



ANNUAL REPORT

UNALIENATED CROWN LAND WEED CONTROL

BULLER - WEST COAST DISTRICT

Financial Year 2008-2009

Prepared for Land Information New Zealand

by



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June 2009

TABLE OF CONTENTS

LIST OF LAND DEFINITIONS	2
INTRODUCTION.....	3
1.1 Priority Rankings	3
2. RESOURCE CONSENT COMPLIANCE	4
3. LIAISON WITH LANDOWNERS	4
4. WEED CONTROL WORKS.....	5
4.1 Lower Buller River Old Man’s Beard	5
4.2 Lower Buller River Asiatic Knotweed	6
4.3 Maruia River	7
4.4 Grey River.....	8
4.5 Otira/Rolleston Rivers Confluence	9
5. SUMMARY	11

LIST OF LAND DEFINITIONS

Crown Riverbed

Crown riverbed in this document refers to land belonging to the Crown that is administered by Land Information New Zealand (LINZ); referred to as Unalienated Crown Land (UCL).

The areas of UCL requiring weed management were identified using the following criteria:

- **Areas of braided riverbed bounded on both sides by marginal strip or road reserve.**
- **Areas of braided riverbed bounded on one or both sides by land not subject to *ad medium filum* (AMF) rights.¹**

Marginal Strip

Marginal Strip in this document refers to lands of the Crown administered by the Department of Conservation (DoC).

Road Reserve

Road Reserve in this document refers to land administered by territorial authorities (District Councils or Unitary Authorities).

Application of these criteria is considered appropriate because it is expected that these particular areas will require the greatest attention for pest management. Other areas may be identified in the future, but they are less likely to have a high priority for pest management.

¹ Where a river abuts a property and connection is not interrupted by a legal road, the adjoining landowner may own the riverbed to the middle of the river. These are called *ad medium filum* rights. This situation is more prevalent in South Island braided rivers.

INTRODUCTION

Land Information New Zealand has responsibilities for managing the control of pest plants (weeds) on UCL, on behalf of the Crown. In most cases, Crown riverbed comprises areas of braided river or stream beds bounded on both sides by marginal strips or road reserves.

Many weed species occur on UCL. The weeds in these waterways can pose serious threats to adjoining farmland and conservation areas, and act as sources of weed reinfestation. The council's Regional Pest Management Strategy (RPMS) has been developed under the Biosecurity Act 1993 to deal with these weeds. Some weeds have been categorised according to their threat to economic values, while others have been listed as threats to conservation values. Control of weeds on UCL is therefore an important aspect of the Crown's land management programme. The aim of weed control is to reduce infestations of pest plants to low levels, after which only ongoing inspection and maintenance control is required.

Landward Management Ltd is the contractor responsible for managing and coordinating biosecurity operations (plant and animal pest control) on UCL, for LINZ. This role includes the following tasks:

- Preparation of annual weed/pest control programmes
- Preparation of tenders and contracts for engagement of weed/pest control contractors
- Monitoring and inspection of operations
- Monitoring resource consent compliance
- Annual reports on operations
- Reporting on other issues which may be of relevance to biosecurity operations.

This report outlines noxious weed control operations carried out on UCL in the West Coast Region for period 1 July 2008 to 30 June 2009 financial year. Operations included:

- Ground spraying of gorse, broom and Old Man's Beard (OMB)
- Aerial helicopter spraying of gorse, broom and OMB

1.1 Priority Rankings

Sites to be treated were selected on the basis of input resulting from the consultation process and priority rankings were assigned to each operation. These priorities were dependent on three factors:

- The ability to define area as UCL;

- Downstream control priorities; and
- Compliance with the RPMS.

Gorse and broom control/containment was the highest priority. A non-RPMS plant such as OMB was also a high priority in areas where it posed a significant threat to the landscape, agricultural and/or ecological integrity of the land.

High priority was also accorded areas where adjacent landowners had grouped together to form a wider weed control programme, which may include UCL. In these circumstances, LINZ aims to act as a “good neighbour” and contribute to the wider weed control programme. The lowest priority was given to areas where boundary control was programmed, but landowners had no defined programme to clear adjacent areas of weeds.

In general, priorities were based on the ability to maintain weed-free areas and previous weed control efforts, the ability to reduce the impact of external infestations, and continuing downstream weed clearance.

The priorities were as follows;

1. Maintenance and inspection of existing weed - free areas (Highest Priority]
2. Contributions as part of a wider weed control programme
3. Downstream control of weed infested areas
4. Control of weeds that do not form part of a wider programme e.g. boundary control (Lowest Priority)

2. RESOURCE CONSENT COMPLIANCE

The West Coast Regional Water Plan allows the discharge of agrichemicals in circumstances where they may enter water, provided certain guidelines are followed. Therefore, no resource consent is required.

3. LIAISON WITH LANDOWNERS

Ongoing liaison with Greymouth and Westport DoC staff occurred throughout the course of the Buller OMB and Maruia gorse/broom control programme. Land Information New Zealand also undertook to consult with the following parties when developing the West Coast regional weed control programme:

- West Coast Regional Council (WCRC)
- Te Runanga o Ngai Tahu
- Buller and Grey District Councils
- Crown Public Health

- Fish and Game
- Federated Farmers
- Forest and Bird

4. WEED CONTROL WORKS

4.1 Lower Buller River Old Man's Beard

Old Man's Beard control in the Buller River valley was initiated in 1986. The nature of the predominantly aerial based work means that even in years where fewer plants were found, the programme costs remain at their present levels.

Approximately 400ha of the riverbed was surveyed over six days between 4 March 2009 and 23 March 2009 in two 3-day periods using a Robinson R44 helicopter. Ten 120 litre loads were sprayed during the control operation. This was carried out a little earlier than last year, and the majority of plants found were well into the flowering stage with fewer plants showing seed head development. About 7ha was spot sprayed by helicopter and all plants found were either sprayed at the time or noted for follow-up work by ground methods.

This control programme needs to continue at this level for the foreseeable future, because the weeds are only being contained, with no major reduction in infestation.

Farm development has continued at sites targeted for control in previous years in the lower Buller Gorge, Three Channel Flat and New Creek. This resulted in fewer plants, but several new sites were found with single plants. It is recommended that the existing control methods continue to maintain the area at a low level of infestation.



Figure 1. OMB treatment area on the lower Buller River

4.2 Lower Buller River Asiatic Knotweed

Asiatic Knotweed is listed in the West Coast RPMS as a conservation pest plant and is classed in the Surveillance category of the RPMS. On the West Coast, Asiatic Knotweed is clearly becoming a major pest with large infestations in the Inangahua River, and scattered plants are appearing in the lower Buller River.

DoC have an existing control programme for Asiatic Knotweed, but additional funding for control of weeds listed in RPMS allowed LINZ to contribute towards control of this weed in the Lower Buller River for the first time in the 2008/09 season. Due to the area being controlled overlapping with the lower Buller River OMB programme, control of the Asiatic Knotweed was done in conjunction with the OMB control.

Control took place between 4 March and 23 March 2009 using a Robinson R44 helicopter, followed by some knapsack spraying of plants not accessible by the helicopter. The DoC programme that has been occurring over the last few years meant that it was possible for all Asiatic Knotweed plants identified in the lower Buller River to be sprayed.

As this river has a low incidence of Asiatic Knotweed, continued maintenance of this weed would be beneficial to prevent higher future costs. This can continue to be done in conjunction with the lower Buller River OMB programme to reduce costs.



Figure 2. Asiatic Knotweed treatment area on the lower Buller River

4.3 Maruia River

For this season both aerial and ground control methods were used to control gorse and broom on the Maruia River.

Aerial spraying took place on 14 January, 26 January, 5 February and 6 February 2009, using a helicopter and spot spray. The operator commented on the large numbers of new gorse seedlings that were growing in the riverbed this season, and these will require future control works.

Ground control using a hand gun from a truck mounted gun and hose spray unit covered areas of the riverbed that were obscured from treatment by aerial means, such as under areas of dense willow growth along the river bank. Ground control was undertaken on 13 March, 14 March and 22 March 2009.

These two different control methods complement each other to ensure more complete coverage of the site. Ongoing control by helicopter surveillance and spot spraying in this area is required to prevent the existing seed bank established in the riverbed from re-establishing adult pest plants.

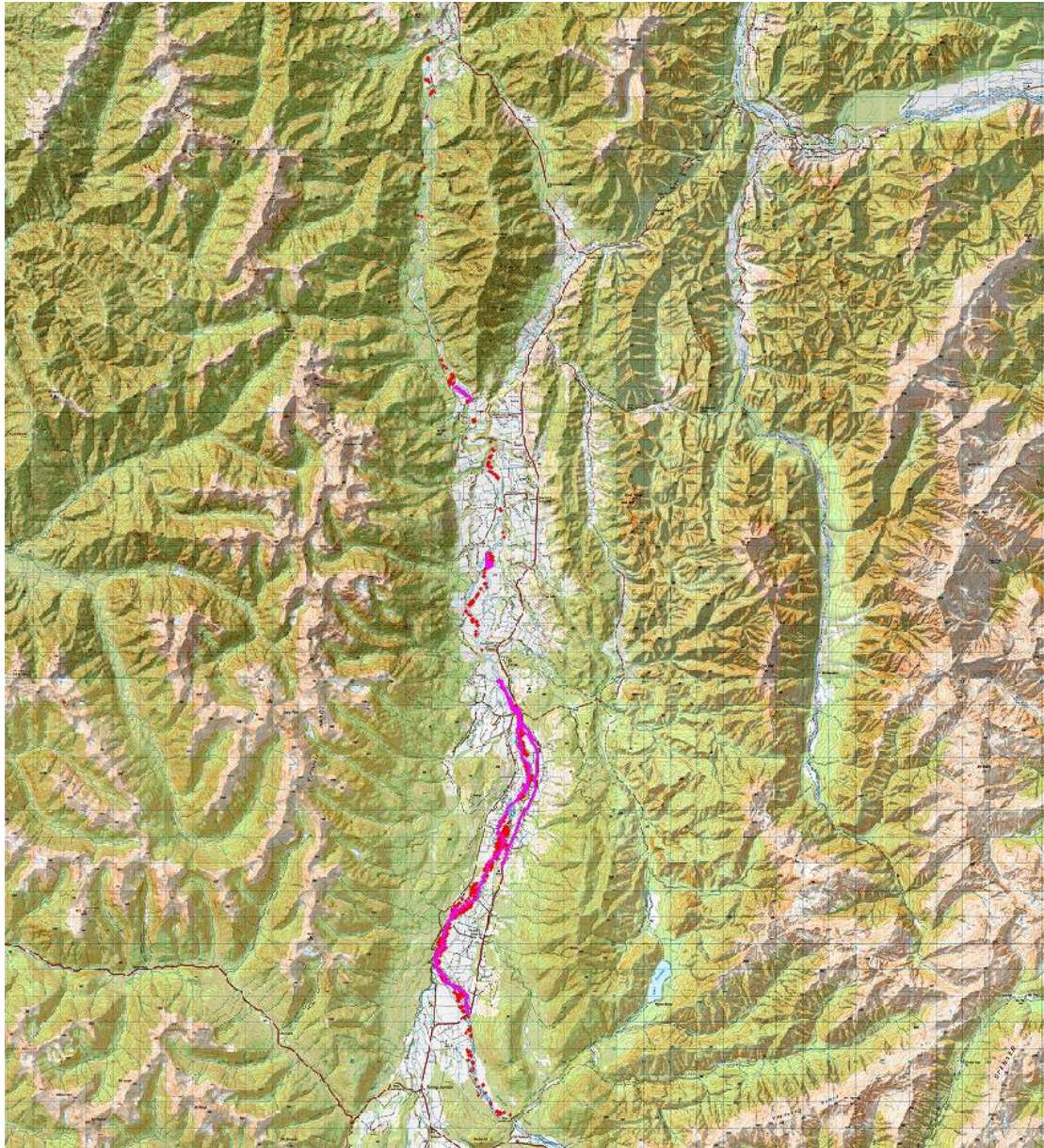


Figure 3. Treatment area on the Maruia River. Red areas show aerial control, pink ground control.

4.4 Grey River

Land Information New Zealand has a programme that is undertaken in conjunction with DoC to control gorse and broom in the upper reaches of the Grey and Robinson Rivers, upstream of Ikamatua. In 2008/09 aerial spot spraying was undertaken on 6 February using a helicopter.

This season there was a lot of small gorse and broom plants found which indicates there is still a large seed bank in the riverbed. Dormant seeds were activated by several very large freshes in the river which disturbed the gravel bed.

Future control at the same level will be required to maintain the progress made on controlling the weed infestation.

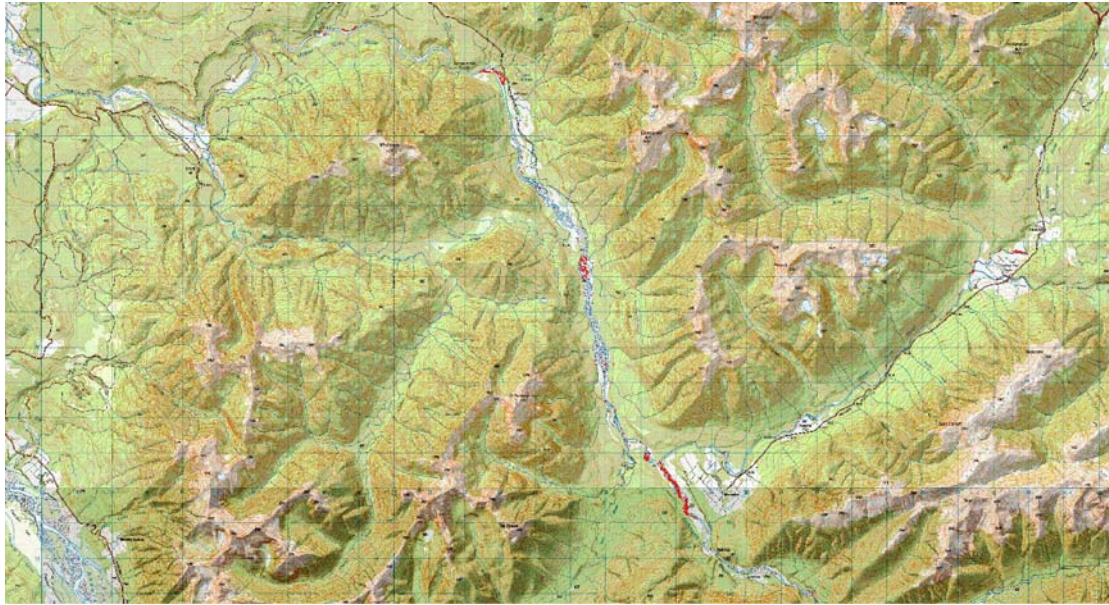


Figure 4. Treatment area on the Grey River

4.5 Otira/Rolleston Rivers Confluence

This site is on the boundary of Arthur's Pass National Park, and is highly visible from SH73 Road Bridge. There are small areas of young regenerating native forest surrounded by broom and gorse in a rocky riverbed spread over about 10ha.

Aerial control works were undertaken on 6 January 2009. The helicopter sprayed about 5ha and was careful to avoid spraying the native vegetation as much as possible. Follow up with ground control methods using knapsack sprayers on the areas not able to be treated aurally was done on 11, 17 and 27 February, and 3 March 2009.

There will need to be an annual follow up using ground control methods of knapsack spraying or cutting and pasting, as there is a large seed bank which will need controlling for a number of years, but in the longer term the regenerating native vegetation will help suppress the weeds.

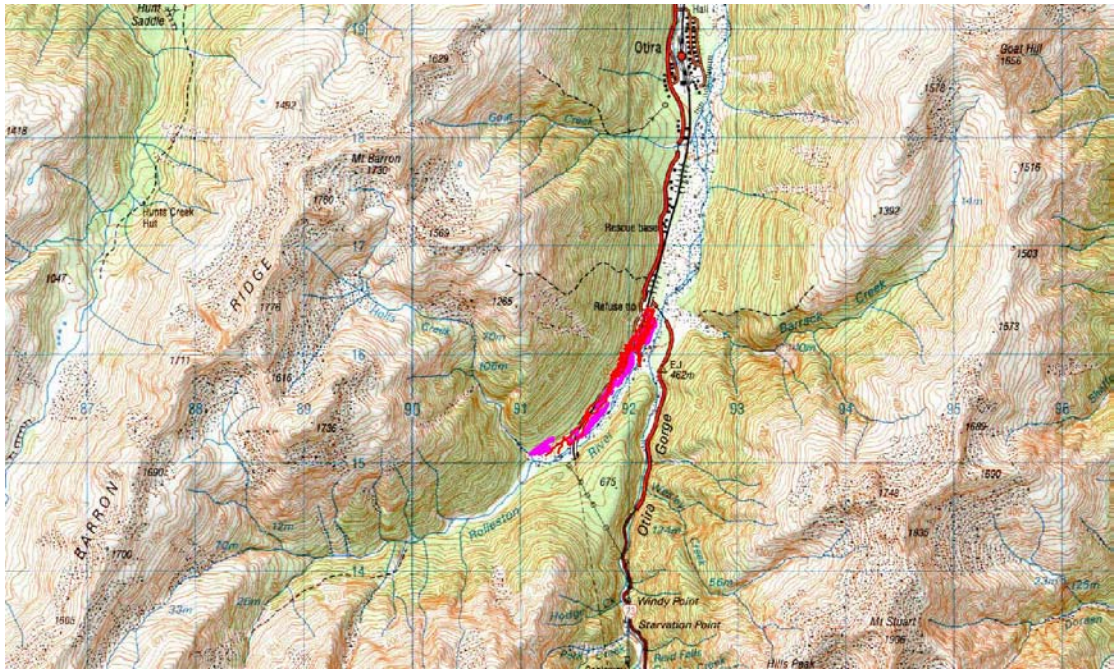


Figure 5. Treatment area on the Otira River. Pink shows aerial treatment areas, red shows where ground treatment occurred.

5. SUMMARY

With the exception of the Otira River, Land Information New Zealand operations on the West Coast are predominantly at a maintenance stage. However continued pressure needs to be maintained on the weed problem to ensure that they do not start spreading to levels that would be more difficult to control. An effective start on controlling the gorse and broom in the Otira River has been made, so control work in future seasons will need to ensure this is maintained.

It is disturbing to note the spread of other weeds such as Asiatic Knotweed and Kahili Ginger in some of these West Coast rivers. However, by contributing towards a programme of control on Asiatic Knotweed in the lower Buller River, it is likely that higher future costs have been avoided. The Department of Conservation is actively managing some of these other weed species on conservation land, so controlling these weeds on UCL will complement DoC efforts.

Most UCL land on the West Coast is surrounded by Conservation land, and therefore continued cooperation with DoC is essential to maintain the weed problem at current levels.