

1. Issue Name

Essential Infrastructure

2. Contributors

Manager Operations & Maintenance, Design Service Manager, Manager Customer Service Business Performance, Senior Advisor Infrastructure Project, Senior Advisor Transport & Infrastructure, Manager Project Office, Manager Infrastructure Development, Manager Major Assets

3. Issue Definition and Scope

The issues and focus points raised within this paper relate directly to the current Corporate Plan's Strategic Priority which is to "Provide and maintain water, waste services, roads, drainage and support the provision of transport and waterways infrastructure to sustain our community".

This paper examines the current strategic objectives by analysing infrastructure planning and management as two sections. The first being Infrastructure Planning and the second Delivery and Maintenance of Infrastructure and while both are strongly related, each section deals with separate issues.

4. Executive Summary

The provision of essential infrastructure is a prerequisite for managing growth. Efficient, timely and coordinated infrastructure networks are required to ensure the cost effective provision of essential services to the community. At the same time the infrastructure is to be provided and operated so that it has limited impacts upon the environment and the community.

The paper examines a range of issues and challenges related to the planning, delivery and management of new and existing infrastructure for projected population growth.

Infrastructure Planning

Five areas of focus have been identified:

- Delivering infrastructure plans in accordance with the principles of sustainable development (balance between economic, environment and social outcomes)
- Links between corporate and strategic objectives in infrastructure planning
- Information and data required for infrastructure planning
- Forward planning
- Demand management
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Delivery and Maintenance of Infrastructure

Five areas of focus have been identified

- Capital funding
- Industry trends
- Compliance with government approvals regulations and standards
- Customer expectations
- Aging assets

There needs to be an acknowledgement when preparing budgets and programs of:

- How increasing compliance requirements has impacted on budgets and programs
- Customer expectation paper.

5. Regional Cooperation

Sustainability is the key issue in infrastructure planning. The recently released Regional Plan for South East Queensland and its accompanying document – Regional Infrastructure Plan and Program 2005-2026 – sets direction for regional sustainability. Regional co-operation is necessary to ensure regional sustainability issues are addressed at local government level.

Cross border issues are particularly significant for planning roads and this is already being addressed in the Regional Roads Groups (RRG)

Major commitments are needed from the State Government to infrastructure planning and delivery in the Shire. RSC needs to advocate for major infrastructure projects of Redlands interest.

Examples are:

- Eastern busway
- Rail duplication
- Bus priority and High Occupancy Vehicles measures
- TransLink's infrastructure program for Redlands
- Main Roads' projects in Redlands
- Island Transport
- Explore opportunities of greater partnerships with state infrastructure supplier to influence their planning and infrastructure delivery process.
- Uniform standard of services
- Roads (Roads Alliance/Regional Road Group (RRG)).
- SEQ Water Resource Supply Strategy
- SEQ Drought Management Strategy

6. Background/ Discussion

INFRASTRUCTURE PLANNING

Challenges for the Council in relation to infrastructure planning are covered in the following five broad focus areas:

Delivering infrastructure plans in accordance with the principles of sustainable development (balance between economic, environment and social outcomes).

As the population increases in the region, infrastructure comes under increasing pressure. Council and State Government will have to determine the level of services they are willing to provide within the resources available. Therefore some hard decisions are to be made on infrastructure, such as developing new infrastructure and optimising capacity of existing infrastructure.

Consideration needs to be given to:

- Increase usage of public transport and other alternate modes of travel.
- Community awareness and education on sustainable use of essential infrastructure.
- Development of preferential policy for sustainable travel modes.
- Improved coordination between land use, transport and other infrastructure planning.
- Minimisation of environmental impacts.
- Trade off between desired service standards and ability/willingness to pay.

- Development and implementation of best use strategies, for example:
 - Water re-use/recycling
 - Water conservation
 - Alternative transport modes
 - Waste minimisation
 - Energy use
- Consideration of a triple bottom line approach
- User Pays e.g. parking, waste, stratified pricing mechanism for water usage. (Council position yet to be developed)

Link between corporate objective and strategic objectives

Council needs to continue to align corporate priorities/plans with desired objectives and further expand the implementation of outcomes set out in Council endorsed strategic studies/plans. Examples include:

- Redlands Planning Scheme
- Redlands Transport Plan 2016
- Redlands Cycling and Pedestrian Strategy
- Council's WorkPlace Travel Plan
- Recent corporate re-alignment is a step forward to bring corporate planning and policies and strategic infrastructure planning and policies together.
- Strategic Asset Management Plans (SAMP)
- Total Asset Management Plans (TMP)
- Individual Asset Management Plans (IAMP)

Information and data required for infrastructure planning and monitoring of existing or implemented programs

Good infrastructure planning needs to be based on readily available, reliable and accurate information. This information needs to be integrated with future projection data to provide high level strategic planning for the Shire.

Council's approach so far in the collection of traffic and travel data has been reactive. Collections of traffic and travel data are usually limited to the needs in responding to the petitions, queries by the residents and/or representatives of the community or industry. A systematic, regular routine compilation of information on traffic and travel data is an issue in transport infrastructure planning.

Infrastructure outcomes monitoring program: There is a need to have a mechanism in place to undertake tasks such as how the supplied infrastructure are performing in relation to achieving desired outcomes.

As constructed information should provide an accurate data for the future planning and management.

Forward Planning

Some Forward Planning issues are:

- Higher order planning processes (SEQ Regional Plan, Regional Infrastructure Plan and Programs, Roads Implementation Program, TransLink's Network Plan have been developed and can inform Corporate Plans and provide priorities on infrastructure provision.
- Priority Infrastructure Planning and Charging as a major policy issue impacting on how the Council will be planning and funding the delivery of new infrastructure to be provided in the

next 15 years to 2021, eg whether development leads infrastructure provision or infrastructure leads development will be determined by how Council will deliver PIP and ICS.

- Ensure that appropriate assessment of development applications is completed so that development impacts do not adversely affect existing and future infrastructure planning.
- Ensure that future infrastructure land banks are protected.
- SMBI Development – Road, Drainage and Water and Sewage Infrastructure
 - There are 2330 dwellings on the SMBI (Southern Moreton Bay Island) and thousands of lots where development might be expected in the future including about 350 where the development rights of landowners are protected under the Southern Moreton Bay Island Development Entitlements Protection Act 2004. The owners of these protected lots have ten years from the adoption date of the new Redlands Planning Scheme to lodge a development application.
 - An increased need/demand for road, drainage and water and sewage infrastructure will be required because of the expected increase in development.

Demand Management

Demand/supply management strategies and policies should be a component of assessment of any new infrastructure proposals i.e.: how to make the best use of existing infrastructure and reduce the need to increase the capacity of existing roads, water and sewer mains and other facilities.

Managing demand to reduce the need for new/upgraded infrastructure can be achieved by implementing soft demand management measures:

Eg. Education, awareness, marketing to influence travel behaviour change program, water usage behaviour, aligning land use to generate less demand on infrastructure, promoting alternative and efficient means.

Or hard demand management measures:

Eg. Appropriate pricing policies on parking, balancing the demand for parking spaces, water usage, more robust framework for infrastructure charging, user pays.

DELIVERY AND MANAGEMENT OF INFRASTRUCTURE:

This section relates to all aspects of design, construction of new assets and the refurbishment and the maintenance of existing assets.

The issues identified in this section are the same issues that almost every local government has to examine.

The existing services within RSC are delivered in accordance with approved service level agreements and to industry standards and specifications. However these assets are approaching capacity and gradual improvement for each service network will be required. Particularly as population forecasts estimate significant growth for our shire and with this growth infrastructure upgrades and increased management will be necessary.

The challenging issues for RSC are:

Funding

A present RSC funding is limited to its income from rates, fees, charges, subsidies and borrowings. As the shire grows and infrastructure ages there will be a requirement for increased funding and the need to examine opportunities through Priority Infrastructure Programs funding options such as user pays.

There is also a need to examine options whereby Council can maximise on our purchasing capacity. For instance Council may seek to purchase construction materials in bulk and contractors provide labour only.

Example of Cost Recovery - Commercial Use of Jetties and Ramps

Presently Council only recovers about 50% of the cleaning and routine maintenance costs. Fees will have to be increased substantially in future to ensure the full recovery of costs on a user pays principle in line with Council's financial objectives.

Industry Trends

As all levels of government and the private sector have large infrastructure programs planned or under construction there have been a number of trends emerging. These include:

Shortage of available contractors. With the current building boom it is becoming increasingly difficult to secure the services of contractors who are willing to quote/ tender for minor building and refurbishment work and minor civil projects. This is especially so when there is a degree of difficulty or remoteness associated with the work eg Weinam Creek dredging-1 tender received, Weinam Creek car park upgrade-1 tender received, Raby Bay canal maintenance-2 tenders received, Karragarra Island Barge Piling-no tenders were received.

The number and quantum of Commonwealth, State Government and other projects proposed to be undertaken over the next ten years (for example the Gateways Upgrade Project and the Brisbane City Council North By pass Tunnel) will make it more difficult for many local governments to access appropriate private sector advisers and construction companies/developers in a cost effective manner.

Shortage of skilled labour due to training deficiencies. This is causing delays especially with building work as there is a considerable amount of staff poaching between building companies. Some companies are paying extraordinary wages for carpenters, tilers and brick layers.

Shortage of materials. The manufacturers of items such as light poles, marine infrastructure and some piping require a minimum of 3 months lead time to supply as they are not able to keep up with the current demands.

Above CPI cost increases in materials eg, most civil construction materials have doubled in cost in the last five years. The input cost index for local government in Queensland is rising at around 5.4% per annum on average – more than double CPI. In the building sector it has been reported that construction cost are rising by around 1.5% per month.

In the area of sewerage treatment alone, there is around \$1 billion in upgrades to sewerage treatment plants being undertaken by local government over the next 4 to 5 years to meet EPA requirements. The trend is similar in other infrastructure classes such as roads, waste treatment, and water supply, and non-traditional areas such as aged care and other community facilities.

Compliance

The number and complexity of approvals required from various Government Departments and agencies has dramatically increased in the past few years. Common problems exist where there is confusion within departments as to the demarcation of responsibility eg should it be handled by them or local government. Problems also exist where some permits are not required to be administered in accordance with IPA time frames eg Riverine, dredging and vegetation clearing permits, hence in these departments there is a back log of applications which may take 6 months or longer to obtain an approval.

Increased Standards for effluent and stormwater discharge have directly increased the costs of building and maintaining infrastructure. Also it is becoming increasingly difficult to undertake dredging works. Dredging provides basic access to ferry terminals, boat ramps, waterways and canals within the Shire. The dredging operations are significant environmentally as they generate spoil which has traditionally been dumped at sea. Increasingly stringent environmental regulations for the Moreton Bay Marine Park, means that most of this spoil may now have to be disposed of on land. The cost of land disposal is well in excess of sea disposal. Council is not alone in this respect, and is working closely with Queensland Transport and other relevant State Government Departments to find solutions.

Customer Expectations

Customer expectations are increasing with the resultant increasing demand on a finite level of resources. For example road noise is a concern to residents so they are demanding road surfacing that is quieter. That comes at an increased cost which requires additional resources if Council is to maintain its reseal program eg in some instances where chip seals used to be used we now use asphalt.

There is also an expectation of best practise with design and construction which increases costs eg State of the art waste water treatment plant facilities, increased width of bikeways from 1.5 to 2.5 metres.

Aging Assets

As Council's assets age there is a greater need to focus on ensuring the assets are maintained in accordance with the asset management plans.

Asset management plans need to be the frame work for the future management and maintenance to minimise whole of life costs. New technology can have affects in this area and information systems need to be funded appropriately e.g. Maximo.

Council needs to continue its move to proactive maintenance from reactive maintenance to enhance the life of the assets. This may result in an increase in costs on the short term. The continued development and implementation of works management systems to further refine costs of the various types of maintenance will enhance our overall asset management.

IMPACTS ON OPERATIONAL OUTCOMES

Infrastructure planning needs to be based on sound data and the fundamental principles of sustainability.

Future capital budgets will need to balance the competing priorities of new assets against the replacement/ rehabilitation of existing assets.

Council needs to explore options that will allow suppliers to be challenged, thus allowing RSC to maximise on the procurement of capital and other resources.

Future maintenance budgets must be framed against the priorities identified in the asset management plans to ensure serviceability of the asset and minimisation of whole of life costs.

In order to provide a balance between community expectations and available resources the refinement of service level agreements and standards needs to continue.

Council needs to develop an asset lifecycle methodology which articulates the accountability and responsibility of the asset as it passes through various phases.

Council needs to consider an integrated and standard approach to infrastructure planning and development.