

**THE WEST COAST REGIONAL COUNCIL**

**MATAINUI RATING DISTRICT**

**ASSET MANAGEMENT PLAN**

October 2014

# CONTENTS

EXECUTIVE SUMMARY .....	3
SECTION 1: INTRODUCTION.....	4
SECTION 2: SERVICE LEVELS .....	6
SECTION 3: FUNDING.....	8
SECTION 4: PERFORMANCE MEASURES .....	9
APPENDIX 1: EXPENDITURE FROM 1994 .....	10

## **EXECUTIVE SUMMARY**

Under the Local Government Act 2002 Councils are required to develop 'Asset Management Plans' to demonstrate that they are managing the infrastructure for which they have responsibility.

This plan sets out the history of the scheme so there is a record of the major decisions, including expenditure. It identifies the Objective(s) of the scheme as well as the methods of monitoring the condition of the assets, and determining the annual maintenance needed to retain the service level.

The Matainui Rating Scheme extends from approximately 500 metres upstream of the State Highway to just below the SH 6 bridge.

The area protected includes part of the Whataroa township and the Whataroa Golf Course. Many community infrastructures such as roads, power and telephone lines all derive benefit from the river control system.

The Infrastructural Asset Register details all of the Scheme's assets and their latest valuation.

## **SECTION 1: INTRODUCTION**

### **1.1 PURPOSE OF AN ASSET MANAGEMENT PLAN**

This Asset Management Plan defines the objective and performance standards of the Matainui Rating District scheme for which the Regional Council has the maintenance responsibility. It also provides a basis upon which the effectiveness of maintenance performance can be measured.

This asset management plan:

- Identifies the service level for the Rating District.
- Describes the history of the rating district and identifies its assets.
- Describes the methods used to maintain the service level of these assets.
- Complies with the regulatory requirements of the Local Government Act 2002.

### **1.2 BACKGROUND**

Matainui Creek is known to have caused flooding problems to the Whataroa township area prior to 1960 before records were kept.

In April 1963 the Canterbury Education Board wrote to the Westland Catchment Board with concern about the overtopping of Matainui Creek and the flooding of the Whataroa School Grounds.

Staff of the Westland Catchment Board inspected the creek in May 1963 and advised the Education Board that some channel clearing and a small stopbank were required to block off an overflow channel to prevent further flooding.

As a result of floods in January and February 1967, the Matainui Creek bed aggraded substantially requiring it to be excavated over a distance of 200 lineal metres. The gravel excavated from the channel was utilised in the reconstruction of the washed out stopbank.

Between the period of 1967-1981 intermittent channel clearing and rock protection works were carried out in the vicinity of the Whataroa Township.

On the 18<sup>th</sup> September 1984 the owner of the Whataroa Hotel expressed concern at the flooding under the Hotel during heavy rain. This involved the lower Golf Course area through to the State Highway Bridge. Floodwater from upstream was ponding behind the stopbank immediately upstream of the State Highway and flooding the car park behind the Hotel. A small channel was excavated through the stopbank at the downstream end to remedy this problem.

As a result of further substantial flooding a meeting was held on the 4<sup>th</sup> October 1993 at Whataroa to discuss the funding of a flood and bank protection scheme to prevent future flooding of the Whataroa Township and Golf Course.

The proposed works which included the construction of a stopbank over 350 metres and the placing of rock protection on the right bank of Matainui Creek were estimated to cost \$18,000. It was agreed by the West Coast Regional Council that a postal ballot would be held to gauge support for the scheme.

On the 5<sup>th</sup> October 1993 the Matainui Creek flooded parts of Whataroa and the Main Road.

On the 5<sup>th</sup> April 1994 the West Coast Regional Council resolved to establish the Matainui Rating District on a flat rate capital value basis.

The works were carried out in November 1994 by H. Langridge and Sons Ltd for a total cost of \$12,588. The works involved: Stripping grass, constructing an 8,490m<sup>3</sup> stopbank, reshaping the Creek batters over 100 metres, loading, carting and placing 1,000 tonnes of rock rubble and placing a 600mm concrete culvert and floodgate.

### **1.3 DESCRIPTION OF ASSETS**

The Rating District assets consist of all those works outlined in the Infrastructural Asset Register. The total replacement value of these works was \$51,275 as at June 2014.

The capital value of land and buildings within the confines of the scheme is \$11.2M.

### **1.4 MAINTENANCE EXPENDITURE**

Appendix I shows expenditure since 1994. The average annual expenditure is \$1,922.

## **SECTION 2: SERVICE LEVELS**

### **2.1 OBJECTIVE**

The objective of the Matainui Rating District is to reduce bank erosion and flooding along the section of Matainui Creek, from just below of the State Highway Bridge for a distance of approximately 500 metres upstream.

The historic "Existing Standard" was 300mm above the highest known flood. The Council has suggested that a re-analysis of flood protection levels be commissioned. However, the rating district have decided that they do not wish to have any new analysis undertaken to quantify the actual level of protection that the scheme currently provides. Given that there has been no analysis carried out to date, the scheme structures will continue to be maintained to the dimensions that they were originally constructed.

### **2.2 MAINTENANCE PROGRAMME**

An annual maintenance programme will be prepared each year in consultation with the Wanganui liaison committee prior to adoption by the Council for inclusion in the Annual Plan. In preparing the annual maintenance programme consideration will be given to:

- An inspection to identify works requiring immediate repair.
- works anticipated as being required given a 'normal' season.
- flexibility to meet unbudgeted damages.

An annual report will be presented to the Rating District outlining the condition of the scheme assets and maintenance works and expenditure required for the coming financial year.

#### **Stopbanks**

Stopbanks are man made structures generally running parallel to the flow of the river that are built to raise the bank level and hence increase the capacity of the river. They are usually constructed of compacted river gravels with a grass cover and do not have the strength to resist the erosive forces of a river in flood without adequate bank protection works in place.

Maintenance includes repair of any scouring, vegetation removal to facilitate access, control of stock to prevent damage to stopbank batter slopes, topping up of stopbanks as required to maintain stopbank capacity in terms of design.

#### **Erosion Control Works**

Erosion control works consist of rock placed in continuous riprap, spurs or groynes. Erosion control works are built to provide protection to stopbanks and natural banks from the river's erosive forces during floods by deflecting flows, absorbing energy and reducing velocities along stopbanks using stub rock groynes.

Erosion control structures are constructed to absorb the energy of the river, to control the alignment of the flow of the rivers, and subsequently give the required protection to stopbanks and natural banks. Because of this they are the areas with the major exposure to damage. Erosion control works already weakened from previous floods may sustain damage disproportionate to the flood discharge. It is very important to ensure damage to bank protection structures is undertaken swiftly.

### 2.3 DAMAGE EXPOSURE

River control works are constructed in a very high energy environment with the purpose of resisting and absorbing some of that energy. It is considered that no matter what the standard of maintenance carried, it is inevitable that damage will occur to structures.

An assessment of maximum damage potential was derived from estimating the damage ratios and costs for three flood events and is in vicinity of \$10,000.

<u>FLOOD EVENT SIZE</u>	<u>VALUE</u>	<u>DAMAGE RATIO</u>	<u>DAMAGE EXPOSURE</u>
20 Year	\$51,275	10%	\$5,127
100 Year	\$51,275	20%	\$10,255
500 Year	\$51,275	20%	\$10,255

## **SECTION 3: FUNDING**

### **3.1 MAINTENANCE**

Maintenance is funded by targeted rates, the level of rating being determined each year in the Annual Plan process following:

- Preparation of an annual works programme and corresponding budget.
- Consultation with Rating District.
- Adoption of draft programme and budget by Council.
- Adoption of final Annual Plan by Council.

### **3.2 DAMAGE REPAIRS**

Routine damage repairs are funded by a combination of:

- carrying out work as scheduled in annual works programme.
- reprioritising works identified in the annual works programme.
- use of financial reserves.

Major damage repairs would be funded by loans raised by the Council and repaid by targeted rating over a number of years.

### **3.3 FINANCIAL RESERVES**

Financial reserves are held within each rating districts account to provide the following.

- meet the costs of unscheduled works.
- enable an immediate response to flood damage repairs.
- prevent major fluctuation in rating levels annually.

The level of financial reserves held in each rating account is determined by the assessment of risk damage and the need for unprogrammed works.

### **3.4 DEPRECIATION**

Rating District schemes are designed to be maintained in perpetuity by constantly repairing and replacing component parts which are damaged by the constant wear and tear. Because there is a constant cycle of replacement of elements of the infrastructure, depreciation of the value of the assets is not appropriate and funding of depreciation is not necessary. This approach is consistent with the NZ Infrastructure Asset Valuation and Depreciation Guidelines (Section 5.4.4).



## **SECTION 4: PERFORMANCE MEASURES**

The overall performance measure is that the infrastructure assets are maintained to meet their service levels at all times.

The following procedures will be adopted to ensure the adequacy of maintenance.

### Annually

- (i) Produce annual works report for the rating district to include type of work to be undertaken, quantities, location and costs.
- (ii) Organise contracts for agreed scheme work, oversee contract completion and report to Council.
- (iii) Report on works undertaken during the previous financial period to the rating district ratepayers and Council.

### Performance Measure

No reports of stopbanks or erosion protection works requiring repairs without an agreed programme of remedial work in progress.

### Triennially

- (i) Re-fly aerial photographs of the area, analysing these photographs to assess changes in river meander patterns that could impact on Rating District Assets.
- (ii) Re-measure cross section river profiles to determine whether the riverbed is stable, or aggrading, and to identify management issues or options.
- (iii) Revaluation of the asset schedule to include any additional rock placed on stopbanks and bank protection works over the three year period.
- (iv) Review this Asset Management Plan

### Performance Measure

Report to Council and ratepayers on revaluation of assets and the Plan review.

## APPENDIX 1: EXPENDITURE FROM 1994

<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
5,547	18,213	899	409	2,438	261	258	258
<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
190	202	38	75	408	2,236	2,019	3,415
<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>			
3,115	0	0	0	398			

Total Expenditure \$ 40,379

Average Annual Expenditure \$ 1,922

Average Expenditure as a % of Asset Value 3.7%

As at 30 June 2014, the value of the Matainui Rating District Scheme assets is \$51,275