



**ANNUAL REPORT**

**UNALIENATED CROWN LAND WEED CONTROL**

**TASMAN-NELSON DISTRICT**

**Financial Year 2008-2009**

**Prepared for Land Information New Zealand**

by



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## 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.<sup>1</sup>**

### **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.

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<sup>1</sup> 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 service provider 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 Tasman District Council (TDC) region for period 1 July 2008 to 30 June 2009 financial year. Operations included:

- Knapsack spraying and cutting and stump pasting of gorse, broom and Old Man's Beard (OMB)
- Helicopter spraying of OMB

### **1.1 Priority Rankings**

Sites are prioritised based on sound biosecurity principles and in accordance with relevant plans such as RPMS. For example, sites that are located upstream from other known sites are of higher priority than the downstream sites, as these sites are likely sources of further infestation. Also, total control plants in the RPMS are of higher priority than boundary control plants.

Once the nature and extent of an infestation is known, then a recommendation to LINZ can be made for the management, control or eradication of these pests. Sites to be treated are then selected on the basis of input resulting from the consultation process, and also following direction from LINZ. Priority rankings have been assigned to each operation, and these priorities are dependent on three factors:

- the ability to define area as Crown riverbed or lakebed;
- in the case of rivers, downstream control priorities; and
- compliance with the RPMS.

The objective of managing OMB in the RPMS is to reduce the density and distribution in Golden Bay and the Upper Buller, and is highest priority. Gorse and broom control/containment is the next highest priority. Non-RPMS plants such as wilding pines may also be high priority in areas where they pose a significant threat to the landscape, agricultural and/or ecological integrity of the land.

High priority is also accorded areas where adjacent landowners have grouped together to form a wider weed control programme, which may include UCL. In these circumstances, LINZ is obliged to act as a “good neighbour” and contribute to the wider weed control programme. Lowest priority will be given to areas where boundary control is programmed, but landowners have no defined programme to clear adjacent areas.

In general, priorities will be 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 for the Tasman-Nelson district are as follows;

1. (Highest Priority) Reducing the density and distribution of OMB infestations
2. Maintenance and inspection of existing weed-free areas
3. Contributions as part of a wider weed control programme
4. Downstream control of weed infested areas
5. (Lowest Priority) Boundary weed control.

## **2. RESOURCE CONSENT COMPLIANCE**

In the Tasman district, LINZ holds a resource consent to carry out weed control in circumstances where a contaminant may enter water. This resource consent was renewed in April 2007 for a period of 20 years and therefore will not need to be renewed until 2027.

## **3. LIAISON WITH LANDOWNERS AND INTERESTED PARTIES**

In most cases, weed control programmes were undertaken for the eradication of OMB and control of riverbed gorse and broom. This control programme was therefore carried out as part of the wider weed control programme in the Tasman-Nelson Region.

Land Information New Zealand consulted with the following parties when developing the Tasman regional weed control programme:

- Department of Conservation (DoC)
- Tasman District Council Biosecurity Division
- Forest and Bird
- Fish and Game
- Public Health Nelson
- Ngati Waewae
- Te Runanga o Ngai Tahu

#### 4. WEED CONTROL WORKS

##### 4.1 Golden Bay Old Man’s Beard

In 2008/09, LINZ in association with DoC, worked on OMB control in UCL riverbeds in the Golden Bay area. The following table outlines the areas covered during the control works, which took place between 10 October 2008 and 9 April 2009.

<b>Location</b>	<b>Area (ha)</b>	<b>Person days</b>
Takaka River and tributaries	610	84
Waingarō River	45	28
Dry River	2	2
Kaituna and Aorere Rivers	45	26
Wainui River	6.5	2

The control programme included intensive ground searching, cutting and stump swabbing with herbicide, as well as knapsack spraying, to treat all OMB plants found in the area. This was done as part of a wider OMB control programme in the entire Golden Bay district with the work being supervised and undertaken by DoC.

Most of the plants found in 2008/09 were young and flowering for the first time. A small number of older plants were also found and killed.

The river corridors are mostly surrounded by clear farmland which reduces the opportunity for the OMB to grow unobserved. Particular care was taken to inspect hedgerows and plantings as staff came and went from the rivers, as these sites can easily spread to the river corridors.

The DoC/LINZ OMB programme is now in a maintenance phase whereby all major growths have been eradicated. Only spot control is required which allows for larger areas

to be searched. This season's programme has been very successful with only maintenance work expected in the future, providing current levels of control are maintained. This programme should continue until the seed bank is exhausted.



Figure 1. Treatment areas in Golden Bay for OMB

## **4.2 Upper Buller Old Man's Beard**

Tasman District Council's RPMS declares OMB as a progressive control pest plant throughout the Buller Catchment. There is an existing OMB control programme in this area, supervised and undertaken by DoC, and the objective of this programme is to reduce the distribution and density of OMB within this area.

Old Man's Beard control was undertaken in the Upper Buller and in Kawatiri and Nuggety Creeks between 15 January and 5 March 2009, over an area of approximately 650ha using aerial and ground methods. A helicopter was used to spray larger plants in areas with difficult access. During ground operations, larger plants were sprayed or cut and stumps treated, and smaller plants were hand pulled or sprayed.

Again this year, contractors noted a large number of seedlings around areas previously treated, and that ground access is becoming very difficult in places due to the increase in blackberry. Blackberry is camouflaging smaller OMB plants on some sites meaning that in many areas OMB is likely to go undetected until plants flower.

There was only one mature OMB plant found in the lower reaches of the area below O'Sullivan's Bridge, and a good decline in the number of mature plants has been observed throughout the rest of the site. Nuggety Creek had several mature, flowering OMB plants located, which were destroyed and no new plants were found at Kawatiri Creek. Generally, only young plants were discovered at Nuggety and Kawatiri Creeks.

Although most of the OMB has been removed, the on-going cost of looking for isolated plants and seedlings in previously treated areas remains. On-going maintenance control of existing infestation sites and surveillance for new sites will be required to ensure that effective results are maintained for the future.

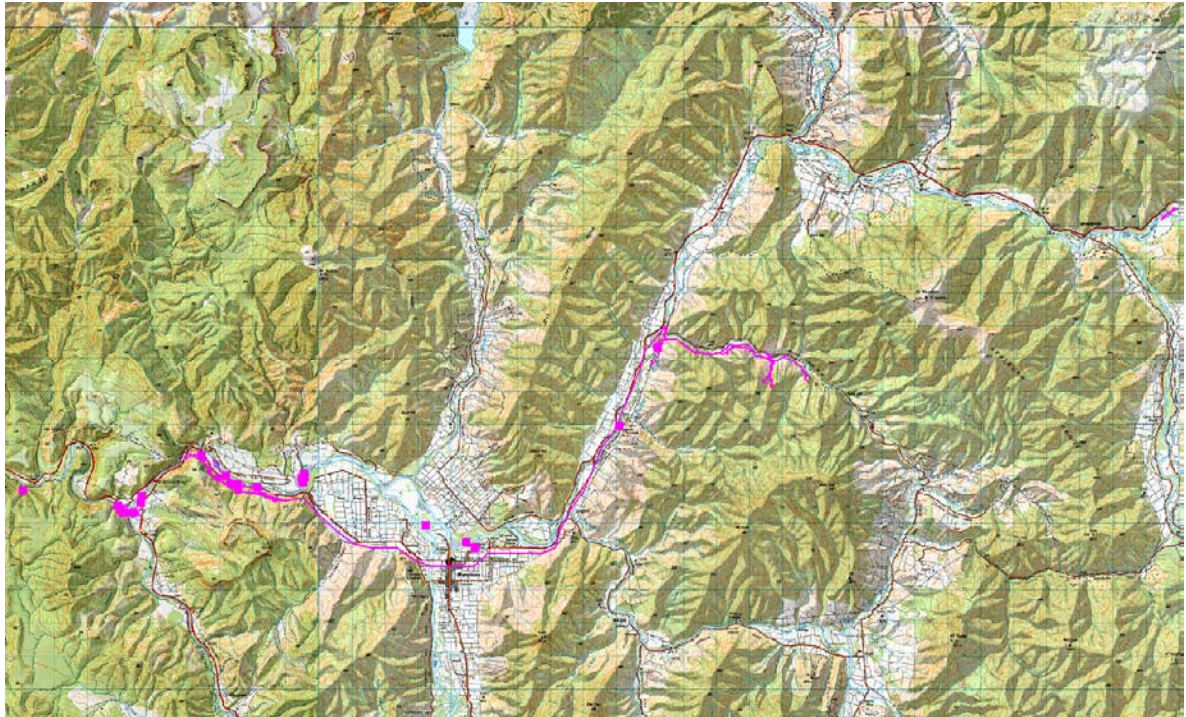


Figure 2. Treatment areas for OMB in the Upper Buller River. Sites of aerial spot spraying are shown as pink squares, with ground tracking shown as pink lines.

### 4.3 Upper Buller Gorse and Broom

Tasman District Council has declared gorse and broom as pest plants under their RPMS; both are classified as progressive control pest plants in the Howard – St Arnaud area. The objective of this classification is to reduce the distribution and density of gorse and broom within this area.

Control work was carried out in December 2008 by DoC on behalf of LINZ. Approximately 165ha was searched during 16 hours spent walking the section of the Buller Riverbed from St Arnaud to Harleys Rock Bridge. Methods of control were grubbing of larger plants and hand pulling of smaller plants.

Less than 20 isolated plants were controlled and although the level of infestation in this area remains at low levels, it is important to maintain a level of surveillance and control in the area to prevent the infestation from becoming larger and spreading.

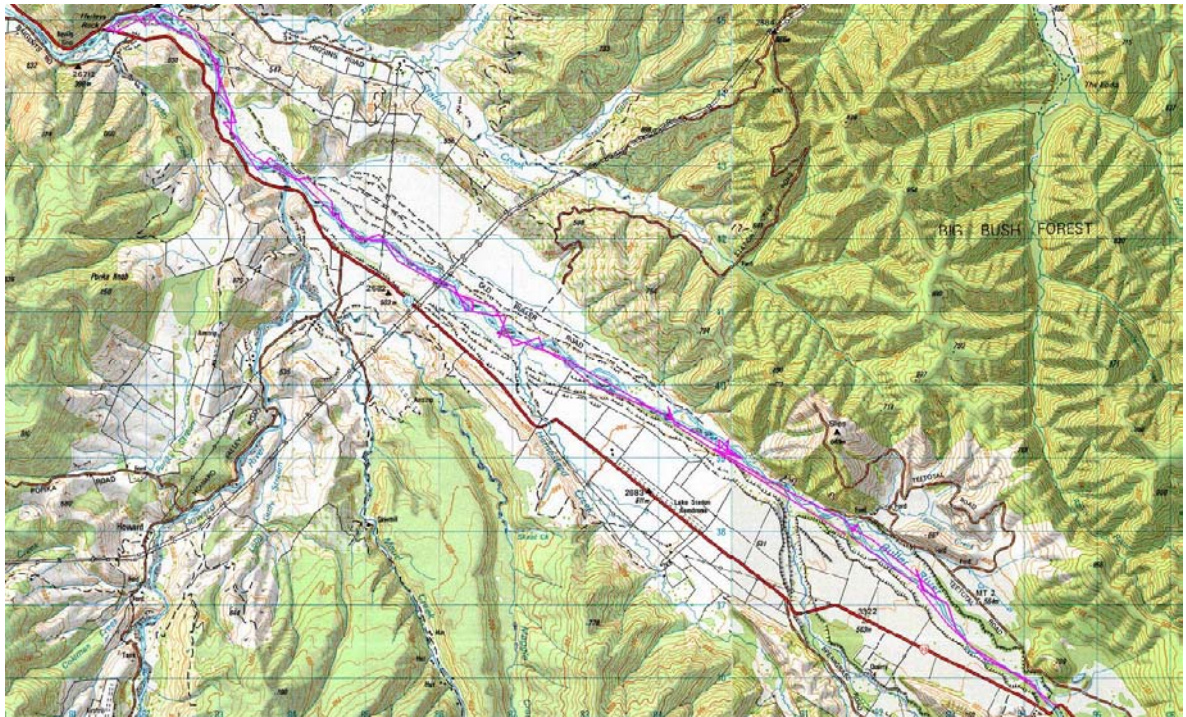


Figure 3. Gorse and broom control area in the Upper Buller River

#### 4.4 Takaka River Gorse and Broom

There is an existing gorse and broom boundary control programme in the Takaka River Gorge. Infestations of scattered weeds are on UCL and require maintenance control by ground spraying only. This season the work was carried out over an area of about 40ha between 5 January and 2 March 2009 using the equivalent of 27 person days. Methods used were intensive ground searching, spraying using knapsacks and stump cutting and pasting. An estimated 4ha of gorse and broom were treated using these methods.

This work is part of a wider programme undertaken by DoC staff, and it is important to maintain current levels of commitment to build on the achievements of previous weed control work.

Another aspect to be aware of is that *Didymo* has now been found in the Takaka River. It was therefore important that anyone carrying out control works properly disinfected their equipment before entering any other waterway.

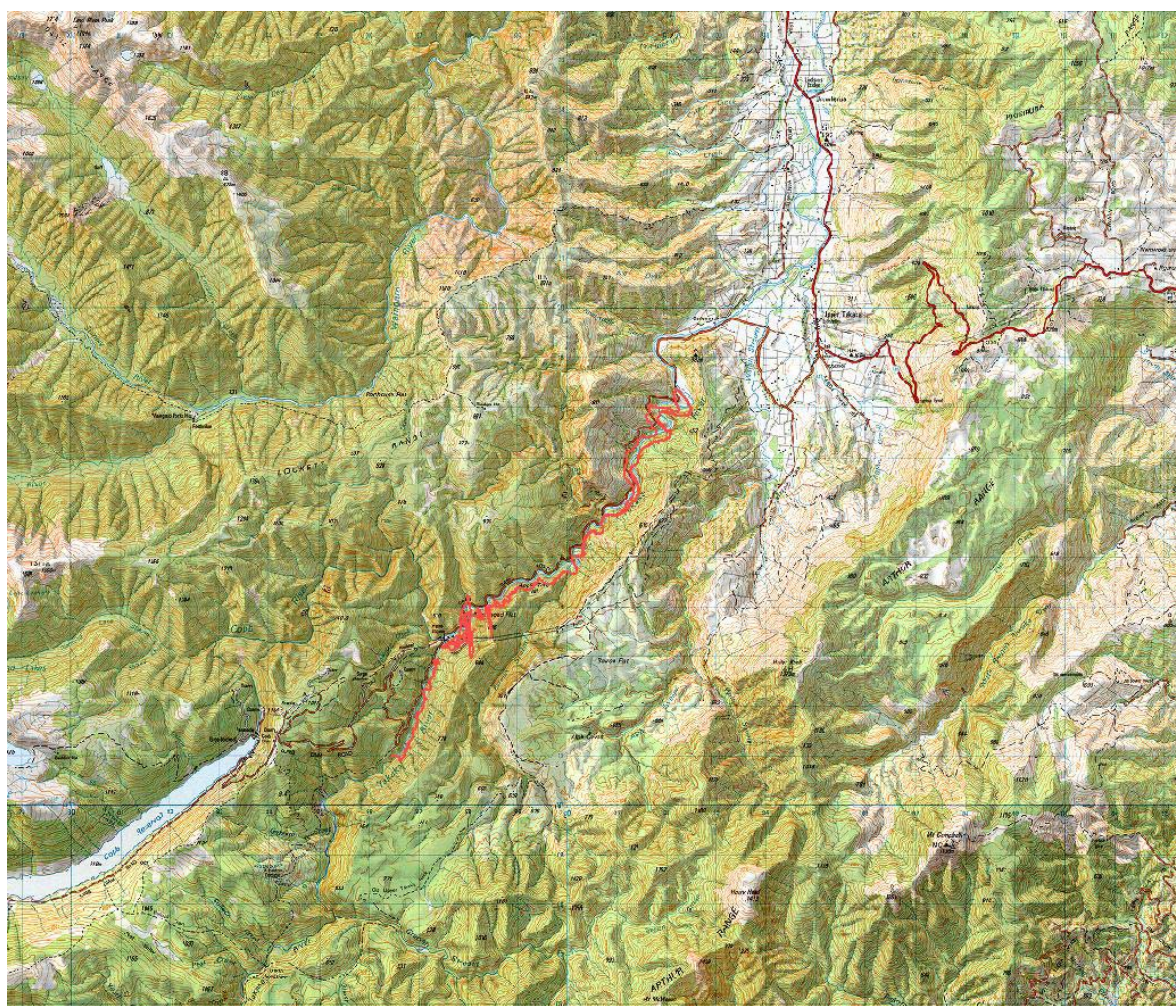


Figure 4. Treatment areas for gorse and broom in the Takaka River Gorge.

## **5. SUMMARY**

All OMB, gorse, and broom control works carried out in the Tasman region are at a maintenance stage. Most of the cost of the work in Tasman is spent searching for remaining plants and seedlings in previously infected areas, and searching and treating new areas progressively downstream. Given the extent of the areas that require searching each season, it is pleasing to see that the LINZ programme, carried out in conjunction with DoC, appears to be keeping control of the existing infestations while still allowing additional areas to be searched.

It is important to maintain the pressure on the areas where OMB, gorse and broom control is being carried out. If any of these sites were to be left off the LINZ programme, there would be the risk that the weeds would be able to flower and produce seeds. If this was to happen the commitment from LINZ would need to increase to re-establish control of the infestation.

It is recommended that for the 2009/10 season, LINZ continues to maintain pressure on the weed infestations detailed in this report.