

## 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 Stormwater assets.

Council asset management plans are regularly externally reviewed, these review has enable asset managers to identify particular areas in the amp that need to be refined. The refinement process has been placed into the improvement section of the AMP. Also an Asset management group has been established to provide group support to the development of amps going forward.

Asset Management plans are compiled by individual asset managers responsible for their assets. Asset managers are also part of the Asset Management Team who work together to ensure quality outcomes. The team has key relationships with the policy division to make sure that customer expectations are understood as well as key outcomes are achieved. The Finance team also assist in the preparation of finance section. Project information as well as overall budgeting is then passed to senior management to enable further analysis as well as support. Asset management plans are then presented to Council where further prioritisation occurs.

On-going NAMS training is available to all staff involved in the production of the asset management plans to facilitate the best management of the 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:

- Stormwater Maintenance contractors providing updated asset information as maintenance works are completed.
- Contractors supplying data where an asset is renewed or installed
- As built data from new subdivision works
- CCTV data allows for condition assessment and fault finding
- Criticality assessment overlays maintenance and renewal program

Validation is completed by way of TDC auditing of contractor's work sheets and reviewing CCTV data.

Councils asset database (Asset –Finda) records all asset data as well as performs valuation, contract payment processing and asset validation. This data base also enables the programming of network renewals based on age, criticality, condition and maintenance records.

#### 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, pipe and manhole testing results.

- GIS – via the GIS help desk email address
- Utility Asset Officer (who will discuss any issues with the Asset Manager if required).
- Asset data is logged into Asset-Finda and into the GIS data systems
- Vested asset information is uploaded into the finance system.

#### 10.2.3 PROCUREMENT

Council developed a Procurement Manual, and the document provides guidelines regarding Council procurement and tender evaluation methods.

#### 10.2.4 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. Level of service consultation will be undertaken as part of the TYP consultation process.

#### 10.2.5 INFORMATION FROM CONTRACTORS

Processes for collection of data (maintenance, condition, new assets, renewals, performance etc) clearly defined and efficiently administered through asset maintenance contracts. Council has provided set requirements in the contract documents that clearly set out Councils data capture requirements and the processes to get this information into the required data set. Council's current contractor Downer Construction can automatically upload data into Asset – Finda as the network is maintained or renewed.

#### 10.2.6 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. Most of the stormwater asset is piped based but there are requirements for the cleaning of quality improvement devices and the management and maintenance of the ephemeral gully systems.

Quality improvement devices have individual maintenance programs and procedures.

#### 10.2.7 ASSET MANAGEMENT ACCOUNTING AND ECONOMICS

Council uses a renewal accounting system.

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 but more regularly for critical assets or in areas where there is a flat grade in the piped network and where the network suffers from silt and sediment build-up.

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 preventative and reactive 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:

#### **10.2.7.1 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.

#### **10.2.7.2 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.

### 10.2.7.3 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 works 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.

### 10.2.8 THE TEN YEAR PLAN PROCESS

The Long Term Plan (LTP) formerly known as the Long Term Council Community Planning (LTCCP) 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) and longer term (30 years).

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

The LTP is updated every three years with this LTP being currently developed for the 2018 to 2028 period.

### 10.2.9 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 LTP is not. It will also outline deviations from the LTP.

## 10.2.10 STANDARDS AND GUIDELINES

In all Stormwater works there are standards and guidelines that are available to ensure that Council is following 'best practice'. This includes national standards on pipe laying, onsite Stormwater treatment, subdivision and development and the TDC Code of Practice for Land Development.

Whereas Acts and Regulations determine minimum levels of service, standards and guidelines provide the means of compliance with specific levels of service. Best practice in regards to stormwater service delivery is constantly evolving, as new technology advances, so due the communities' expectations around environmental outcomes.

## 10.3 Asset Management Information Systems

### 10.3.1 ASSET MANAGEMENT SYSTEM

Council has purchased and implemented Asset Finda which is an Asset Management System that contains the data for Water, Wastewater and Stormwater Assets. The data held in this system links directly with the GIS system and the finance system.

### 10.3.2 GIS

The GIS stores all the spatial data relating to the assets. The data is taken from the AMS. Some GIS data is also available to the public to view.

### 10.3.3 SERVICE REQUEST SYSTEM

This is the system used by Council to record customer complaints, comments or compliments. The information is entered into the system when a customer calls and the call will be categorised depending the issue. Service requests are added into Asset-Finda and then sent to the contractor for completion.

### 10.3.4 ASSET VALIDATION BY CONTRACTORS

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

### 10.3.5 SPM (DEVELOPMENT CONTRIBUTION CALCULATIONS) DO NOT APPLY FOR THE STORMWATER ASSET

Capital works project costing are inputted into SPM along with their respective breakdowns of cost e.g. proportion of the project that is growth, backlog or renewal. The level of Development Contribution (DC's) is then calculated for forward financial planning and income projections. Development contributions are not required for the stormwater cost centre.

### 10.3.6 MONITORING DATA

All results from monitoring is stored into one central laboratory database. This database is updated by Laboratory staff and includes data from in-house testing as well as testing carried out by external laboratories. Relevant data is extracted and provided in the annual Consnet report.

#### 10.3.7 PROMAPP

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

#### 10.3.8 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.

#### 10.3.9 HISTORIAN

Historian is a data management programme that allows easy viewing of operational data such as daily flows or plant measurements.

### **10.4 Data**

#### 10.4.1 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.

#### 10.4.2 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.

#### 10.4.3 ASSET VALUATION

The asset valuation provides a three yearly update of the value of the Stormwater Asset. New assets or disposed of assets are taken into account at this time.

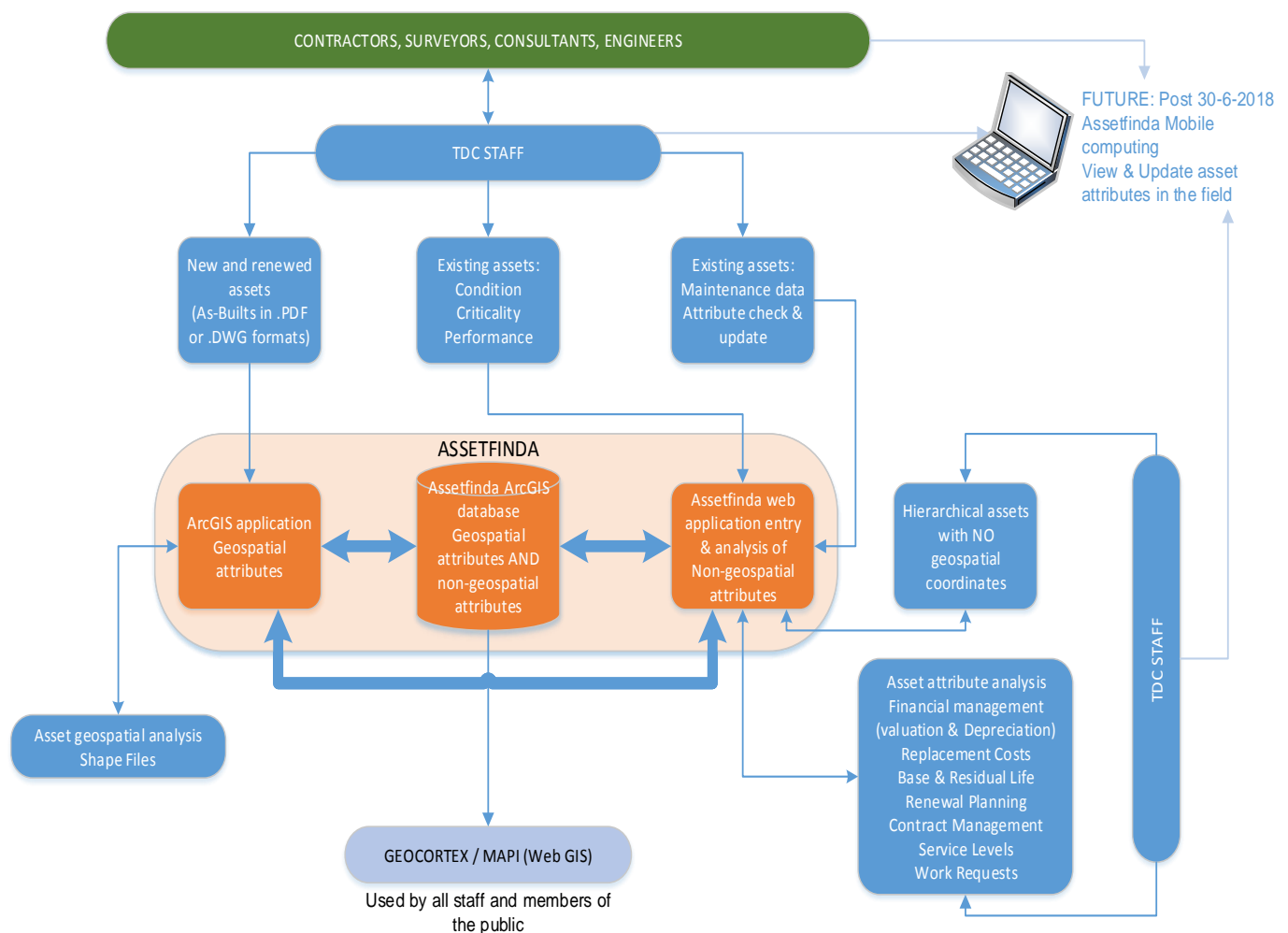
#### 10.4.4 CONDITION ASSESSMENT

Condition assessments are carried out by both contractors and council staff. This process is both formal and informal. Reticulation conditional information is contained within contractor reports.

CCTV works are tendered out as Council looks to condition assess at least 10% of the network per year.

#### 10.4.5 OPERATIONAL DATA

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



**Figure 10-1: Asset Management System / GIS Data Recording Flow**

#### 10.4.6 DATA QUALITY ASSURANCE

The following are quality assurance regimes:

- Data Collection:
  - The contractor is responsible for GPS data collection following council standards (council doesn't accept any data with more than 0.3 m error in GPS coordinates).
  - TDC staff is continuously collecting data for historical assets which are updated after verification.
  - Project management team provides as built and field data and advise AMS team to update the information in asset register and or GIS.
- Data entry: Currently council is doing manual entry of the data using ArcGIS import capabilities CAD files and PDF files.
- Data maintenance: This is partially done by council staff whenever the contractor finds any variance in existing data and physical asset in the ground. As regards to the WWTP and pump stations operating staff and contractors staff are continuously validating and updating the conditions of the asset and informing the AMS team. In future it is envisaged that some efficiency will be developed with upgrade of AssetFinda and field staff will be

able to update asset attributes directly and it will be validated using quality assurance protocol developed at that time.

## 10.5 Asset Management Policy

### PURPOSE

The Asset Management Policy supports Council's long term strategic goals found in the 2018 LTP of:

- Ensure that the Taupo District remains a great place to live
- Promote economic development
- Protect our water resources and use them wisely
- Maintain the quality infrastructure that we have
- Keep rates and debt affordable

### OBJECTIVE

The objective of Council's Asset Management Policy is to:

- ensure service delivery is optimized to deliver agreed community outcomes and levels of service for both residents, visitors and the environment
- optimize expenditure over the life cycle of the assets
- risks are managed appropriately
- provide a service delivery that is sustainable

### PRINCIPLES

The following principles will be used by Council to guide asset management planning and decision making:

- effective consultation to determine appropriate levels of service
- Integration of asset management within Council's strategic, tactical and operational planning frameworks including corporate, financial, and business planning
- Informed decision making using a lifecycle and risk management and inter-generational approach
- Transparent and accountable asset management decision making
- Sustainable management of assets for present and future needs

### CORPORATE FRAMEWORK

This Asset Management Policy links to Council's LTP, Infrastructure and Financial Strategy and Asset Management Plans. It builds on Council's strategic goals by promoting an integrated approach to the management of service delivery and across all asset classes.

### STRUCTURED ASSESSMENT of ASSET MANAGEMENT PRACTICE

Council has undertaken a structured assessment of the appropriate level of asset management practice for each of the asset classes. This structured assessment follows the guidelines provided in Section 2.1.3 of the International Infrastructure Manual (IIMM 2011v4). The level of maturity determined for each asset class can be found in introduction section of the respective Asset Management Plan.



#### IMPLEMENTATION and REVIEW of POLICY

This Asset Management Policy has been implemented in 2018. The next full review of this Asset Management Policy shall be completed in June 2017 prior to completing asset management plan updates to support the 2018 LTP.

#### MATURITY ASSESSMENT

In the first quarter of 2018 the maturity level of each of the Asset Management Plans has been assessed through an external review process to determine the actual level of maturity. This review will form the basis for the further refinement of each of the AMP's Improvement plans.