10.0 ASSET MANAGEMENT PRACTICES

10.1 Current Asset Management Practices

This section outlines the decision making tools Taupō District Council (TDC) currently uses to determine long term maintenance, renewal and creation expenditure for roading assets.

AM practices fall under three broad headings:

Processes: The necessary processes, analysis and evaluation techniques needed for life cycle asset management.
Information Systems: The information support systems used to store and manipulate the data.
Data: Data available for manipulation by information systems to produce the required outputs.

10.2 Asset Management Processes

10.2.1 ATTRIBUTE DATA COLLECTION AND VALIDATION

Data collection is completed by:
- RAMM rating consultants on two yearly basis
- Road Maintenance contractors are updating asset information as maintenance works are completed via RAMM contractor.
- Contractors supplying data where an asset is renewed or installed
- As built data from new subdivision works
- A sample of data is collected and measured by TDC staff
- Asset information officers enter new subdivisional assets and site visits undertaken.

Validation is completed by way of TDC auditing a sample of RAMM records annually.

10.2.2 NEW DEVELOPMENT APPROVALS/AS-BUILT RECORDS

The Development Engineer approves completed works and ensures that the following people are issued a copy of all final documents, e.g. plans, beam readings, seal details etc.
- Transport Manager, who in turn passes these on to the business unit for entry into RAMM and for recording of statistics
- Management Accountant, for the purposes of recording finances held for outstanding works, e.g. second coat sealing
- GIS personnel, for updating of spatial data
- Asset information officers to add new subdivision assets into RAMM

10.3 Procurement

10.3.1 NZTA PLANNING & PROJECT EVALUATION PROCEDURES / PROJECT EVALUATION PROCEDURES

These methods are used to determine whether projects meet New Zealand Transport Agency's funding criteria for subsidised work.

They have also been used as an economic evaluation method for prioritisation of unsubsidised works.

10.3.2 PROCUREMENT

A procurement strategy has been developed in accordance with the NZTA Procurement Manual and endorsed by NZTA. All subsidised and unsubsidised works have been procured in accordance with this strategy since October 2010. It sets out Councils intended procurement programme over the next two years along with the proposed delivery models and support selection methods for the procurement of Council's land transport activities. With the current state of supplier markets for both professional services and physical works Taupō district is adequately catered for within the area.

Implementation of the strategy will ensure that Council obtains best value for money.

Taupo District Council has a procurement policy dated 2014 which covers the policy for procurement of all works, goods or services by Taupo District Council having regard to budget provisions in the Ten Year Plan/Annual Plan or by specific resolution of Council.

In summary, Council will procure works, goods or services in accordance with the following principles;
- Accountability
- Openness
- Value for Money
- Lawfulness
- Fairness
- Integrity

Procurement of works, goods or services valued between $10,000 and $50,000 (GST exclusive) requires (wherever possible) three written quotes.

Procurement of works, goods or services valued over $50,000 (GST exclusive) will be subject to a competitive procurement process and the type of process will take into account the level of risk and the type of works, goods or services to be procured. Competitive processes are set out in more detail in the operational guidelines and include seeking quotes or using a tender or proposal process.

It is noted that in the area of roading and transport procurement where there is New Zealand Transport Agency (NZTA) assisted funding, then Council must follow the NZTA Procurement Manual, both for physical works and professional services.

In the last LTP period we have had issues with the lack of in-house project management resources for the number of projects we had and the number of contractors available to do the work on time and/or on budget. A couple of recent projects have had cost estimates over and above the engineers cost estimate, which is often due to local contractors being busy with sub-divisional work so overprice jobs. This means we are having to defer budgets into following years where possible thus we have been unable to spend the approved budgets in the allocated years. Going outside the district also means cost estimates are higher due to the additional travel and/or accommodation costs.

A flow on effect of this is we then need to re-tender which takes time and resources plus we run the risk of not getting enough tenderers for the work and/or we are required to re-tender again or not be able to do the project at all. This was particularly evident in the last financial forecast where we were forecast $6M and final spend was $5.2M, largely from not implementing all our minor improvement projects.

A smart buyer template has been completed and can be found below. Taupo District Council have scored 41 points and will look to improve this score for the next AMP.

_____

REG | THE ROAD EFFICIENCY GROUP

Smart Buyer Self Assessment

This assessment is based on the Smart Buyer Principles identified in the Road Maintenance Task Force Report. Score the following by ticking the appropriate box - (1) Disagree to (5) Strongly Agree.

Whenever you score yourself "4 or 5" think of an example you can use to justify your score to an independent auditor or the other attendees at this workshop.

Assessment statement Our Organisation	Score				
	1	2	3	4	5
1. Fully understands the different contracting models available.			✓		
2. Holds meetings that update the contracting industry on the forward works programme and any changes in approach, and proactively engages with the contracting industry to ensure it gains optimal value from any changes being implemented.		✓			
3. Has sufficient robust data (or is in the process of gathering robust data) on our networks to enable optimal integrated decision-making.			✓		
4. Has access to expertise that fully enables best use of the data available.			✓		
5. Is open to alternative solutions to those proposed in the contract documents.			✓		
6. Understands risk and how to allocate and manage it.			✓		
7. Has a Council that is prepared to pay more now to achieve a lower whole of life cost.			✓		
8. Actively pursues value for money & does not always award contracts to the lowest price.		✓			
9. Is able to manage supplier relationships/contracts to ensure optimal expenditure, which sustains infrastructural assets at appropriate levels of service.			✓		
10. Supports ongoing skill and competency training and development for staff.			✓		
11. Actively shares and gains knowledge within the sector.			✓		
12. Is effective in keeping up with best practice in procurement, including best practice RFP/contract documentation.			✓		
13. Regularly seeks and receives candid feedback from suppliers on its own performance as a client and consistently looks to improve its performance.			✓		
14. Explores opportunities for collaboration by either sharing in-house resources with neighbours, or by procuring together or tendering together. That exploration could be through an LGA s17A evaluation of transport function delivery options.				✓	
Number of ticks in each column		2	11	1	
Multiplying factor	x1	x2	x3	x4	x5
Total Score in Column		4	33	4	
Total Score	41				

⑭ Collaborate with Regional road safety coordinators to deliver joint road safety programmes. eg Driver Direction's work with NZTA to deliver bridge inspection's biannual.

Council's current Road maintenance contract and resealing contract is about to expire in June 2018. We are now in the process of undertaking a thorough review of the existing contact and procurement strategy for the next tender round. Morrison Low has been engaged to facilitate this review and identify any changes that would drive improved performance in future contracts. The scope is to maximize the "ownership" of the network and include a single point of accountability and reduce the number of contract being administered. The contract style is to have a collaborative style of contract which will give emphasis to teamwork between Council and contractor and will include governance meetings. The contract tenure is proposed to be a term of 6 years with a single renewal of 3 years of right if the performance meets or exceeds a prescribed performance score, thus giving the maximum of 9 years. This will be subject to Council being comfortable with a renewal as of right subject only to performance which will be considered in a Council workshop early in 2018.

10.3.3 LEVEL OF SERVICE CONSULTATION

The level of service consultation provides feedback from residents and ratepayers of the Taupō District. The responses from this consultation provide input into how the asset is managed.

While we have not directly consulted the community on levels of service formally since 2005, a draft issues and options discussion paper is being developed at the same time as the AMP development. This paper identifies the issues the Taupo District are facing and the options along with the preferred option.

One of the issues is the whether to maintain the current levels of service. With the ageing population and increase demands of footpaths we may need to consider the funding of such facilities and whether we need to have as many parks or playgrounds. The preferred option in this draft document is to maintain levels of service.

10.3.4 INFORMATION FROM CONTRACTORS

Processes for collection of data (maintenance, condition, new assets, renewals, performance etc) clearly defined and efficiently administered through asset maintenance contracts.

10.3.5 STANDARD OPERATING PROCEDURES

Standard Operating Procedures are being developed to assist in the operation and maintenance of assets. This process is ongoing with new procedures being developed as the need arises and updates being made as required.

10.4 Asset Management Accounting and Economics

Council uses a renewal accounting system. The asset management renewal and capital expenditure policy is included as Appendix F Asset Maintenance, Renewal and Capital Expenditure Policy.

Infrastructure assets are those public facilities which provide for the delivery of services and sustained standard of living. They primarily comprise the Council's fixed utility systems including roads, streets and footpaths, the water and sewerage reticulation systems, the stormwater system, bridges and culverts.

Infrastructure assets are deemed to have the following attributes:

- they are large networks constructed over several generations;
- they have very long useful economic lives;
- they have a high initial cost;

- they provide a benefit and/or a social service rather than a commercial service, i.e. the assets are used by or for the community as a whole, servicing all the City's residents and visitors The assets are not usually capable of subdivision for ready disposal, because of legal or other restrictions, and consequently are not readily disposable within the commercial marketplace;
- assets are not normally depleted as their service capability is fully maintained in perpetuity, i.e. they are expected to have an indefinite life if adequately maintained although portions of the network will be replaced from time to time.

Assets are systematically evaluated as required, approximately every three years.

Depreciated replacement cost is calculated having regard to an allowance for the expired portion of the expected useful economic life for each category of infrastructure asset.

TDC uses the principles of accrual accounting to measure costs of services provided and recognise revenues.

Renewal accounting treats all upgrading, reconstruction, renewal and renovation work which does not increase the capacity or service potential of assets as operating expenditure.

Operating expenditure can be divided into two broad categories; normal ongoing day to day routine maintenance works, and those other more infrequent larger projects that upgrade or renew the asset to its previous service potential.

Creation expenditure involves increases in an asset's service potential or the creation of new assets.

All expenditure on infrastructure assets will therefore fall into one of three categories:

10.4.1 ROUTINE MAINTENANCE EXPENDITURE

Routine maintenance projects can be expected to display some or all of the following characteristics:

- regular and ongoing annual expenditure necessary to keep the assets at their required service potential,
- day to day and/or general upkeep works designed to keep the assets operating at required levels of service,
- works which provide for the normal care and attention of the asset including repairs and minor replacements,
- minor response type remedial works i.e., isolated failures requiring immediate repair to make the asset operational again.

10.4.2 RENEWAL EXPENDITURE

Work displaying one or more of the following attributes, can be classified as renewal expenditure.

- works which do not increase the capacity or service potential of the asset, i.e. works which upgrade and enhance the assets restoring them to their original size, condition, capacity etc,
- the replacement component of augmentation works which increase the capacity of the asset, i.e. that portion of the work which restores the assets to their original size, condition, capacity etc.,
- the replacement component of a new work which replaces the redundant element of an existing asset,

_____

- reconstruction or rehabilitation components of works involving improvements, realignment and re-grading,
- renewal and/or renovation of existing assets, i.e., restoring the assets to a new or fresh condition.

10.4.3 NEW WORKS EXPENDITURE

New works expenditure projects displaying one or more of the following characteristics:

- construction works which create a new asset that did not previously exist in any shape or form,
- expenditure which purchases or creates a new asset (not a replacement) or in any way improves an asset beyond its original design capacity,
- upgrade works which increase the capacity of the asset,
- construction work is designed to produce an improvement in the standard and operation of the asset beyond its current capacity.

To the extent that a project results in replacement of an asset caused by physical deterioration, and also provides capacity for increased demand, proportions should be allocated to both creation and renewals on the basis of marginal cost.

It is recommended that the split between creation and renewal expenditure is based on marginal cost. This recognises the full cost of renewing the existing asset to its original service potential is an expense as this expenditure cost does not contribute to improving the asset beyond its original design capacity.

As mentioned earlier in this section we have had some issues with the implementation of some of our minor improvement projects due to lack of available contractors and/or overpricing of works.

10.4.4 THE TEN YEAR PLAN PROCESS

The Ten Year Plan (TYP) formerly known as the Long Term Planning (LTP) process considers the community outcomes, statutory requirements, the headline indicators and external pressures to determine what Council can or should be doing to help the community work towards its desired future.

The TYP also contains an action plan that sets out how Council will undertake its strategic goals and details the specific activities, functions and initiatives undertaken in the short term (three years) and long term (10 years).

The TYP draws on information from other documents including the Asset Management Plans and models it in financial terms over a ten year horizon.

The TYP is updated every three years with the next TYP being currently developed for 2018.

10.4.5 THE ANNUAL PLAN PROCESS

The Annual Plan is an action plan that sets out how Council will undertake its strategic goals and details the specific activities, functions and initiatives undertaken. It is produced in the years when a TYP is not. It will also outline deviations from the TYP.

10.4.6 STANDARDS AND GUIDELINES

In all transport works there are standards and guidelines that are available to ensure that Council is following 'best practice'.

_____

A schedule of recognised national standards and guidelines available to TDC for road maintenance and development is attached as Appendix E Road Legislation, Regulations Standards and Guidelines.

In addition TDC have sub-divisional standards.

Whereas Acts and Regulations determine minimum levels of service, standards and guidelines provide the means of compliance with specific levels of service required by the road controlling authority.

10.5 Asset Management Information Systems

10.5.1 RAMM

Road Assessment and Maintenance Management System (RAMM) is used as a carriageway inventory and treatment selection tool. RAMM is a computer based system suitable for both flexible and rigid pavements and is used throughout New Zealand for both national and local road networks. This allows for direct comparison of condition data and treatment achievements between local authorities. Use of RAMM is a New Zealand Transport Agency requirement for obtaining funding assistance.

SLIM is used as an inventory for street lights and is now included as part of RAMM. It can also be used as a contract management tool for street lights.

10.5.2 DTIMS DETERIORATION MODELLING

The national Roading Information Management System (RIMS) group have developed policies, specifications and development plans to provide advanced asset management capability including lifecycle costing, pavement performance models and risk assessment. The tool they have chosen for this is the dTIMS predictive modelling package.

Taupo District Council has implemented performance modelling (PPM) for its sealed road maintenance management with the objective of taking a more proactive, long-term approach to manage the pavement network performance. This will be done by implementing work programmes that deliver long-term levels of service.

The aim of the PPM analysis is to:
- Provide Council with a more optimal maintenance planning on both the network and the project planning levels.
- Determine whether current funding levels are appropriate, as set out against target levels of service and predicted deterioration.
- Determine the optimal funding split between resealing and rehabilitation projects.
- Confirm the appropriateness of the short to medium term maintenance programme.

10.5.3 GIS

The GIS stores all the spatial data relating to the assets. The data is taken from the AMS.

10.5.4 SERVICE REQUEST SYSTEM

Council operates an electronic customer service request system where all phone calls or counter requests are recorded. The information is entered into the system and the call is categorised depending on the issue. Predetermined Council Staff are then tasked with completing these requests in a predetermined timeframe.

_____

The customer can also access the system through Council's link to "Fix my street" application on the website. Service requests have specified response times and if not completed on time, will be escalated through the Council hierarchy.

10.5.5 ASSET VALIDATION BY CONTRACTORS

Data is collected on a daily basis by maintenance and capital works contractors. This information is then updated into RAMM.

10.5.6 PROMAPP

Promapp is a procedure development programme that is being used to develop standard operating procedures for all Council business.

10.5.7 OBJECTIVE

Objective is Council's electronic document management system. All information relating to Council business is saved in this system for easy retrieval when required. This includes incoming and outgoing correspondence especially emails and letters.

10.6 Data

10.6.1 ROAD INVENTORY DATA

Road inventory data is the most important data in relation to the roading asset management plans as it records the assets and their attributes in detail. Road inventory data is collected by various means and then held in various information systems.

10.6.2 TRAFFIC VOLUME COUNTS

TDC owns six traffic counters, five of which are capable of conducting classification and speed surveys. The operation and management of these counters is undertaken in-house by the Transport team.

TDC has developed a system that endeavours to achieve the following return periods for counts on the district's roads and is now to be based on the ONRC:
- Arterials – 1 year
- Primary and Secondary collectors – 3 years
- Access and Low volume roads – 6 years

10.6.3 NZTA CRASH DATA

A valuable asset management database the Council utilises is the NZTA crash data, which is held in Crash Analysis Software (CAS). This data includes all crashes on New Zealand public roads that have been reported to the police.

10.6.4 ACCOUNTING COST DATA

Cost data for the asset groups are identified in the accounting records.

The work category type (maintenance, renewals, and new works) is identified. Marginal costs are only separately identified for significant works. Minor asset expenditure (traffic controls, service lanes) may not be separately identified.

Visual inspection to verify quantities for payment for routine maintenance and renewal tasks is done by the professional services business unit.

_____

10.6.5 GROWTH MODEL

The growth model is updated on an annual basis to reflect changes in development patterns. This model predicts the spread and level of growth within the Taupō District Council Area. This model assists Asset Managers in planning forward works for their respective assets.

10.6.6 ASSET VALUATION

The asset valuation provides a three yearly update of the value of the Transport Asset. New assets or disposed of assets are taken into account at this time. The valuation process is performed in accordance with generally accepted accounting standards and with NZ local authority asset management practice (NAMS).

10.6.7 CONDITION ASSESSMENT

Condition assessments are carried out by both contractors and council staff. This process is both formal and informal. At least 10% of the Transportation assets are regularly assessed by Council staff and/or contractors. Consultants are used for the critical assets such as Bridges which are inspected and condition rated every 2 years. The performance of the Transportation assets are documented in a report to NZTA via their annual achievement reporting procedure, using the latest RAMM data available.

10.6.8 OPERATIONAL DATA

Operational data is available on objective, on site and through Historian.

10.6.9 DATA QUALITY ASSURANCE

The following are quality assurance regimes:

Road Inventory Data

- Data Collection:
    - The contractor is responsible for data collection following council requirements.
    - TDC staff are continuously collecting data for historical assets or assets not collected by contractors which are updated after verification.

- Data entry:
  Road maintenance contractors use pocket RAMM tool to record asset data and this is uploaded electronically to the main RAMM database, therefore there is little error in data entry except at source. Council staff verify the data inputted each month via RAMM reporting. The Contractor is also required to independently verify the accuracy of RAMM data at the completion of the three year contract term.

- Data maintenance:
  This is done by council staff whenever the contractor or council staff identify any variance in existing data and physical asset in the ground. Updating the conditions of the asset for the Transport asset is undertaken by Council staff and contractors via the pocket RAMM tool.

Traffic Counting Data

Data Collection
Metrocounters are installed as per MetroCount 5600 Series guidelines and programmed by TDC staff for local roads as per road classification. Two speed indication devices can also record and store data for up to a month, with one being able to be downloaded via Bluetooth technology.

_____

Data Entry/Maintenance
Data is downloaded from the Metrocounter into the traffic counting spreadsheet by Council staff and the data is uploaded into RAMM via Metro Count Import utility of RAMM. Traffic count data can be verified with Metrocount software by TDC staff.

_____