvements to data and systems to enable them to produce long term financial plans as out in section 1.2.5

Recommendation 7

It is recommended that each Council implement the following recommendations that will position themselves to meet the requirements of the *Local Government Act 2009* and reflected in the policy framework in Appendix 9. Long-term strategic asset management planning is an essential element of the new *Local Government Act 2009*.

Planning And Accountability Documents

That each Council must have in place the following planning and accountability documents:

- an annual report;
- a 5 year corporate plan;
- an annual operational plan;
- a long-term community plan;
- a long-term financial plan;
- a long-term asset management plan;
- a report on the results of an annual review of the implementation of the long term plans mentioned in this recommendation.

Asset Management Policy

That each Council adopt an Asset Management Policy that establishes the objectives for asset management providing a platform for service delivery and;

- integrates asset management with council corporate and financial planning;
- assigns accountability and responsibility for service delivery together with asset management; and

- takes account of whole of life costing, service levels and financing options.

Asset Management Processes and Procedures

That each Council put in place asset management processes and procedures that are consistent with the Local Government Financial Sustainability Frameworks and the International Infrastructure Management Manual (IIMM).

Asset Management Develop Programme

That each Council put in place an Asset Management Development Programme that exceeds the basic (core) approach set out in the IIMM. Discussions and workshops indicate that most Council's will be able to progress to achieving advanced asset management.

Skills and Knowledge Sharing

That the FNQROC Regional Asset Management Strategy Technical Committee is active in consultation with other Council's in Queensland and other States to exchange skills and techniques to raise asset management planning levels across Local Government.

Sustainable Funding Model

That each Council's Infrastructure Asset Management and Service Delivery Policy sets out the requirement to have in place a Sustainable Funding Model that meets community needs. It is a legislated requirement under the Local Government Act 2009 that each Council will have a funding model for all asset related services extending out at least 10 years into the future with supporting knowledge about the full life cycle costs of all assets and a matching Funding Strategy which addresses:

- The need for funds;
- The peaks and troughs in this need;
- How the funds will be sourced; and
- The Works Improvement Programme will focus on enabling the prioritisation of works to achieve sustainable service levels in accordance with the funding model.

Asset Management Plan and Community Plan Development

That each Council continues its emphasis on development and writing of Long Term Asset Management Plans. The legislative requirement for the development of a Long Term Community Plan should not detract from this emphasis. Both tasks should be undertaken in "parallel" at this stage.

1.5 Implementation Plan

The Implementation Plan

The next stage of the project will be to commence a 2 - 3 year process to implement infrastructure asset management and service delivery planning systems and practices that are consistent with the local government financial sustainability frameworks, and where applicable and practical, the International Infrastructure Management Manual.⁴

The suggested project implementation plan includes the following outcomes:

1. A Long Term Financial Plan based on linking service level targets with optimal investment in infrastructure driven by each Council's Corporate Plan;
2. A lifecycle costing plan to identify and report on long term service goals and costs;
3. Long Term Asset Management Plans for all asset related services;
4. Risk Management Plans for each service;
5. An integrated decision support system that provides information needed for infrastructure and risk management plans and reports on performance goals and indicators of success;

⁴ *Assets, Financial, and Infrastructure Management – Issues 6, 2007*

6. An Infrastructure Asset Management and Service Delivery Development Programme to increase the capacity of each Council's people, systems and processes to implement advanced asset management.

2. Asset Management Policy and Strategy

2.1 Introduction

The following Councils from Ingham to Cooktown comprise the Far North Queensland Regional Organisation of Councils (FNQROC):

- Cairns Regional Council
- Cassowary Coast Regional Council
- Cook Shire Council
- Hinchinbrook Shire Council
- Tablelands Regional Council
- Yarrabah Aboriginal Council
- Wujal Wujal Aboriginal Council

This area includes two of the world's greatest natural and World Heritage listed treasures - the reef and the rainforest. The region's population is approximately 250,000 with 50% of this population being based in Cairns. FNQROC covers an area in excess of 185,000 sq. kms.⁵

The support and assistance of Cairns Regional Council (through its Asset Management Development Program) in the development of this Regional Asset Management Strategy is gratefully acknowledged.

2.1.1 Background.

In the past, there has not been a good understanding of the long term cumulative consequences of decisions to build infrastructure. Under this Policy and Strategy, agreed levels of service performance will have an accompanying Long Term Financial Plan that aims to fully fund the capital, maintenance and operating costs needed to sustain the service level targets. In order to achieve this, a number of service level scenarios and long term cash flows will be run to determine the optimum balance between environmental, economic, social, and cultural objectives.

In 2005, FNQROC identified that it was likely that there would be significant changes in how Queensland Council's would manage and report on assets and commenced this project as a long term initiative to facilitate a collaborative and consistent approach to asset management. This judgement has proved correct. Since this project started the following events have occurred:

- The Auditor-General of Queensland, Report to Parliament No. 1 for 2007 Results of Local Government Audits for 2005-06 expressed concern about the standard of asset accounting and financial reporting and made the following comments about strategic asset management:
 - a greater emphasis is required on sound asset valuation, recording and management practices, including analyses for future asset replacements;
 - more focus is needed on establishing a robust framework to review valuations of property, major plant and equipment and infrastructure assets prepared by experts; and
 - reviews should be undertaken by councils of the use of residual values and useful lives of the three road asset components taking into account the pattern of expected benefits to be consumed from the roads, as required by the accounting standards.

⁵ FNQROC Website <http://www.FNQROC.com.au>

- The Queensland Department of Local Government expressed concern about local government sustainability and consequently instigated a reform of local government which addressed legislative reform, structural reform, performance management, and capacity building;
- The Local Government and Planning Ministers' Council (LGPMC), consisting of Local Government and Planning Ministers from across Australia and New Zealand and the President of the Australian Local Government Association provided final endorsement of nationally consistent frameworks for assessing financial sustainability, asset planning and management, and financial planning and reporting and agreed that all State and Territory governments apply the frameworks in the context of their relationships with their local government sectors. This framework provides tools for all local government authorities that are consistent across the areas of financial sustainability, asset planning and management, and financial planning and reporting. A report on the progress of their application will be provided back to the LGPMC in 2008.
- The new Queensland *Local Government Act 2009* was passed on 12 June 2009. Section 104(3) requires each Council to produce the following planning and accountability documents)
 - (a) an annual report;
 - (b) a 5 year corporate plan;
 - (c) an annual operational plan;
 - (d) a long-term community plan (at least 10 years);
 - (e) a long-term financial plan (at least 10 years);
 - (f) a long-term asset management plan (at least 10 years);
 - (g) a report on the results of an annual review of the implementation of the long term plans mentioned in this section.

2.1.2 Purpose and Scope.

The purpose of this project is to:

- Provide the strategic framework for asset management for the FNQROC, which includes:
 - Adopting lifecycle asset management principles aimed at reducing overall costs and exposure to risk;
 - Identifying the corporate imperatives in relation to the utilisation of community assets;
 - Improving the allocation of resources and the forecasting of expenditure and funding models for the future;
 - Adopting long and short term objectives for the various classes of assets;
 - Defining roles and responsibilities and a priority list of asset improvement aligned to the Council's Long Term Financial Plan and Business Case template objectives.
- Recommend an Action Plan for the implementation.

2.1.3 Strategic Issues

There are a number of strategic issues facing each Council and the region as a whole.

1. Population Trends and Environmental Performance

Infrastructure will need to play a part in water and energy conservation, waste reduction and improving air quality. Extreme weather events have the capacity to damage infrastructure and shifts in rainfall and temperature have an impact on what infrastructure is needed and how it is managed. This will need to be closely monitored and factored into any Long Term Financial Plan scenarios.

Growth has driven the provision of infrastructure up to now. Growth has, and continues to be promoted by developers and funded by Governments over many years. This has created factors that will require management and analysis at a regional level rather than local level, even though the impacts will be felt locally.

There are significant population shifts driven both by ageing population and the trend towards urbanisation. In 1998/99, 382 Local Government Areas (LGAs) gained or had no population growth, while 245 LGAs experienced population loss.⁶ Migration has amplified this trend to urbanisation. In 2001, eight out of ten people born overseas lived in a capital city.

In addition there are key strategic questions facing rural regions including:

- Many assets built in growth booms will need renewal within the next 20 years;
- How should we plan and fund asset renewal in communities with declining population;
- Are there environmental, social and cultural limitations to the trend of increased population density in cities and regional centres?
- What role do rural communities play in the social and cultural well-being of a country?
- Should rural communities operate as self-sustaining economic business units and what should happen if they can't financially survive?
- How can we identify national or regional benefits provided by rural communities and fund these benefits at the national or regional level?
- Central governments support 'growth', should they also support 'decline'?

Some of these key issues point to environmental, cultural, and social factors becoming more important than past economic driven decisions for asset management.

In 2005 the Commonwealth Committee into Sustainable Cities recommended that the Department of Transport and Regional Services, in consultation with the Department of the Environment and Heritage, investigate options to extend the Roads to Recovery programme to include other modes of transport as a step towards including sustainability in the funding criteria.⁷ The committee believes that the way in which transport infrastructure is currently budgeted for undermines the type of transport interconnectedness that is necessary for sustainability.... there are still separate budgets for roads, public transport, airports and pedestrian and cycling infrastructure, leading to a 'rather narrow vision'.

2. Transport Trends

There has been a long term trend to increased road transport and heavier vehicles. The AUSLINK white paper identifies that this trend is likely to increase yet most local roads were constructed for traffic volumes and loads that existed over 20 years ago. Domestic non-bulk freight is expected to grow at 3.4 per cent per annum between 2000 and 2020 to 255 billion tonne-kilometres. It can be expected to double between 2000 and 2022.⁸

3. Cost Shifting and Funding

Most assets in the region were built or funded by funds other than land tax (rates) during periods of rapid growth. Asset Custodians are now expected to pay for renewal; however no one has "done the numbers" on the life cycle cost consequences of rapid development in 50's 60's and 70's. It is unlikely that it can be funded from traditional local government revenue whilst maintaining all services. This is recognised in Hawker Enquiry⁹. This inquiry noted that:

⁶ Australian Bureau of Statistics 1998-1999

⁷ Recommendation 5, Section 5.25. The Parliament of the Commonwealth of Australia Sustainable Cities House of Representatives Standing Committee on Environment and Heritage August 2005

⁸ Auslink White Paper

⁹ House of Representatives Standing Committee on Economics, Finance and Public Administration report on the inquiry into Local Government and Cost Shifting. 24 November 2003

“It is clear from ... that cost shifting by State governments has been a major cause of the increasing financial concerns of local government and neglect of asset maintenance. Also, State-imposed restrictions on council revenue are burdening local Council’s particularly in the case of the huge distortions created by rate capping in NSW. This situation is not new and has been building for many years under successive governments.”

“4.83 The major issue confronting all levels of government is the replacement of assets and the maintenance of existing assets and the intergenerational legacy.”

“4.84 The provision of infrastructure is essential when viewed from a whole of government perspective – infrastructure provides for the local, regional, state and national public good. Infrastructure should therefore be a collective responsibility and, as such, be jointly funded by all spheres of government.”

The Uniform Tax Act of 1942 created a vertical fiscal imbalance. Now the approximate percentage of total taxes collected as a proportion of GDP is in the order of:

- 78 % Commonwealth;
- 19% State;
- 3% Local.

Transfer Payments comprise approximately 10 % of Local Government revenue; however the LGAQ noted that most Council’s do not have Asset Management Plans or Long Term Financial Plans and therefore would not know the life cycle cost of providing services.

4. Responsibility of Custodianship

Local Government is good at service provision but has not been good at longer term service costing. There is a minimum level of accountability and administrative effort that goes with asset custodianship. Councils have generally not allocated resources to keeping accurate asset registers and recording maintenance and renewal work history. This has been a major weakness. Most Council’s have not put enough resources into this minimum level of competence – until compelled by external regulation. Long Term Asset Management Plans (including Risk Management Plans) and Long Term Financial Plans are essential responsibilities of asset custodianship and are mandatory for all public infrastructure under the *Local Government Act 2009*.

5. Increasing Community Expectation

Community expectation for Councils to provide ever increasing services is combined with higher expectations by other levels of government for providing increased levels of transparency and reporting for all areas of Council’s operations. These trends, over time significantly increase the administrative resources and expertise needed by Councils to keep and analyse information and provide reports on that information.

6. Skills Shortages

Australia and New Zealand were commonly categorised as countries of immigration, but have also become countries of significant emigration, particularly for skilled staff needed for asset management.

The demographic trends outlined earlier, compounded by past governments’ policies in higher education is creating significant and growing difficulties for rural Council’s to attract and retain skilled staff. The cost of construction materials has escalated far more than CPI over the past 5 years, largely due to the increase in oil prices. This trend is likely to continue.

7. Changing Regulation

As part of its commitment to continuing reform of local government, the LGAQ has released for comment a series of issues papers. It is likely that two things will occur. Firstly, a change in State Level regulation in line with what is already occurring in other States to mandate or encourage Asset Management Policies, Strategies and Plans with accompanying long term financial plans that match forward programmes with available funds over a period of at least 10 years. The second is the ongoing development of the new national framework as a mechanism to allow the development of transparent and accountable whole of government funding model for infrastructure.

The common themes that will affect future regulation or availability of funds are

1. Strategic long term infrastructure management, service delivery and funding models be included as essential components of an integrated planning and reporting framework across all local government.
2. Council's adopt Infrastructure Asset Management and Service Delivery planning systems and practices that are consistent with the Local Government Financial Sustainability Frameworks, and where applicable and practical established practices and standards such as the International Infrastructure Management Manual.
3. An Infrastructure Asset Management and Service Delivery improvement program is implemented to progressively raise Infrastructure Asset Management and Service Delivery planning to a level appropriate for each council.
4. The requirements for higher levels of Asset Management are also central to good governance and financial planning and contain the following seven elements of a strong local government system as follows:
 1. • Good governance;
 2. • Representative democracy and community support;
 3. • Sound policy;
 4. • Sufficient resources;
 5. • Meaningful planning;
 6. • Connectedness;
 7. • Strong leadership.

8. National Trends

At its meeting on 4 August 2006, the Local Government and Planning Ministers' Council (LGPMC) agreed to a nationally consistent approach to asset planning and management, financial planning and reporting and assessing financial sustainability. On 20 October 2006, the LGPMC endorsed the draft National Frameworks for Financial Sustainability in Local Government as a basis for consultation. On 21 March 2007 the LGPMC endorsed the Frameworks for implementation in the context of their relationships with their local government sectors. It was noted that QLD has not completed the consultation phase due to the electoral cycle and will consider the matter out of session. Jurisdictions will report on progress of their application of the Frameworks in 2008.

The National Frameworks¹⁰ consist of three main components of which Asset Planning and Management is one. This framework consists of seven elements which each State and Territory is expected to adopt as follows:

1. Development of an Asset Management Policy - Each state/territory is expected to develop an asset management policy, which provides high-level guidance to assist Council's in developing their own Asset Management Policy.

¹⁰ LGMPC National Frameworks Australian Government Department of Transport and Regional Services

2. Strategy and Planning – Council's should be provided with guidance from the State on developing an Asset Management Strategy, which is designed to support and implement its Asset Management Policy.
3. Governance and Management Arrangements – Council's should be encouraged to apply and effect good governance and management arrangements which link asset management to service delivery and include assigning roles and responsibility for asset management between the CEO, the Council and senior managers.
4. Defining Levels of Service – mechanisms should be established that include community consultation to define the levels of service Council's are expected to provide from their asset base.
5. Data and Systems – a framework for collection of asset management data should be established.
6. Skills and Processes – the asset management framework should contain a continuous improvement program.
7. Evaluation – the asset management framework should contain a mechanism to measure its effectiveness.

2.2 Asset Management Policy

2.2.1 Benefits of Producing a Policy.

An Infrastructure Asset Management and Service Delivery Policy provides the guiding principles for:

- How the strategic, financial and infrastructure management plans connect;
- The time horizon for financial and service planning;
- Compliance with mandatory requirements;
- Whether the Council seeks to take a leading position on advanced asset management;
- Ensuring asset provisions meet current policies but also emerging and rapidly changing circumstances and competitive global environments.

2.2.2 Importance of Sustainability.

The National Frameworks define a council's long term financial performance and position as sustainable when planned long term services and infrastructure standards are met without unplanned increases in rates and charges, or disruptive cuts to services. The frameworks provide a range of financial sustainability indicators; however they stress that the usefulness of indicators is not in the numbers themselves but the analysis of what is driving the indicator. This policy recommends that each Council's Corporate Plan go much further than economic sustainability.

Asset remaining life and useful life are major variables in the Financial Reports, Long Term Asset Management Plans and Long Term Financial Plans.

A number of sustainability factors have the potential to directly impact asset useful and remaining lives and the best investment of community wealth in providing infrastructure assets into the future. Taking transport as an example of this principle, relevant changes include:

- Changes in soil salinity;
- Changes in agricultural practices and land use;
- Changes in transport load on local networks;
- Shifts between modes of transport;

- Costs of energy and construction materials resulting from a combination of market forces and government policy (e.g. possible carbon taxation);
- Social costs associated with population shifts particularly for communities with static, aging or declining populations;
- Challenges for growing urban centres associated with energy, food and water supply and waste disposal;
- Protection of endangered fauna and flora.

All these factors point to major changes to the current infrastructure, much of which was planned and constructed on mainly economic factors, some of which no longer apply.

The asset management strategy produced by each Council should identify impacts on infrastructure of internal and external trends and the programme of works in the Long Term Financial Plan.

2.2.3 Objectives.

The following policy objectives set the broad direction that each Council should head to satisfy the strategic goals set in their respective management and corporate plans and other strategic documents.

These policy objectives and principles are based on:

- The principles set out in discussions, workshops and documents of many Council's across Australia and New Zealand;
- Discussions and workshop responses from FNQROC asset managers, strategic planning and corporate support staff.

Objectives

The objective or purpose of an Infrastructure Asset Management and Service Delivery policy is to:

1. Provide infrastructure and services to sustain the communities in the FNQROC region and;
 - Support the quality of life and amenity, urban environment and cultural fabric appropriate to each Council;
 - Adapt to the emerging needs in sustainable transport, environmental protection, water use and waste management;
 - Facilitate the changes to infrastructure needed to cater for changing needs particularly in relation to shifts in population demographics, changing land use and changing infrastructure costs.
2. Implement a life-cycle approach to the management of the Council's infrastructure assets to achieve best value for the community:
 - Asset planning decisions are based on an evaluation of alternatives that consider the "whole of life" of an asset through acquisition, operation, maintenance, renewal and disposal;
 - The asset management cycle will consider environmental, economic and social outcomes;
 - Ensure that assets are managed to achieve service level objectives for safety, functionality, fitness for use and aesthetics.
3. Ensure that service delivery needs form the basis of infrastructure asset management where:

- Each Council will establish and monitor levels of service for each asset class linked to the strategic planning framework in their respective Management and Corporate Plans;
 - Long Term Asset Management Plans (including Risk Management Plans) will be established for each asset class to enable effective prioritisation and monitoring;
 - There is a flexible and scenario based approach through systems and plans to allow for innovative use of assets in the future particularly in recycling and environmental indicatives.
4. Provide a sustainable funding model that meets community needs:
- Each Council will have a funding model for all asset related services extending at least 10 years into the future and addressing the need for funds, peaks and troughs and how the funds will be sourced.
5. Minimise each Council's impact on the environment by:
- Each Council minimising energy and water use, waste generation and air quality impact;
 - Reduction in environmental impact in all infrastructure asset management planning, project and service delivery.
6. That each Council will develop and implement an integrated decision support system to:
- Provide systems and knowledge necessary to achieve policy outcomes;
 - Minimise risk of corporate knowledge and data loss;
 - Manage knowledge as efficiently as possible by the appropriate use of software, hardware and communication tools;
 - Reduce data duplication and multiple entries.
7. Ensure compliance with legislative and statutory requirements.

A summarised Infrastructure Asset Management and Service Delivery Policy that can be used as a template by each Council is set out in Appendix 9.

Figure 2.2.3 – Infrastructure Management Strategy to Deliver Objectives and Principles



Figure 2.2.3 shows the key elements of the strategy that need to be implemented. The Infrastructure Asset Management and Service Delivery Strategy and Development Programme is to improve the bottom two tiers shown in this diagram which are currently fragmented or missing. Informed decisions need to be supported by Long Term Asset Management Plans (including Risk Management Plans) linked to Long Term Financial Plans supported and informed by an integrated asset decision support system.

2.2.4 Principles.

The following principles form the overarching framework by which the objectives will be delivered and guide the fundamental direction by which systems, processes and plans need to be based.

1. Environmental Performance – all aspects of the management of the Council's assets will include criteria to achieve outstanding environmental performance.
2. Appropriate levels of Asset Management Practice – the Council's infrastructure asset management practices system will be at an appropriate standard and as a minimum achieve basic asset management set out in the International Infrastructure Management Manual.
3. Life-Cycle Asset Management principles - apply a “whole of life” methodology for managing infrastructure assets including:
 - Planning;
 - Acquisition/creation;
 - Operation;
 - Maintenance;
 - Renewal; and
 - Divestment.
4. Best Value - that each Council will balance financial, environmental and social aspects to achieve best value for their community.
5. Service Levels – asset service levels will be clearly defined and reflect the needs of the community, meet corporate policy objectives and balancing capital investment and operational safety and costs.
6. Long Term Financial Plan (LTFP) – asset practices, plans and systems will enable the development of Long Term Financial Plans for asset classes for a period of at least 10 years with knowledge about the life cycle consequences for the adopted scenario used in the LTFP.
7. Asset Planning Strategies - that each Council is committed to integrating long-term sustainability objectives into asset planning and project delivery. The each Council recognises the need to strategically plan to meet the service delivery needs of stake holders.
8. Asset Management Practices – that each Council will adopt a consistent and standard methodology to management of all classes of assets including the development of Long Term Asset Management Plans (including Risk Management Plans) for all asset classes.
9. Asset responsibility – the responsibility for all individual aspects of the management and use of the Council's assets will be clearly defined by means of a responsibility matrix or decision chart.

2.3 Strategy

2.3.1 Benefits of Producing a Strategy.

An infrastructure strategy is necessary to convert vision to execution in a sustained and planned way. Lack of a strategy to guide the wise allocation of scarce resources inevitably results in reactive spending and construction of projects that consume resources without contributing much to set goals.

The strategy is a set of specific actions the organisation will undertake to improve and enhance the asset management capability

Strategy objectives are:

1. Develop Long Term Asset Management Plans to plan infrastructure to meet short, medium and long term service objectives;
2. Renew existing infrastructure to meet service level requirements and minimise life cycle costs;
3. Upgrade existing infrastructure and build new infrastructure to meet the Council's Corporate Plan;
4. Maintain and operate existing infrastructure at lowest possible life cycle cost whilst controlling exposure to risk and loss of service;
5. Review operations of existing infrastructure in order to identify and dispose of infrastructure not necessary for realising Council's vision;
6. Provide a Long Term Financial Plan and funding model to fund the provision, maintenance and operations of infrastructure;
7. Prepare and implement Risk Management Plans to identify, manage and control the residual risk associated with the Long Term Asset Management Plan and Long Term Financial Plan.

2.3.2 A Consistent Approach to Asset Management.

There has been a long trend of high levels of variability between Council's on core data and assumptions used in asset registers. Local Government regulators in QLD, VIC, NSW and SA have observed variation in the depreciation amounts reported by Council's that otherwise appeared to have similar characteristics such as road lengths, location and terrain.

Reports commissioned in Tasmania in 2001 and in Victoria in 2006 both concluded that most of the variability in financial reporting stems from variations in asset recording and valuation practice. For example, variations in unit rates stem from differing assumptions and treatments of factors such as earthworks, overhead/profit allocation and differing treatment of asset components. Differences in useful life are primarily due to variations in estimates made due to lack of supporting data. This is mainly the result of the majority of road pavements not having been recorded as renewed.

Useful life is the actual period between asset renewals. It is therefore the sum of age and remaining life and varies for each asset.

Determination of useful life therefore needs to look at the statistical variations across an asset class as it is influenced by:

- Minimum acceptable service levels;
- Local conditions;
- Construction type and techniques; and
- Maintenance history.

2.3.3 Strategy Actions.

An Infrastructure Asset Management and Service Delivery development programme is needed to upgrade each Council's skills, processes and technology to an advanced level. The programme covers the following 7 phases:

1. Develop the Service Delivery Framework needed to support each Council's Corporate Plan and link other strategic policies to the delivery of infrastructure;
2. Develop the business processes needed to plan and sustain the infrastructure necessary for this vision. This will include assessment of data requirements and implementing projects to collect and/or update the data together with ongoing responsibility for upkeep;
3. Develop & implement Long Term Asset Management Plans (including Risk Management Plans). The plans to be consistent with the IIMM and National Asset Management System (NAMS) methodologies and utilise NAMS templates where appropriate;
4. Develop and document Infrastructure Asset Management and Service Delivery procedures for planning, design, renewal, construction, maintenance, operations and disposal;
5. Implement organisational development needed to achieve the programme and provide staff with the necessary skills to deliver it;
6. Integration of specific strategies such as the property management strategy and the Environmental Management Plan;
7. Implement an integrated Infrastructure Asset Management and Service Delivery System.

The coordination and management of the Infrastructure Asset Management and Service Delivery Development Programme should be borne by the Infrastructure Asset Management and Service Delivery Group with regular progress reports to the executive. See Appendix 2 for diagrammatic representation.

The detailed actions and implementation plan are set out in Appendix 3 – Overall Implementation Plan.

2.3.4 Future Expenditure Projections.

This strategy included an estimate of the long term funding projections. An infrastructure computer model was used (LifeCycle KMS) based on the best available information for each asset.

The modelling in Lifecycle sought to provide Long Term Financial Plans that were based on actual asset behaviour. Key points are:

1. The objective was to understand the failure mechanism (the point at which the asset requires renewal or disposal) for each asset and then aggregate the behaviour of every asset. Service potential or remaining service potential is influenced by many factors (not just condition) and can be represented by many forms (e.g. star rating as used for hotels). The true test of service potential failure is when the asset is actually renewed or disposed because the service it provides and the associated risks posed no longer satisfies the needs of the asset custodian;
2. The modelling used the asset register AREG. Key fields needed for modelling were:
 - Overall Economic Life (the frequency between asset renewals);
 - Remaining Life – Remaining Service Potential (the remaining life 0 – 5 in AREG should be the adopted 5 year works programme);
 - Renewal Cost – the default was current replacement cost, however there were times when the actual renewal cost was different to the Greenfields replacement cost.
3. The agreement from the 5 participating Council's was to model the inventory and expenditures for the asset classes.

4. AM Expenditures were set up for the format agreed; however, where data was not received expenditures were zero.
5. The final result was a Long Term Financial Plan that can be updated as data improves.
6. A more detailed explanation of the process is contained in Appendix 6. The financial modelling carried using the best available data available to this project showed that:
 - The resources needed to look after existing assets maintained by Council are set to rise in the future;
 - The supporting data is fragmented and needs to substantially improve.

2.3.5 Service Levels and Asset Management.

Asset service levels are determined by available revenues, and the efficiency and effectiveness of asset service planning operational delivery. Where a user pays service model is being used the service provider has the capacity to match the service level with the lifecycle service cost.

When any other model than direct user pays is applied, there is not a direct link between the service level and the payment made through a taxation funded subsidy. In this case, a political judgment needs to be made of relative service priorities based on community well-being objectives for the time horizon determined by the service provider's corporate vision and plans.

FNQROC Councils' revenues like many asset related services are a combination of the two revenue models, user pays and taxation (rates / grants). Any measurement of service levels must therefore have a corresponding funding model that takes into account that services are based on both satisfying the needs of the local community and a wider community well-being.

Asset renewal deficiency or renewal gap is a financial measure of the difference between a desired service level and what is achievable with projected levels of revenue and current expenditure priorities.

Asset renewal deficiency needs to be linked to an understood service deficiency in terms of service quality, function or safety. Once this deficiency is recognised and understood, the service provider can develop a works program to achieve the desired service level in a target timeframe subject to funding availability.

If the target service level is unachievable within the revenues and priorities set out in the Long Term Financial Plan, then the Long Term Asset Management Plan should identify the consequences of not delivering service to the desired level and the associated Risk Management Plan should ensure that risk is controlled and minimum standards of public safety are retained.

In the light of the above, the notion of 'backlog' can be misleading and is often used by those who disagree with past or current policy priorities set by the political decision-makers. Provided that the Long Term Asset Management Plan and associated Risk Management Plan clearly set out the future consequences and measures to mitigate adverse impacts, the notion of 'backlog' becomes irrelevant.

A method has been developed as part of this strategy to determine existing and target service based on a range of service level indicators. These indicators describe the service performance of buildings based on a "star rating", similar to that used to rate hotel accommodation. The rating covers the categories of quality, function and safety. The asset improvement plan aims to progressively bring infrastructure up to the target service level in accordance with the asset improvement plan.

Applying a star rating to an infrastructure service is a way of looking at the service result rather than physical asset activity. This is a key starting point.

Star ratings provide a way to quantify service levels so that:

- The service result can be described in terms the community can understand and measure (safety, function, quality);
- Work and cost on assets can be determined for that service result (construction standard, inspections, cleaning, disposal, construction, maintenance, renewal).

2.3.6 Linking Asset Management with Corporate Objectives.

The mechanism for implementing the asset strategy is the allocation of resources. Therefore, the way to link strategic Infrastructure Asset Management and Service Delivery with the Corporate Plan is to ensure that resources are allocated to activities so that:

- Service levels are improved where current performance is too low;
- Service levels are maintained or reduced where current performance is higher than the target;
- Over servicing needs to be monitored to ensure resources are not being diverted from other key areas that are under performing.

There is no overall process to implement and prioritise the initiatives and recommendations primarily because there is no mechanism to determine how these initiatives will achieve service level targets and the life cycle costs of these initiatives.

The policies need to be examined and the elements that relate to specific asset classes captured and incorporated into Long Term Asset Management Plans to prioritise and implement those initiatives.

A Long Term Financial Plan linked to the Corporate Plan objectives is an essential step in determining which recommendations and measures set out in these documents should be implemented and when. The Business Case Template adopted by the Council to determine whether a project should proceed includes the financial analysis necessary to cater for this linkage. A comprehensive Long Term Asset Management Plan will set out the prioritised works and maintenance requirements that can determine priority.

A schematic model Policy Process for linking the Corporate Plan with the Capital Works Programme is shown in Fig 2.3.6 on the following page. The method to link to strategy is to ensure that the key elements needed to manage assets are in place and systems exist that allow these to be joined together to provide the overall view.

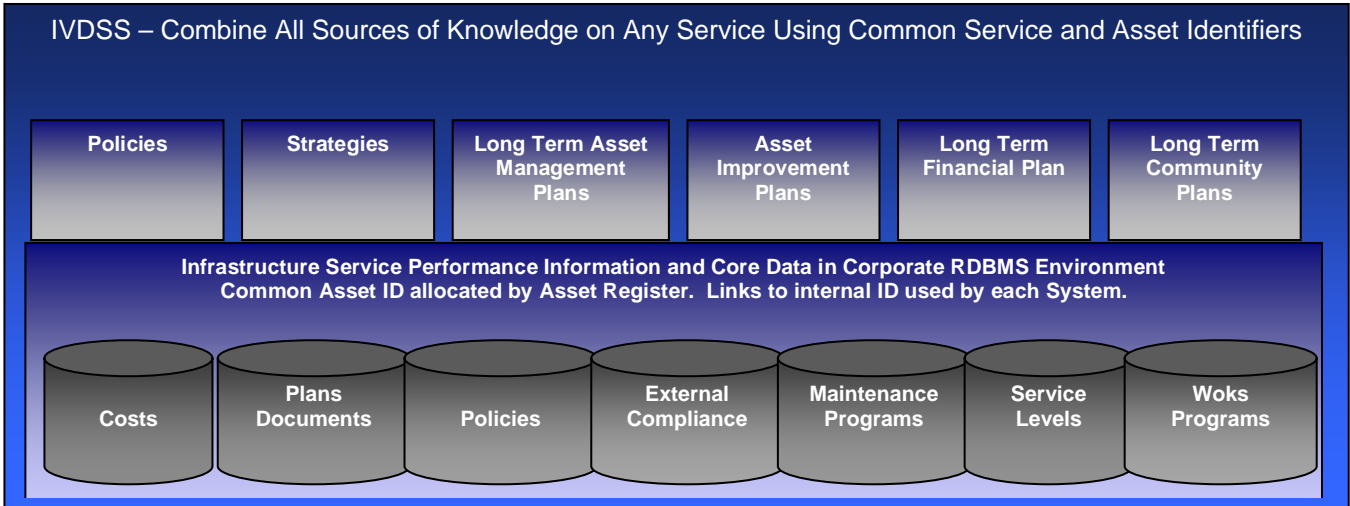
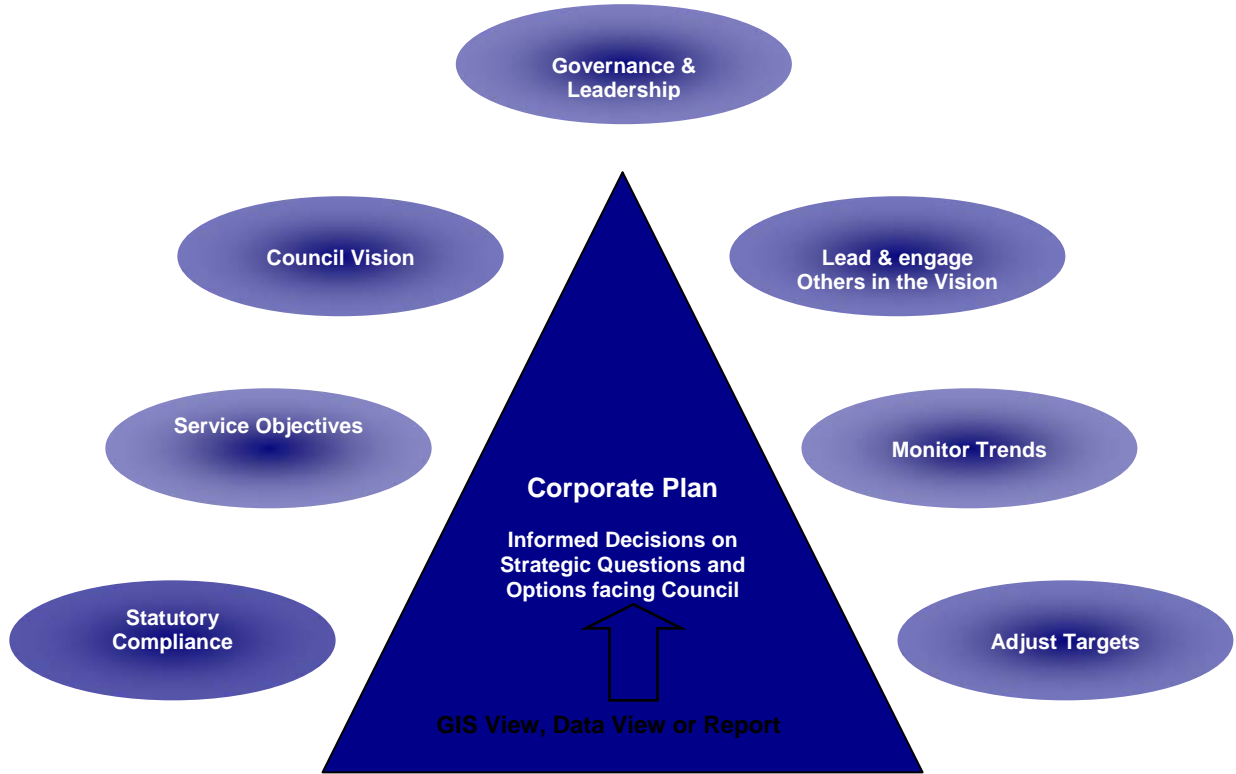
The key elements are:

1. The Strategic Plan provides a forward looking review of where the Council is going and sets out the vision and key focus areas;
2. The Corporate Plan sets out what the Council will do in the next five years;
3. The Annual Operational Plans set out what will be done each year;
4. This Infrastructure Asset Management and Service Delivery Policy and Strategy builds on the Sustainable Asset Management Policy 2006 and establishes the link between the Council's Corporate Plan and achieving advanced asset management;
5. Long Term Asset Management Plans (including Risk Management Plans) and a Long Term Financial Plan with Funding Model provide the supporting structure needed to implement each Council's management plan focus areas.

In the future the Capital Works Programmes need to be driven much more by:

- Corporate Plans;
- Asset Management and Risk Management Plans;
- Infrastructure Asset Management and Service Delivery Plans.

Figure 2.3.6 – Linking Asset Management with Corporate Objectives for Each Council



2.3.7 Performance and Risk Management.

Performance management is built into the Long Term Asset Management Plans. Risk management is built into the associated Risk Management Plans. Both can be summarised in 3 categories

Quality

Quality indicators are used to measure how assets will be maintained in a condition necessary to deliver the Council's management plan goals. Defects found or reported that are outside set service performance standards will be repaired.

The Long Term Asset Management Plans set out the renewal and maintenance response if service falls below target levels. An important improvement to current practice is that there should be a forward projection of a minimum of 10 years rather than just an annual defect prioritisation.

Function

The intent of function based performance measurement is that an appropriate service level function is maintained in partnership with other levels of government and stakeholders to achieve the Council's objectives

Safety

The Risk Management Plan sets out how safety and risk will be managed to agreed levels. This sets out the inspection and defect prioritisation processes as well as risk mitigation and control measures.

The following risk management principles are recommended by this strategy:

1. Risk management must be integrated with all service planning and delivery activities rather than an administrative "add on". This means the Risk Register is an output from the Long Term Asset Management Plans (including Risk Management Plans) that are integrated with the Corporate Plan and Long Term Financial Plans;
2. Risk Management Plans will be consistent with the Council's Risk Management Policy, particularly the steps for risk identification, assessment, management and mitigation, and incorporate use of the corporate Risk Register as the tool for recording and reporting risk;
3. The Council's view that risk is both an opportunity and a responsibility will be reflected in the infrastructure Risk Management Plans. Innovative solutions and community promotion of solutions will be encouraged;
4. Systematic management of risk is a large task requiring a continuous improvement approach. Most service areas are already doing an excellent job of managing operational risk but not through a consistent framework of Long Term Asset Management Plans and Risk Management Plans;
5. We will allocate ownership to risk. Ownership must be linked to the capacity of each Council to control risk;
6. Management of operational risk is a core line management function and is not an "add on" overhead;
7. Strategic risk inherent in resource allocation needs to be communicated, measured and reviewed through the framework of planning and operational plans. The Long Term Financial Plan for resource allocation is the mechanism for implementation;
8. Service performance measurement / review / consultation / incident management is crucial to guide a systematic approach and enable us to learn from our mistakes.

3. Conclusion

Most of the existing infrastructure in the region was built over the past 100 years under whole of Government policies that encouraged private sector development and subsidised growth from general taxation revenue. During this past period of rapid infrastructure expansion, little or no analysis was done to understand cumulative economic, social, environmental and cultural consequences of decisions to build capital projects funded by the apparent abundance created by rapid growth.

Compounding the lack of analysis and knowledge of current infrastructure, much of the FNQROC's Infrastructure was built under a set of assumptions and factors that are changing rapidly. Some examples are:

1. Transport networks are based on abundant, cheap oil available since World War 2. Allocating sustainable economic and environmental costs to transport is likely to change the mix of transport options and supporting infrastructure that will be required;
2. Stormwater drainage networks are based on stormwater being a waste product rather than a harvestable resource;
3. The built environment has often been driven by short term objectives with little understanding of environmental synergy or cumulative adverse impacts of excessive resource consumption and waste output;
4. Changes to the movement of freight have shifted; increasing freight movements from rail to road. The Commonwealth AUSLINK studies expect significant increases in road transport;
5. Patterns of growth are changing with significant shifts from rural to urban living combined with an ageing population.

The net result of these factors is that increased population density in Cities and Regional Centres generate a very high environmental footprint, a factor that will increasingly influence the nature of service planning and investment in infrastructure. Rural hinterlands will find it increasingly difficult to sustain infrastructure built during boom times. The existing infrastructure will need modification as these external factors become increasingly important, however much more needs to be known about the cumulative consequences of past decisions and of current options facing each Council working collaboratively with other Council's in the region and whole of Government.

Under this policy and strategy, infrastructure service plans will be required to develop detailed asset construction, renewal, upgrade, maintenance, operating and disposal plans with corresponding risk management plans.

The current framework for each Council's Corporate Plan provides the foundations for advanced asset management.

A whole of government approach is essential for wise decisions to allocate scarce resources to make changes to what infrastructure is needed and how it is managed. These decisions need to understand the cumulative consequences of past decisions and the likely consequences of current decisions. This infrastructure strategy is necessary to convert the vision to execution in a sustained and planned way.

Achieving this requires three streams of activities:

1. Implementing an infrastructure management development programme to enhance skills, processes and systems. A decision support strategy has been recommended to improve data and systems;
2. Implementing Long Term Asset Management Plans (including Risk Management Plans) for each service including a framework for setting and monitoring service level targets;
3. A Long Term Financial Plan and funding model to match service level targets, infrastructure investment and maintenance and a funding model.

Appendix 1 Glossary of Terms

Average Annual Asset Consumption (AAAC)

Average Annual Asset Consumption is the amount of a local government's asset base consumed during a year. It is the sum of the current replacement cost divided by the economic life for all assets in an asset category or class.

Asset

"An asset of the local government shall be recognised in the statement of financial position when and only when:

- it is probable that the future economic benefits embodied in the asset will eventuate; and
- the asset possesses a cost or other value that can be measured reliably."¹¹

Most road infrastructure assets satisfy both criteria. Exceptions are land under roads and bulk earthworks.

For network assets such as roads, the combined application of the concept of materiality and high variability of the road attributes across the network has resulted in the almost universal and correct practice that assets be broken into segments.

Each asset has a current replacement value, written down current replacement value, annual depreciation amount, and economic and remaining life

Asset Category

Grouping of like assets, e.g. all unsealed roads.

Asset Class

Grouping of like asset categories, e.g. all pavement, seal, kerb & gutter are all part of the asset class of roads.

Asset Management

The combination of management, financial, economic, engineering and other practices applied to physical assets with the objective of providing the required service level in the most cost effective manner.

Capital Expansion Expenditure

Expenditure on extending an existing asset network, at the same standard currently enjoyed by residents, to a new group of users. It is discretionary expenditure, which increases future operating, and maintenance costs, because it increases Council's asset base but may be associated with additional revenue from the new user group (e.g. extending a drainage or road network, the provision of an oval or park in a new suburb for new residents).

Capital Expenditure

Expenditure which is relatively large (i.e. material) and has benefits expected to last for more than 12 months. Capital expenditure can be split into three areas, renewal, upgrade and expansion.

Capital Renewal Expenditure

Expenditure on an existing asset, which increases asset service potential of an existing asset. This may be to the same or a lower level than initially provided (partial renewal). It is periodically required expenditure, relatively large (i.e. material) in value compared with the value of the asset or asset component being renewed. As it reinstates existing service potential, it has no impact on revenue but may reduce future operating and maintenance expenditure if completed at the optimum time (e.g. resurfacing a sealed road, resheeting an unsealed road, replacing a drainage pipeline with pipes of the same capacity, relining of an existing drainage pipeline, replacing bridge decking or resurfacing an oval). Where renewal works include a significant upgrade, the renewal and upgrade components should be separately identified (e.g. if a swimming pool with a replacement cost of \$3M is replaced with a \$15M leisure centre, then \$3M is identified as renewal and \$12M as upgrade).

¹¹ AAS27

Capital Upgrade Expenditure

Expenditure which enhances an existing asset to provide a higher service level or expenditure that will increase the life of the asset beyond that which it had originally. Upgrade expenditure is discretionary and often does not result in additional revenue unless direct user charges apply. It will increase operating and maintenance expenditure in the future because of the increase in Council's asset base (e.g. widening the pavement and sealed area of an existing road, replacing drainage pipes with pipes of a greater capacity, enlarging a grandstand at a sporting facility, replacing an existing bridge with one having a greater carrying capacity, replacing a chain link fence with a wrought iron fence).

Confidence Level

A measure of the certainty, reliability and trust in information that lies behind a decision.

Cost

Resources sacrificed or foregone to achieve a specific objective. Costs are measured in monetary units that must be paid for goods and services.

Current Replacement Cost

The cost of replacing the service potential of an existing asset, by reference to some measure of capacity, with an appropriate modern equivalent asset.

Depreciation

Depreciation is a measure of the average annual consumption of service potential over the life of the asset. Depreciation is not a measure of required expenditure in any given year.

Economic Life

The period from the acquisition of an asset to the time when the asset, while physically able to provide a service, ceases to be the lowest cost alternative to satisfy a particular service level. The economic life is at the maximum when equal to the physical life, however obsolescence will often ensure that the economic life is less than the physical life.

Expenditure

The spending of money on goods and services. Expenditure falls into two basic categories, recurrent and capital.

Fair Value

The amount for which an asset could be exchanged or liability settled, between knowledgeable, willing parties, in an arms length transaction, normally determined by reference to market or comparable prices. Generally, there is no market for Council's infrastructure assets and Fair Value is current replacement cost less accumulated depreciation.

Funding Model

A Funding Strategy which addresses:

- the need for funds;
- the peaks and troughs in this need; and
- how the funds will be sourced.

Life cycle analysis should be the basis of the funding model. The funding model adopted by Council decides how it determines:

- The level of funds year by year;
- The source of those funds;
- The use or allocation of those funds:
 - To recurrent/capital;
 - To infrastructure and to other assets and other services.

Infrastructure Assets

These are typically large, interconnected networks of or portfolios of composite assets such as roads, drainage and recreational facilities. They are generally comprised of components and sub-components that are usually renewed or replaced individually to continue to provide the required service level from the network. These assets are generally long lived, are fixed in place and often have no market value.

Maintenance Expenditure

Expenditure on an existing asset which is periodically or regularly required as part of the anticipated schedule of works required to ensure that the asset achieves its economic life. It is expenditure which was anticipated in determining the assets economic life. Maintenance may be planned or unplanned (e.g. repairing a pothole in a road, repairing the decking on a timber bridge, repairing a drainage pipe or repairing the fencing in a park).

Materiality

An asset is material; its omission would result in misleading the reader of the financial report. The convention of an asset being material if greater than 10 – 15 % of asset value is only partly useful for road assets because of historic variability in practice in measuring value. The overriding principle is that financial reports present a true and fair picture of the financial position of the Council.

Primary Service

The services provided by Council's to their communities, e.g. local roads, libraries, child care services.

Remaining Life

The time remaining until an asset ceases to provide the required service level or economic usefulness. Remaining life is economic life minus age.

Risk Management

The allocation of probability and consequence to an undesirable event and subsequent actions taken to control or mitigate that probability and/or consequence.

Service Level

The defined service quality for a particular Primary Service (e.g. roads, child care services) against which service performance may be measured. Service levels usually relate to quality, quantity, reliability, responsiveness, environmental, acceptability and cost (e.g. the number of accidents on local roads).

Service Level Target

Target set for service level to be achieved in the next reporting period (e.g. to retain, increase or reduce the number of accidents on local roads).

Sustainability Factor

The ratio between the average annual asset consumption and average actual renewal expenditure.

Transparency

A measure of the accuracy and confidence levels in Council's reporting of asset consumption as depreciation in financial reports.

Useful Life

See Economic Life.

For a definition of any other words or terms used in this document please refer to:

- a) the Glossary contained in the “**INTERNATIONAL INFRASTRUCTURE MANAGEMENT MANUAL – International Edition**” and / or
- b) Cairns Regional Council's “**ASSET MANAGEMENT DEVELOPMENT PROGRAM – Asset Management Dictionary**”

Appendix 2 Proposed Implementation Framework

Regional Asset Management Strategy Technical Committee Terms of Reference

The terms of reference of the group is to support the development of Figure 2.3.6 in councils to ensure all people, processes and systems work together to deliver services and meet corporate objectives. This includes:

- Supporting the development and implementation of the Council's Asset Management Policy including systems and standards for asset management protocols and processes;
- Supporting councils to produce asset management plans for all classes of assets;
- Supporting councils to define and document asset management roles and responsibilities;
- Each member to identify and report to the Technical Committee and issues and impediments to implementation including alternate proposals;
- Support to prioritise and implement asset management tasks and projects;
- Establish sub groups to address particular issues in implementation;

Appendix 3 Overall Implementation Plan

The RAMS Technical Committee, at its Meeting No.8 held 5 October 2009, resolved to adopt the plan detailed in the Department of Infrastructure and Planning published document entitled “**ASSET MANAGEMENT ADVANCEMENT PROGRAM 2009-10 – A milestone based approach to the development and implementation of asset management plans in Queensland local governments.**”

Section 4 refers to the planning program for 2009-10:

- Asset management plan completion priorities
- Asset management targets – core plan

Section 5 refers to detailed activities:

- Completion of core asset management plans by December 2010
- Asset planning and data
- Service levels and risk
- Expenditure projections
- Completing the asset management plan
- Long-term financial plan

The RAMS Technical Committee at its meeting No.9 held 25 November 2009, resolved to use the Institute of Public Works Engineering Australia’s (IPWEA) **NAMS.Plus** Program as an additional reference. It is a subscription web-based program (www.namsplus.org.au) and provides detailed templates to use for the implementation of Asset Management principles into Council’s business.

It also provides a thorough Gap Analysis tool in terms of Asset Management Performance and Capacity which Councils are encouraged to use to monitor progress during the implementation phase by assessing their sustainable asset management capability and identifying priority areas for development of asset management improvement plans.

The Gap Analysis is in the form of survey questions and is divided into three sections:

- Stewardship
- Asset Management Planning
- Financial Planning

The survey questions ask Councils to indicate responses to the following and provides a graphical report of present v desired capability.

<p>Desired Capability (<i>to achieve sustainable asset management and meet Local Government Act requirements</i>)</p>	<p>What level of capability each Council considers is required for them to achieve sustainable asset management practices and meet the requirements of the Local Government Act.</p>
<p>Current Capability</p>	<p>What is the level of capability that each Councils is at now.</p>
<p>Relative Importance of Practice Area</p>	<p>How does each council rank the importance of each practice area to assist it in achieving sustainable asset management and meet the requirements of the Local Government Act.</p> <ul style="list-style-type: none"> • Not Relevant • Some Relevance • Would be Useful • Important • Essential

A copy of the survey questions is contained in the following pages with a cross reference to the Department of Infrastructure and Planning's "ASSET MANAGEMENT ADVANCEMENT PROGRAM 2009-10".

Question	Capability Levels	Desired Capability	Present Capability	DIP AMAP Reference
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Stewardship

Asset Management Policy				
Does your Council have an adopted AM Policy.	1.No, not planned 2.Planned in next 12 months 3.Under development 4.Developed, not adopted by council 5. Yes			4.2 1st Action 5.5 Step 15
Asset Management Strategy				
Does your Council have an adopted AM Strategy.	1.No, not planned 2.Planned in next 12 months 3.Under development 4.Developed, not adopted by council 5. Yes			N/A
Risk Management Process				
Does you council have a system for managing asset related risks either as part of a corporate risk management system or within an AMP for Road Assets?	1. No, not planned 2. Planned in next 12 months 3. Under development 4. Developed, not adopted by council 5. Yes			5.3 Step 7
As above for Building Assets				
As above for Parks/Recreation Assets				
As above for Water/Sewer/CWMS Assets				
As above for Drainage Assets				
Accountability and Responsibility for Asset Management				
Does your council have a cross-functional approach to asset management?	1. No, not planned 2. Planned in next 12 months 3. Under development 4. For some asset categories 5. Yes, for all asset categories			4.2 8 th Action 5.2 Steps 1, 2, 5
Does your council's Executive Management Team consider AM issues at the corporate level?				
What is the primary role of your council's Asset Management Team?	1. No AM Team 2. Capital works prioritisation for some/all services 3. Capital program management for some/all services 4. Coordination of lifecycle AM activities for some services 5. Coordination of lifecycle AM activities for all services			
At what level are outcomes of the AMT accepted?	1. No AM Team 2. AM Team planned in 12 months 3. Specialist Officer 4. Department Head 5. Executive Management Team/CEO			
Does your council's Audit Committee consider AM issues?	1. No Audit Committee 2. Audit Committee planned in 12 months 3. Reporting as required 4. Regular meeting agenda item 5. Audit Committee considers sustainability indicators			
Are AM accountabilities and responsibilities defined in managers' position statements?	1. No 2. Planned in 12 months 3. Being developed 4. In Managers' position statements 5. CEO's position statements includes			

	indicators for maintenance of appropriate assets to provide services			
Sustainability Reporting				
Does your council report on its financial sustainability?	<ol style="list-style-type: none"> 1. No sustainability indicators developed 2. Sustainability indicators planned in 12 months 3. Sustainability indicators developed 4. Sustainability reported as required 5. Sustainability reported in Annual Reports 			

Question	Capability Levels	Desired Capability	Present Capability	DIP AMAP Reference
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Asset Management Planning

Asset Identification and Reporting				
<p>Does your council identify and record assets at the 'component' level for Road Assets for valuation and depreciation purposes?</p> <p>Note: Components for road assets are sealed surfacing, pavement (layers) K&G (x2), footpaths (x2), earthworks/formation (if required) within road segment ~200m urban, 0.5 - 5-10 km rural</p>	<ol style="list-style-type: none"> 1. No, assets recorded at network level (eg road network) 2. No, assets recorded at 'major' asset level (eg individual road/street) 3. No, assets recorded at 'segment' asset level (eg road ~200m - 5-10km length)? 4. Assets recording at component planned within 12 months 5. Yes, assets identified and recorded at component level. 			5.2 Steps 3, 4
<p>As above for Building Assets</p> <p>Note: Components for buildings assets are structure, mech/elect plant, fitout, etc where material</p>	<ol style="list-style-type: none"> 1. No, assets recorded at category level (eg all buildings) 2. No, assets recorded at sub-category asset level (eg all public halls) 3. No, assets recorded individual building level 4. Asset recording at component level planned within 12 months 5. Yes, assets identified and recorded at component level. 			
<p>As above for Parks/Recreation Assets</p> <p>Note: Components for parks/rec'n, assets are surface type, playground item, structure, etc, where above capital threshold</p>	<ol style="list-style-type: none"> 1. No, assets recorded at category level (eg all parks) 2. No, assets recorded at sub-category asset level (eg all passive parks) 3. No, assets recorded individual park level 4. Asset recording at component level planned within 12 months 5. Yes, assets identified and recorded at component level. 			
<p>As above for Water/Sewer/CWMS Assets</p> <p>Note: Components for Water/Sewer/CWMS assets are pipe reach (up to ~100m), pump station civil works, individual pumps, switchboards, etc, where above capital threshold</p>	<ol style="list-style-type: none"> 1. No, assets recorded at category level (eg all drainage schemes) 2. No, assets recorded at sub-category asset level (eg 100mm dia pipes, pump stations by size) 3. No, assets recorded at sub-category level for individual drainage schemes) 4. Asset recording at component level planned within 12 months 5. Yes, assets identified and recorded at component level. 			
<p>As above for Drainage Assets</p>	<ol style="list-style-type: none"> 1. No, assets recorded at category level (eg all 			

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<p>Note: Components for drainage assets are pipe reach between pits, pits structures, access points where above capital threshold</p>	<p>drainage assets) 2. No, assets recorded at sub-category asset level (eg 375mm dia pipes, pump station by size) 3. No, assets recorded at sub-category level for individual Water/Sewer/CWMS schemes) 4. Asset recording at component level planned within 12 months 5. Yes, assets identified and recorded at component level.</p>			
<p>Where is this asset data held?</p>	<p>1. No asset register 2. Hard copy 3. Technical asset register 4. Financial asset register supported by technical asset register(s) 5. One asset register serving financial & technical uses</p>			
<p>Asset Data Maintenance (4.2, 3rd Action)</p>				
<p>How current is your asset data?</p>	<p>1. Asset register > 5 years out of date 2. Asset register > 2 years out of date 3. Asset register > 1 year out of date 4. Asset register updated annually 5. Asset register updated monthly/continuously</p>			<p>5.2 Step 3</p>
<p>Does your council have a documented work procedure for asset register maintenance?</p>	<p>1. No 2. Planned in 12 months 3. Being developed 4. Yes 5. Yes and operates as scheduled</p>			<p>5.2 Step 3</p>
<p>Does your council have a documented work procedure for recognising and capitalising new and donated assets?</p>	<p>1. No 2. Planned in 12 months 3. Being developed 4. Yes 5. Yes and operates as scheduled</p>			<p>5.4 Step 8</p>
<p>Does your council have a documented process for reviewing useful lives of assets?</p>				<p>5.2 Step 3</p>
<p>Has a council officer been allocated responsibility for maintaining Council's asset register?</p>	<p>1. No 2. Updating done by several staff members as required 3. Updating done by one staff member 4. Yes, included in a staff position statement 5. Yes, staff member is competent in role</p>			<p>5.2 Steps 1, 2</p>
<p>Does the responsible council officer have the time and resources to maintain the asset register?</p>	<p>1. No 2. Updates are always delayed 3. Updates are sometimes delayed 4. Updates are carried out to schedule 5. Currency of asset register is verified monthly</p>			
<p>Asset Condition Data</p>				
<p>Do you have condition data for Road Assets?</p>				
<p>As above for Building Assets</p>	<p>1. No, no condition data 2. Condition data for < 50% of assets 3. Condition data for > 50% of assets 4. Rolling program of condition assessment 5. Annual condition assessment</p>			<p>4.2 4th Action 5.2 Step 3</p>
<p>As above for Parks/Recreation Assets</p>				
<p>As above for Water/Sewer/CWMS Assets</p>				
<p>As above for Drainage Assets</p>				
<p>Risk Management</p>				
<p>Does your council have a current listing of asset related risks and risk management treatments linked to capital and maintenance programs for Road Assets?</p>	<p>1. No 2. Planned in 12 months 3. Being developed 4. Risks assessed and risk treatments</p>			<p>4.2 5th Action 5.3 Step 7</p>

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As above for Building Assets	identified 5. Yes, linked to maintenance & capital works programs			
As above for Parks/Recreation Assets				
As above for Water/Sewer/CWMS Assets				
As above for Drainage Assets				

Relating Service Levels to Costs of Delivery

Does your council know the life cycle costs of services provided using Road Assets?				
As above for Building Assets	1. No 2. Planned in 12 months 3. Being developed 4. Yes for some services 5. Yes, for all services			5.3 Step 6 5.5 Step 11
As above for Parks/Recreation Assets				
As above for Water/Sewer/CWMS Assets				
As above for Drainage Assets				

Future Demand Impacts

Has your council identified future demands and impacts on service delivery for Roads?				
As above for Building Assets	1. No 2. Planned in 12 months 3. Being developed 4. Yes for some services 5. Yes, for all services			5.4 Step 8
As above for Parks/Recreation Assets				
As above for Water/Sewer/CWMS Assets				
As above for Drainage Assets				

Asset Management Plans

Has your council an adopted asset management plan for Roads?				
As above for Building Assets	1. No 2. Planned in 12 months 3. Being developed 4. Developed but not adopted by Council 5. Yes			4.2 7 th Action 5.2 Step 4 5.5 Step 12
As above for Parks/Recreation Assets				
As above for Water/Sewer/CWMS Assets				
As above for Drainage Assets				

Question	Capability Levels	Desired Capability	Present Capability	DIP AMAP Reference
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Financial Planning

Consideration of Life Cycle Costs in Investment Decisions

Does your council break up capital expenditures into capital renewal, capital upgrade and capital expansion?	1. No 2. Planned in 12 months 3. Being developed 4. Yes for some expenditure categories			5.4 Steps 9, 10
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	5. Yes, for all expenditure categories			
Does your council receive and consider life cycle cost information in decisions relating to new/upgrade services and assets?	1. No 2. Planned in 12 months 3. Being developed 4. Yes for some services & assets 5. Yes, for all services & assets			
Revaluation Process				
How does your council do its asset revaluations for infrastructure assets (other than buildings)?	1. Values held at 'cost'. No revaluations 2. Revaluations done by external valuer 3. Revaluations done part by external valuer and part by council staff 4. Revaluations done by council staff 5. Revaluations done by council staff and verified by external source			5.2 Step 4
What is your council's revaluation frequency for assets?	1. Values held at 'cost'. No revaluations 2. 5 year revaluation cycle 3. 3 year revaluation cycle 4. 2 year revaluation cycle 5. Annual revaluation cycle			5.2 Step 4
Reporting Asset Consumption Against Service Delivery				
Does your council report asset consumption as an operating expense against the relevant service activity?	1. No, reported as corporate overhead expense 2. Planned within 12 months 3. Being developed 4. Yes for some service activities 5. Yes for all service activities			4.2 6 th Action?
Long Term Financial Plans				
What is the length of your council's long term financial plan?	1. 1 year 2. 2 - 3 years 3. 5 years 4. 10 years 5. 10+ years			5.6 Step 16
Long Term Financial Plans Include Projected Asset Renewals (Not Depreciation)				
Does your council's LTFP include asset renewals?	1. No 2. Planned in 12 months 3. Being developed 4. Includes renewals for some service activities 5. Includes renewals for all service activities			5.4 Step 9, 10
Long Term Financial Plans Include Growth and Upgrade of Services				
Does your council's LTFP include provision for network growth and upgrade of services?	1. No 2. Planned in 12 months 3. Being developed 4. Includes growth and upgrade for some service activities 5. Includes growth and upgrade for all service activities			5.4 Steps 8, 10
Long Term Financial Plans Include Life Cycle Costs for New Assets and Services				
Does your council's LTFP include provision for future operating expenses associated with new assets and services?	1. No 2. Planned in 12 months 3. Being developed 4. Includes operating expenses for some new assets and services 5. Includes operating expenses for all new assets and services			5.4 Steps 8, 10

Appendix 4 Template for Long Term Financial Plan Asset Expenditures

AM Expenditures		
Category	Expenditure Category	Baseline 5 year average expenditure (2 years history, current year, 2 years future)
Road Seal – Council A	Capital Renewal	\$0.00
Road Seal – Council B	Capital Upgrade	\$0.00
Road Seal – Council C	Maintenance	\$0.00
Road Seal – Council D	Capital Expansion	\$0.00

Appendix 5 Template for Asset Service Planning and Service Delivery Documents

Document Number	Document Name	Type	Total
Council A			
	(a) an annual report;		
	(b) a 5 year corporate plan;		
	(c) an annual operational plan;		
	(d) a long-term community plan;		
	(e) a long term financial plan;		
	(f) a long-term asset management plan;		
	(g) a report on the results of an annual review of the implementation of the long term plans above.		

Appendix 6A Asset Cashflow and LifeCycle Expenditure Model Results - Details of Methodology

The best available data from all sources has been compiled into a single asset register to enable the preparation of asset cash flow and expenditure models that can be used for a forward financial plan.

The modelling in Lifecycle seeks to provide long term financial plans that are based on actual asset behaviour. Key points are:

- The objective is to understand the failure mechanism (the point at which the asset requires renewal or disposal) for each asset and then aggregate the behaviour of every asset. Service potential or remaining service potential is influenced by many factors (not just condition) and can be represented by many forms (e.g. star rating as used for hotels). The true test of service potential failure is when the asset is actually renewed or disposed because the service it provides and the associated risks posed no longer satisfies the needs of the asset custodian.
- The modelling uses the asset register AREG. Key fields needed for modelling are:
 - Overall Economic Life (the frequency between asset renewals);
 - Remaining Life – Remaining Service Potential (the remaining life 0 – 5 in AREG should be the adopted 5 year works programme);
 - Model_Cat – the grouping used to run individual life cycle profiles (the default starting point is for Model_Cat to be the same as Exp_Cat);
 - Exp – Cat – the grouping used to match expenditures with asset renewal cashflows;
 - Renewal Cost – the default is current replacement cost, however there are times when the actual renewal cost is different to the Greenfields replacement cost.

Figure A6.1.1 – M1 Simple Model

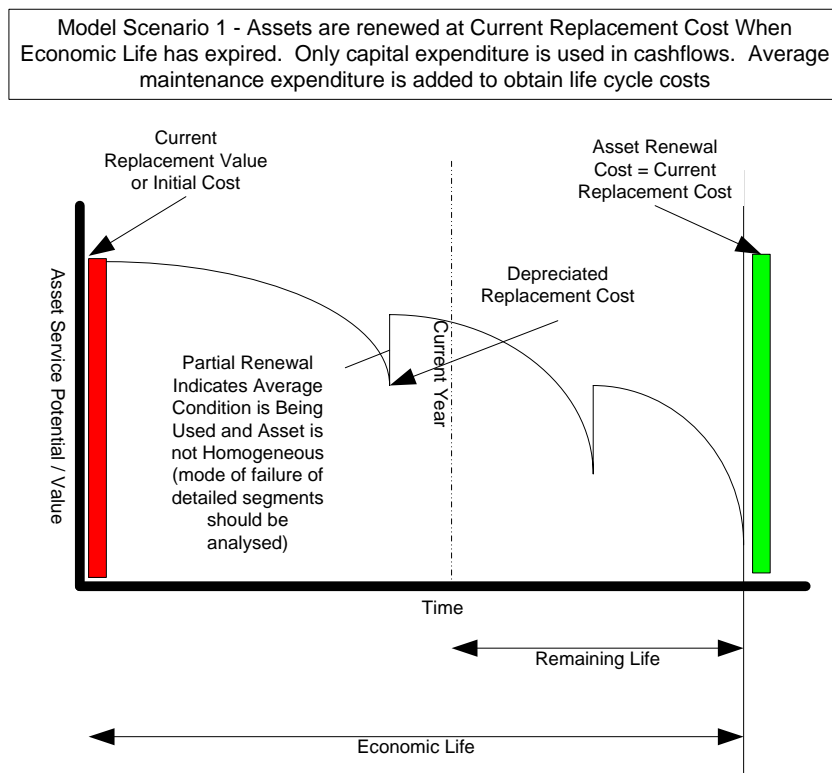


Figure A6.1.2 – M1 Simple Model

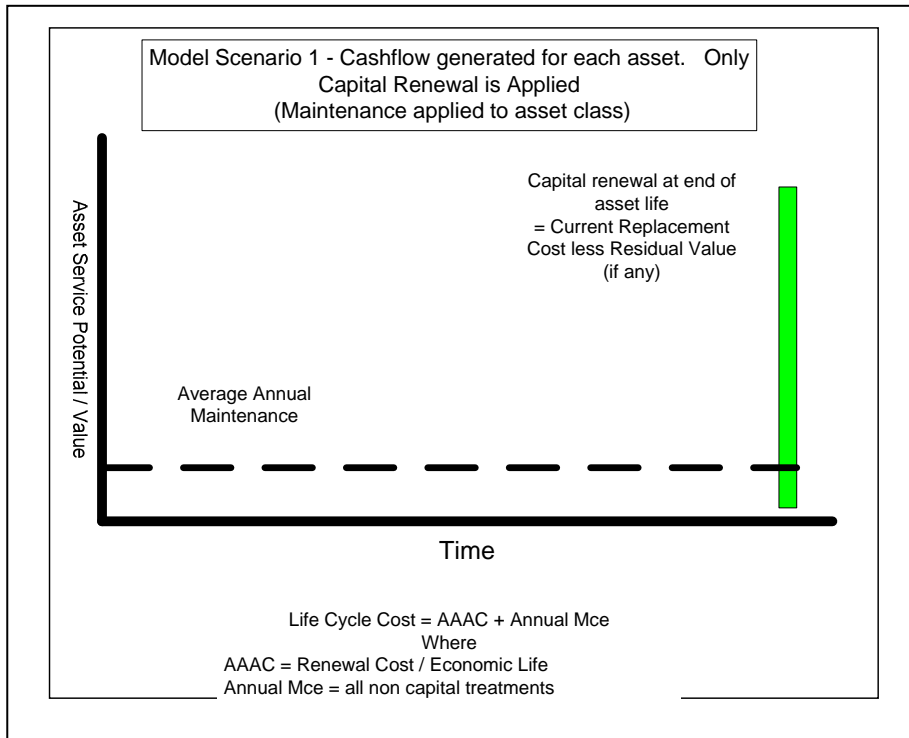


Figure A6.2.1 – M2 Advanced Model Using Lifecycle Cash flows

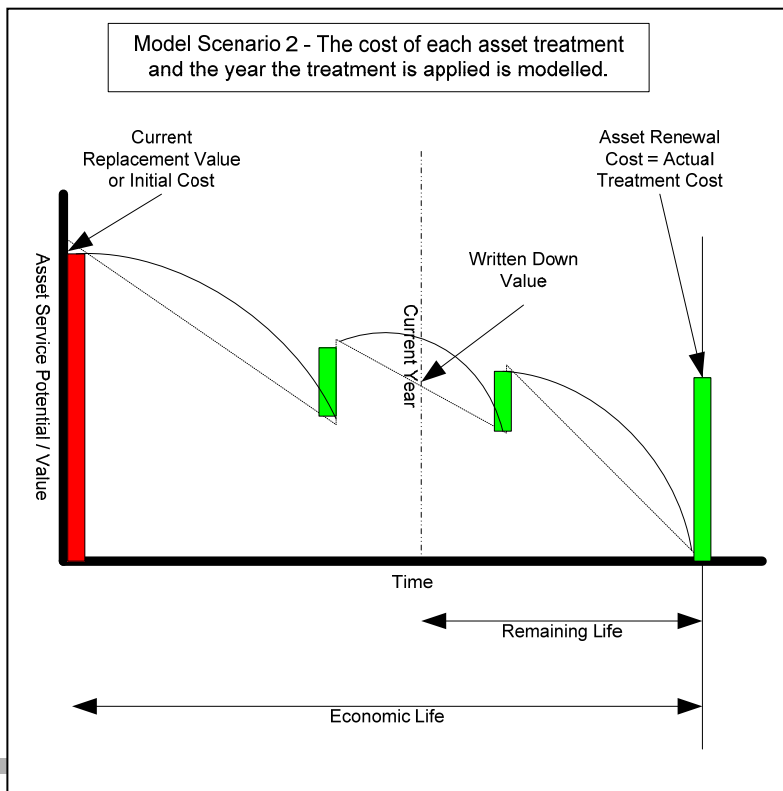
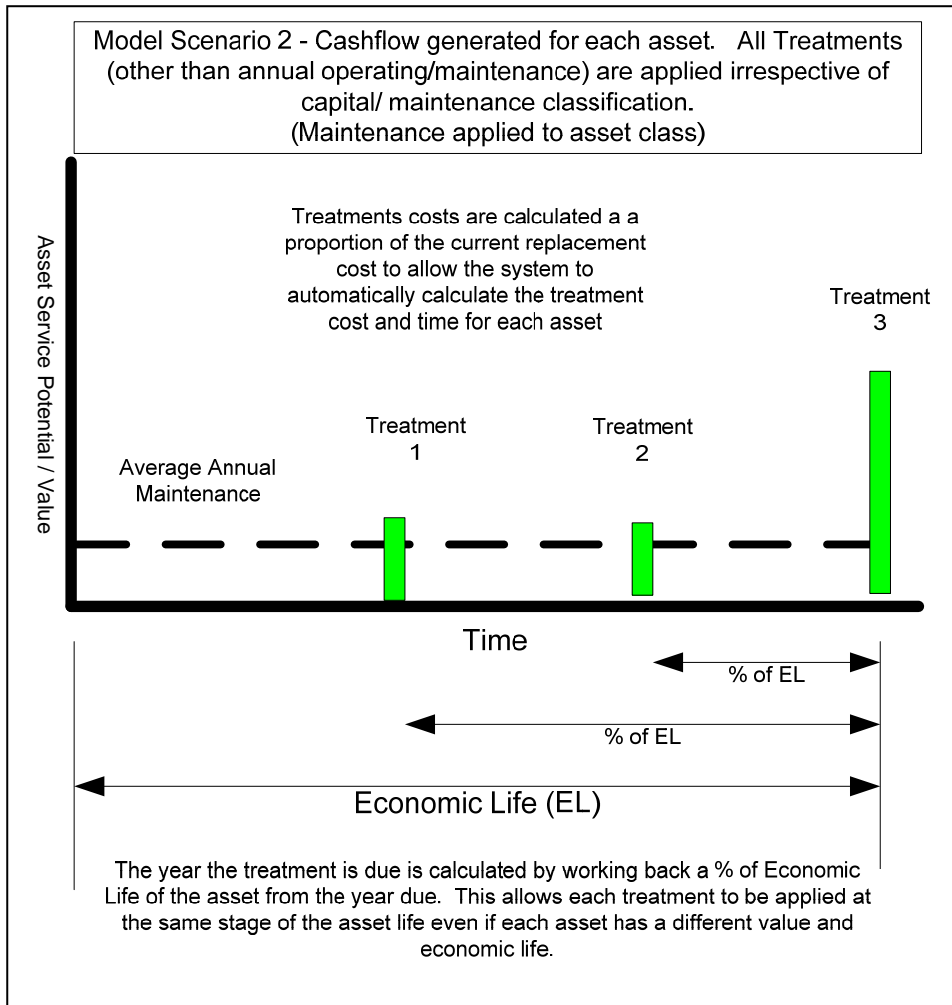


Figure A6.2.2 – M2 Advanced Model Using Lifecycle Cash flows



Appendix 7 Classification System – Draft Whole of Council Classification Schema

Asset Group	Asset Category	Asset Sub-Category 1	Asset Sub-Category 2
Property, Plant and Equipment	Land	Freehold Land	-
		Leasehold Land	-
		Reserves	Road Reserves
			Park Reserves
	Drainage Reserves		
	Buildings	<i>NOTE: the adjacent Asset Sub-Category 2 types apply to all of the below Building Asset Sub-Category 1 types</i>	Building Complete
			Site Features
			Structural
			External Fit-out and Finishes
			Internal Fit-out and Finishes
			Fixtures and Fittings
			Mechanical and Electrical
		Airport Buildings	Building Complete
			Building Component
		Animal Control Buildings	Building Complete
			Building Component
		Art and Performance Buildings	Building Complete
			Building Component
			Building Asset Planning
		Child Care Buildings	Building Complete
			Building Component
		Commercial Buildings	Building Complete
			Building Component
		Community Halls and Club Houses	Building Complete
			Building Component
		Pavilions and Exhibition Buildings	Building Complete
			Building Component
		Health and Immunisation Buildings	Building Complete
			Building Component
		Landfill Buildings	Building Complete
			Building Component
		Libraries and Information Buildings	Building Complete
Building Component			
Museums and Cultural Buildings		Building Complete	
		Building Component	
Office and Depot Buildings		Building Complete	
		Building Component	
Public Amenities Buildings	Building Complete		
	Building Component		
Residential Buildings	Building Complete		
	Building Component		

		Sports and Recreation Buildings	Building Complete
			Building Component
	Plant and Equipment	Plant	Light Vehicles
			Graders
			Dozers
			Loaders/Excavators
			Pavers
			Tractors
			Trailers/Caravans
			Rollers
			Trucks
			Street Cleaners/Sweepers
			Compressors
			Forklifts
			Small Plant
			Buses
			Boats
		Computing Equipment	Laptops
			PCs and Monitors
			Servers
			Storage, Backup Devices and Media
			Printers
			Scanners
			Network Devices
		Communication Equipment	Telephones
			Faxes
			PABXs
			Mobile Phones
			Trunked Radio Base Station
		General Equipment	Trunked Radios
	Office Equipment		
	Office Furniture		
	General Library Collections	Portable and Attractive Equipment	
-			
Performance Equipment	Audio and Sound Equipment		
	Lighting Equipment		
	Props		
	Fixed Theatre Equipment		
Heritage and Cultural	Works of Art	Category A Artworks	
		Category B Artworks	
		Pottery and Sculpture	
	Special Library Collections	-	
	Heritage Buildings	Building Complete	
	Museum Buildings	Building Complete	
	Museum Collections	Museum Plant and Equipment	
		Heritage Bric a Brac	
		Museum Document and Films	
		Museum Furniture and Fittings	

			Coin Collection	
			Museum Clocks	
			Doll Collection	
			Museum Clothing	
			Museum Signage	
			Museum Tools	
			Museum Trophies	
		Monuments and Memorials	Sporting Memorials	
			War Memorials	
			Statues	
			Cultural Monuments	
		Cemetery	Concrete Crypts	
			Ashes Internment	
			Graves	
			Headstones	
		Railway Line	Track	
			Sleepers	
			Formation	
		Railway Line Equipment	Points	
			Signals	
		Infrastructure – Road, Bridge and Drainage	Sealed Roads	Surface
				Pavement
				Formation
				Kerb
				Concrete Floodway
			Unsealed Roads	Pavement
				Formation
				Surface
				Concrete Floodway
			Access Roadways and Carparks	Surface
				Pavement
				Formation
Kerb				
Concrete Floodway				
Concrete Road Bridges	Concrete Road Bridges Complete			
	Deck			
	Abutment			
	Piers and Headstocks			
	Handrails and Guardrails			
Timber Road Bridge	Timber Road Bridges Complete			
Composite Road Bridge	Composite Road Bridges Complete			
	Deck			
	Abutment			
	Piers and Headstocks			
Major Road Culverts	Major Road Culverts Complete			
	Culvert			
	Headwalls, Wingwalls and Aprons			
	Handrails and Guardrails			
Pathway Structures	Timber Pathway Structures			

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			Concrete Pathway Structures
			Steel Pathway Structures
			Composite Pathway Structures
		Pathways	Cycleways on Road Pavement
			Cycleways not on Road Pavement
			Shared Pathways
			Footpaths
		Traffic Management Devices and Road Furniture	Road Signage
			Pavement Markings
			Guardrail
			Public Transport Shelters
			Public Transport Seating
			Bicycle Parking Facilities
	Traffic Signals		
	Roundabouts		
	LATMs		
	Medians		
	Stormwater Drainage	Pipes and Culverts	
		Covers, Inlets and Outlets	
		Junctions	
		Inter Allotment	
		Sub-Soil	
		Gross Pollutant Traps	
		Lined Open Drains	
	Infrastructure – Water	Above Ground Water	Barrage
			Water Treatment Plant
			Reservoirs
Pump Stations			
Flow Meters			
Underground Water		Mains and Common Services	
		Property Services	
		Valves and Hydrants	
Infrastructure - Sewerage	Above Ground Sewerage	Wastewater Treatment Plants	
		Pump Stations	
	Underground Sewerage	Rising Mains	
		Gravity Mains (including jump ups)	
		Access Chambers	
Infrastructure - Airport	Runways	Flexible Pavements	
		Runway Major Culvert	
		Runway End Safety Areas	
		Graded Runway Strip	
		Jet Blast Protection Areas	
		Formation	
	Taxiways	Flexible Pavements	
		Formation	
	Aprons	Flexible Pavements	
		Rigid Pavements	
		Apron Tie Downs	
		Formation	
	Airside Stormwater Drainage	Pipes and Culverts	
		Covers, Inlets, Outlets and Junctions	

		Airside Access Roads	Surface	
			Pavement	
			Formation	
		Airport Electrical	Substations	
			Distribution Transformers	
			Generators	
			Airfield Lighting Supply	
			Airfield Lighting Transformers	
			HV Cables (greater than 1000v)	
			LV Cables (less than or equal to 1000v)	
			ELV Cables (less than or equal to 24v)	
			Communication Cables	
			Earthing Points	
		Visual Aids – Markings, Signals and Signs	Runway Markings	
			Taxiway Markings	
			Apron Markings	
			Movement Area Guidance Signs	
			Wind Direction Indicator	
			Obstacle Markings	
		Visual Aids - Aerodrome Lighting	Obstacle Lighting	
			Aerodrome Beacons	
			Illuminated Wind Direction Indicator	
			Precision Approach Path Indicators	
			Runway Lighting	
			Taxiway Lighting	
			Apron Floodlighting	
		Site Improvements	Watering Systems	Bores
				Pumps
				Tanks
				Irrigation – Sprinkler Network
				Irrigation - Controllers
				Irrigation – Water Mains
				Taps
Open Space Furniture and Utilities	Playgrounds-Equipment			
	Playgrounds-Sofffall			
	Playgrounds-Shade Structures			
	Skateparks			
	Barbeques			
	Seating-Grandstand			
	Seating-Bench			
	Tables			
	Fixed Bins			
	Planter Boxes			
	Open Space Signage			
	Drinking Fountains			
Sporting Facilities	Swimming Pools			
	Tennis Courts			

			Netball Courts
			Basketball Courts
			Softball Field
			Squash Courts
			Rodeo Grounds
		Fencing	Fences and Gates
			Bollards
			Retaining Walls
		Lighting	Park Lighting
			Sports Field Lighting
		Yards	Wooden Yards
			Steel Yards
			Concrete Yards
		Water Features	Fountains
			Concrete Ponds and Waterfalls
		Waterway Facilities	Wharfs and Pontoons
			Boat Ramps
			Revetment Walls / Retaining Embankments
			Groynes / Foreshore Protection
			Rowing Course (or should this be equip?)
			Weirs
		Leachate Systems	Leachate Monitoring Boreholes
			Leachate Sub-Soil Drains
			Leachate Manholes/Pumpwells
			Landfill Retaining Walls
		Waste Transfer Stations	Station Component
		Weighbridges	Fixed Weighbridges
		Zoo	Enclosures
		Electrical	Exterior
		Sullage	
		Towers / Stations	Weather Stations
			TV Transmission Towers
		Beach Steps	Aluminium
		Memorials	Walls
		Washdown Bays	
		Open Space Soft	Horticulture
Grassed Areas – Sporting fields			
Landscaped Areas			
Arboriculture	Street Trees		
	Park Trees		

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Inventories	(Self Generating and Re-Generating)	Nursery Stock	Grow Tubes
			2 litre pots
			5 litre pots
			10 litre pots
			20 litre pots
		Animal Trading Stock	Cattle
			Pigs
			Sheep
			Horses
		Zoo Animals	Mammals
			Reptiles
			Birds
	Waste Collection	Waste Collection Equipment	Wheelie Bins

Appendix 8 Asset Management Policy

This sample policy has been kindly provided by Cairns Regional Council

Asset Management Policy

1. Policy Scope:

This policy applies to all infrastructure related service provision such as Transport, Stormwater Drainage and Flood Protection, Community Services delivered by Council Facilities, Water and Sewerage Services, Sport and Recreation and Environmental Protection.

2. Policy Purpose:

To ensure that Council has information, knowledge and understanding about the long term and cumulative consequences of being the custodian of public infrastructure. This will be done by ensuring systems, processes and people are able to inform decisions on the most effective and efficient options for delivering infrastructure related services whilst controlling exposure to risk and loss. This purpose will be achieved by compliance with the intent of sections 102 to 104 in Part 3 of the 2008 Local Government Bill.

3. Policy Reference (eg Legislation, related documents):

- New QLD *Local Government Act 2009*
- National Asset Management Framework
- IPWEA NAMS.PLUS National Templates for Asset Management Plans
- International Infrastructure Management Manual

4. Policy Definitions:

To assist in interpretation, the following definitions shall apply:

Asset Management

The combination of management, financial, economic, engineering and other practices applied to physical assets with the objective of providing the required level of service in the most cost effective manner.

Financial Management Documents (LGB 2008, Section 104)

The financial management documents include the following documents—

- (a) an annual budget;
- (b) a general purpose financial report;
- (c) a financial forecast;
- (d) an asset register that records—
 - (i) capital expenditure; and
 - (ii) depreciation charges; and
 - (iii) revaluation increments and decrements;

(e) a revenue statement.

Planning and Accountability Documents (LGB 2008, Section 104)

The planning and accountability documents include the following documents—

- (a) an annual report;
- (b) a 5 year corporate plan;
- (c) an annual operational plan;
- (d) a long-term community plan;
- (e) a long term financial plan;
- (f) a long-term asset management plan;
- (g) a report on the results of an annual review of the implementation of the long term plans mentioned in this section.

Long Term Community Plan (LGB 2008, Section 104)

A long-term community plan is a document that—

- (a) outlines the local government's goals, strategies and policies for implementing the local government's vision for the future of the local government area, during the period covered by the plan; and
- (b) covers a period of at least 10 years after the commencement of the plan.

Long Term Financial Plan (LGB 2008, Section 104)

A long-term financial plan is a document that—

- (a) outlines the local government's goals, strategies and policies for managing the local government's finances, during the period covered by the plan, including the following policies—
 - (i) an investment policy;
 - (ii) a debt policy;
 - (iii) a procurement policy;
 - (iv) a revenue policy; and
- (b) covers a period of at least 10 years after the commencement of the plan.

Long Term Asset Management Plan (LGB 2008, Section 104)

A long-term asset management plan is a document that—

- (a) outlines the local government's goals, strategies and policies for managing the local government's assets and infrastructure, during the period covered by the plan; and
- (b) covers a period of at least 10 years after the commencement of the plan.

The long-term asset management plan is the forward programme of all asset operational, maintenance, renewal, expansion and upgrade costs needed to deliver the levels of service set out in the Long Term Community Plan. The Long Term Asset Management Plan must match the levels of funding set out in the Long Term Financial Plan.

5. Policy Context:

Section 102 of the Local Government Bill 2008 provides the policy context. This requires that *“to ensure the financial stability of local governments, each local government must implement the following financial sustainability criteria—*

- (a) financial risks are to be managed prudently;*
- (b) financial policies are to be formulated—*
 - (i) to ensure a reasonable degree of equity, stability and predictability; and*
 - (ii) so that current services, facilities and activities are financed by the current users of the services, facilities and activities; and*
 - (iii) having regard to the effect of the policies on the future users of services, facilities and activities;*
- (c) full, accurate and timely information about the local government’s finances and infrastructure (including a report mentioned in section 104(7), for example) is to be made available to the public on the local government’s website.”*

6. Policy Evaluation Process:

Council will annually conduct, and report on the results of, a review of the implementation of the long-term plans mentioned in this policy. These are:

- Long Term Community Plan
- Long Term Financial Plan
- Long Term Asset Management Plan

7. Responsibilities:

Sponsor	Chief Executive Officer
Business Owner	General Manager Infrastructure Service
Policy Implementation	Strategic Manager Asset Services
Policy Compliance	Assets Engineer

8. Changes to Policy:

This policy is to remain in force until otherwise determined by the <CEO/Council>.

CHIEF EXECUTIVE OFFICER