



Redjacks Creek Rating District 2021-2024 Asset Management Plan



West Coast Regional Council

388 Main South Road
Greymouth
7805

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1.0 Purpose of this Document

The purpose of this document is to summarise the management philosophy that is applied to the Redjacks Creek Rating District including the infrastructure assets and services. This approach ensures that acceptable levels of service are provided in the most cost-effective manner and contribute to the achievement of the community outcomes identified in the West Coast Regional Council's Long-Term-Plan (LTP).

This AMP defines the objectives and performance standards of the Redjacks Creek Rating District for which the West Coast Regional Council bears the maintenance responsibility, including providing a basis upon which the effectiveness can be measured. The key purposes of this AMP are to:

- Provide a history of the Redjacks Creek scheme.
- Convey the long-term strategy for the management of the Redjacks Creek Rating District.
- Provide a tool to assist with management assets in a cost effective and sustainable manner.
- Manage the environmental, service delivery and financial risks of asset failure.
- Demonstrate that the service potential of the rivers and drainage assets is being maintained.

2.0 Asset Management Objectives

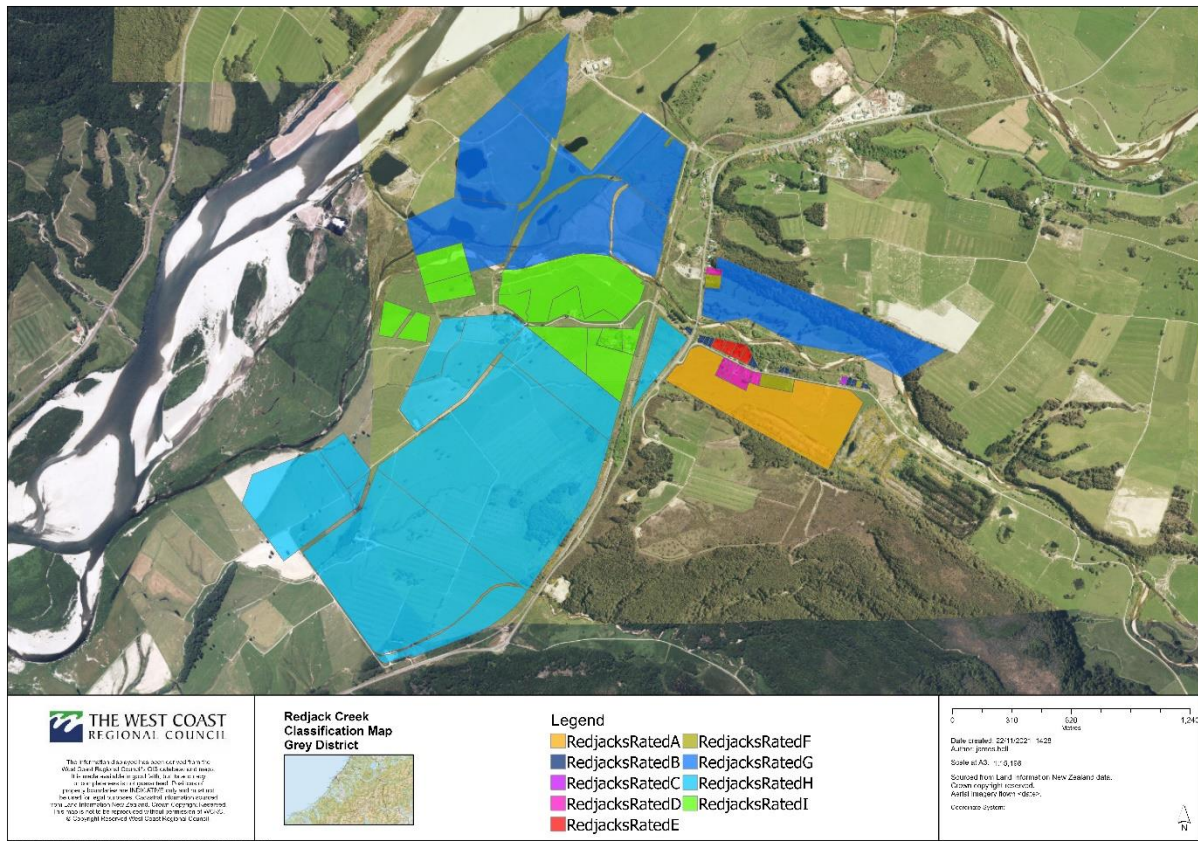
West Coast Regional Council recognises that the Redjacks Creek Asset Management Plan is the fundamental driver of drainage and infrastructure for the scheme. This AMP has been developed in accordance with the Local Government Act 2002, with the first AMP completed in 2003 with three yearly updates or earlier where information indicates a significant change from what is stated in the current AMP.

In order to fulfil the outcomes, vision, goals and objectives of these assets, the West Coast Regional Council have adopted a systematic approach to the long-term management of its assets and services on the Redjacks Creek Rating District by preparing this AMP.

West Coast Regional Council is committed to best appropriate practice asset management in order to achieve the following key objectives:

- Meet the service expectations of the Redjacks Creek community.
- Ensure maintenance activities achieve efficient results with optimal benefits.
- Demonstrate Council's approach to managing risk and meeting growth requirements towards a sustainable future.
- Comply with all statutory requirements.

3.0 Redjacks Creek Rating District



4.0 Redjacks Creek Rating District Background

Prior to 1945 little is known about the flooding problems associated with the Redjacks Creek area; however, it has been established that the area was susceptible to flooding periodically.

On 12 October 1945 Federated Farmers expressed concern at the flooding dangers on Redjacks Creek.

Between 1945 and 1949 small works in the form of timber constructed groynes and trees spurs were placed upstream of the Road Bridge.

On 11 March 1949 Redjacks Creek overflowed its banks 300 metres upstream of the Road Bridge and inundated farmland down to the Main Road. At this point the Grey County Council offered to contribute monetarily to any proposed works. At this time the Ministry of Works also expressed concern at the lack of protection offered to the residential subdivision being undertaken by the Department of Lands and Survey in the area.

On 30 May 1949 a letter was received by 14 residents requesting a solution to river overflows.

On 21 April 1950 the Ministry of Works proposed works which involved the construction of 400 metres of stopbanking to be protected by willow plantings out from the stopbank.

On 1 June 1950 the Westland Catchment Board sought approval from locals regarding apportionment of proposed costs i.e., Westland Catchment Board - \$1,100; Grey County Council - \$200; and local contributions - \$200. This offer was rejected by local ratepayers at a meeting held on site on 2 July

1950. Between 1950 and 1953 small works in the form of channel cleanouts occurred. Between 1953 and 1958 realignment work and erosion control works were carried out. Between 1958 and 1963 some bank protection took place by placing anchored trees along eroded banks.

On 13 May 1963 the road access was cut to the mill by flooding. 40 tonnes of rock was utilised to rectify the problem.

In early 1968 another request for an investigation was sought for protection to the right bank upstream of the State Highway Bridge. As a result, the Westland Catchment Board produced a scheme to build stopbanks on the left and right banks of Redjacks Creek upstream of the State Highway Bridge. An estimated cost of \$23,000 utilising National Roads Board subsidy of \$8,000 a Grey County Council share of \$3,000 and a 2:1 subsidy on locally raised funds was proposed.

The works were designed to contain a 50 years return period flood event estimated at 411 cumecs with 0.900 metre freeboard. It was also noted that the whole area had been flooded 5 times prior to 1969. In 1969 the road was closed twice by flooding.

On 14 November 1969 the Soil Conservation and Rivers Control Council approved expenditure of \$25,000.

Robinson Construction carried out the works involving:

- 11,209m³ of fill on the right bank stopbank
- 12,730m³ of fill on the left bank stopbank
- 2,350 tonnes of rock rip rap on the right bank.

These works were completed on 9 February 1971.

Between 1972 and 1982 approximately \$12,180 was spent on various works.

On 23 June 1986 a classification for the Redjacks Creek Rating District was adopted by the Westland Catchment Board.

On 20 April 1993 the Classification was revised and adopted by The West Coast Regional Council. The classification is a differential one with 9 different classes based on land area.

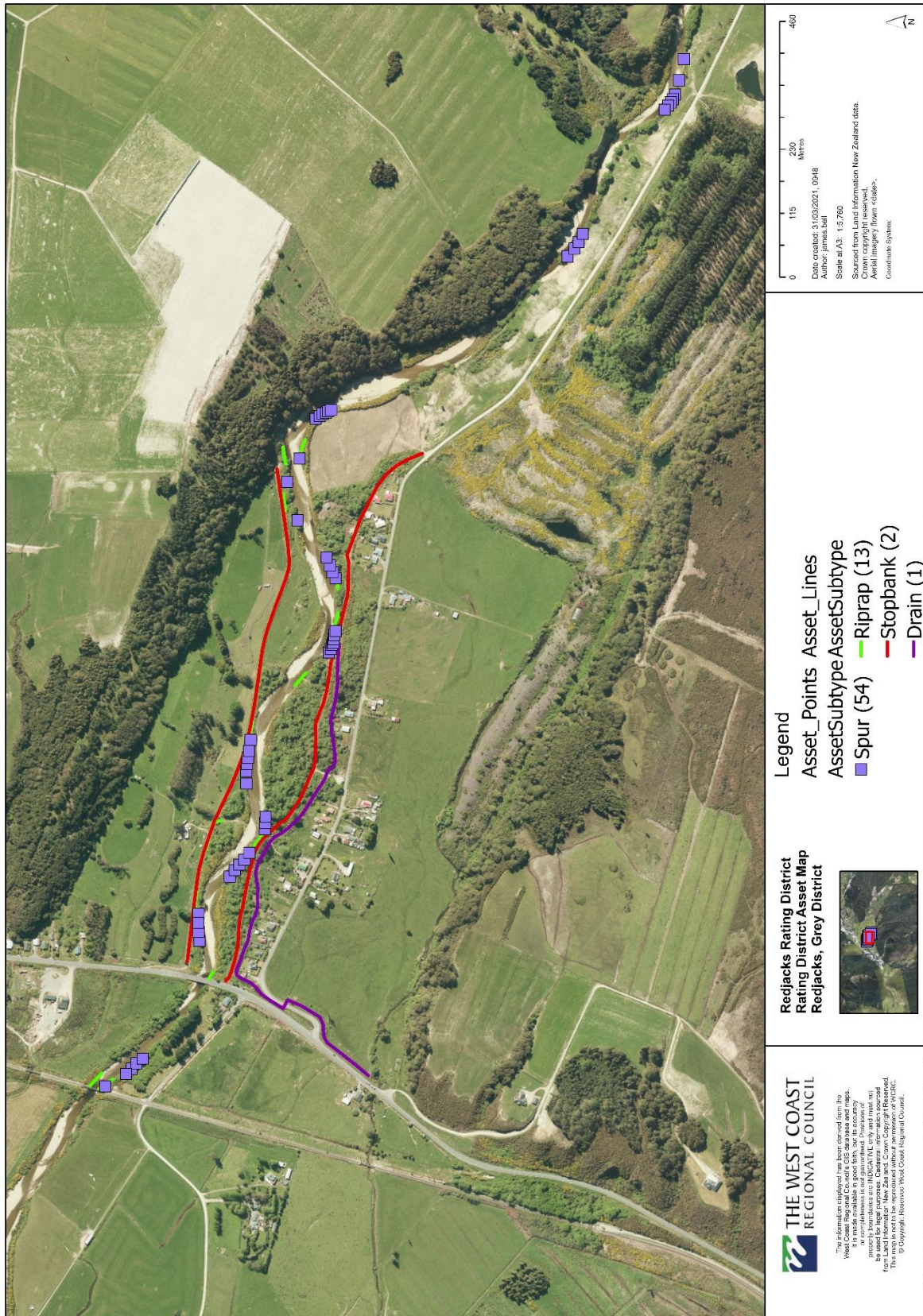
5.0 Description of Assets

Asset	Quantity	Unit	Rate
Rock	9,214	Tonne	\$50.00
Fill	31,500	m3	\$12.47
Excavation	6,750		\$5.00
Asset Value			\$887,255.00
<i>Contingencies</i>			<i>\$88,725.50</i>
<i>Resource Consents</i>			<i>\$19,519.61</i>
<i>Emergency Work Conditions</i>			<i>\$88,725.50</i>
Asset Value			\$1,084,225.61

5.1 Physical Assets

Asset Type	# Of Assets	Asset Components	Quantity	Rate	Value	Total Value
Spur	55	Rock	3372T	\$50.00	\$168,600.00	\$168,600.00
Riprap	13	Rock	5842T	\$50.00	\$292,100.00	\$292,100.00
Stopbank	2	Fill	31500m ³	\$12.47	\$392,805.00	\$378,000.00
Drain	1	Excavation	6750m ³	\$5.00	\$33,750.00	\$33,750.00
Totals						\$887,255.00

5.2 Asset Map



Note: Not all assets have been added to the asset map due to having no spatial data to represent them at this current time.

6.0 Existing Standard

The objective of the Redjacks Creek Rating District is to reduce bank erosion and flooding over the length of the scheme.

There have been a mix of design standards during the life of this scheme. The original stopbanks were built 900mm above the highest known flood. After 1986, sections of stopbank were built to contain a flood of 411 cumecs which at that time was estimated to be a 1 in 50-year return period flood.

The Council have suggested that an analysis be commissioned to quantify the actual level of protection that the scheme currently provides. The rating district have decided that they do not wish to have any new analysis undertaken. Given that there has been no analysis carried out the scheme structures will continue to be maintained to the dimensions that they were originally constructed.

6.1 Service Level

The Levels of Service represented in this AMP are described and aligned with community values including affordability, quality, safety, community engagement, reliability, and sustainability. The scheme structures will be maintained to the dimensions that they were originally constructed.

Councils in New Zealand will generally adopt one of three methods for determining the level of service provided by a scheme:

- Agreeing on a scope of physical works with the community without reference to a target capacity or return period (low risk schemes)
- Providing physical works with a level of performance provided in terms of a target capacity (medium risk schemes)
- Providing physical works with a level of performance in terms of a target return period (high risk schemes)

Each of the three methods for determining the level of service may be suitable for a given scheme, provided that communities understand event likelihood, scheme and property vulnerability, potential consequences, and residual risk.

Where council staff have recommended physical works or analysis that did not proceed due to community resistance to cost, then councils are only able to track their service delivery through measures around maintenance works programmes or a general description of channel condition.

6.2 Maintenance Programme

An annual maintenance report is prepared each year in consultation with the Redjacks Creek Rating District to adoption by the Council for inclusion in its annual budgets.

In preparing the annual maintenance report the following will be considered:

- 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.

6.3 Damage Exposure

Event size (AEP)	Value	Damage ratio	Damage exposure	Prudent Reserve	Prudent reserve contribution
10%	\$1,084,225.61	5%	\$54,211.28	\$54,211.28	100%
5%	\$1,084,225.61	10%	\$108,422.56	\$75,895.79	70%
2%	\$1,084,225.61	20%	\$216,845.12	\$108,422.56	50%

It has been deemed, within reason, that all Rating Districts have a prudent reserve target balance that contributes to at least 100% of the damage exposure for a 10% AEP event, 70% for a 5% AEP event and 50% for a 2% AEP event. These percentages define what is an appropriate and acceptable level of risk for Council and the community.

6.4 Prudent Reserve

Why do we need a prudent reserve?

- Minimise the financial impact of unplanned works, such as those caused by weather events
- Ensure the rating district is able to contribute funding that is sustainable and affordable
- Ensure Council's debt level is managed, and that borrowing is still available when required
- Ensure the debt levels of the rating district do not exceed the ability to fund the repayments

This target balance for the 'prudent reserve' for this rating district is \$30,000 as agreed by council. This prudent reserve is immediately available. It is likely the current reserve will only cover a portion of the actual cost of the potential damage that could occur.

If an event were to occur and the prudent reserve does not cover the full repair and rebuild cost of the assets, it is understood by the community that the remaining costs will be paid by loan, or the rating district accounts will be in overdraft. In the instance of extreme weather events, NEMA funding and the Council's private insurance will be accessed for cost recovery if the criteria are met. The West Coast Regional Council's insurance policy has a \$400,000 excess. 40% of eligible rebuild costs will be met by this policy.

Below are the key criteria that needs to be met to access the NEMA funding, which can cover up to 60% of eligible rebuild costs

The provisions for government financial support to local authorities apply whether or not a state of emergency is, or has been, in force

Government assistance will not normally be available for assets which receive a subsidy from any other source, unless:

- *the local authority has adequately protected itself through asset and risk management including mitigation, where appropriate, and the proper maintenance of infrastructure assets, or*

- *the local authority has made sound financial provisions (such as the provision of reserve funds, effective insurance, or participation in a mutual assistance scheme with other local authorities) to a level sufficient to ensure that the local authority could reasonably be expected to meet its obligation to provide for its own recovery*

Threshold

Threshold for reimbursement; As with other response claims, Government policy is to reimburse 60 percent of the combined eligible costs (response and essential infrastructure costs), above the following thresholds:

- *0.0075 percent of the net capital value of the city council, district council or unitary authority involved*
- *0.002 percent of the net capital value of unitary authorities where the assets in question are of a type that ordinarily are managed by regional councils, or*
- *0.002 percent of net capital value in the case of regional councils*

7.0 Funding

7.1 Maintenance

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

- a) Preparation of an annual works programme and corresponding budget.
- b) Adoption of the annual works programme and budget.
- c) Discussion of the works report and budget with the ratepayers.
- d) Adoption of final budget in the Council's Annual Plan.

Capital works are generally defined as works which increase the service level of the scheme. Such work would include increasing the design standard or the area covered by a scheme and works to increase security or performance of an erosion control system or structure over and above that identified in the asset plan.

7.2 Damage Repairs

Routine damage repairs are funded by a combination of:

- a) Carrying out work as scheduled in annual works programme.
- b) Reprioritising works identified in the annual works programme.
- c) 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.

7.3 Financial Reserves

Financial reserves are held within the rating district account to provide the following:

- a) Meet the costs of unscheduled works.
- b) Enable an immediate response to flood damage repairs.
- c) Prevent major fluctuation in rating levels annually.

The levels of financial reserves held in the rating account are determined by the estimated damage exposure and the likely need for un-programmed works.

7.4 Depreciation

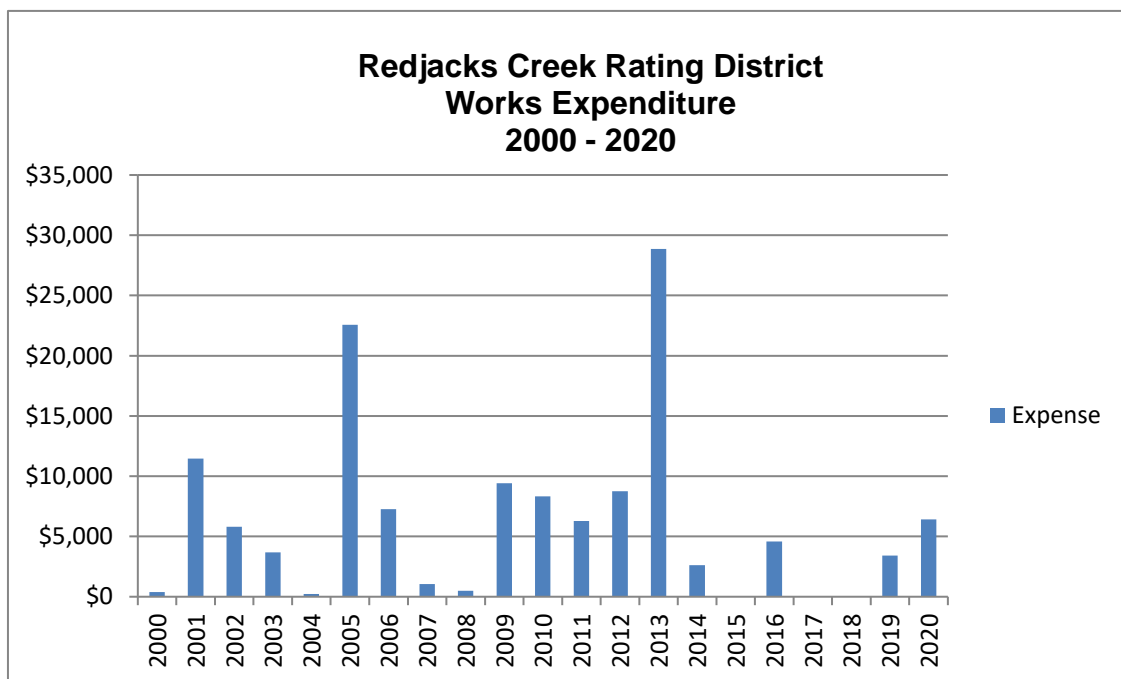
River and erosion control schemes are designed to be maintained in perpetuity by constantly repairing and replacing component parts which are damaged by floods or by the constant wear and tear encountered in a river environment.

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

As there is a constant cycle of replacement of elements of the infrastructure as necessary, 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.

7.5 Works Expenditure

This chart reflects the construction costs of infrastructure assets on the Redjacks Creek Rating District. This chart **does not** reflect the total annual expense incurred by the Redjacks Creek Rating District. Please refer to the annual works and financial report for the total expenses.



Expenditure 2000 - 2020	
Total expenditure	\$174,525
Average expenditure	\$6,233
Total asset value	\$1,066,133

7.6 Cost Sharing

A cost-sharing agreement was negotiated with the Grey District Council in 2014. The Grey District Council resolved to contribute \$2,000 (plus GST) per year to the Scheme.

8.0 Performance Measures

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

Period	Procedure	Performance Measure
Annually	Produce annual works report for the rating district assets to include type of work to be undertaken, quantities, location, and costs.	No reports of channel or creek requiring repairs without an agreed programme of remedial work in progress.
	Organise contracts for agreed scheme work, oversee contract completion and report to Council.	
	Report on works undertaken during the previous financial period to the rating district ratepayers and Council.	
Triennially	Re-measure cross section river profiles to determine whether the riverbed is stable, or aggrading, and to identify management issues or options.	Report to Council and ratepayers on revaluation of assets and the Plan review.
	Revaluation of the asset schedule to include any additional excavation and channel clearance and bank protection works over the three-year period.	
	Review this Asset Management Plan	
10-yearly	Flood modelling will be undertaken to identify a range of level of services.	Report to council and ratepayers.

8.1 AMP Review and Monitoring

This plan is a living document, which is relevant and integral to daily activity. To ensure the plan remains useful and relevant the following on-going process of AMP monitoring and review activity will be undertaken:

- Formal adoption of the AMP by the West Coast Regional Council.
- Review and formally adopt Levels of Service to comply with the Rating District committee
- Revise this AMP three yearly prior to Long Term Plan (LTP) to incorporate and document changes to works programmes and outcome of service level reviews.
- Quality assurance audits of asset management information to ensure the integrity and cost effectiveness of data collected.
- Peer review and external audits will be undertaken to assess the effectiveness with which this plan meets corporate objectives. Periodic internal audits will be undertaken to assess the adequacy of asset management processes, systems and data and external audits will be undertaken to measure asset management and performance against 'best practice'.