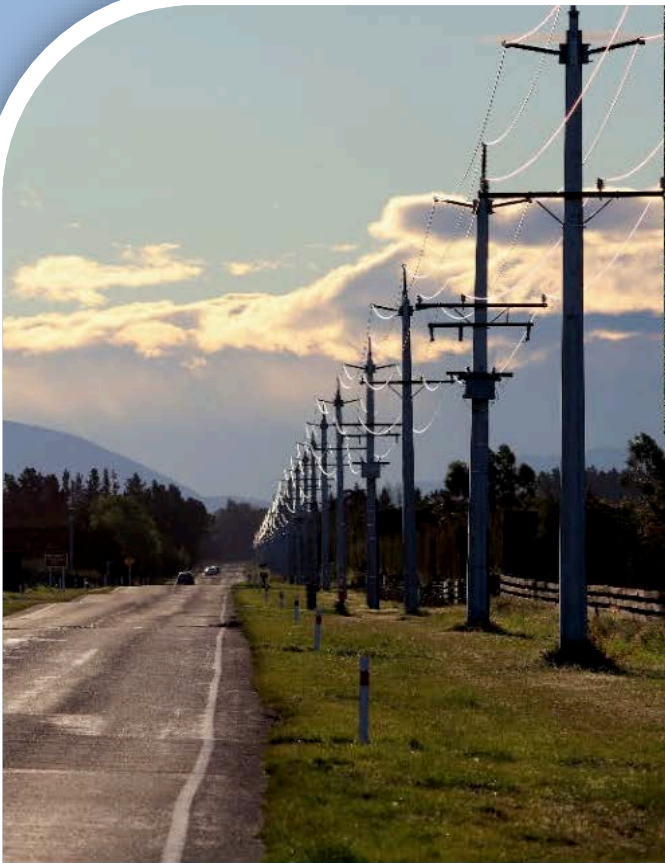




WAIMAKARIRI  
DISTRICT COUNCIL

## ACTIVITY MANAGEMENT PLAN 2018

# UTILITIES & ROADING INTRODUCTION CHAPTER



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## 1. INTRODUCTION

This is the introductory chapter to the Waimakariri district council utilities & roading (U &R) activity management plans (amps). The council's activity management plans are key strategic documents that describe all aspects of the management of assets and services for an activity (including technical and financial) over the lifecycle of the asset in the most cost-effective manner to provide a specified level of service.

The specific activities covered by the u&r amps are:

- Roothing
- Water
- Sewer
- Drainage
- Stockwater
- Solid Waste

The chapter provides an overview of the activities and asset management practices and processes that are common to all of the activities.

## 2. DOCUMENT HEIRARCHY

The Roothing, Solid Waste and Stockwater AMPs are stand-alone documents that (including appendices) provide a complete picture of the activity, its assets and how they are managed.

With the Council managing numerous different water and wastewater schemes, the AMPs have been structured so that two documents need to be referenced to get a complete picture for each scheme.

There are three Overview documents, one each for Water Supply, Wastewater and Drainage. They describe the processes and asset management practices that are common to all schemes, and include high level scheme descriptions, and a district wide view of levels of service, asset condition, risk, growth projections etc.

The individual scheme AMPs contain all the detail specific to each scheme, but need to read in conjunction with the Overview documents.

## 3. DESCRIPTION OF ACTIVITIES

### Roothing

The Roothing Activity Management Plan covers all of the roading and transport activities in the Waimakariri District. The assets include approximately 970. km of sealed roads, 575 km of unsealed roads, 329 km of footpaths, 9 km of off road cycle ways, 292 bridges, along with signs, streetlights, and passenger transport infrastructure to support the public passenger transport system. Almost all urban roads and 56% of rural roads are sealed.

The roading activity provides people with access to employment, services, education, and recreation, as well as providing for the movement of goods to support a thriving economy. The road corridor also provides access for critical services such as power, telecommunications, water supply and waste disposal. The Council considers that the provision of an effective and efficient roading and transportation system is a key component to meeting Waimakariri Community Outcomes, and in meeting the Council goal of providing high quality living and productive environments.

Key strategies driving this activity are the New Zealand Transport Strategy, the Government Policy Statement on Transport, Safer Journeys Strategy, the Regional Land Transport Plan, and the Greater Christchurch Urban Development Strategy. The key pieces of legislation governing this activity are the Local Government Act, the Land Transport Management Act, and the Resource Management Act.

### **Water Supply**

The water supply activity involves the management, operation and maintenance of the District's water supplies in a way that protects and enhances the health and well-being of the community and minimises the effect on the environment.

The Council considers the supply of potable water to the community to be an essential service. The Council elects to perform this function in order to ensure that the community receives an affordable, safe and reliable supply. This ensures the public health of the community is protected and the impacts on the environment are minimised.

The water supply activity includes the operation of seven on-demand, three semi-restricted and five fully restricted water supplies. Between them these schemes supply water to approximately 79% of the properties in the district.

The key pieces of legislation governing this activity are the Health (Drinking Water) Amendment Act, the Local Government Act, and the Resource Management Act.

### **Wastewater**

The wastewater activity involves the management, operation and maintenance of the District's wastewater schemes so that sewage is collected, conveyed, treated, and disposed of in a way that protects and enhances the health and well-being of the community and minimises the effect on the environment.

The Council considers the provision of a public sewer system to the community to be an essential service. The Council elects to perform this function in order to ensure that the community receives an affordable, safe and reliable service. This ensures the public health of the community is protected and the impacts on the environment are minimised.

The wastewater activity includes the Eastern District Wastewater Scheme (serving 9 distinct communities) plus three smaller, separate schemes elsewhere in the district. The schemes collectively provide a wastewater service to 60% of the properties in the district.

The key pieces of legislation governing this activity are the Local Government Act and the Resource Management Act.



## **Drainage**

The drainage activity involves the management, operation and maintenance of the District's drainage schemes within urban and selected rural areas of the Waimakariri District. The level of service in rural areas is largely restricted to maintaining the network of open drains.

The Council considers the carrying out of this work to be an essential service. The Council elects to perform this function to provide public safety, protect property and drain excess water from roads, and minimise adverse effects on the receiving environment.

There are seven rural drainage areas and five urban areas, but only 10% of the District is covered by a drainage area.

Drainage activities have reference to a number Acts but principally are concerned with the Land Drainage Act, the Local Government Act and the Resource Management Act, and various Regional Council documents.

## **Stock Water**

The stock water race activity involves the management, operation and maintenance of the network of water races that delivers stock drinking water to approximately 44,000 hectares of land. The area supplied lies between the Waimakariri and Ashley rivers, and east of Burnt Hill and Oxford and west of Rangiora and Eyreton.

The Council carries out this activity to enable livestock farming on dry land.

The Irrigation scheme is owned by Waimakariri Irrigation Limited (WIL), although the races are owned by WDC. Both the stock water as well as the irrigation water system is managed by WIL. WIL is officially appointed as the Council's Agent for the management of the stock water races.

No specific legislation relates to the stock water race activity

## **Solid Waste**

The Solid Waste activity involves the collection, transport, treatment, and disposal of solid and hazardous waste in a way that protects and enhances the health and well-being of the community and minimises the effect on the environment.

The Council provides a refuse and recycling collection service, refuse disposal facilities and hazardous waste and recycling facilities to help maintain the quality of life in the district and protect the environment.

The activity includes collection services to approximately 77% of District properties, the operation of two waste transfer/drop off facilities, the operation of a cleanfill, closed landfill aftercare, and a range of waste minimisation and education activities.

Strategies driving the Solid Waste activity are outlined in the Waste Management & Minimisation Plan (2017), the New Zealand Waste Strategy, and the Canterbury Hazardous Waste Management Strategy.

The key pieces of legislation governing this activity are the Waste Minimisation Act, the Local Government Act, and the Resource Management Act.

#### 4. AMP PLANNING FRAMEWORK

The purpose of the Activity Management Plans (AMP) is to meet the required level of service, in the most cost effective manner, through the management of assets for present and future customers. Good asset management is about achieving best value through the right balance between cost, risk and performance.

There are a number of processes and documents that feed into the AMPs. The AMPs are critical documents that output as works and services via the LTP.

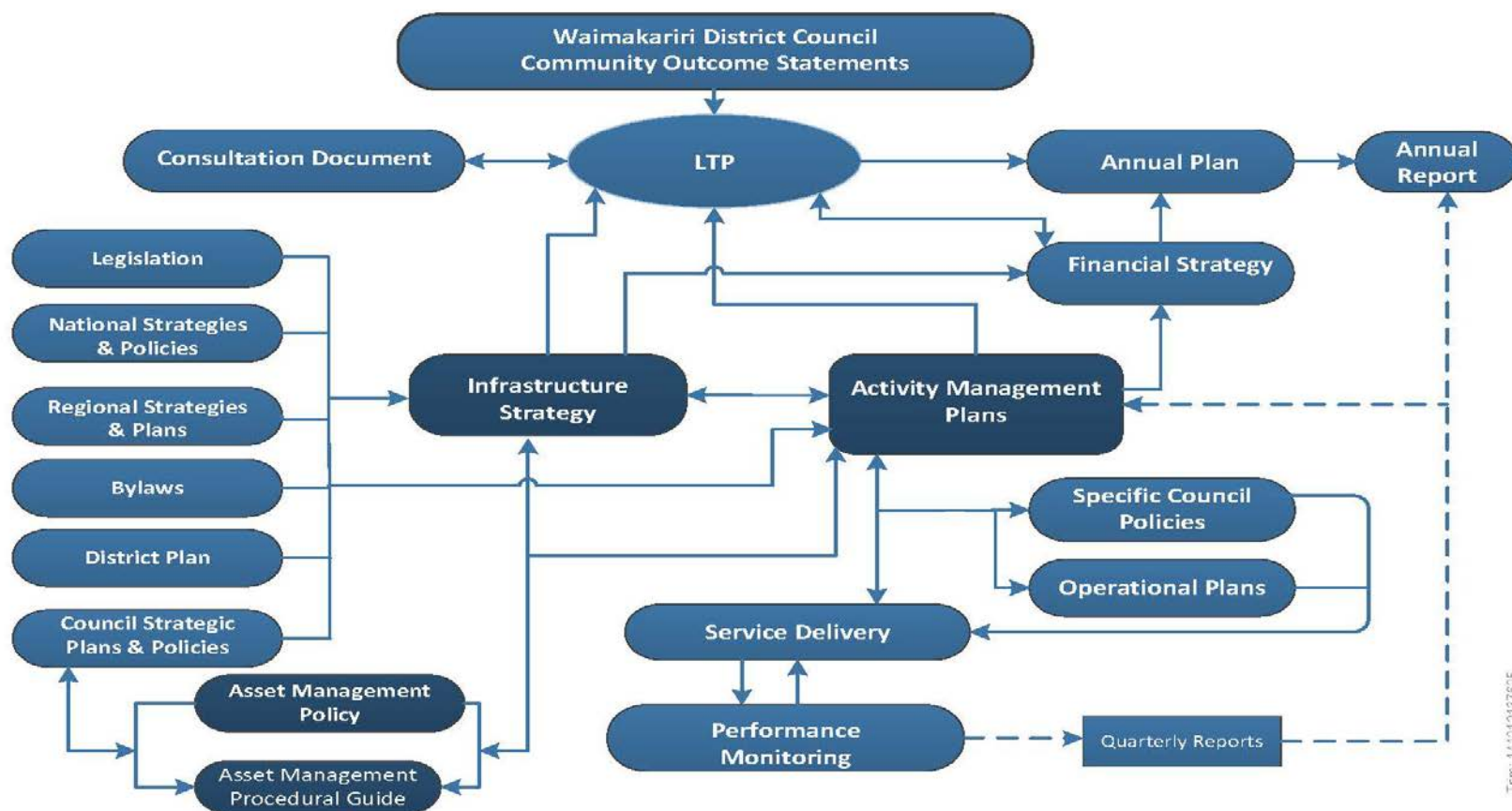
The strategic view for the infrastructural assets is provided via the Infrastructure Strategy, which considers the long term view (100+ yrs), and the amalgamated effect of the Utilities and Roding Activity Management Plans, as well from non-infrastructural assets such as the Council's property portfolio. It identifies significant infrastructure issues that will need addressing, and identifies the principal options for managing those issues and the implications of those options.

The Council has recently developed an Asset Management Policy (TRIM 170814087085), intended to provide clear direction as to the appropriate focus and level of asset management practice expected within the Waimakariri District Council. The Council has also convened an Asset Management Steering Group with the responsibility of overseeing the implementation of the policy. Terms of reference are detailed in TRIM 160816082392

The diagram below shows the various inputs and outputs for the Roding, Water, Wastewater, Drainage, Stock Water and Solid Waste activities.



Figure 1: Activity Management Planning Framework



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## **5. LINKS TO COMMUNITY OUTCOMES**

The AMPs describe the assets and services that contribute to the community's outcomes. The outcomes are the aspirations of the District's communities that show the kind of environment and lifestyle which people are seeking in the future.

The outcomes were developed by residents of the Waimakariri District, for the people who live here, through a widespread consultation process that was facilitated by the Council. Further information about the outcomes and about how the Council's services and activities contribute to these outcomes is detailed in the Council's Ten Year Plan 2018-2028.

Some of the key outcomes that the Council's services contribute to are noted as follows:

- There is a safe environment for all
- Transport is accessible, convenient, reliable, and sustainable
- There is a healthy and sustainable environment for all
- Core utility services are provided in a timely and sustainable manner

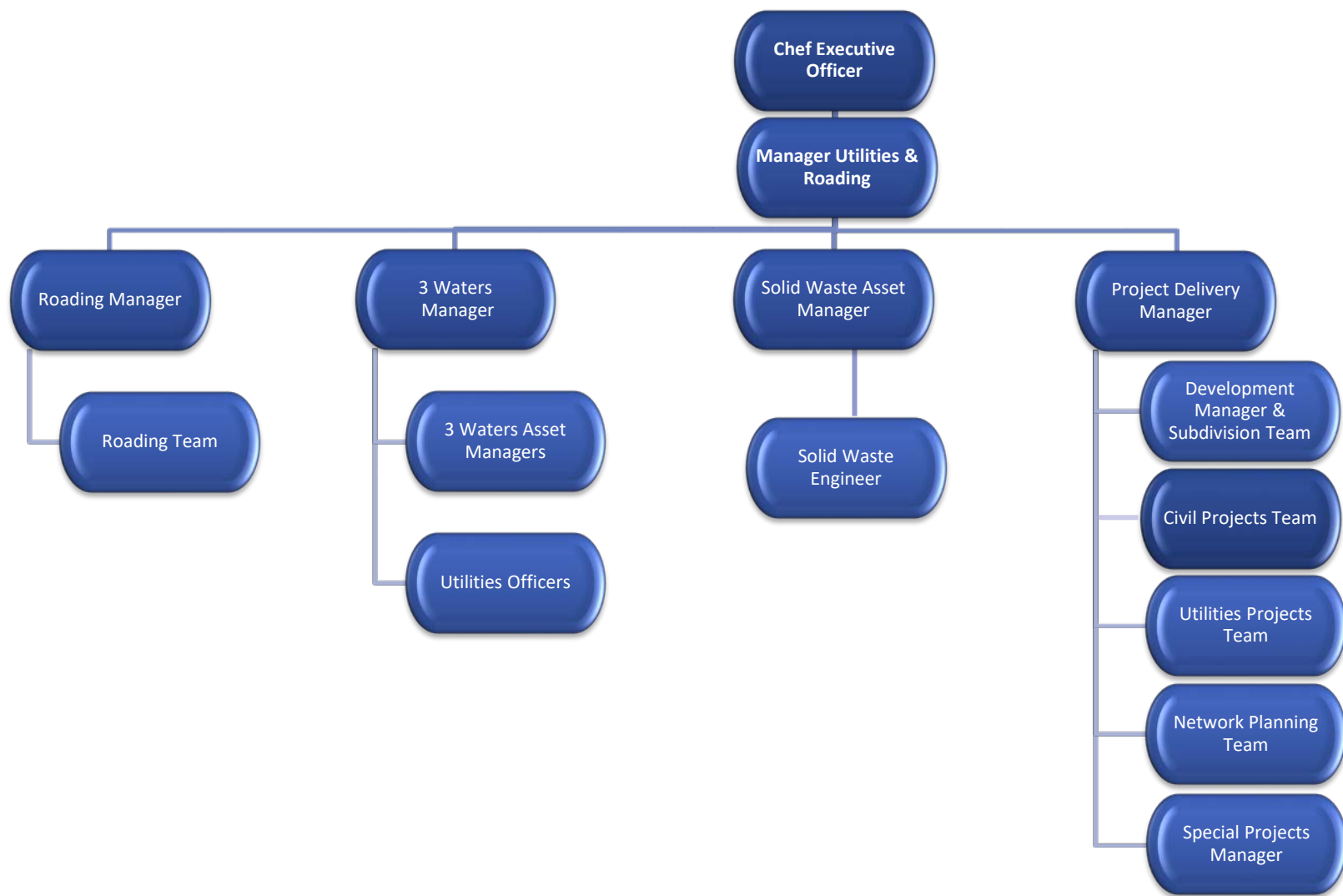
The Council's services progress the achievement of these outcomes by providing service levels that maintain community safety and public health, promote customer value for money and service efficiency, whilst protecting and enhancing the environment. These services provide the infrastructure that supports business development, population growth and healthy active lifestyles for residents.

## **6. ORGANISATIONAL CONTEXT**

The Manager Utilities and Roothing is responsible for developing, managing and maintaining Council infrastructural assets in accordance with sustainable asset management principals and plans.

The structure on the following page shows how the various responsibilities are delegated within the Utilities and Roothing Department.

**Figure 2: Utilities & Roding Organisational Chart**



## 7. ASSET MANAGEMENT MATURITY FOR UTILITIES AND ROADING

The purpose of this section is to outline the process to determine the appropriate level of asset management to be adopted for the U&R activities.

The Council is replacing the legacy activity level based AM complexity assessment with the more updated Asset Management Maturity Assessment.

The AM Maturity Assessment methodology was developed by the NZ Treasury and National Infrastructure Unit in 2011 to help asset owners identify current and appropriate (target) levels of AM practice.

The assessment recognises that appropriate levels of AM practice can differ between AM practice areas and activities within an organisation.

The structured methodology considers 17 elements of AM practice for each activity and requires an assessment of current Asset Management practices against 5 defined levels of maturity:

- Aware
- Minimum
- Core
- Intermediate
- Advanced

The methodology also requires consideration, for each of the 17 elements, as to what level of maturity it is appropriate to try and achieve.

An AM Maturity Assessment has been carried out for the 3 Waters and Roding activity areas. For Roding the maturity level descriptions, outcome of the assessment, and the targets, are shown in section 8 (Asset management Practices) of the Roding AMP. For 3 Waters the descriptions, outcomes, and targets are appended to the Overview documents for each activity.

Outputs from regular maturity assessments will be used to focus improvement plan actions and update the AM Policy.

The existing 3-level AM complexity assessments will remain valid for the Stockwater and Solid Waste activities until an AM Maturity Assessment has been completed. For both of these activities Core has been assessed as the appropriate level of complexity to target in the 2015 AMP updates.

The characteristics of Core asset management are:

- Takes a lifecycle approach
- Is based on the best current information
- Includes a simple risk assessment
- Adopts existing levels of service
- Contrasts existing management with opportunities for improvement.
- Prioritises capital works
- Produces long term budgets for maintenance, rehabilitation and replacement.
- Provides performance measures for monitoring implementation

## **8. SUSTAINABILITY**

The Council's approach to sustainability involves taking account of the needs of people and communities now, the reasonably foreseeable needs of future generations, and the need to maintain and enhance the quality of the environment.

This view, including the increasing public expectation for improving environmental outcomes is accommodated through the AMP and LTP review process. Budgets (long and short term) that estimate the costs of changing levels of service expectations are part of the AMP review process, and these are an input into the LTP budgets which then become available for public feedback.

Sustainability is in any case an integral part of asset management. Its primary purpose is to maintain (and replace when necessary) infrastructural assets so as to ensure that a level of service that has been agreed with the community continues to be provided at least cost.

Economic sustainability is necessary for achieving intergenerational equity. By considering the whole lifecycle costs of assets and activities future costs and rates are projected. The value and life expectancy of all assets are determined and used to value annual depreciation. Depreciation is collected annually via rates which ensures that sufficient funding is available in the future to enable replacement of assets at the end of their useful lives. This mechanism ensures that current ratepayers are funding their portion of the use of an asset.

Details of the actions and approaches taken from a sustainability perspective for the different utility and roading activities, are set out in the Overview documents for water supply, wastewater and drainage, and in the individual AMPs, where appropriate, for roading, and solid waste.

### **Sustainability under the Treaty of Waitangi**

The Council has a good working relationship with Te Ngai Tuahuriri Runanga which is sustained on a regular monthly basis with meetings with the Runanga at which any significant activities or issues are discussed.

The relationship between the Council and the Runanga is guided by a Memorandum of Understanding.

A good working relationship between the Council and the Runanga helps ensure that decisions of significance to Maori are made in a mutually agreed way following the principles of sustainability.

## **9. HOW DO WE REACH OPTIMAL DECISIONS?**

### **Optimised Decision Making**

This section outlines the Council's approach to optimised decision making, in particular relating to capital works expenditure. It outlines some of the processes the Council goes through to ensure that expenditure is optimised and defines the different levels of optimisation that are applied to various projects. Council is working towards applying optimised decision making processes to operational and maintenance expenditure, but its systems and data capture processes are not yet robust enough to enable this.

## Definition

For the purposes of this plan we have defined optimised decision making as a process for considering and prioritising all options to rectify performance failures of assets. The process encompasses NPV analysis and risk assessment.

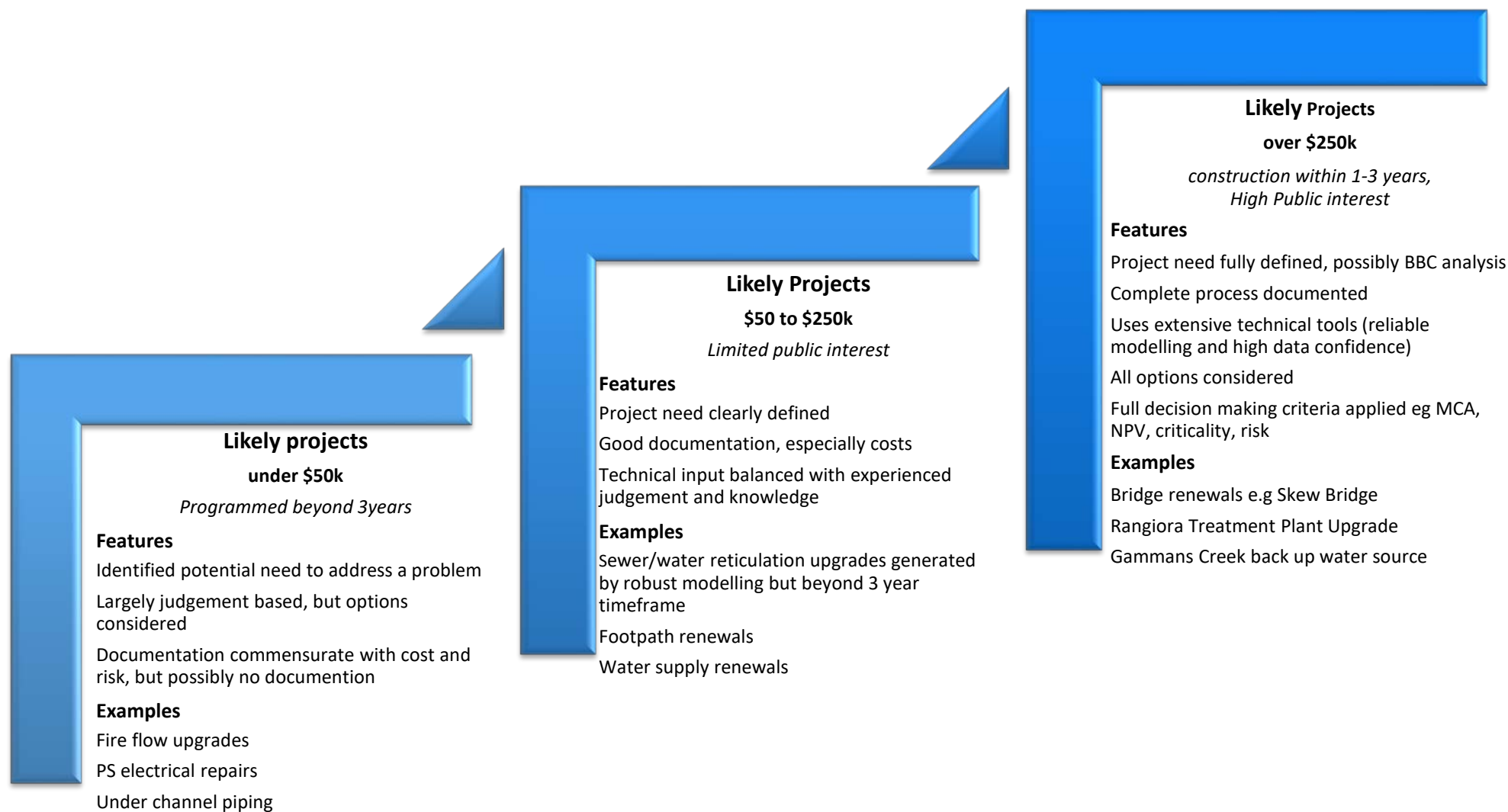
The Council applies differing levels of optimisation to projects, depending on a number of factors, including the relative value (or effect on ratepayers) of a project, the risks, the degree of public interest, and when the works are planned to be built.

The range of assessments Council uses in its decision making are listed below, but not all criteria are used for all decisions. The table on the following page shows the structure of Council's tiered decision making process.

- a) Current and desired level of service
- b) Legislative requirements
- c) Growth projections
- d) Disaster resilience
- e) Lifecycle cost
- f) Impact on rates (short and long term)
- g) Likely effectiveness of the solution
- h) Environmental impact
- i) Ease of consenting
- j) Risks (including reliability of costs)
- k) Political and Public considerations (including public consultation)



**Figure 3: Tiered Approach to Optimised Decision Making**



## **10. PROJECT DEVELOPMENT AND APPROVAL**

### **Public Engagement**

Capital projects are developed in order to meet the needs of growth, renewal, or levels of service (LOS).

While LOS for each activity have not changed substantially since 2005, they are reviewed and updated as part of the three yearly AMP review process. Projects that are needed to ensure LOS are met are subsequently identified, and then included in long term capital and operational budgets. The key LOS and accompanying budgets form part of the LTP, which goes out for public consultation.

There is also a need to engage with the public on specific services and issues outside of the LTP process.

A recent example of this was the planned amalgamation of the Woodend and Pegasus water supply schemes. An extensive public engagement programme was carried out to ensure that the views of both communities was understood. It included advertising, specific mail outs to affected property owners and public meetings, and resulted in 73% of the combined communities in favour of joining the supplies.

### **Financial Approval**

The Council operates a thorough and robust approval process. The delegations from the Council to the Chief Executive are clearly defined in the Councils delegations Manual. These delegations also define the limits of authority for Department and Unit Managers.

Overall the Ten Year Plan (LTP) is the major vehicle for approval of expenditure. This document is revised and approved by Council every three years. Each other year the Annual Plan is the process whereby the Council approves the following year's expenditure.

Prior to inclusion in the Annual Plan or the Ten Year Plan, each substantial project will normally have been subject to approval by the Council's Utilities and Roading (U&R) Committee. The U&R committee will be briefed by Council staff on major issues and projects and they will make major decisions on these issues. Any projects that then require operational or capital expenditure will be recommended by the Utilities and Roading Committee for adoption by the Council in the next Annual Plan or Ten Year Plan.

### **Major Project Consultation**

There are specific projects within each activity that have been or will be subject to major consultation and approval exercises. Examples of these are:

- Planned upgrades to the Oxford rural and Ohoka water supplies
- Waste Management & Minimisation Plan 2017 Review
- West Kaiapoi new arterial road
- Central Rangiora gravity trunk wastewater upgrade
- Woodend and Pegasus water supply treatment amalgamation
- Obtaining urban stormwater network discharge consents (required by 2018)
- Kaiapoi River Rehabilitation Works
- Garrymere Water Source

## 11. AMP REVIEW AND AUDIT PROCESS

Since the previous 2015 AMP reviews, Council has developed an Asset Management Policy which has been approved by the Management Team. An Asset Management Steering Group has also been set up, with representatives from all relevant Council departments included. The Steering Group objectives are:

- To coordinate a more consistent approach to asset management practice across Council departments.
- To support the application of the Asset Management Policy.
- To support continuous improvement of asset management practice.

The Steering group has produced 4 Advice Notes that cover the basics of asset management planning, generic definitions, a style guide and a comprehensive contents schedule. It is anticipated that this will assist with the consistency of approach to asset management.

The 2015 Utilities and Rooding AMPs were externally peer reviewed by AECOM, but the timeframe to publishing was too short to enable incorporation of all suggested improvements. The recommendations from that peer review have been incorporated in this review where still relevant. In addition Brian Smith from Brian Smith Advisory Services was engaged to provide advice on the structure and content of the 2015 3 Waters AMPs prior to the commencement of the 2017 AMP revision.

For the water supply, wastewater, drainage and stockwater sections, the documents have been updated by the Council's Project Delivery Unit, and the Infrastructure Strategy Manager, with the assistance from the respective asset managers and the 3 Waters Manager. The Rooding Activity Management Plan was prepared by the Rooding Asset Planning Engineer and reviewed by the Rooding Manager. The Solid Waste Activity Management Plan was prepared by the Solid Waste Asset Manager. These documents were then reviewed by the Manager Utilities and Rooding.

The draft 2018 AMP's are to be peer reviewed by Infrastructure Associates. They will peer review the Introductory Chapter, the 3 Waters Overview documents, the Rooding AMP and a representative sampling of the 3 Waters AMP's. Where time permits, amendments in response to the peer review will be made prior to placement of the AMP's on Councils website in June 2018. Otherwise amendments will be made at the next AMP review.

The construction rates used to derive the 2017 valuations of Council assets, are also used as the basis for the capital project estimates which form one of the more significant outputs from the AMP revision.

For the 3 Waters and Solid Waste valuations Brian Smith provided advice on the valuations methodology, prior to the work being undertaken, and the finished valuation was peer reviewed and certified by John Vessey (Technical Principal Asset Valuation) of Opus International Consultants Ltd to ensure accuracy and follow the international accounting standards requirements.

The Rooding valuations that were revised in 2017 were prepared by MWH and externally peer reviewed, and were then reviewed by the Rooding Manager.

Under the Local Government Act 2002 Audit New Zealand are required to Audit the Long Term Plan. This includes the underlying asset management plans. This year audit New Zealand took an overview level audit of selected Water Supply Activity Management Plans, the Rooding AMP, and also audited the 2017 valuations.

## **12. EARTHQUAKES**

### **Roading**

The impact of the earthquakes has been taken into account in developing the AMP. This includes the impact of the red zoning on assets servicing those areas and the impact of the relocation of people to the new growth areas.

### **Three Waters**

Most repairs to wastewater, water supply and drainage infrastructure damaged by the 2010/11 earthquake series are now complete. Any legacy issues which remain have been taken into account in the review of the AMP, and any projects identified to build resilience to any future earthquakes have been included in the revised AMPs as business-as-usual projects.

With the overall planning for the infrastructure within the Kaiapoi Regeneration areas (formerly known as Residential Red Zones) now complete, it has been possible to clarify the final form of the services in this area. Completion of the water and wastewater infrastructure reconfiguration in this area is programmed to be complete by the end of the 2017/18 year, and the final storm water works are expected to be completed the following year in conjunction with some other regeneration area projects.

### **Solid Waste**

The effect on the Council's solid waste infrastructure of the Canterbury Earthquakes is now negligible.

## **13. LOOKING FORWARD**

As for the 2015 documents, the 2017 suite of AMPs are part of a process of continuing effort to improve Utilities and Roothing AMPs. A component of the AMP review process is to identify shortcomings in processes and practices and scope out projects that will help to fill the gaps. Improvement Plans are an integral part of asset management and have been produced for all of the 2017 Utilities and Roothing AMPs. In the case of 3 waters AMPs one combined Improvement Plan was developed that covered all of the individual AMPs, with projects that affect or are specific to individual AMP's covered in each scheme AMP.

Progress has been steady on some of these projects, while for others progress has been slow, or stalled.

For 3 Waters, the projects that are expected will provide the most significant benefit, are linked to the implementation of a well specified Asset Management System. This will include the ability to load asset data in the field through mobile devices, and an integrated works management system that will enable the linking of repair work directly to assets. It is anticipated that these systems will allow a steady improvement to be made in Council's confidence in its 3 Waters asset data, particularly regarding underground network assets. Current confidence is mixed, and will improve (for example via the CCTV programme of the sewer network), but is in need of a boost in some other areas, e.g water supply network pipe condition.

It is expected that good progress will be made on implementation of these new systems during the three year period before the next AMP revisions.

For Roothing, work will continue on identified shortcomings in the data, including condition rating, where appropriate, of drainage data. There will also be greater linkage of information

gathered from contractor data (i.e. from RAMM Contractor) to feed into the overall picture of the network performance. It is also planned to make much greater use of spatial representation of data, both for coordination with other Utilities, such as 3 Waters, and for better analysis of influences on network condition.

For Solid Waste, work will continue on identified shortcomings in the data, including asset valuation at component level, condition rating, criticality assessment, facility capacity and risk assessment. Current confidence is low, and will improve with this planned work.

#### 14. APPENDIX A - List of AMP documents and their TRIM reference Numbers

##### Roading

Section/Appendix	Scheme / Document Reference	TRIM Number
Section 1	Executive Summary Waimakariri Transport AMP 2018	<a href="#">170321027383</a>
Section 1	Introduction Waimakariri Transport AMP 2018	<a href="#">170321027382</a>
Section 3	Levels Of Service Waimakariri Transport AMP 2018	<a href="#">170321027378</a>
Section 4	Future Demand Waimakariri Transport AMP 2018	<a href="#">170321027379</a>
Section 5	Risk Management Waimakariri Transport AMP 2018	<a href="#">170321027377</a>
Section 6	Life Cycle Management Plan Waimakariri Transport AMP 2018	<a href="#">170321027282</a>
Section 7	Financial Summary Waimakariri Transport AMP 2018	<a href="#">170321027375</a>
Section 8	Asset Management Practices Waimakariri Transport AMP 2018	<a href="#">170321027374</a>
Section 9	Plan Improvement And Monitoring Waimakariri Transport AMP 2018	<a href="#">170321027381</a>
Section 10	Appendices Waimakariri Transport AMP 2018	<a href="#">170321027373</a>
Appendix A	Glossary of Terms Waimakariri Transport AMP 2018	<a href="#">170321027372</a>
Appendix B	Strategic Business Case Waimakariri Transport AMP 2018	<a href="#">171025115475</a>
Appendix C	Maintenance Contract Level Of Services Waimakariri Transport AMP 2018	<a href="#">150630103986</a>
Appendix D	Roading Valuation Report Waimakariri Transport AMP 2018	<a href="#">171201130750</a>
Appendix E	Risk Management Waimakariri Transport AMP 2018	<a href="#">171205131856</a>

## Water Supply

Scheme / Document Reference	TRIM Number
Water Supply AMP Overview Document 2018	<a href="#">170822090191</a>
Rangiora Water Supply Scheme AMP 2018	<a href="#">161116117739</a>
Kaiapoi (including Pines/ Kairaki) AMP 2018	<a href="#">161116117709</a>
Pegasus/Woodend Water Supply Scheme AMP 2018	<a href="#">161116117732</a>
Oxford Urban Scheme AMP 2018	<a href="#">161116117758</a>
Oxford Rural No. 2 Water Supply AMP 2018	<a href="#">161116117758</a>
Oxford Rural No. 1 Water Supply Scheme AMP 2018	<a href="#">161116117729</a>
Waikuku Beach Water Supply Scheme AMP 2018	<a href="#">161116117719</a>
Cust Water Supply Scheme AMP 2018	<a href="#">161116117722</a>
Mandeville/Fernside Water Supply Scheme AMP 2018	<a href="#">161116117727</a>
Summerhill Water Supply Scheme AMP 2018	<a href="#">161116117718</a>
Ohoka Water Supply Scheme AMP 2018	<a href="#">161116117711</a>
Poyntz Road Water Supply Scheme AMP 2018	<a href="#">161116117736</a>
West Eyreton Water Supply Scheme AMP 2018	<a href="#">161116117741</a>
Garrymere Water Supply Scheme AMP 2018	<a href="#">161116117714</a>



## Wastewater

Scheme / Document Reference	TRIM Number
Wastewater AMP Overview Document 2018	<a href="#">161116117659</a>
Eastern District's Wastewater Scheme AMP 2018	<a href="#">161116117662</a>
Rangiora Wastewater Scheme AMP 2018	<a href="#">161116117667</a>
Kaiapoi Wastewater Scheme AMP 2018	<a href="#">161116117680</a>
Woodend Wastewater Scheme AMP 2018	<a href="#">161116117668</a>
Pegasus Wastewater Scheme AMP 2018	<a href="#">161116117672</a>
Waikuku Beach Wastewater Scheme AMP 2018	<a href="#">161116117664</a>
Mandeville Wastewater Scheme AMP 2018	<a href="#">161116117675</a>
Pines/Kairaki Wastewater Scheme AMP 2018	<a href="#">161116117670</a>
Tuahiwi Wastewater Scheme AMP 2018	<a href="#">161116117666</a>
Woodend Beach Wastewater Scheme AMP 2018	<a href="#">161116117669</a>
Oxford Wastewater Scheme AMP 2018	<a href="#">161116117674</a>
Loburn Lea Wastewater Scheme AMP 2018	<a href="#">161116117678</a>
Fernside Wastewater Scheme AMP 2018	<a href="#">161116117682</a>

## Drainage

Scheme / Document Reference	TRIM Number
Drainage AMP Overview Document 2018	<a href="#">161116117610</a>
Coastal urban Drainage Scheme AMP 2018	<a href="#">161116117569</a>
Pegasus Urban Drainage Scheme AMP 2018	<a href="#">161116117571</a>
Oxford Rural Drainage Scheme AMP 2018	<a href="#">161116117572</a>
Ohoka Rural Drainage Scheme AMP 2018	<a href="#">161116117575</a>
Loburn Lea Rural Drainage Scheme AMP 2018	<a href="#">161116117576</a>
Kaiapoi Urban Drainage Scheme AMP 2018	<a href="#">161116117578</a>
Coastal Rural Drainage Scheme AMP 2018	<a href="#">161116117581</a>
Clarkville Rural Drainage Scheme AMP 2018	<a href="#">161116117585</a>
Oxford Urban Drainage Scheme AMP 2018	<a href="#">161116117589</a>
Cust Rural Drainage Scheme AMP 2018	<a href="#">161116117591</a>
Rangiora Urban Drainage Scheme AMP 2018	<a href="#">161116117592</a>
Central Rural Drainage Scheme AMP 2018	<a href="#">161116117602</a>

## Stock Water

Scheme / Document Reference	TRIM Number
Stock Water Race AMP 2018	<a href="#">161115117090</a>

## Solid Waste

Scheme / Document Reference	TRIM Number
Solid Waste AMP 2018	<a href="#">171129129620</a>