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JRA Discussion on AMP Preparation and SRV

Version 1.2

Date: 7 October 2014

Version History

Version	Change	Changed by	Reviewed by	Approved by and date
1.0	Draft - AM	AM	CoR	
1.2	Revised Draft	AM	CoR	

1 Background

Jeff Roorda and Associates is currently assisting City of Ryde in the updating of their Asset Management Plans. This work is of particular importance as the work will also be used to support the application to the Independent Pricing and regulatory Tribunal for a special Rate Variation (SRV)

2 Methodology

2.1 Data

The data used for the analysis is based on City of Ryde infrastructure financial valuation.

This data is based on the detail information provided by the technical/operational areas of council who monitor and record condition data for all major asset groups. This information is recorded at a high level of detail and is continually being updated as works and inspections are undertaken.

The major groups of assets include:

- Road Pavements
- Roadside
- Traffic and Parking
- Stormwater
- Buildings
- Parks and Reserves
- Playspaces and Sporting Fields
- Ryde Leisure and Aquatic Centre
- Library and Cultural

The detailed data held for each of these asset groups is provided in a summarised form, being based on their condition type.

As recommended by the International infrastructure Management Manual the condition types used are from Condition 1 to Condition 5. (Condition 1 being near new, condition 5 being those assets that have reached the state at which renewal is required).

These registers are the basis of the annual infrastructure valuations, which are subject to financial audit.

2.2 Analysis

The analysis of needs has been assessed from 2 perspectives, one being from a long term service level sustainability and the other from a short to medium term view.

2.2.1 Long Term Service Level Sustainability - Funding Model

When considering the funding of infrastructure the long term requirements should be a primary consideration. In much of the existing City of Ryde documentation this is referred to as the Infrastructure Funding Model.

In this funding model the Capital Renewal requirements for infrastructure is estimated as being:

Capital Renewal Requirements = Renewal Value / Useful Life

In addition to the Capital Renewal Requirements, operations, maintenance and creation of addition assets should be included. These items are described as:

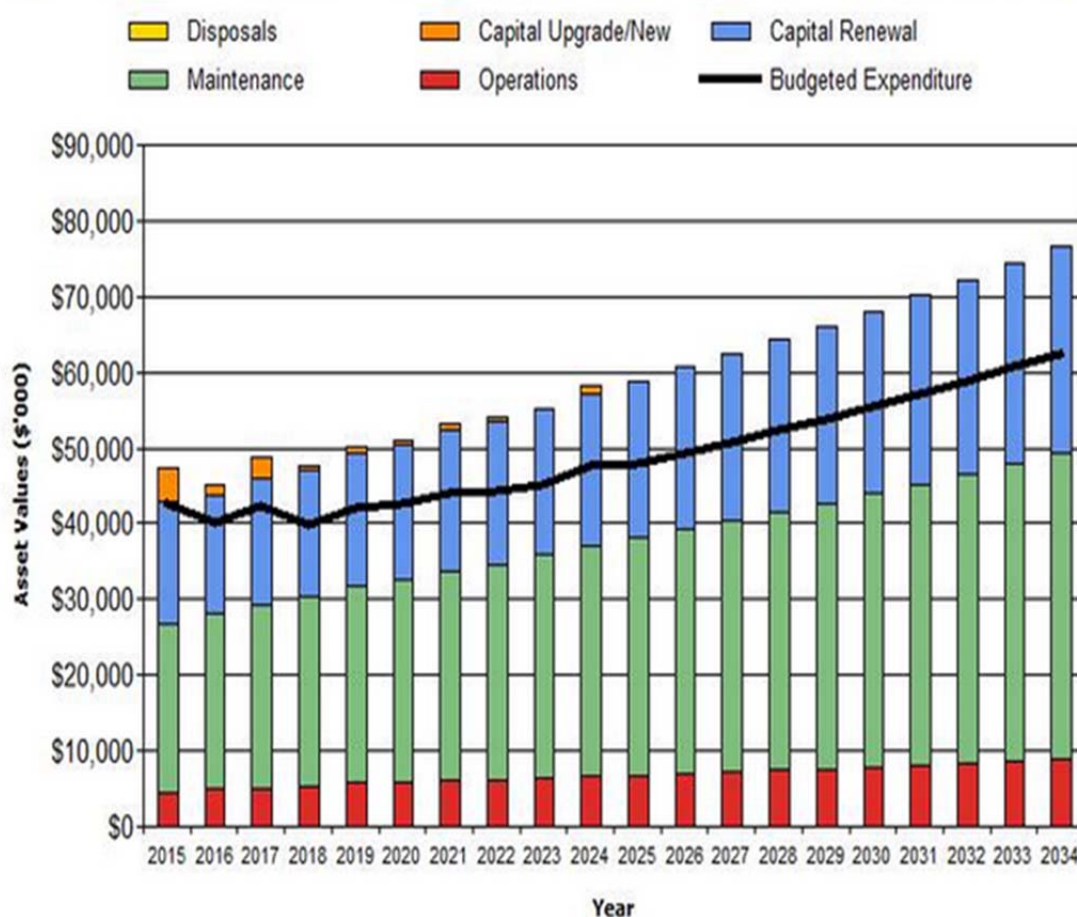
- Operations – what we do to provide the service, e.g. cleansing *
- Maintenance – repairs to the asset to ensure it reaches its life *
- Capital renewal/replacement – replacing the service capacity
- Capital upgrade/new – adding new or upgrading existing assets

In the analysis Operations, Maintenance and Upgrade/New is assumed to stay as per the current situation

Figure 1 – Forecast Funding Model Requirements Compared with Current Budgets

(CPI 3% per annum increase)

Ryde CC - Projected Operating and Capital Expenditure ()



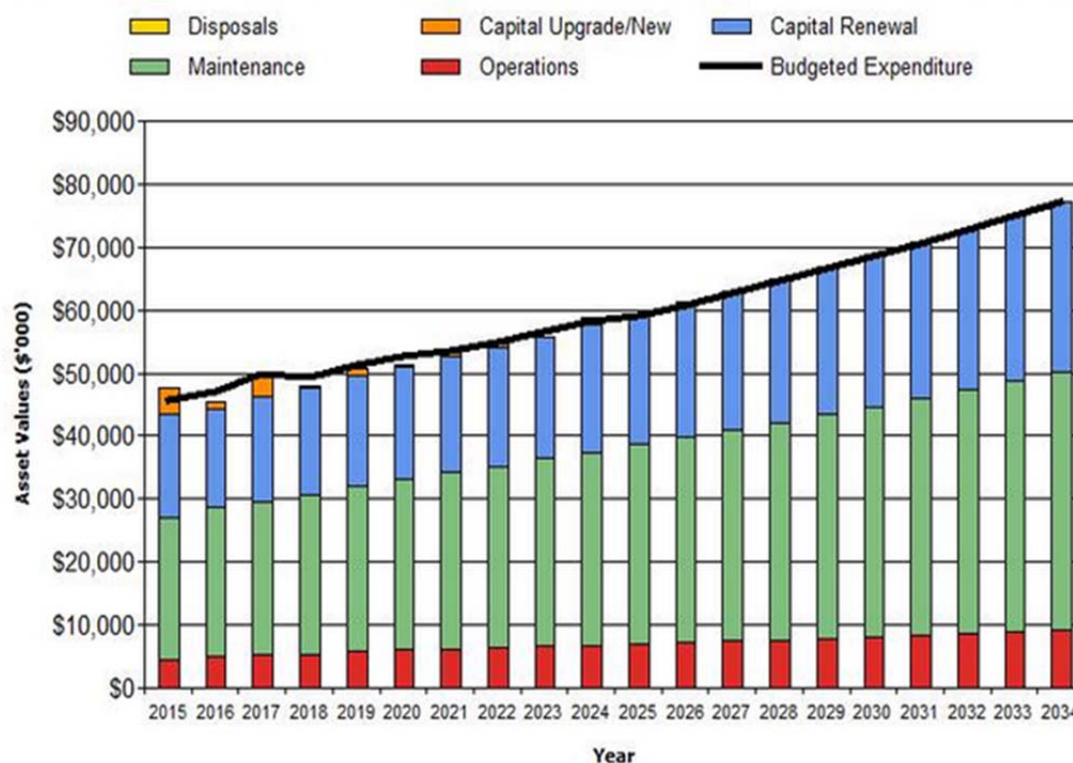
Comments:

- Comparison of Budget (Long Term Financial Plan) with Forecast needs indicates a shortfall of funds.
- The long term position would result in a progressive reduction in service levels over time.
- The objective of generating sufficient income to offset all infrastructure requirements is a sound basis for future planning and this analysis is consistent with the need to generate additional income.

Figure 2 – Forecast Funding Model Requirements Compared with 7% SRV

(CPI 3% per annum increase)

Ryde CC - Projected Operating and Capital Expenditure ()



Comments

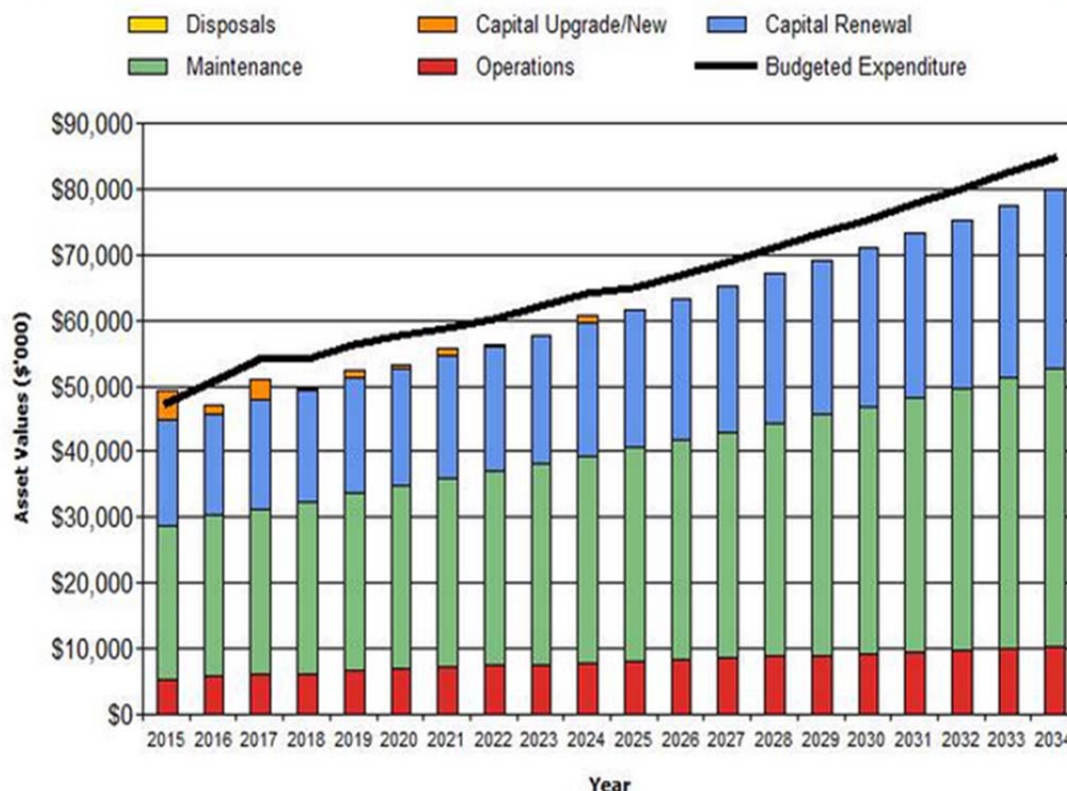
- The provision of additional infrastructure funding provided by a 7% SRV meets the forecast infrastructure requirements
- For a long term sustainability of infrastructure service levels this funding model is the minimum option

What about options considering SRV greater than 7%

SRV options for increases of up to 12% have been considered. With respect to infrastructure renewal, this would allow the average renewal replacement cycle to be accelerated. This would renew assets earlier and would ultimately lead to a higher standard of infrastructure network.

Figure 3 – Forecast Funding Model Requirements Compared with 12% SRV
(CPI 3% per annum increase)

Ryde CC - Projected Operating and Capital Expenditure ()



Comments

- The provision of additional infrastructure funding provided by a 12% SRV is slightly above the average forecast infrastructure requirements
- This will enable existing service levels to be sustained, and potentially improved.

2.2.2 Short to Medium Term Service Level Sustainability - Condition Model

Asset Plans

The funding model described provides a forecast of the long term average renewal requirements, and uses this as a basis for estimating income requirements. Generating the income to achieve the funding of this model enables service levels over the long term to be sustained.

Financial Planning should provide for the long term funding, the assets plans will advise on the timing of specific asset renewals. The asset plans take into consideration the distribution of asset condition and identify expenditure need at the short to medium term (typically for input into the 10 year Long term Financial Plan)

Whilst the longer term funding model is appropriate for establishing ongoing income requirements, at a detail level it is likely that the short term asset renewal will not necessarily be required “at the average rate”. Depending on when infrastructure was constructed,

environmental conditions and asset performance there will be “peaks and troughs” in the shorter term needs.

Council's Financial Strategy will compare the infrastructure need for a period with the funds available and plan accordingly.

For example. In periods where asset renewal requirements are less (renewal trough) than the funding available reserves may be used, whereas in a period of high renewal needs (renewal peak) reserves may be utilised as may be loans if appropriate.

Asset Plans consider the timing of renewal needs. The approach for City of Ryde has utilised the detail condition assessment to anticipate the renewal timing. An example from the full data set is shown in Table 1

Table 1: Asset Condition Profile Example

Asset Group	Condition Rating	Asset Sub Group	Useful Life	Remaining Life	Replacement Cost
Road Pavements	1	AC Local	50	50	\$72,194,200
Road Pavements	2	AC Local	50	45	\$127,757,105
Road Pavements	3	AC Local	50	20	\$49,299,763
Road Pavements	4	AC Local	50	12	\$13,137,980
Road Pavements	5	AC Local	50	5	\$0
				TOTAL	\$262,389,047

2.2.3 Sample of Model Methodology

Using the data in Table 1 the following examples are provided to demonstrate the modelling approach.

Funding Model

Average Funding Requirement= Replacement Value/Useful Life

$$= \$262,389,047 / 50 = \mathbf{\$5,247,780.94}$$

Comment: If funds of \$5.25M per annum are provided long term renewals can be sustained

Asset Condition Model

Allows for the timing of when the renewal is required:

- Condition 1
 - \$72,194,200 within 50 years, then repeated in another 50 years
- Condition 2
 - \$127,757,105 within 45 years, then repeated in another 50 years
- Condition 3
 - \$49,299,763 within 20 years, then repeated in another 50 years
- Condition 4
 - \$13,137,980 within 12 years, then repeated in another 50 years
- Condition 5
 - \$0 within 5 years, then repeated in another 50 years

2.2.4 Asset Condition Model Summary

The full condition profile register of assets was modelled as described in section 2.2.3

As the useful lives are grouped by remaining life and useful life the forward renewal profile initially had very large peaks of renewal. To reduce this impact some averaging of the results over 5 year periods was made as shown following.

Figure 4: Renewal Profile Based on Condition Assessment

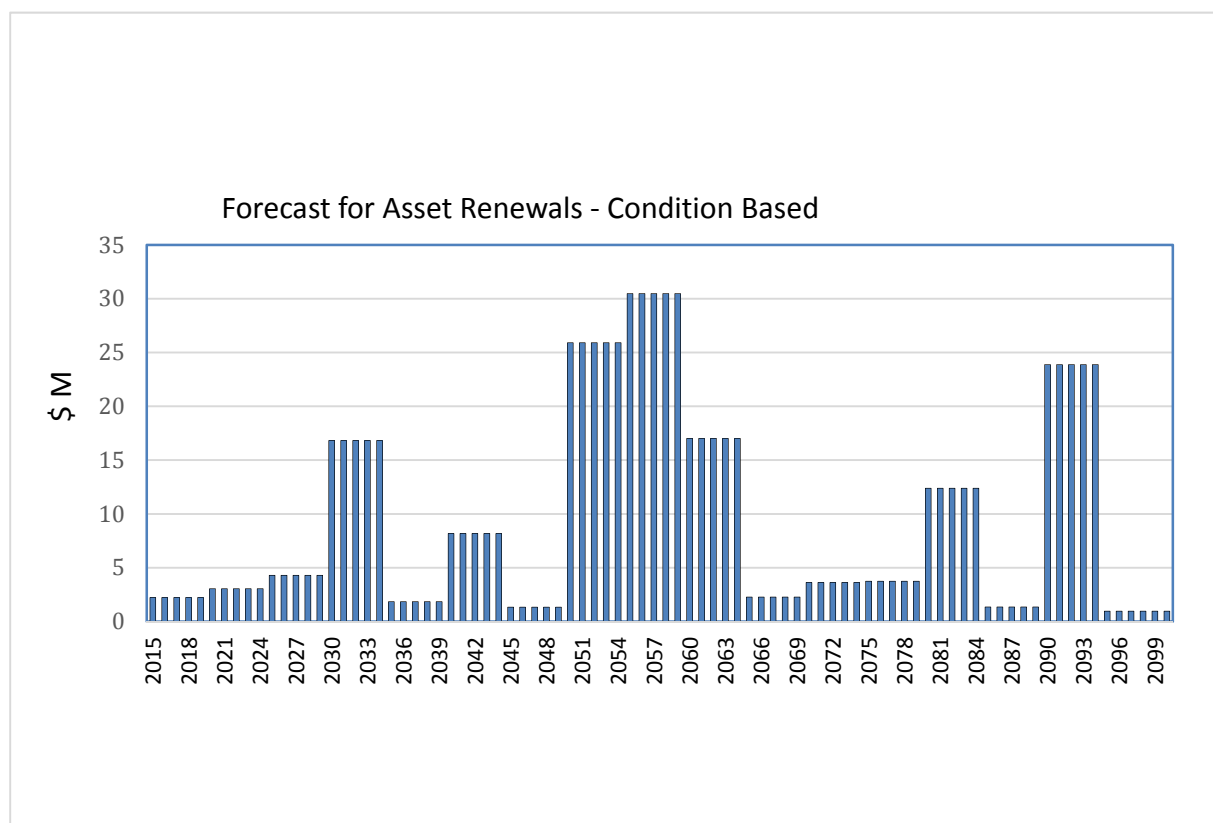


Figure 4 highlights that whilst the assets in Condition 4 and 5 can be managed in the short to medium term there are some very significant peaks of renewal in the future. These peaks represents those assets currently in Condition 3, Condition 2 and even Condition 1 that will deteriorate over time and will require replacement in the future.

3 Summary of Modelling Results

The model based on Condition provides a clear indication that:

- Assets due for renewal in the short to medium term can be managed
- There are significant renewals in the future well above current funding levels
- Without a Funding Strategy within an overall infrastructure Financial Strategy future service levels will reduce

The Funding Model based on the longer term average renewal requirements indicate:

- Current funding levels will not be sufficient to support sustainable service levels in the future

- A 7% SRV will be sufficient to sustain the current level of service if used in conjunction with an overall infrastructure Financial Strategy
- A 12% SRV will enable the cycle of renewal to be achieved and potentially reduced, leading to some small improvement in service levels in the future