



Kongahu Rating District 2021-2024 Asset Management Plan



West Coast Regional Council

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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 Kongahu 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 Kongahu 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 Kongahu protection scheme.
- Convey the long-term strategy for the management of the Kongahu 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 Kongahu Asset Management Plan is the fundamental driver of flood protection 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 Kongahu 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 Kongahu 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 Kongahu Rating District Background

The Kongahu Swamp covered an area of 1000 hectares in the Karamea District. The swamp extended from the Little Wanganui River to the Otumahana Lagoon over a length of approximately 8 kilometres.

The first proposal to drain the swamp was prepared by the Public Works Department in 1938 but no major work was carried out at that time. At the request of the Karamea Federated Farmers the Westland Catchment Board agreed to carry out a survey and prepare a proposal to drain the Kongahu Swamp.

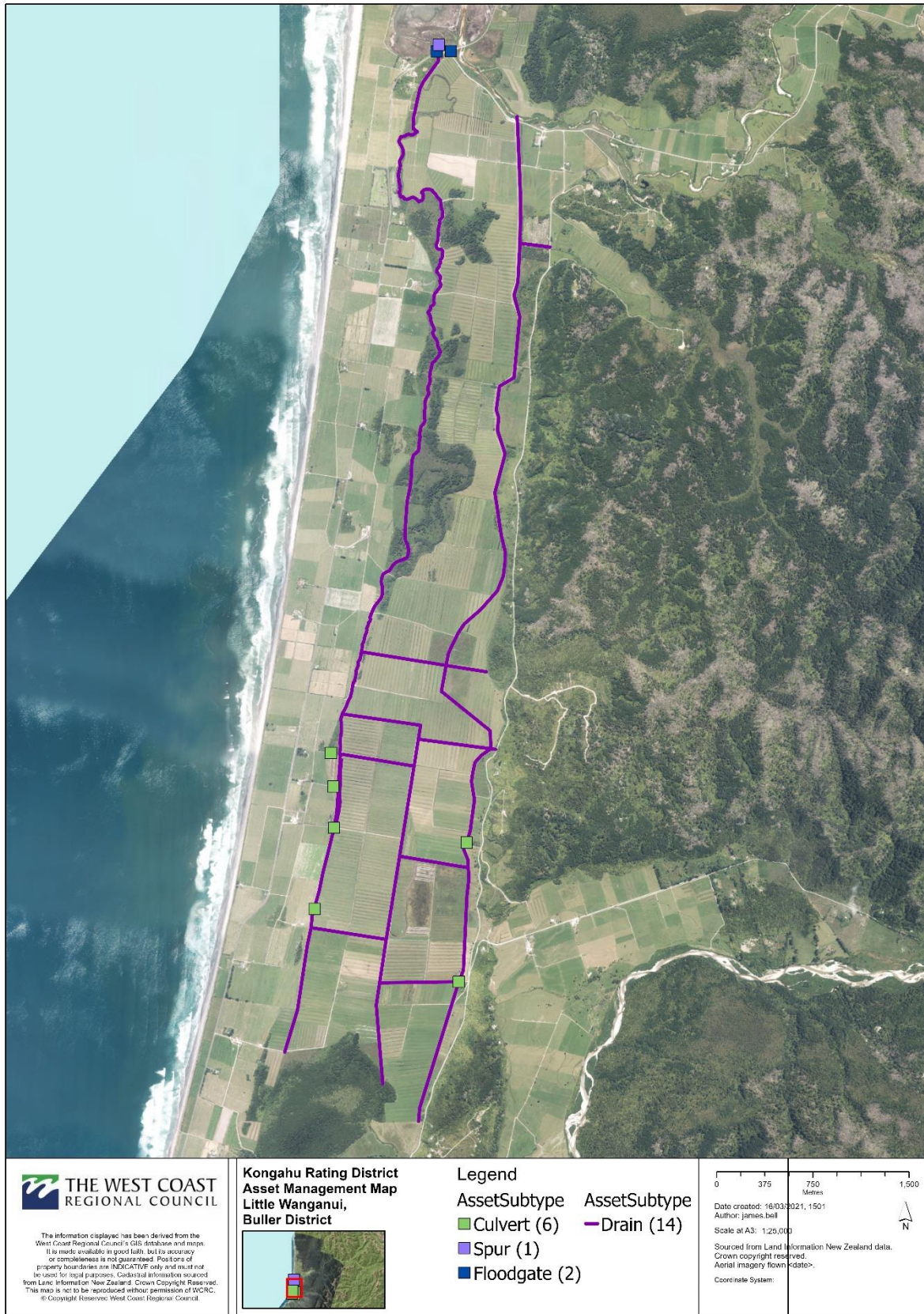
5.0 Description of Assets

Asset	Quantity	Unit	Rate
Drain	118,735	m ³	\$5.20
Channel	100,492		\$5.20
Fill	500		\$12.47
Rock	460	Tonne	\$49.00
Culverts	24,100	\$	\$1.07
Lump Sum	60,000	\$	\$1.07
Asset Value			\$1,258,742.40
<i>Contingencies</i>			<i>\$125,874.24</i>
<i>Resource Consents</i>			<i>\$27,692.33</i>
<i>Emergency Work Conditions</i>			<i>\$125,847.24</i>
Asset Value			\$1,538,183.21

5.1 Physical Assets

Asset Type	# of Assets	Asset Components	Quantity	Rate	Value	Total Value
Culvert	6	Culvert	\$24,100.00	\$1.07	\$25,787.00	\$25,787.00
Spur	1	Rock	60T	\$49.00	\$2,940.00	\$2,940.00
Floodgate	2	Floodgate	\$60,000.00	\$1.07	\$64,200.00	\$64,200.00
Drain	15	Excavation				
		Drain	118735m ³	\$5.20	\$617,422.00	\$1,139,980.40
		Excavation				
Riprap	1	Channel	100492m ³	\$5.20	\$522,558.40	
		Rock	400T	\$49.00	\$19,600.00	\$19,600.00
Stopbank	1	Fill	500m ³	\$12.47	\$6,235.00	\$6,235.00
Total						\$1,258,742.40

5.2 Asset Map



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

6.0 Existing Standard

The objective of the Kongahu Rating District is to maintain existing creeks and drains included in the scheme to their original design specifications.

There is no hydrological information held on the Kongahu area in respect to flood events or maximum flows that the scheme is intended to provide drainage for.

The rating district does not wish to have any drain flow analysis undertaken to quantify the actual level of drainage that the scheme currently provides. The scheme structures will 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.

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.

The rating district does not wish to have any drain flow analysis undertaken to quantify the actual level of drainage that the scheme currently provides. The scheme structures will be maintained to the dimensions that they were originally constructed.

6.2 Maintenance Programme

An annual maintenance report is prepared each year in consultation with the Kongahu 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.

The maintenance of the Kongahu Swamp Drainage Scheme can be broken into two areas: Creek Maintenance and Drainage Maintenance.

Creek Maintenance

Creek maintenance includes the excavation of creek bed build up, and the removal of vegetation from within and around waterways to allow the fast passage of flood flows to prevent overtopping of creek banks.

Drain Maintenance

Drains are required to be cleaned out on a regular basis to maintain their original design capacity as per the plan specifications as well as the repair of any damage to bank batters.

A major new issue as at 2014 is the invasion of the aquatic weed parrot's feather into the scheme's creeks and drains. This aggressive weed is now present throughout the area and can clog up the drains affecting efficient water flows. It has spread beyond the drains during major floods into upstream as well as downstream areas. Roundup will not kill this plant but Garlon does a better job. With NIWA advice, Council staff are trying to develop the optimal method of keeping on top of this pest plant.

Maintenance Issues

1. Maintain invert levels of drains and creeks.
2. Repair erosion including structural problems and water damage.
3. Maintain access ways to enable future maintenance.
4. Regular spraying to manage weed growth and keep water flowing.

Well established grass covered banks have been proven to be effective in resisting erosion. During normal use damage can be caused by grazing stock causing slumping and damage to the banks of drains and creeks.

Banks and creek beds can be damaged in the event of an earthquake by vertical or horizontal displacement. This could result in the slumping and filling of drainage through liquefaction of the surrounding land.

Typical maintenance works undertaken

1. Ensure creeks and drains are kept clear of weed and debris.
2. Ensure any slumping of natural banks are repaired by excavation.
3. Control of weeds and unsuitable vegetation on creek and drainage batters by spraying.

6.3 Damage and Risk Exposure

Erosion 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 out, it is likely that damage will occur from time to time.

An assessment of maximum damage potential was estimated as below:

Event size (AEP)	Value	Damage ratio	Damage exposure	Prudent Reserve	Prudent reserve contribution
10%	\$1,538,183	5%	\$76,909	\$76,909	100%
5%	\$1,538,183	10%	\$153,818	\$107,673	70%
2%	\$1,538,183	20%	\$307,637	\$153,818	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 \$50,000 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.

The aim of maintenance is to ensure the infrastructure assets are kept at a standard where they can always perform to their service level. Where rock is required to be placed on an existing infrastructure under direct attack from the river, the protection required to maintain the existing infrastructure at its same service potential would be charged to the scheme maintenance account.

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

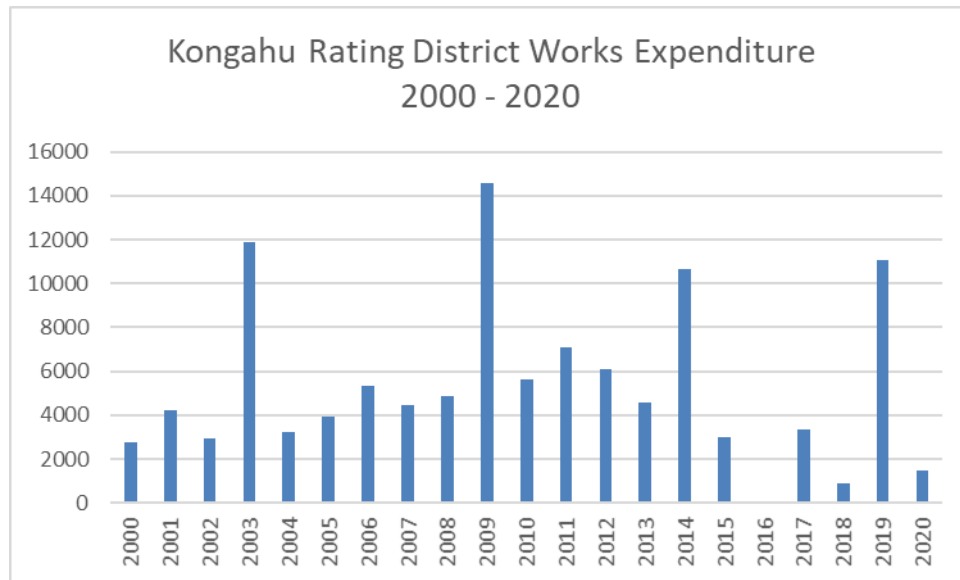
River control schemes are designed to be maintained in perpetuity by constantly repairing and replacing component parts which are damaged by floods or by the constant wear and tear encountered in a river environment.

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 Kongahu Rating District. This chart **does not** reflect the total annual expense incurred by the Kongahu Rating District. Please refer to the annual works and financial report for the total expenses.



Expenditure 2000 - 2020	
Total expenditure	\$112,042
Average expenditure	\$5335
Total asset value	\$1,538,183

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 stopbanks or erosion protection works requiring repairs without an agreed programme of remedial work in progress. Asset maintenance is current as per level of service.
	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	Review this Asset Management Plan	Report to Council and ratepayers on revaluation of assets and the Plan review.
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'.