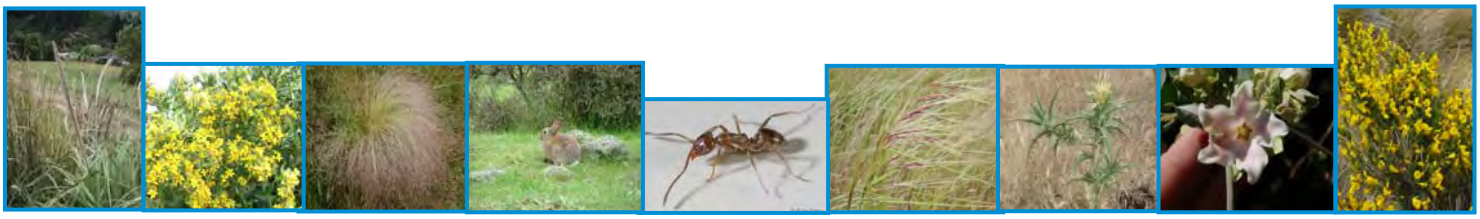
Regional Pest Management Strategy for Marlborough 2012



MARLBOROUGH DISTRICT COUNCIL

Regional Pest Management Strategy

Biosecurity Act 1993

It is hereby certified that this is a correct copy of the Regional Pest Management Strategy for Marlborough as approved by resolution of the Marlborough District Council on 13 December 2012.

The Council further resolved that the Strategy shall become operative on 17 December 2012.

A R Besley
CHIEF EXECUTIVE

The Common Seal of the Marlborough District was hereunto affixed in the presence of:

A T Sowman
MAYOR

A R Besley
CHIEF EXECUTIVE

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Marlborough District Council
Seymour Square
PO Box 443
Blenheim 7240
New Zealand
www.marlborough.govt.nz

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Table of Contents

Overview 1

PART ONE Introduction and Background 3

1 Introduction 5

1.1 Title 5

1.2 Purpose 5

1.3 Commencement and Duration 5

1.4 Area of Jurisdiction 5

1.5 Structure of the Strategy 5

2 Background 7

2.1 Who is Involved in Pest Management? 7

2.1.1 Ministry for Primary Industries 7

2.1.2 National Strategies, Programmes and Initiatives 7

2.1.3 Crown and Other Agencies 8

2.1.4 Marlborough District Council's Role 9

2.1.5 Land Owners and Land Occupiers 10

2.1.6 Community Initiatives 10

2.2 Principles in Managing Pests 10

2.3 Methods the Council Uses to Manage Pests 11

2.3.1 Information, Education and Advice 11

2.3.2 Monitoring and Surveillance 13

2.3.3 Regulation 13

2.3.4 Direct Control 13

2.3.5 Biological Control 14

2.3.6 Species Led Control 14

2.3.7 Site Led Control 14

2.4 Ecological Threat Programme 15

PART TWO Statutory Framework 21

3 Statutory Framework 23

3.1 Proposer of the Strategy 23

3.2 Management Agency 23

3.3 Prerequisites for a Proposal 23

3.4 Hierarchy of Pest Status 25

3.4.1 Infestation Curve Model 25

3.5 Strategy Obligations 27
3.5.1 Stakeholders 27
3.6 Other Matters 29
3.6.1 Other Statutes, Regulations and Pest Management Strategies 29
3.6.2 Effects of the Strategy's Implementation 29
3.6.3 Other Management Responses 30
PART THREE Pest Management Programmes 33
4 Pests to be Managed 35
5 Total Control Pests 37
5.1 Total Control Plant Pests (Marlborough District Council Initiative) 37
5.1.1 African Feather Grass (Pennisetum macrourum) 37
5.1.2 Bathurst Bur (Xanthium spinosum) 37
5.1.3 Bur Daisy (Calotis lappulacea) 38
5.1.4 Chinese Pennisetum (Pennisetum alpecuroides) 38
5.1.5 Giant Needlegrass (Stipa rudis) 38
5.1.6 Parrots Feather (Myriophyllum aquaticum) 38
5.1.7 Saffron Thistle (Carthamus lanatus) 39
5.1.8 Pest Management Programme for African Feather Grass, Bathurst Bur, Bur Daisy, Chinese Pennisetum, Giant Needlegrass, Parrots Feather and Saffron Thistle 39
5.2 Total Control Animal Pests 40
5.2.1 Rooks (Corvus frugilegus) 40
5.3 Total Control Plant Pests (Marlborough District Council and Department of Conservation Joint Initiative) 41
5.3.1 Boneseed (Chrysanthemoides monilifera) 42
5.3.2 Cathedral Bells (Cobea scandens) 42
5.3.3 Climbing Spindleberry (Celastrus orbiculatus) 42
5.3.4 Eel Grass (Vallisneria australis) 43
5.3.5 Evergreen Buckthorn (Rhamnus alaternus) 43
5.3.6 Madeira Vine (Anredera cordifolia) 43
5.3.7 Moth Plant (Arauja sericifera) 43
5.3.8 Senegal Tea (Gymnocoronis spilanthoides) 44
5.3.9 Spartina Grass (Spartina anglica) 44
5.3.10 Pest Management Programme for Boneseed, Cathedral Bells, Climbing Spindleberry, Eel Grass, Evergreen Buckthorn, Madeira Vine, Moth Plant, Senegal Tea and Spartina Grass 44

6 Containment Control Pests 46

6.1 Plant Pests 46

6.1.1 Broom (Cytisus scoparius) and Gorse (Ulex europaeus) 46

6.1.2 Broom (Cytisus scoparius) and Gorse (Ulex europaeus) Containment Control Areas48

6.1.3 Chilean Needlegrass (Nassella neesiana) 52

6.1.4 Contorta Pine (Pinus contorta) 54

6.1.5 Kangaroo Grass (Themeda triandra) 56

6.1.6 Nassella Tussock (Nassella trichotoma) 58

6.1.7 Nodding Thistle (Carduus nutans) 60

6.1.8 Ragwort (Senecio jacobaea) 61

6.1.9 Reed Sweet Grass (Glyceria maxima) 63

6.1.10 White-Edged Nightshade (Solanum marginatum) 64

6.2 Animal Pests 65

6.2.1 Feral Rabbits (Oryctolagus cuniculus) 66

6.2.2 Possums (Trichosurus vulpecula) 68

7 Surveillance Pests 70

7.1 Surveillance Pests 71

7.1.1 Blue Morning Glory (Ipomoea indica) 71

7.1.2 Climbing Asparagus (Asparagus scandens) 71

7.1.3 Cotton Thistle (Onopordum acanthium) 71

7.1.4 Darwin Ants (Doleromyrma darwiniana) 71

7.1.5 Egeria (Egeria densa) 72

7.1.6 Kahili Ginger and Yellow Ginger (Hedychium gardineramum and H. Flavescens) ..72

7.1.7 Lagarosiphon (Lagarosiphon major) 72

7.1.8 Purple Loosestrife (Lythrum salicaria) 72

7.1.9 Pest Management Programme for Surveillance Pests 73

PART FOUR Management and Administrative Provisions 75

8 Powers Conferred 77

9 Regulatory Management 78

9.1 Policy 78

9.2 Failure to Comply with a Notice of Direction 79

9.3 Offences 79

9.4 Recovery of Costs Incurred 79

9.5 Exemption Provisions 79

10 Integrated Management and Cross-Boundary Issues 81
11 Monitoring 82
12 Funding 83
12.1 Rationale 83
12.2 Alternative to Funding District Intervention 83
12.3 Strategy Costs 83
12.4 Funding Sources 84
12.4.1 District and Geographic Rate Revenue 84
12.4.2 Pest Management Contribution 84
12.4.3 Recovery of Direct Control Costs for “Total Control” Pests 85
12.5 Costs 85
12.5.1 Rating Provisions 85
12.5.2 Compensation 85
MAPS 87
APPENDICES 99
Appendix 1: Meaning of Words 101
Appendix 2: Explanation of Strategy Rules 107
Appendix 3: Alternative Options for Managing Pests 109
Appendix 4: Impacts of Pest and Parties Affected 113

TABLES

Table 1 - Pest Risk Pathways 12
Table 2 - Ecological Threats 15
Table 3 - Infestation Curve Category Descriptions 26
Table 4 - Plants Declared to be Pests 36
Table 5 - Animals Declared to be Pests 36
Table 6 - Maximum Allowable Feral Rabbit Populations 67
Table 7 - Modified McLean Scale 68
Table 8 - Administrative Powers under the Act 77

FIGURES

Figure 1: Infestation Curve 26
Figure 2: Strategy Enforcement Compliance Process 78

Overview

Given New Zealand's island status and distance from other countries, we are free of many serious pests and diseases that are present overseas. However, our island status does mean we are forced to trade and travel much more so than by people in other countries. This raises the risk of unwanted organisms entering into New Zealand.

Because the threat of unwanted organisms entering New Zealand, and the consequent effects on our economy and environment could be so devastating, there is a strong lead role taken by central government in dealing with this issue. There is also significant involvement by regional councils, industry groups, community groups and the general public in dealing with pest issues.

The Marlborough District Council's (the Council) current ability to have a significant role in managing pests in Marlborough has its basis in the Biosecurity Act 1993 (the Act), which is the overriding Act for dealing with unwanted organisms and pests in New Zealand. Biosecurity is the exclusion, eradication or effective management of risks posed by pests and diseases to the economy, environment and human health. It covers terrestrial, freshwater and marine environments.

The Council has had a long history in managing unwanted organisms and pests. While much of the focus has historically been on traditional primary producing activities, especially in the farming sector, managing pests now has a much broader focus including native bush, wetlands and marine environments. For example, given the extent of Marlborough's streams and rivers and the fact that these crisscross many properties, as well as the ease with which some species can spread, the potential for the spread of unwanted aquatic plants is very high. Similarly for the Marlborough Sounds, various pest species could have a serious impact on the multi million dollar marine farming industry and in colonising wharf and jetty structures and moorings. There is also the potential for displacement of native species in both marine and freshwater environments.

Therefore, the protection of human health and of our indigenous terrestrial, marine and freshwater environments, have become increasingly important to the Council.

In enabling the Council to have a pest management strategy to "… provide for the effective management and eradication of pests and unwanted organisms….," the Act sets out five reasons why pests should be controlled: for economic wellbeing; for ecological values; for soil and water quality; for human health or enjoyment of recreational values; and for Maori values.

The Council is in many cases reliant on actions of the wider community to managing unwanted organisms in Marlborough as a range of pests are evident on private land. Therefore, although the Council has prepared a statutory document to assist in managing certain pest species in Marlborough, there is a collective responsibility for the whole community to be vigilant in biosecurity matters generally.

PART ONE

Introduction and Background

1 Introduction

1.1 Title

This regional pest management strategy is known as the "Regional Pest Management Strategy for Marlborough" (the Strategy). It has been made following the review and amendment of the existing "Regional Pest Management Strategy for Marlborough" which expired on 2 July 2012.

1.2 Purpose

The purpose of this Strategy is to provide a framework for the efficient and effective management or eradication of pests and unwanted organisms in Marlborough so as to:

- Minimise actual and potential adverse and unintended effects associated with the targeted pests; and
- Maximise the effectiveness of individual pest management through a regionally co-ordinated approach.

As provided for by the Act, the Strategy will confer powers and impose legal obligations on people for pest control purposes. Objectives specific to each pest are set out in Part Three of the Strategy.

1.3 Commencement and Duration

The Strategy shall become operative on the date that the Council's special order resolution adopting the Strategy is publicly notified. The Strategy will remain in force for a period of five years from becoming operative. The Council may initiate a review within five years if the Council considers the Strategy is failing to meet its objectives, or circumstances have changed significantly.

1.4 Area of Jurisdiction

The Strategy, when operative, will have effect over the entire Marlborough District as shown in Map 1.

1.5 Structure of the Strategy

The structure of the Strategy is based in part upon the requirements for a regional pest management strategy that are set out in Section 76 of the Biosecurity Act 1993 as well as providing some background and context for the Council's role in managing pests in Marlborough.

Part One provides background to the Strategy including its purpose, duration and area of effect. This part is an explanatory section of the Strategy that covers the various roles and responsibilities for pest management in New Zealand and the Council's philosophy and approach to how these responsibilities will be achieved at a local level. This part also addresses Council's non regulatory approach to managing pests and undesirable organisms.

Part Two covers statutory matters that need to be included in terms of the requirements of the Act relating to the preparation, administration and implementation of the Strategy. The way in which pests are identified for inclusion in the Strategy, the various obligations on stakeholders affected by its provisions, the effects of implementing the Strategy and a range of other management responses are covered.

Part Three specifies the management regimes for pests included in the Strategy. For each pest, the management programme sets out the effects of the pest to be addressed, the objective to be achieved, the main methods (including alternatives) to achieve the objective and the rules relating to each pest.

Part Four details the powers conferred on the Council, the approach to enforcing the Strategy, monitoring and funding provisions relating to the implementation of the Council's responsibilities as a management agency.

The appendices include an explanation of terms used, reasons for rules included in the Strategy, an assessment of alternative options and an assessment of the costs and benefits of including pests in the Strategy.

2 Background

This part of the Strategy provides context for the Council's pest management activities. It sets out the various roles of those involved in pest management in New Zealand, the Council's philosophy in managing pests as well as the methods used in pest management. This includes those methods contained within the Strategy as well as methods that are not directly provided for through the Strategy.

The Biosecurity Act was enacted in 1993. The Act has two basic purposes:

- Border control and surveillance to keep unwanted organisms out of New Zealand; and
- The control and management of unwanted organisms post border (plants, animals and diseases).

The main tools for achieving this are various preventative control measures both at the border and pre border.

2.1 Who is Involved in Pest Management?

2.1.1 Ministry for Primary Industries

The newly formed Ministry for Primary Industries (MPI) on 30 April 2012, is charged with leadership of the New Zealand Biosecurity System. This encompasses facilitating international trade, protecting the health of New Zealanders and ensuring the welfare of our environment, flora and fauna, marine life and Maori resources. MPI has a lead role in preventing unwanted pests and diseases coming into New Zealand and for controlling, managing or eradicating them should they arrive in the country. The species that are introduced into New Zealand from overseas are referred to as 'exotic' species. MPI is responsible for dealing with incursions from organisms such as Didymo and Salt Marsh Mosquito. MPI is supported by the Crown agencies and regional councils in some of this work.

2.1.2 National Strategies, Programmes and Initiatives

A number of industries are actively involved, with MPI, for managing organisms that may be harmful to their interests. For example there are two national pest management strategies:

- The Animal Health Boards strategy for Bovine tuberculosis; and
- The National Beekeepers' Association strategy for American Foulbrood.

The Council currently provides vector management funding under the National Pest Management Strategy for Bovine tuberculosis.

Other than national pest management strategies, MPI manages national pest control programmes for a number of notifiable pests, for example Salvinia (*Salvinia molesta*), Johnson Grass (*Sorghum halepense*) and Cape Tulip (*Hameria collina*).

National Pest Plant Accord

The National Pest Plant Accord (the Accord) is a co-operative agreement between Nursery and Garden Industry Association, regional councils and government departments with biosecurity responsibilities. The Accord was established in 2001.

The purpose of the Accord is to prevent the sale, propagation or distribution of specific plant pests. This is enabled by declaring all pest plants listed in the Accord to be unwanted 'organisms' under the Act. The Council is a party to the Accord and as a signatory is committed to its implementation. The list of plants in the accord is available on Biosecurity New Zealand's website http://www.biosecurity.govt.nz/nppa. The full list has not been included in the Strategy because the list is subject to review and may change during the life of the Strategy.

2.1.3 Crown and Other Agencies

Animal Health Board

The Animal Health Board is a non-profit making incorporated society, made up of representatives from the farming sector and local government. The Animal Health Board's mission is to eradicate Bovine tuberculosis (Bovine Tb) from New Zealand, in order to protect New Zealand's access to export markets for dairy, beef and deer products.

It was formed specifically for this purpose, and is legally responsible for managing and implementing the National Pest Management Strategy for Bovine Tb.

The Animal Health Board has a significant pest control programme in Marlborough where Bovine Tb vectors for carriers of Bovine Tb, such as possums and ferrets are controlled in risk areas.

Department of Conservation

The Department of Conservation (the Department) is responsible for the nation's estate under the Reserves Act 1977, National Parks Act 1980, and the Conservation Act 1987.

The Department has particular interest and expertise in the area of environmental animal and weed pests that pose a threat to indigenous biodiversity. In Marlborough, the Department carries out control of animal pests, mainly Possums and Goats along with weed pest species like Wilding Pines and Old Mans Beard in order to protect vulnerable plant communities and snail habitats.

Land Information New Zealand

Land Information New Zealand (LINZ) is a significant land owner in Marlborough and is involved in pest management programmes on Unoccupied Crown Land (UCL). The majority of the UCL for which LINZ has responsibility is contained within the main braided river systems of the Wairau and Awatere Rivers.

KiwiRail

KiwiRail is the government department responsible for the railway corridor that extends from Picton to the Council's south-eastern boundary. KiwiRail is involved in pest management programmes on land associated with the rail corridor.

Transit New Zealand

Transit New Zealand is the government department responsible for the state highways within Marlborough.

2.1.4 Marlborough District Council's Role

The Act empowers the Council to have a significant role in carrying out its purpose. The Council has therefore chosen to be very actively involved given the range of pests present in Marlborough and the potentially damaging consequences to our economy and general environment if these pests aren't managed.

The main way in which the Council has managed pests has been through the development and implementation of a regional pest management strategy. The Strategy sets out specific pests to be managed and the ways in which they will be managed.

The Council also provides a liaison and support role between MPI and the wider community where MPI is the lead agency for dealing with an unwanted organism.

From the rivers and adjoining river or floodway reserves to the many land based reserves managed for recreation, soil conservation (Wither Hills Farm Park) or locally used for playgrounds, the Council is actively involved in dealing with plant and animal pests and a range of undesirable species on, and in the land and water, that it administers. For example, aquatic vegetation in waterways is often referred to as 'weed' and is considered to be unsightly and unwanted. Some species grow prolifically and reduce the efficiency of the water flow, resulting in the loss of production on surrounding farmland. The Council has a management programme to mitigate the threat from a range of these undesirable species in the drainage systems of the Wairau Plain. However, there are species, both native and introduced, that are valued for cultural purposes and which also provide valuable habitat and food for species of native fish, invertebrates and birds. So the Council plays an important balancing role between the cultural and ecological values of these 'weeds' and the need to remove them from our waterways.

In more recent times the Council has become more aware of, and involved in, dealing with unwanted organisms and undesirable species in the marine environment.

Under the Resource Management Act 1991 (the RMA), the Council's regional policy statement and resource management plans also have something to say about plant and animal pests. These RMA based documents currently state that regional and national pest management strategies are generally the most appropriate methods in managing pest problems. There is however, little recognition within these documents of threats to our waterways (fresh and marine), from unwanted organisms.

The resource management plans do have some rules for the application or administration of chemicals, biological controls, poisons and hazardous substances, where it is necessary to control plant and animal pests. In some cases these rules may provide for activities to be permitted, subject to certain conditions, while other activities may require a resource consent.

One important aspect of the RMA is that under Section 6(c) the Council is required to recognise, and provide for as a matter of national importance, the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna. The Council has been going through a process of identifying significant natural areas in Marlborough and this has included an assessment of where plant or animal pests may be a threat to the values sought to be protected. Pest control in these areas of significance will be an important part of providing protection and will help restore and improve ecosystem functions and maintain indigenous biodiversity.

2.1.5 Land Owners and Land Occupiers

All land owners and occupiers play a big role in managing a variety of pests including rural and urban property owners, gardeners, and parties with an interest in aquatic aquariums and ornamental plants.

2.1.6 Community Initiatives

Communities play an important role in managing pests. Communities with pest problems often have the enthusiasm and local knowledge to undertake pest control programmes to provide benefits to the community. There are many examples of community groups including Landcare and Weedbuster groups, local resident associations, industry organisations, which all have a part to play in working together to tackle weed and animal pest problems.

2.2 Principles in Managing Pests

The Council has a number of principles which underpin the direction for its pest management activities in Marlborough. These include the following:

- The primary responsibility for the management of pests rests with land occupiers when the pest is classified as a containment control pest.
- Monitoring and surveillance of pests is fundamental for detecting new sites of existing pests and potential new pest organisms.
- Pest species that are of low incidence, but which have the ability to spread and potentially can cause significant impacts, may be eradicated subject to their distribution and density.
- Public awareness and ownership of pest issues is essential for ongoing management of existing pests and for being alert to the risk of new pest organisms.
- Costs for the control of pests, with the exception of low incidence pests, rests with land occupiers. A targeted general rate based on land value is used to fund all other activities associated with pest management as much of this work benefits the whole district.
- The Council will work alongside Government agencies, community groups and iwi to manage pest problems, including advocating to central Government for improving the relationship between national and regional pest management activities when necessary.

- The Council will take part in research for the development of new tools for managing pests, including biological control, particularly where there is benefit to the whole district.
- The Council will encourage site led pest management programmes and initiatives on areas of significant natural value.

2.3 Methods the Council Uses to Manage Pests

Most of the Council's responses to managing pests are currently within the framework of the Biosecurity Act 1993 with the Regional Pest Management Strategy for Marlborough playing a significant role. While there are a range of alternatives for the future management of pests both in terms of methods and the range of pests to be managed, presently the following methods are used by the Council.

2.3.1 Information, Education and Advice

The Council recognises the advantages of a strong advisory and educational role in pest management and therefore takes a very active role in providing information and advice on the best methods for controlling plant and animal pests. This role relates to providing advice, promoting effective control action and creating a greater understanding and acceptance by land occupiers of the responsibilities of pest management.

The Council's officers have considerable experience and expertise in pest management matters. This experience and expertise will be passed onto the wider community to assist them when addressing specific problems. Information is disseminated in the following ways:

- Responding to public enquiries including identification of pests for the public;
- Personal visits associated with inspections, monitoring and surveillance;
- Carrying out presentations to interested groups;
- Educational programmes designed to increase the awareness of land occupiers in respect of the responsibilities pests present, infestation levels and best control methods;
- The use of displays at shows and field days;
- The publication and distribution of leaflets;
- Preparing features for and placing advertisements in the media;
- Conducting practical, on site demonstration of management techniques; and
- Community initiatives e.g. Weedbusters.

2.3.1.1 Pest Risk Pathways

Increasingly, the prevention of pest spread is best managed at the source rather than once a pest organism has arrived at a new destination. Historically, the majority of pest programmes have focused management of pests at the point of origin with little emphasis on strategies to deal with risk pathways.

Pathways for terrestrial pest spread can include such things as the dumping of garden waste, transportation of stock, grain, and hay commodities. Other pathways include the movement of road metal gravel, and earth works associated with land management activities. While in the aquatic environment contaminated vessels, drainage maintenance and the dumping of aquarium waste can all potentially cause pest spread between waterways.

There is a growing need to develop a coordinated approach to manage these risks more effectively. Ongoing consultation and further exploration of risk pathways and policy intervention to avoid and mitigate adverse impacts need to continually be considered with relevant stakeholders and the community.

The Council intends to undertake an ongoing education campaign, as well as providing advice and information during the life of the Strategy, to increase public awareness of pest spread and pathways. The following table provides a summary of significant risk pathways and potential mitigation measures.

Table 1 - Pest Risk Pathways

Risk Pathway	Description Of Problem	Risk Mitigation Measures
Garden Waste	The dumping of garden waste on public and private land, such as road ways, river and recreation reserves damages the environment. Invasive plant pest stem/root fragments or seeds will cause new plant pest infestations.	Public and land occupier education programmes. Appropriate private and public green waste dumping facilities. Regulatory powers.
Gravel, Soil Stockpiles and Quarries	Gravel/soil stockpiles and quarries can be a source of weed seeds. For example, the movement of gravel onto road ways can cause new plant pest infestations.	Public, land occupier and contractor education programmes. Responsible authorities to maintain management plans to mitigate risks. Regulatory powers.
Earthworks	Earthworks are major soil disturbing activities and occur at various scales. Earthworks can be a consequence of land use change, subdivision and land redevelopment. Invasive plant pest stem/root fragments or seeds are capable of being moved through the movement of contaminated soil or machinery.	Public, land occupier and contractor education programmes. Regulatory powers.
Movement of Domestic Stock and Commodity Products	Farming practices such as selling domestic stock, grain based or hay commodities are a potential avenue for spreading contaminated plant pest stem/root fragments or seeds. This is particularly the situation for seeds like Chilean Needle Grass which are easily transported due to their biological characteristics.	Public, land occupier and contractor education programmes. Regulatory powers.

Risk Pathway	Description Of Problem	Risk Mitigation Measures
Aquarium Contents	Some garden ponds and aquariums harbour fish, aquatic plant species and other organisms, which may become an environmental threat if released into waterways.	Public, land occupier and contractor education programmes. Appropriate private and public dumping facilities Regulatory powers.
Vessels and Water related Equipment	Vessels and other equipment used in waterways pose a risk if contaminated and transported between various waterways. The contamination can occur through the movement of aquatic plant pests such as *Egeria densa*, Didymo or potentially salt water organisms such as sea squirts.	Public, contractor and commercial operator education programmes. Codes of practice with Industries.
Intentional Release	Members of the community may release terrestrial and aquatic organisms into the environment for their own personal benefit. An example would be the release of coarse (sport) fish into Marlborough waterways.	Public education programmes Regulatory powers.

2.3.2 Monitoring and Surveillance

Monitoring and surveillance is probably the most important method in the Council's overall pest management role. Without being aware of what pests we have in Marlborough, the extent to which they are present, and also being on the lookout for potential new pests, the Council's responsibilities for pest management would be very hard to carry out. In general therefore, the Council's programme of monitoring and surveillance helps to determine the location, nature and extent of pest infestations and establish the extent to which the objectives set out in Part Three of the Strategy are being achieved.

Monitoring and surveillance work also helps to establish whether, and to what degree, land occupiers are meeting their obligations and standards prescribed in Part Three of the Strategy. Inspections can also form part of the Council's regulatory response to enforcing rules where obligations are not being met.

2.3.3 Regulation

Rules in Part Three of the Strategy require land occupiers to carry out the control of certain pests e.g. Nassella Tussock. As a way to assist land occupiers to achieve the rules set out in the Strategy, the Council prepares and sends out programmes which map out a set of target dates by which work has to be completed.

In the event that an occupier fails to meet the rules set out in the Strategy, the Council has the ability to use powers set out in the Act requiring land occupiers to comply with Strategy rules or to take remedial action. In circumstances of continued non-compliance, the Council will use the enforcement provisions of the Act.

2.3.4 Direct Control

The Council and Department of Conservation, carry out the direct control of some pests. This is generally for those pests with low numbers and at known sites, with the eventual aim being to eradicate them from Marlborough.

2.3.5 Biological Control

The Council uses biological control agents for a range of plant pests where these are environmentally acceptable and both cost effective and sustainable. Biological control introduces and establishes natural enemies that prey on or adversely affect a pest. This control helps to restore the natural balance between a pest and its environment.

For pests that are well established, biological control in conjunction with other technical methods provides the most effective long-term control method. As a control method, it has high initial establishment costs, although the benefits of biological control accrue more widely than to just the individual land occupier. Consequently, the Council believes that there is substantial benefit across the district by the Council investing in appropriate biological control programmes. The Council will, for the duration of this Strategy, provide financial and logistical support to research agencies for a service that includes supplying biological control agents, managing release sites, collecting data and training field staff.

2.3.6 Species Led Control

All of the pest management programmes listed in Part Three of the Strategy are species led control type programmes. This means the focus is on getting rid of or controlling a specific pest rather than managing a particular area for a range of pests. The species led control programmes aim to eradicate pests where they are limited in number or distribution and to manage their spread where they are more widespread. These pest programmes generally apply to the whole of Marlborough.

2.3.7 Site Led Control

Widespread pests such as Old Mans Beard, Possums and Stoats have a serious effect on the natural ecological values of Marlborough. Many people in the community are concerned about the effects of these pests, however, realistically there are not the resources, either in terms of technology or finance to effectively manage them with physical control methods across the entire District at this stage. The most effective and efficient approach will be to target these pests at sites of high natural and ecological value where they can be realistically managed to protect particular values or areas. This approach to pest management is referred to as a ‘site led’ approach. Within Marlborough the Council hasn’t developed this type of approach to a significant degree. However, the Council’s recent role in identifying significant natural areas in southern Marlborough has resulted in the site led approach to pest management being used to assist in protecting some highly valued sites.

The Council will continue to identify areas with significant natural value under Section 6(c) of the Resource Management Act 1991, which requires that the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna are recognised and provided for. Where plant or animal pests are identified as a threat to the areas identified as significant, targeted pest control will be an effective method of providing protection and will help restore and improve ecosystem functions and maintain indigenous biodiversity.

The objective therefore of site led pest management, is to work with in partnership with interested landowners to achieve the Council’s broader objectives contained within its resource management documents for the protection and enhancement of biodiversity values.

A range of ecological threats are discussed in Section 2.4 and could be the subject of some form of control in the future.

2.4 Ecological Threat Programme

Table 2 below lists the main known plant and animal species which are identified as actual and potential threats to Marlborough's ecological and/or biodiversity values (and in some cases production values also). These species cannot currently be included within the pest management programme section (Part Three) of the Strategy, as they do not pass the required cost benefit analysis for intervention across the entire District. However, any voluntary future pest control initiatives are more likely to be based on a site led approach targeted to sites with significant ecological value where the reduction of a range of pests would be effective in protecting those values. Vulnerable and important habitats like wetlands, coastal systems, forest fragments and waterways are often the type of sites where this approach to pest management can be preferred. Various mechanisms under the Biosecurity Act, the Resource Management Act or the Local Government Act could be used to undertake control.

Objectives and Policies

The Council will:

- Encourage community initiatives and site led management programmes;
- Provide information material and advice on impacts, threats and control options;
- Advise on identification of the ecological threats and the most appropriate method of control;
- Collect information and keep records relating to the distribution, impacts and spread of these species; and
- Identify sites with significant ecological value where the reduction of a range of ecological pest threats would be effective in protecting those values.

Table 2 - Ecological Threats

Common Name	Scientific Name
Australian Magpies	*Gymnorhina tibicen and Gymnorhina tibicen hypoleuca*
Banana Passionfruit	*Passiflora mollissima*
Crack Willow	*Salix fragilis*
Feral Cats	*Felis catus*
Feral Deer	*Various sp*
Feral Goats	*Carpa hircus*
Feral Pigs	*Sus scrofa*
Japanese Honeysuckle	*Lonicera japonica*
Mouse-Ear Hawkweed	*Hieracium pilosel*
Mustelids	Stoat (*Mustela erminea*), Weasels (*Mustela nivalis*) *vulgaris*) *and* Ferrets (*Mustela furo*)
Old Mans Beard	*Clematis vitalba*
Pampas Grass Jubata and Selloana	*Cortaderia jubata and C. selloana*
Possums	*Trichosurus vulpecula*

Common Name	Scientific Name
Rats	Kiore (*Rattus exulans*), Norway Rat (*Rattus norvegicus*) and Ship Rat (*Rattus rattus*)
Wandering Jew	*Tradescantia fluminensis*
Wasps	*Vespula vulgaris and Vespula germanica*
Wilding Pines	*Pinus* species
Yellow Flag Iris	*Iris pseudacorus*

Australian Magpies (*Gymnorhina tibicen*)

Two species of Magpie, the Black-Backed Magpie (*Gymnorhina tibicen tibicen*) and the White-Backed Magpie (*Gymnorhina tibicen hypoleuca*) were introduced into New Zealand in the 1860s. They originate from Europe and feed mainly on the ground, taking a wide variety of invertebrate prey. They are accused by many of robbing the nests of indigenous birds, although there is no hard evidence to support this. They do act aggressively toward intruders when nesting.

Populations of the Black-Backed Magpie exist mainly in Hawkes Bay but the White-Backed Magpie is common throughout New Zealand. Localised infestations of the White-Backed Magpie exist throughout Marlborough.

Banana Passionfruit (*Passiflora mollissima*)

Banana Passionfruit is a vigorous, smothering climber that originates from tropical North and South America. It covers native trees and shrubs on forest margins and its seed is dispersed as part of a fleshy fruit. This fleshy fruit is eaten by birds and possums. Its presence will ruin the appearance of the forest landscape.

Banana Passionfruit is recognised as a weed in Hawaii and Victoria in Australia. It is widespread and abundant in the North Island and localised infestations are spread throughout the South Island although it is absent south of Dunedin. It is widespread in the inner Marlborough Sounds and localised infestations exist in the outer Sounds.

Crack Willow (*Salix fragilis*)

Crack Willow is a large tree that originates from Europe and West Asia. It grows in the margins of rivers, streams, ponds and lakes. It spreads through branches falling off (hence the term ‘crack’) and rooting elsewhere. It displaces native vegetation from stream and wetland margins and will restrict water flows causing flooding.

Extensive Crack Willow infestations exist throughout New Zealand. In Marlborough, Crack Willow is the dominant species in numerous wetlands and riverbanks.

Feral Cats (*Felis catus*)

Cats were bought to New Zealand in the ships of early European explorers, from 1769 onwards. They were kept on the ships to control the rats. Despite their early introduction into New Zealand, they did not become feral here until at least 50 years later. Cats predate on possums, rodents, rabbits, birds and reptiles. They also feed on invertebrates to a lesser extent. Native and introduced birds form a large part of their diet.

Populations of Feral Cats exist on both the North and South Islands and on Stewart Island. Population levels vary from low to high depending on the food source. In Marlborough, the Feral Cat population is moderate to high throughout the region.

Feral Deer (Various Sp)

Various species of deer were released in New Zealand between 1850 and 1925 for recreational hunting purposes. Deer will browse and graze and have adapted well to New Zealand conditions. They remove all palatable seedlings when present in New Zealand's indigenous forest and will browse commercial forest species. They also have a detrimental effect on indigenous coastal shrubland.

Populations of Feral Deer exist in New Zealand's North and South Islands and on numerous offshore islands. Populations vary from low to medium depending on the habitat. Localised infestations of Feral Deer exist throughout Marlborough.

Feral Goats (*Carpa hircus*)

The Feral Goat originates from Europe and was released in New Zealand in the late 1700s. They were liberated widely on the main islands and also on smaller islands to provide food for castaways. Goats are browsers rather than grazers and have adapted well to New Zealand conditions. They remove all palatable seedlings when present in New Zealand's indigenous forest and will browse commercial forest species. They also have a detrimental effect on indigenous coastal shrubland.

Populations of Feral Goats exist in the North and South Island in scattered locations but often over large tracts of country. Population levels vary from low to high depending on the habitat. Feral Goats are widespread in Marlborough. They are most abundant in South Marlborough and in the Marlborough Sounds.

Feral Pigs (*Sus scrofa*)

The Feral Pig was first released in New Zealand in the late 1700s to act as a food source for castaways. Over the next hundred years, releases were made on many offshore islands and at numerous places throughout the mainland. Feral Pigs are omnivorous, opportunistic feeders that will eat grasses, roots, crops, seeds and other animals when available. They will eat indigenous snails, invertebrates, frogs, lizards and ground nesting birds and their eggs. They also cause damage to the forest floor and pasture by rooting up the ground in search of food.

Populations of Feral Pigs exist in New Zealand's North and South Islands and on numerous offshore islands. Populations vary from low to high depending on the habitat. Localised infestations of Feral Pigs exist throughout Marlborough.

Japanese Honeysuckle (*Lonicera japonica*)

Japanese Honeysuckle is a vigorous evergreen climber that originates from East Asia. It has tubular white flowers which are followed by egg-shaped glossy berries. It is often spread by the movement of stem fragments. It climbs over and smothers from the ground to the medium canopy. It can cause canopy collapse.

Infestations of Japanese Honeysuckle are found all over Marlborough with the worst infestations being in the Rai Valley and in the Marlborough Sounds.

Mouse-ear Hawkweed (*Hieracium* species)

Hieracium species are stoloniferous, low growing perennial herbs that originate from Eurasia. They grow in degraded short tussock grassland on poorly vegetated slopes, in gravel and on river terraces. Hieracium species spread by wind-dispersed seed and via stolons. They displace desirable pasture species and native tussock species and will become the dominant species in low fertility pasture areas.

Infestations of Hieracium exist in the drier areas of the North Island and throughout the South Island. The most extensive infestations are in the South Island's high country. In Marlborough, Hieracium is a serious problem in the Upper Awatere and the Upper Clarence catchments.

Mustelids - Stoat (*Mustela erminea*), Weasels (*Mustela nivalis vulgaris*) and Ferrets (*Mustela furo*)

Mustelids are a large group of small to medium-sized carnivores that originate from Europe. Three species of Mustelid, the Stoat, the Weasel and the Ferret, were introduced into New Zealand in the late 1880s to control rabbits. They will prey on birds, feral mice, rabbits, hares, rats, possums and insects. They are all active hunters and have a detrimental effect on our indigenous fauna. They are also a recognised vector in the spread of the disease Bovine tuberculosis to domestic livestock.

Populations of Mustelids exist in the North and South Island. Population levels vary depending on habitat from low to high. Mustelids are found throughout Marlborough. Ferret populations are generally highest in rabbit prone areas while Weasels and Stoat populations are generally highest in areas of indigenous bush and scrub.

Old Mans Beard (*Clematis vitalba*)

Old Mans Beard is a vigorous perennial climber, which originates from Eurasia. It spreads by seed and re-sprouting. It will smother native trees and block out all available light. Because of this, it is a threat to many native species. It will invade rock areas, all types of forest, forest margins, open areas and home gardens.

Old Mans Beard infestations exist throughout the North and South Island except for Westland and Fiordland. It is also on Stewart Island and the Chatham Islands. Infestations exist throughout Marlborough.

Pampas Grass Jubata and Selloana (*Cortaderia jubata* and *C. selloana*)

Pampas Grass Jubata and Pampas Grass Selloana are large perennial grasses, which grow up to 5 metres tall and originate from South America. They spread by windblown seed that will blow over 2 kilometres. They have the potential to form dense infestations, which compete with pine forests and displace native species on forest margins.

Pampas Grass Jubata is recognised as a weed in Hawaii and Pampas Grass Selloana is recognised as a weed in Victoria, Australia. In New Zealand, infestations exist throughout the North and South Island and in Marlborough, Pampas Grass is considered to be widespread.

Rats - Kiore (*Rattus exulans*), Norway Rat (*Rattus norvegicus*) and Ship Rat (*Rattus rattus*)

There are three species of Rat present in New Zealand. Kiore arrived here with the Polynesians much earlier than the Norway Rat and the Ship Rat that got ashore from sailing ships in the late 18th century. Rats are omnivorous and opportunistic and will eat anything palatable. They will eat indigenous birds, their eggs, invertebrates, lizards and invertebrates.

Populations of all three species of Rats exist in New Zealand's North, South and Stewart Islands. Population levels vary from habitat to habitat. In Marlborough, populations of all three species of rats exist in most habitats.

Wandering Jew (*Tradescantia fluminensis*)

Wandering Jew is a trailing perennial herb that originates from South America. It competes with native forest floor species and regenerating seedlings in disturbed forest and on stream margins. It spreads through seed and shoot fragments, which are often dispersed by water. It grows in damp, shaded places in semi-open forest and along stream margins. It is often found growing in gardens.

Wandering Jew infestations exist at localised areas throughout the North Island and in the South Island north of Canterbury. In Marlborough, localised infestations exist throughout the region.

Wasps (*Vespula vulgaris* and *Vespula germanica*)

The Common and German Wasp are introduced wasps, which are widespread in New Zealand. Both species have no natural predators in New Zealand and have thrived in some districts due to mild winters and a plentiful food supply. They consume large amounts of honey dew in beech forest and predate on our native insects, which are an important food source for our native birds and lizards.

Wilding Pines (*Pinus* species)

Wilding Pines are trees that have spread from plantings made for the prevention of soil erosion and for commercial forestry. Various Pinus species are spread by seed and are a problem in areas where native forest does not occur, such as above the bushline, in high country tussock grasslands and in low growing coastal vegetation. They can displace native tussock grassland species and native shrublands, and are deemed by many to be an aesthetic problem.

Wilding Pines are recognised as a weed in Australia. A range of infestations of Wilding Pines exist throughout New Zealand. Large areas of Marlborough are infested with Wilding Pine species, particularly in the Marlborough Sounds and in parts of South Marlborough.

Yellow Flag Iris (*Iris pseudacorus*)

Yellow Flag Iris is an aquatic perennial which grows up to 2 metres tall and originates from Europe and North Africa. It has yellow flowers which form brown seed capsules and dense rhizomes. It is poisonous to humans and animals and forms dense mats, which displace native vegetation and increase the risk of flooding.

Infestations of Yellow Flag can be found in many waterways on the Wairau Plain in Marlborough.

PART TWO

Statutory Framework

3 Statutory Framework

In preparing the Strategy, the Council has taken into account relevant statutory and planning matters. That is, the Council is satisfied that the Strategy complies with the requirements of the Biosecurity Act 1993. In particular, the Council is satisfied that, in declaring the organisms in this Strategy to be pests, it has had proper regard to the matters identified in Section 72(1) of the Act and that the overall effects of the Strategy's implementation are beneficial.

3.1 Proposer of the Strategy

The Marlborough District Council is the proposer of this Strategy. The Council has resolved to propose this Strategy in recognition of its role as a lead agency in terms of pests that justify a district wide response.

3.2 Management Agency

The Marlborough District Council is the management agency responsible for implementing the Strategy. The Council will be the management agency responsible for the administration and implementation of the Strategy. The main responsibilities are to:

- Develop and administer systems and methods to achieve the Strategy's objectives; and
- Develop and administer systems which ensure that adopted funding, monitoring and review processes are consistent with the requirements of the Strategy, the Act and other statutory obligations.

The Council, in determining that it shall be the management agency, is satisfied that it meets the requirements of Section 84(3) of the Act, in that it:

- Is accountable to Strategy funders through representation and annual reporting requirements;
- Is acceptable to funders and those persons subject to management provisions of the Strategy; and
- Has the management capacity, competency and expertise to carry out the implementation of the Strategy.

3.3 Prerequisites for a Proposal

In preparing the original Strategy and in subsequent reviews, the Council screened a number of potentially harmful plants and animals to determine what (if any) regional intervention would be appropriate. The screening process was based on Section 72(1) of the Act which requires that before notifying a proposed strategy, the Council is of the opinion that:

(a) The benefits of having a regional pest management strategy in relation to each organism to which the strategy would apply outweigh the costs, after taking account of the likely consequences of inaction or alternative courses of action; and

(b) The net benefits of regional intervention exceed the net benefits of an individual's intervention; and

(ba) Where funding proposals for the strategy require persons to meet directly the costs of implementing the strategy—

(i) The benefits that will accrue to those persons as a group will outweigh the costs; or

(ii) Those persons contribute to the creation, continuance, or exacerbation of the problems proposed to be resolved by the strategy; and

(c) Each organism in respect of which the strategy is under consideration is capable of causing at some time a serious adverse and unintended effect in relation to the region on one or more of the following:

(i) Economic wellbeing; or

(ii) The viability of threatened species of organisms, the survival and distribution of indigenous plants or animals, or the sustainability of natural and developed ecosystems, ecological processes, and biological diversity; or

(iii) Soil resources or water quality; or

(iv) Human health or enjoyment of the recreational value of the natural environment; or

(v) The relationship of Maori and their culture and traditions with their ancestral lands, waters, sites, waahi tapu, and taonga.

In determining which pests should be included in the Strategy, the Council undertakes a two-stage process.

- The first stage is an impact analysis, which is an initial screening process to determine what pests are having a significant impact in Marlborough and require some form of Council intervention. Each animal and plant is given a ranking of Nil, Low, Medium or High with regard to its current and potential impacts on each of the five categories set out in Section 72(1)(c) of the Act. Following this, each animal and plant is given an overall pest classification of ‘major’ or ‘minor’. A ‘minor’ pest does not undergo any further assessment. A ‘major’ pest proceeds to the second stage of assessment.

- The second stage of the process is a cost benefit analysis. If a pest is found to have significant impact, an analysis of the costs and benefits of implementing a strategy for that pest must be undertaken. Under the provisions of Section 72(1)(a) and (b) of the Act, the Council considers what would happen in the absence of a pest management strategy, and if the benefits of Council intervention would exceed the benefits of an individual’s intervention.

Analyses for the pests included in this Strategy are to be found in reports separate to this Strategy and are available upon request from the Council. At each review of the Strategy, the process of analysis under Section 72(1) is only gone through for new pests to be included or where the management program for a pest is proposed to be substantially changed. The analysis has not been repeated for pests that have no change to their management programme.

3.4 Hierarchy of Pest Status

Once a pest has been assessed for inclusion within the Strategy it is then categorised into a particular status with the assistance of an infestation curve model (the next section describes how this model works).

The status determines the amount of intervention and who is responsible for carrying out control as prescribed in the pest management programmes in Part Three. The different levels of intervention are defined as follows:

"Surveillance Pests" are specific pests identified within the Strategy for which the Council will monitor distribution, spread and impacts over the term of the Strategy. However, the Council undertakes monitoring or surveillance work on numerous other plant and animal pests throughout Marlborough.

"Containment Control Pests" are pests that are well established in Marlborough where the long-term aim is to prevent the spread of the pest to new areas and reduce the density of the pest where possible. For the majority of containment control pests, the land occupier is responsible for undertaking control work.

"Total Control Pests" are pests that are of limited distribution and density in Marlborough and for which the long-term aim is to eradicate the pest. Total control pests are those that are dealt with by the 'direct control' method.

There are two categories of total control pests. The first is where the cost of control is shared between the Council (75%) and land occupier (25%) - this is referred to as a 'Marlborough District Council Initiative'. The second is where the cost of control is shared between the Council and the Department of Conservation - this is referred to as a 'Marlborough District Council and Department of Conservation Joint Initiative.'

3.4.1 Infestation Curve Model

When adopting a management regime for a particular plant or animal pest, the Council considers the level of infestation of this pest and what the Council's role will be in the management of that pest. A model has been developed known as the infestation curve to demonstrate this concept. The basic infestation curve is a direct result of population dynamics - see Figure 1 and Table 3 below.

A simple analysis of the curve shows three distinct phases. The first phase is the 'lag phase' or initial establishment where the curve is almost flat. (Pests in this phase are often classified as 'Total Control Pests'). The second phase, the 'explosion phase', is where the population and its distribution increase rapidly and the curve rises steeply. (Pests in this phase are usually classified as 'Containment Control Pests'). The third phase is the 'widespread phase' where the population has filled the majority of its available habitat.

Figure 1: Infestation Curve

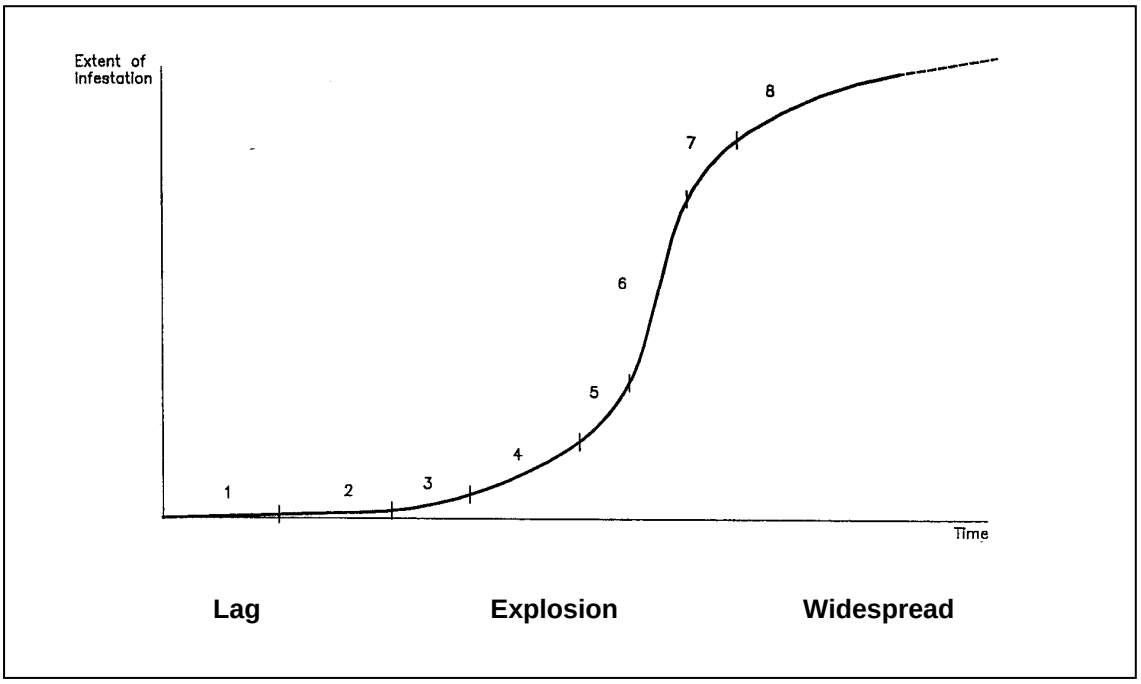


Table 3 - Infestation Curve Category Descriptions

Number	Shape of Curve	Description
1	Flat	Not yet known in district but known nearby
2	Flat	One or two known sites
3	Flat	3-20 sites
4	Starting upward	20+ sites although still occupying a small proportion of possible sites
5	Steeply upward	Starting to noticeably expand the range and/or intensity of infestation
6	Halfway up	Widespread and continuing to expand the range and/or intensity of infestation
7	Upper Curve	Common through most of the expected habitat in the district
8	Levelling off	Found in nearly every expected habitat

The lower a pest is situated on the curve, the more cost effective it will be to control. If elimination is possible at a modest cost and the pest has the potential to cause adverse effects in the District, then the cost benefit evaluation in favour of control action would be significant.

The higher a pest is on the curve, the more difficult and costly it will be to control. If control is attempted, there will be greater uncertainty about the costs and benefits, and a greater risk of failure. When a pest is high on the curve, there will usually be limited value in district wide intervention aimed at physical control. The pest is widespread and the community has to accept this. To attempt eradication is unlikely to be feasible, although there may be benefit in controlling the pest in areas of ecological significance (site-led management) to protect the biodiversity of these areas. The Council's role with this type of pest is to educate the public as to the threat that this plant or animal poses and the best means of controlling it. A number of New Zealand's most serious pests are high on the infestation curve, for instance Possums and Gorse.

3.5 Strategy Obligations

3.5.1 Stakeholders

For the purposes of the Strategy, 'stakeholders' are defined as being "*... the beneficiaries and exacerbators identified in this Strategy as being bound to and/or contributing to the Strategy*". Occupiers of land infested with pests generally contribute to the problem or are the beneficiaries of annual control action.

Accordingly, where appropriate, the Strategy shall place the onus of pest control on the land occupier, where it shall be deemed 'land occupier responsibility' (unless the Strategy states otherwise).

3.5.1.1 Land Occupiers

Occupiers of private land are required to control pests on land they are responsible for as set out in the obligations and standards prescribed in Part Three (Pest Management Programmes) of this Strategy.

Private land occupiers will further contribute to funding the implementation and administration of the Strategy in accordance with the funding provisions set out in Part Four of the Strategy.

3.5.1.2 Roadside Verges

The roading authorities, being Transit New Zealand and the Council (Marlborough Roads is a company responsible for managing both State Highways and local authority roads in Marlborough), are required to control plant pests on all formed roads managed by these authorities including:

(a) rest areas;

(b) weighpit and stockpile sites;

(c) on State Highway road reserves adjacent to Unoccupied Crown Land;

(d) within State Highway road reserves where adjacent land is administered by the Department of Conservation;

(e) on road reserves where road works have contributed to the establishment of plant pests;

(f) other isolated areas of road reserve mainly for road safety reasons; and

(g) other areas where it is unreasonable to expect the abutting landowner to control plant pests on the road reserve due to, for example, topography or remoteness;

except where:

- the boundary is unfenced and the adjacent owner has ready access to the road reserve, with the exception of 3.5.1.2(e);
- the plant pests Broom (*Cytisus scoparius*), Gorse (*Ulex europaeus*), Nodding Thistle (*Carduus nutans*) and Ragwort (*Senecio jacobaea*), have encroached from adjacent land onto road reserve and are endemic to the locality;
- access is not directly available from legal road but from adjacent land;

in which case the adjacent land occupier will be deemed to be responsible.

Land occupiers are required to control plant pests on unformed roads e.g. paper roads, extending from their boundaries to the centreline of that unformed road.

3.5.1.3 Crown Agencies

Crown land accounts for a significant part of Marlborough - approximately 35% of the land area. Four central government agencies and enterprises occupying the Crown Estate have been identified as being beneficiaries or exacerbators of pest management in Marlborough. These include the Department of Conservation, Transit New Zealand, Land Information New Zealand and KiwiRail.

Pursuant to Section 87 of the Act, the Crown can agree by Order in Council to be bound by or fund a Strategy, but cannot be required by this Strategy to do so. The Ministry for Primary Industries on behalf of regional councils is seeking to formalise an Order in Council to bind crown agencies to the Strategy. In the meantime the Council cannot take action against the Crown in the event of non-compliance with the provisions of the Strategy. Alternatively, the Crown may agree to contribute monies, subject to an Order in Council, in lieu of rates, to fund this Strategy. The Council will continue to seek agreement from Crown agencies to either be bound by or fund the Strategy.

Department of Conservation: The role of the Department has been previously described in Part One of this Strategy.

The Council and the Department have formed a joint initiative to carry out the control of a number of Total Control plant pests, which is funded on a 50/50 share operational basis. For other pests, it is proposed that the Department of Conservation be bound to the Strategy and accept pest management responsibilities on land that it administers, and contribute to the funding of the Strategy.

Land Information New Zealand: Land Information New Zealand administers vacant land, non-rateable land, and Unoccupied Crown Land, particularly within the major water ways of Marlborough. Until an Order in Council is finalised, Land Information New Zealand accepts pest management responsibilities on land that it administers.

KiwiRail: KiwiRail is, on behalf of the Crown, the owner and manager of the land associated with the railway corridor. It is proposed that KiwiRail be bound to the Strategy and accept pest management responsibilities on land that it administers, and contribute to the funding of the Strategy.

Transit New Zealand: It is proposed that Transit New Zealand be bound to the Strategy and accept pest management responsibilities on land that it administers, and contribute to the funding of the Strategy.

3.6 Other Matters

There are a range of other matters that are required to be considered by the Council in preparing, administering and implementing the Strategy. These are as follows:

3.6.1 Other Statutes, Regulations and Pest Management Strategies

In addition to the Biosecurity Act, there are other Acts, regulations and strategies that this Strategy must have regard to. Nothing in the Strategy is to affect or derogate from other legislation, regulations or rules of law relating to pest management. These include, but are not restricted, to those Acts specified in Section 7 of the Biosecurity Act.

The Strategy must not be inconsistent with any national or regional pest management strategy (whether relating to the same region or any other region) concerning the same organism, or regulation or any regional policy statement or regional plan prepared under the Resource Management Act 1991.

The Council is satisfied that the Strategy complies with the requirements of the Biosecurity Act and is not inconsistent with other statutes, regulations and pest management strategies.

3.6.2 Effects of the Strategy's Implementation

Successful implementation of the Strategy will contribute to the long-term management of plant and animal pests in Marlborough. This will be achieved by containing or reducing the spread of pests and or by reducing their density to a level that avoids adverse and unintended effects on the environment. While in some cases the emphasis will be on eradicating pests, in most cases the emphasis will be on managing pests at an acceptable level of infestation and preventing external impacts on neighbouring properties.

While the Council does have the option of not having a Strategy, this would mean relying on the voluntary actions of individuals. Voluntary control has not always been successful and consequently the Council considers that intervention across the District is the most appropriate and cost effective means of managing pests.

Effects arising from the Strategy's implementation, on Maori, the environment and overseas markets, are required to be included by the Act, and these are outlined below. These effects include a consideration of both the positive effects that may arise from controlling pests, and also the detrimental side effects arising from that control.

3.6.2.1 … on the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu and taonga

It is important to acknowledge the role of Tangata Whenua as kaitiaki in the management of Marlborough's resources.

Therefore, the management of pests through the Strategy can have an impact on Maori values. This could be through spiritual, cultural and intrinsic values of species or locations, or the direct impact on certain utilised resources (either positively or negatively). Maori interests may go beyond protecting indigenous plant and animal species, to also incorporate valued introduced species. They can include the use of, as well as the protection of, various species.

The Strategy's implementation is anticipated to have some minor positive effects on Maori culture and traditions. Specifically by reducing the incidents of plant pests in particular, invading and degrading waahi tapu and taonga.

Any adverse effects arising from the Strategy on Maori culture and traditions are likely to be restricted to a land occupier using herbicides or pesticides to control pests in order to comply with their obligations under the Strategy. In this context any concerns on this matter will be addressed through the integrated management measures set out in Section 10 of the Strategy.

3.6.2.2 … on the environment

The Strategy's implementation is expected to have various positive effects on the environment. Specifically, the Strategy's promotion of efficient and effective pest management will avoid or reduce the incidents of pests invading and having adverse and unintended effects on privately-owned land and Crown land. By avoiding or minimising these adverse or unintended effects, the Strategy will enhance agricultural production, biodiversity values, and recreational and aesthetic values in Marlborough. However, pest management eradication methods such as mechanical, manual and chemical means can have adverse effects on the environment. Every effort will be made to use the method with the least adverse environmental effect.

3.6.2.3 … on the marketing overseas of New Zealand products

The control of pests should facilitate increased agricultural production in some cases. Similarly, the control of pests in the conservation estate should increase the recreational and aesthetic values associated with such areas, which might have tourism implications. Consequently, the Strategy is expected to have a positive effect with respect to the marketing overseas of New Zealand products.

3.6.3 Other Management Responses

There are many weeds and nuisance animals that are not declared pests, because an individual response is considered more appropriate than a district wide response, the costs of requiring control outweigh the benefits, or the impact of the organism is not considered serious. Notwithstanding this, there are other management responses that may be appropriate. Wherever there are possibilities for the Council to support the management of such pests without major financial resourcing, this will be pursued if practical.

There are also opportunities within the development of the Council's Long Term Community Council Plan (LTCCP) for groups to pursue funding to assist in pest management work.

3.6.3.1 Small Scale Management Programmes

Small-scale management programmes under Section 100 of the Act can be used for controlling an unwanted organism where that organism:

- Could cause serious adverse and unintended effects unless early action to control it is taken; and
- Can be eradicated or controlled effectively by small-scale measures within 3 years, because distribution of the organism is limited and technical means to control the organism are available; and
- The costs are not significant.

PART THREE

Pest Management Programmes

4 Pests to be Managed

After having regard to Section 72 of the Act, the organisms listed in Table 4 and Table 5 are declared pests under the Strategy. Within this Part of the Strategy, the management regime for each pest is set out.

Each management regime includes:

1. A description of the adverse effects associated with that pest and the reasons for including it in the Strategy;

2. The objective to be achieved during the term of the Strategy;

3. The means by which the Council will measure if it is achieving this objective;

4. The principal means by which the Council intends to achieve the objective; and

5. The Strategy rules which apply to the pest.

Each year the Council prepares an operational plan that identifies activities to be undertaken by the Council in implementing the Strategy. An annual report is prepared on the operational plan whereby performance targets are reported against relevant issues and commented on. The operational plans and annual reports can be requested from the Council or are available at www.marlborough.govt.nz.

With respect to individual pests, each warrants different types and levels of regional intervention and are have been classified as either 'total control', 'containment control' or 'surveillance'. All pests so classified are banned from sale, propagation or distribution.

The appendices include an explanation of the Strategy rules and consideration of alternative measures that would be reasonable to take to achieve the objectives of the Strategy.

Table 4 - Plants Declared to be Pests

Common Name	Scientific Name	Pest Designation
African Feather Grass	*Pennisetum macrourum*	Total Control
Bathurst Bur	*Xanthium spinosum*	Total Control
Boneseed	*Chrysanthemoides monilifera*	Total Control
Bur Daisy	*Calotis lappulacea*	Total Control
Cathedral Bells	*Cobaea scandens*	Total Control
Chinese Pennisetum	*Pennisetum alecuroides*	Total Control
Climbing Spindleberry	*Celastrus orbiculatus*	Total Control
Eel Grass	*Vallisneria australis*	Total Control
Evergreen Buckthorn	*Rhamnus alaternus*	Total Control
Giant Needlegrass	*Stipa rudis*	Total Control
Madeira Vine	*Anredera cordifolia*	Total Control
Moth Plant	*Arauja sericifera*	Total Control
Parrots Feather	*Myriophyllum aquaticum*	Total Control
Saffron Thistle	*Carthamus lanatus*	Total Control
Senegal Tea	*Gymnocoronis spilanthoides*	Total Control
Spartina Grass	*Spartina anglica*	Total Control
Broom	*Cytisus scoparius*	Containment Control
Chilean Needlegrass	*Nassella neesiana*	Containment Control
Contorta Pine	*Pinus contorta*	Containment Control
Gorse	*Ulex europaeus*	Containment Control
Kangaroo Grass	*Themeda triandra*	Containment Control
Nassella Tussock	*Nassella trichotoma*	Containment Control
Nodding Thistle	*Carduus nutans*	Containment Control
Ragwort	*Senecio jacobaea*	Containment Control
Reed Sweet Grass	*Glyceria maxima*	Containment Control
White-Edged Nightshade	*Solanum marginatum*	Containment Control
Blue Morning Glory	*Ipomoea indica*	Surveillance
Climbing Asparagus	*Asparagus scandens*	Surveillance
Cotton Thistle	*Onopordum acanthium*	Surveillance
Egeria	*Egeria densa*	Surveillance
Kahili Ginger and Yellow Ginger	*Hedychium gardineramum and H. Flavescens*	Surveillance
Lagarosiphon	*Lagarosiphon major*	Surveillance
Purple Loosestrife	*Lythrum salicaria*	Surveillance

Table 5 - Animals Declared to be Pests

Common Name	Scientific Name	Pest Designation
Rooks	*Corvus frugilegus*	Total Control
Feral Rabbits	*Oryctolagus cuniculus*	Containment Control
Possums	*Trichosurus vulpecula*	Containment Control
Darwin Ants	*Doleromyrma darwiniana*	Surveillance

5 Total Control Pests

5.1 Total Control Plant Pests (Marlborough District Council Initiative)

Common Name	Scientific Name
African Feather Grass	*Pennisetum macrourum*
Bathurst Bur	*Xanthium spinosum*
Bur Daisy	*Calotis lappulacea*
Chinese pennisetum	*Pennisteum alpecurioides*
Giant Needlegrass	*Stipa rudis*
Parrots Feather	*Myriophyllum aquaticum*
Saffron Thistle	*Carthamus lanatus*

The Council undertakes direct control of the 'Total Control' plant pests identified in this category. Land occupiers, where the infestation of these 'Total Control' plant pests occur, being an exacerbator in terms of the Strategy, fund 25% of the control costs while the Council funds the other 75% (where the land occupier is clearly identifiable). These plant pests have the potential to severely affect pastoral farming and cereal harvesting in the district and African Feather Grass and Parrots Feather also poses a threat to Marlborough's conservation values.

5.1.1 African Feather Grass (*Pennisetum macrourum*)

Description of the Problem / Reasons for the Strategy

African Feather Grass is a robust, perennial grass with spreading rhizomes that originates from tropical and southern Africa. It forms dense tussocks and produces long, narrow flowers heads, which resemble a bottlebrush. It is a garden plant that has escaped into surrounding habitat. It spreads utilising seeds and rhizomes. African Feather Grass is generally unpalatable to stock and is a threat to pasture production if left uncontrolled. This plant's vigorous growth habit will displace native species from grasslands. It has the potential to invade wetlands, roadsides, urban areas and forest margins throughout Marlborough.

African Feather Grass is recognised as a weed in the USA. In New Zealand, infestations of African Feather Grass are scattered throughout the North Island and east of the main divide in the South Island from Marlborough to Central Otago. There are also infestations near Westport.

5.1.2 Bathurst Bur (*Xanthium spinosum*)

Description of the Problem / Reasons for the Strategy

Bathurst Bur is a shrubby annual that originates from South America. It spreads utilising hooked seeds. These hooked seeds, along with their long sharp spines, injure stock and contaminate wool. Bathurst Bur will also displace preferred pasture species. It will interfere with cereal harvesting if left uncontrolled.

Bathurst Bur is recognised as a weed in Oregon in the USA and throughout Australia. Localised infestations exist throughout the North Island and infestations can be found in scattered locations in Marlborough, Nelson, Canterbury and Southland.

5.1.3 Bur Daisy (*Calotis lappulacea*)

Description of the Problem / Reasons for the Strategy

Bur Daisy is erect perennial herb, which originates from Australia. It grows up to 30 cm high and has small yellow flower heads, which form spiny burs. It displaces desirable pasture species and its spiny burs contaminate wool. It has the potential to spread throughout Marlborough's dry grassland country.

Bur Daisy is found in a limited range of locations in Canterbury and in central Otago. There is only one property with a known infestation of Bur Daisy in Marlborough.

5.1.4 Chinese Pennisetum (Pennisetum alpecuroides)

Description of the Problem / Reasons for the Strategy

Chinese Pennisetum is a perennial, tufted grass that originates from Eastern Asia. It will grow up to 1 metre high and has purple seed heads, which look like small bottlebrushes. It spreads utilising seed, which attaches itself to passing animals. This species is capable of forming dense mats and is unpalatable to stock. Chinese Pennisetum prefers higher rainfall areas and has the potential to invade large areas of Marlborough.

In New Zealand, localised infestations exist at a few localities in the North Island and in Marlborough and Nelson in the South Island.

5.1.5 Giant Needlegrass (*Stipa rudis*)

Description of the Problem / Reasons for the Strategy

Giant Needlegrass is a perennial, tussock forming grass, which originates from Eastern Australia. Its general appearance is not unlike Chilean Needlegrass (*Nassella neesiana*), but it will grow up to 1.3 metres high which is twice the height of Chilean Needlegrass. It spreads through seed, which lacks the aggressive point and barb that Chilean Needlegrass has. Giant Needlegrass will displace desirable pasture species and forms dense infestations if left uncontrolled.

Giant Needlegrass infestations exist in Auckland in the North Island and in the Wairau Valley near Blenheim.

5.1.6 Parrots Feather (*Myriophyllum aquaticum*)

Description of the Problem / Reasons for the Strategy

Parrots Feather is a stout hairless perennial semi-aquatic plant that originates from South America. It was introduced to New Zealand as an ornamental aquarium plant. It will grow up to 2 metres in length and can emerge up to 15cm above the water. It will grow in freshwater ponds, dams, ditches, lakes and streams up to 2 metres deep. It forms tangled mats of vegetation which impede drainage, displace native vegetation and disrupt recreational activities.

Parrots Feather infestations exist in waterways throughout the North Island. Isolated infestations exist on the West Coast, in Tasman and in Marlborough. The majority of Marlborough's infestations are in garden ponds.

5.1.7 Saffron Thistle (*Carthamus lanatus*)

Description of the Problem / Reasons for the Strategy

Saffron Thistle is an erect annual herb, which originates from Europe and Asia. It has woody stems, prominent spines and small yellow flower heads. It can form impenetrable strands if left uncontrolled and has the potential to devalue fibre, injure stock and interfere with cereal harvesting.

Saffron Thistle is recognised as a weed in California and Oregon in the USA and throughout Australia. Infestations exist throughout the North Island and in Nelson and Canterbury, north of the Rakaia River. There are also a number of isolated infestations of Saffron Thistle in Marlborough.

5.1.8 Pest Management Programme for African Feather Grass, Bathurst Bur, Bur Daisy, Chinese Pennisetum, Giant Needlegrass, Parrots Feather and Saffron Thistle

Objective

"To eradicate African Feather Grass, Bathurst Bur, Bur Daisy, Chinese Pennisetum, Giant Needlegrass, Parrots Feather and Saffron Thistle from Marlborough."

Means of Achievement

The Council will:

- Undertake control work to destroy these plant pests at known sites annually before they produce seed.
- Carry out inspections to ensure all plants have been destroyed where land occupiers carry out control of these plant pests.
- Carry out inspections to monitor for the presence of these plant pests on properties surrounding known sites.
- Encourage land occupiers with infestations of these plant pests to carry out control work; and
- Provide advice and information on the control of these plant pests to affected land occupiers and other interested parties.

Performance Measures

- No new infestations resulting from known sites of these plant pests established in Marlborough.
- A measured decline in the populations of these plant pests at known sites by 2017.

Strategy Rules

1. Land occupiers are required to notify the Council of any new infestation not previously known of African Feather Grass (*Pennisetum macrourum*), Bathurst Bur (*Xanthium spinosum*), Bur Daisy (*Calotis lappulacea*), Chinese Pennisetum (*Pennisetum alpecuroides*), Giant Needlegrass (*Stipa rudis*), Parrots Feather (*Myriophyllum aquaticum*) or Saffron Thistle (*Carthamus lanatus*) on land that they occupy.

   A breach of this rule will create an offence under Section 154(r) of the Biosecurity Act.

5.2 Total Control Animal Pests

Common Name	Scientific name
Rooks	*Corvus frugilegus*

5.2.1 Rooks (*Corvus frugilegus*)

Description of the Problem / Reasons for the Strategy

Rooks are large, black birds with a violet-blue glossy sheen, which originate from Europe. They will forage on fields of cereal at all stages of the crop and will tear up large areas of pasture in search of grass grub and other invertebrates. Rookeries (nests) are generally built in pine or eucalyptus trees, although they have been found in poplar and walnut trees. Where established, rookeries may approach several hundred birds.

Rooks are present throughout New Zealand but the worst infestations exist in the southern part of the North Island. Low numbers of Rooks are in Marlborough.

Objective

"To eradicate Rooks from Marlborough."

Means of Achievement

The land occupier will:

- Ensure that other than in accordance with a direction, or under the supervision, of an authorised person, no person discharges a firearm at any rookery; lays any poison bait where Rooks are known to be present from time to time, or damages, disturbs or interferes in any way with a rookery.

The Council will:

- Undertake control works to eradicate Rooks by using appropriate physical and chemical means.
- Undertake monitoring activities to determine population numbers and to determine the degree of success of control works to eradicate Rooks.
- Support appropriate research initiatives, including biological control, should it become available.
- Provide advice and information on Rooks and their behaviour to interested parties.

Performance Measures

- A measured decline in Rook numbers by 2017.

Strategy Rules

1. Land occupiers are required to notify the Council of the presence of Rooks (*Corvus frugilegus*), on land that they occupy.

   A breach of this rule will create an offence under Section 154(r) of the Biosecurity Act.

2. No person may move or interfere with any article or substance left at a place by an authorised person pursuant to this Strategy for the purposes of:
   (i) Confirming the presence, former presence or absence of Rooks (*Corvus frugilegus*), or
   (ii) Managing or eradicating Rooks (*Corvus frugilegus*), other than in accordance with a direction, or under the supervision, of an authorised person.

   A breach of this rule will create an offence under Section 154(r) of the Biosecurity Act.

5.3 Total Control Plant Pests (Marlborough District Council and Department of Conservation Joint Initiative)

Common Name	Scientific name
Boneseed	*Chrysanthemoides monilifera*
Cathedral Bells	*Cobaea scandens*
Climbing Spindleberry	*Celastrus orbiculatus*
Eel Grass	*Vallisneria australis*
Evergreen Buckthorn	*Rhamnus alaternus*
Madeira Vine	*Anredera cordifolia*
Moth Plant	*Arauja sericifera*
Senegal Tea	*Gymnocoronis spilanthoides*
Spartina Grass	*Spartina anglica*

The Marlborough District Council and the Department of Conservation have formed a joint initiative to carry out the control of the 'Total Control' plant pests identified in this category. The Council and the Department of Conservation will fund control of these plant pests as a 50/50 share on an operational basis. Infestations of these plant pests are comparatively small at present but they have the potential to invade large areas of Marlborough's indigenous forest and coastal scrubland, waterways and wetlands.

5.3.1 Boneseed (*Chrysanthemoides monilifera*)

Description of the Problem / Reasons for the Strategy

Boneseed is an evergreen perennial shrub that originates from the Cape region of South Africa. It has a vigorous root system, produces many seeds, which are resistant to fire, and tolerates very dry conditions. Birds disperse its seed as a result of eating its fruit, and the fruit falls to the ground if not eaten. It is one of New Zealand's most serious environmental weeds, as it will displace native species on coastal cliffs, in salt marshes and on sand dunes. It will grow on islands, sand dunes and coastal cliffs and in disturbed or regenerating forest, ungrazed pasture, riverbeds, roadsides, parks, quarries, wastelands and exotic plantations.

Boneseed is recognised as a weed of national significance in Australia. Infestations exist throughout New Zealand in coastal areas excluding the West Coast of the South Island and Southland's coast. It is especially prevalent on Banks Peninsula. There are a number of isolated infestations of Boneseed in Marlborough.

5.3.2 Cathedral Bells (*Cobea scandens*)

Description of the Problem / Reasons for the Strategy

Cathedral Bells is a climbing perennial evergreen vine which can grow 6 metres. The plant originates from Central and South America. The vine has distinctive large round deep purple lantern like flowers. The fruit are large and oval from 6-10cm long and release winged seeds. The plant is susceptible to frost and heavy shading. Occasionally plants will root from nodes on the stems where they touch the ground. Seed is dispersed by wind over short distances and can be spread by fragments or seed in water, gravel or soil over large distances.

It has the potential to become a major weed in a variety of habitats where it will displace native species.

Cathedral Bells infestations exist throughout the North Island. Isolated infestations exist on the West Coast of the South Island and in Marlborough.

5.3.3 Climbing Spindleberry (*Celastrus orbiculatus*)

Description of the Problem / Reasons for the Strategy

Climbing Spindleberry is a vigorous climber, which originates from Eastern Asia. It has the ability to kill trees by smothering them due to its shade tolerance and rampant growth. Birds will disperse its seed into remote areas. It has a bad record overseas, causing major problems in plantation forests and natural areas of Eastern Asia.

Localised infestations of Climbing Spindleberry exist in the Coromandel and in abandoned gardens in the South Island. There are a number of isolated infestations of Climbing Spindleberry in Marlborough.

5.3.4 Eel Grass (*Vallisneria australis*)

Description of the Problem / Reasons for the Strategy

Eel Grass is a submerged, aquatic, perennial herb that originates from Europe, Africa, Asia and Australia. It is a potential competitor with native wetland and aquatic species and will block drains, impeding water flows. It spreads by rhizome fragments, which is often aided by humans who throw this popular aquarium plant into waterways.

Eel Grass infestations exist at scattered locations throughout the North and South Island. In Marlborough, small infestations exist in the Opawa River loop and one in the main Opawa River, near Blenheim. It has also been found in Waterlea Creek.

5.3.5 Evergreen Buckthorn (*Rhamnus alaternus*)

Description of the Problem / Reasons for the Strategy

Evergreen Buckthorn is an evergreen shrub that originates from the Mediterranean region. It will grow in scrub around forest margins, in plantations and on coastal cliffs. It is spread by birds as its seed is contained in a fleshy fruit. It displaces native species and hinders regeneration of forest remnants.

Widespread Evergreen Buckthorn infestations exist in the northern half of the North Island and scattered infestations exist in the southern half of the North Island. A few localised infestations exist in the South Island. There are several small isolated infestations of Evergreen Buckthorn in an area of the Marlborough Sounds.

5.3.6 Madeira Vine (*Anredera cordifolia*)

Description of the Problem / Reasons for the Strategy

Madeira Vine is a vigorous climber, which originates from tropical South America. It grows from an underground tuber and has aerial tubers, which grow attached to the stem, and break off easily to form new plants when they land on the ground. It will also grow from rhizomes. As well as blocking light to supporting plants by smothering them, it can become so heavy that it breaks branches. It is tolerant to drought and salt spray. It prefers to grow in warm coastal sites.

Madeira Vine is recognised as a weed in Hawaii and in New South Wales in Australia. Localised infestations exist throughout the North Island's coastal areas and in the South Island's urban areas. There are a number of isolated infestations of Maderia Vine in Marlborough.

5.3.7 Moth Plant (*Arauja sericifera*)

Description of the Problem / Reasons for the Strategy

Moth Plant is a vigorous evergreen climber that will grow up to 6 metres high and originates from tropical South America. It spreads by wind-borne seeds that are released from pods as they dry out and split during autumn and winter. Moth Plant will smother native species and is a problem in gardens where it can become the dominant species. The plant is poisonous and its sap has an irritant effect on contact with the skin.

Moth Plant is recognised as a weed in California, South Africa and in Australia. Moth Plant infestations exist throughout the northern half of the North Island and localised infestations exist in the southern North Island and in Marlborough. There are a number of small isolated infestations of Moth Plant in Marlborough.

5.3.8 Senegal Tea (*Gymnocoronis spilanthoides*)

Description of the Problem / Reasons for the Strategy

Senegal Tea is a perennial, semi-aquatic herb which grows to 1.5 metres when flowering and originates from Central and South America. It spreads by vegetative fragmentation with new plants produced from stem nodes and by seed. It forms dense floating mats which can quickly cover waterbodies, excluding native flora and fauna and impeding water flows and navigation and recreational activities.

Senegal Tea infestations are scattered across the Lower North Island. It has only recently been found in the Upper South Island. There are two known isolated infestations of Senegal Tea in Marlborough, these are both located in garden ponds.

5.3.9 Spartina Grass (*Spartina anglica*)

Description of the Problem / Reasons for the Strategy

Spartina is a sward forming grass that originates from the United Kingdom. It grows from underground rhizomes, which will break off and establish elsewhere. It will also spread via seed. It grows in estuaries and displaces native plants and animals of salt marshes and mud flats. It can cause accelerated sedimentation in estuaries. It can also impede river water flows.

Spartina is recognised as a weed in both Oregon and Washington in the USA. Infestations are in scattered locations in estuaries throughout the North and South Islands and on Stewart Island. In Marlborough, it is found in the Havelock and Mahakipawa estuary.

5.3.10 Pest Management Programme for Boneseed, Cathedral Bells, Climbing Spindleberry, Eel Grass, Evergreen Buckthorn, Madeira Vine, Moth Plant, Senegal Tea and Spartina Grass

Objective

"To eradicate Boneseed, Cathedral Bells, Climbing Spindleberry, Eel Grass, Evergreen Buckthorn, Madeira Vine, Moth Plant, Senegal Tea and Spartina Grass from Marlborough."

Means of Achievement

The Council, in association with the Department of Conservation, will:

- Undertake control works to destroy these pest plants at known sites annually, before they produce seed or are able to spread by other means.
- Carry out inspections to ensure all plants have been destroyed where land occupiers carry out control of these plant pests.

- Carry out inspections to monitor for and gather information on the presence of these plant pests on properties within Marlborough.
- Encourage land occupiers with infestations of these plant pests to carry out control work.
- Provide advice and information on the control of these plant pests to affected land occupiers and other interested parties.

Performance Measures

- No new infestations resulting from known sites of these plant pests are established in Marlborough.
- A measured decline in the populations of these plant pests at known sites by 2017.

Strategy Rules

1. Land occupiers are required to notify the Council of the presence of Boneseed (*Chrysanthemoides monilifera*), Cathedral Bells (*Cobea scandens*), Climbing Spindleberry (*Celastrus orbiculatusm*), Eel Grass (*Vallisneria australis*), Evergreen Buckthorn (R*hamnus alaternus*), Madeira Vine (*Anredera cordifolia*), Moth Plant (*Arauja sericifera*), Senegal Tea (*Gymnocoronis spilanthoides*) and Spartina Grass (*Spartina anglica*).

   A breach of this rule will create an offence under Section 154(r) of the Biosecurity Act.

6 Containment Control Pests

6.1 Plant Pests

Common Name	Scientific Name
Broom	*Cytisus scoparius*
Chilean Needlegrass	*Nassella neesiana*
Contorta Pine	*Pinus contorta*
Gorse	*Ulex europaeus*
Kangaroo Grass	*Themeda triandra*
Nassella Tussock	*Nassella trichotoma*
Nodding Thistle	*Carduus nutans*
Ragwort	*Senecio jacobaea*
Reed Sweet Grass	*Glyceria maxima*
White-Edged Nightshade	*Solanum marginatum*

6.1.1 Broom (*Cytisus scoparius*) and Gorse (*Ulex europaeus*)

Description of the Problem / Reasons for the Strategy

Wild Broom is an erect perennial shrub that will grow up to 3 metres high and originates from Eurasia. It will form dense patches if left uncontrolled and seeds from explosive fruits, which are resistant to fire. Wild Broom will displace preferred pasture species and dense patches impede stock access. It will grow on pastoral country, in hedgerows, waste places and plantations from the coast to high altitudes. Its vigorous growth habit will displace native herbaceous species. The presence of Broom will greatly reduce the economic viability of a farming unit.

Wild Broom is recognised as a weed in five states of the USA including Hawaii and in New South Wales and Victoria in Australia. Wild Broom infestations exist throughout New Zealand. In Marlborough, widespread infestations exist north of the Awatere Valley. Scattered infestations exist over the rest of Marlborough.

Gorse is an erect, spiky, perennial shrub that will grow to 4 metres high and originates from Eurasia. It will form dense patches if left uncontrolled and seeds from explosive fruits, which are resistant to fire. Gorse will displace preferred pasture species and dense patches impede stock access. It will grow on pastoral country, in hedgerows, waste places and plantations from the coast to high altitudes. Its vigorous growth habit will displace native herbaceous species. The presence of Gorse will greatly reduce the economic viability of a farming unit.

Gorse is recognised as a weed in four states of the USA including Hawaii, in South Africa and it is recognised as a weed of national significance in Australia. Gorse infestations exist throughout New Zealand. In Marlborough, widespread infestations exist north of the Wairau Valley. Scattered infestations exist over the rest of Marlborough.

Objective

"To prevent the spread of Broom and Gorse on to properties that are clear of, Broom and Gorse where agricultural and/or environmental values will be affected."

Means of Achievement

The land occupier will:

- Be responsible for the control of Broom and Gorse on their land and comply with the requirements specified in the Strategy Rule.
- Be encouraged to minimise the spread of Broom and Gorse by controlling isolated patches.

The Council will:

- Provide advice and information on the control of Broom and Gorse to affected land occupiers and other interested parties.
- Increase public awareness of the threat of Broom and Gorse.
- Respond to complaints regarding Broom and Gorse within 5 working days.
- Carry out inspections to determine if land occupiers have destroyed all Broom and Gorse plants within 10 metres of their property boundaries where a complaint has been received and agricultural and/or environmental values will be affected.
- Carry out enforcement action where required to ensure land occupiers meet their obligation to control Broom and Gorse as outlined in the Strategy Rule.
- Release biological control agents for Broom and Gorse throughout Marlborough.
- Encourage land occupiers to minimise the spread of Broom and Gorse by controlling isolated patches.

Performance Measures

- Respond to all complaints in relation to Broom and Gorse within 5 working days.
- 100% compliance for complaints regarding Broom and Gorse where agricultural and/or environmental values will be affected.

Strategy Rule

1. Land occupiers shall destroy all Broom (*Cytisus scoparius*) and Gorse (*Ulex europaeus*) plants within 10 metres of their property boundaries, where the adjoining land is clear of Broom (*Cytisus scoparius*) and Gorse (*Ulex europaeus*), and the spread of Broom (*Cytisus scoparius*) and Gorse (*Ulex europaeus*) will affect agricultural and/or environmental values.

   A breach of this rule will create an offence under Section 154(r) of the Act and may result in default work under Section 128 of the Biosecurity Act.

6.1.2 Broom (*Cytisus scoparius*) and Gorse (*Ulex europaeus*) Containment Control Areas

Description of the Problem / Reasons for the Strategy

Broom and Gorse are widespread over most of Marlborough. The Council recognises that two areas in Marlborough are predominantly free of these plant pests. The first is the Upper Wairau Catchment and the second is the Upper Awatere Catchment. In the Upper Wairau Catchment, only isolated infestations of Broom and Gorse exist and generally these are the result of roading and forestry operations. In the Upper Awatere Catchment, one extensive infestation of Broom exists but elsewhere, the level of infestation of Broom and Gorse is comparatively minor compared with the rest of Marlborough. Because of the low level of infestation, it is still feasible to attempt to contain Broom and/or Gorse infestations in these areas, as the benefits will outweigh the costs.

The Council has classified the Upper Wairau as a 'Broom and Gorse Containment Control Area' and the Upper Awatere as a 'Broom Containment Control Area'. Broom has been given priority in the Upper Awatere Catchment as it is spreading much faster than gorse, which seems to be confined to the main Awatere River system. Isolated patches of broom exist in a number of the smaller catchments that flow into the Upper Awatere River, and these have the potential to spread into large areas of high country in the Upper Awatere Catchment.

6.1.2.1 Upper Wairau Broom and Gorse Containment Control Area

Objective

"To prevent any increase in the distribution of Broom and Gorse in the 'Upper Wairau Broom and Gorse Containment Control Area' and reduce infestation levels where possible."

Means of Achievement

The land occupier will:

- Be responsible for the control of Broom and Gorse on their land, to the standard specified in the control programme and in compliance with the Strategy Rules.
- Notify the Council when their Broom and Gorse 'control programme' has been completed.

- Notify the Council of any infestation of Broom and Gorse, which has was not previously known on their land.

The Council will:

- Provide advice and information on the control of Broom and Gorse to affected land occupiers and other interested parties.

- Carry out field inspections to monitor for the presence of Broom and Gorse plants on properties surrounding known sites.

- Assist and encourage effective control through co-ordination and facilitation of annual 'control programmes' for land occupiers known to have infestations of Broom and Gorse in the Upper Wairau containment control area. The scope of the control programme shall include, but will not be restricted to the following:

  - Land occupier obligations.

  - Timeframe required for completion of control.

  - Recommendations for control methods.

- Carry out random field inspections to determine if land occupiers have completed their 'control programme' and met the requirements of the Strategy.

- Carry out enforcement action where required to ensure land occupiers meet their obligation to control Broom and Gorse as outlined in the Strategy Rules.

- On the default of a land occupier not meeting their obligation to control Broom and Gorse the Council will carry out the work and recover all expenses from the occupier.

- Increase public awareness of the threat of Broom and Gorse.

Performance Measures

- Respond to all complaints regarding Broom and Gorse in the 'Upper Wairau Broom and Gorse Containment Control Area' within 5 working days.

- No new infestations resulting from known sites of Broom and Gorse established in the 'Upper Wairau Broom and Gorse' Containment Control Area.

Strategy Rules

1. In the 'Upper Wairau Broom and Gorse Containment Control Area' (Refer Map 2), land occupiers shall destroy all Broom (*Cytisus scoparius*) and Gorse (*Ulex europaeus*) plants, before they produce seed, on land that they occupy.

   A breach of this rule will create an offence under Section 154(r) of the Biosecurity Act and may result in default work under Section 128 of the Biosecurity Act.

2. Land occupiers in the 'Upper Wairau Broom and Gorse Containment Control Area' are required to notify the Council of any infestation of Broom (*Cytisus scoparius*) and Gorse (*Ulex europaeus*), that was not previously known, on land that they occupy.

   A breach of this rule will create an offence under Section 154(r) of the Biosecurity Act.

6.1.2.2 Upper Awatere Broom Containment Control Area

Objective

"To prevent any increase in the distribution of Broom in the 'Upper Awatere Broom Containment Control Area' and reduce infestation levels where possible."

Means of Achievement

The land occupier will:

- Be responsible for the control of Broom on their land, to the standard specified in the control programme and in compliance with the Strategy Rules.
- Notify the Council when their Broom 'control programme' has been completed.
- Notify the Council of any infestation of Broom, which was not previously known on their land.

The Council will:

- Provide advice and information on the control of Broom and Gorse to affected land occupiers and other interested parties.
- Carry out field inspections to monitor for the presence of Broom plants on properties surrounding known sites.
- Assist and encourage effective control through co-ordination and facilitation of annual 'control programmes' for land occupiers known to have infestations of Broom in the Upper Awatere containment control area. The scope of the control programme shall include, but will not be restricted to the following:
  - Land occupier obligations.
  - Timeframe required for completion of control.
  - Recommendations for control methods.

- Carry out random field inspections to determine if land occupiers have completed their 'control programme' and met the requirements of the Strategy.

- Carry out enforcement action where required to ensure land occupiers meet their obligation to control Broom as outlined in the Strategy Rules.

- On the default of a land occupier not meeting their obligation to control Broom the Council will carry out the work and recover all expenses from the land occupier.

- Increase public awareness of the threat of Broom.

Performance Measures

- Respond to all complaints regarding Broom and Gorse in the 'Upper Awatere Broom Containment Control Area' within 5 working days.

- No new infestations resulting from known sites of Broom established in the 'Upper Awatere Broom Containment Control Area'.

Strategy Rules

1. In the 'Upper Awatere Broom Containment Control Area' (Refer Map 3), within the area classified as "Fringe", land occupiers shall destroy all Broom (*Cytisus scoparius*) plants, before they produce seed, on land that they occupy.

   A breach of this rule will create an offence under Section 154(r) of the Biosecurity Act and may result in default work under Section 128 of the Biosecurity Act.

2. In the 'Upper Awatere Broom Containment Control Area' (Refer Map 4), within the area classified as "Core", land occupiers shall:
   (i) Destroy all Broom (*Cytisus scoparius*) plants in a 10 metre boundary strip around the perimeter of the area classified as "Core".
   (ii) Destroy all Broom (*Cytisus scoparius*) plants between the banks of a river at full flow.
   (iii) Destroy all Broom (*Cytisus scoparius*) plants within 10 metres of a riverbank.

   A breach of this rule will create an offence under Section 154(r) of the Biosecurity Act and may result in default work under Section 128 of the Biosecurity Act.

3. Land occupiers in the 'Upper Awatere Broom Containment Control Area' (Refer Map 3), within the area classified as 'Fringe', are required to notify the Council of any infestation of Broom (*Cytisus scoparius*), that was not previously known, on land that they occupy.

   A breach of this rule will create an offence under Section 154(r) of the Biosecurity Act.

6.1.3 Chilean Needlegrass (*Nassella neesiana*)

Description of the Problem / Reasons for the Strategy

Chilean Needlegrass is an erect, tufted perennial grass, which can grow up to one metre high in the absence of grazing. It originates from South America. Plants form dense clumps, which exclude preferred pasture species and are unpalatable to stock during the flowering period. Chilean Needlegrass is capable of producing seed by three means; aerial seeds, stem seeds and basel seeds (cleistogenes). Chilean Needlegrass flowers between November and April and the aerial seeds have sharp tip's, which can bore into the eyes and pelts of animals. The seeds can be distributed by stock, waterways, feral animals, machinery, hay and to some extent, by wind.

Chilean Needlegrass is recognised as a weed of national significance in Australia. In New Zealand, there are localised infestations in Auckland and Hawkes Bay in the North Island and in Marlborough. In Marlborough, 101 properties (2006) are known to have an infestation of Chilean Needlegrass. Infestations range from isolated patches to widespread infestations and cover an estimated area of 4,311 hectares.

Objective

"To prevent any increase in the distribution and density of Chilean Needlegrass and reduce infestation levels where possible."

Means of Achievement

The land occupier will:

- Be responsible for the ongoing control of Chilean Needlegrass on their land, to the standard specified in the 'control programme' and in compliance with the Strategy Rules.
- Notify the Council when their Chilean Needlegrass 'control programme' has been completed.
- Notify the Council of any infestation of Chilean Needlegrass, which was not previously known on their land.
- Ensure that they or persons visiting their property do not spread the seed of Chilean Needlegrass from infested areas to clear areas by movement of stock, hay, soil, vehicles, machinery or by other means.

The Council will:

- Provide advice and information on the control of Chilean Needlegrass to affected land occupiers and other interested parties.
- Carry out inspections to monitor for the presence of Chilean Needlegrass plants on properties surrounding known sites.

- Assist and encourage effective control through co-ordination and facilitation of annual 'control programmes' for land occupiers known to have infestations of Chilean Needlegrass. The scope of the control programme shall include, but will not be restricted to the following:
  - Land occupier obligations.
  - Timeframes required for completion of control.
  - Recommendations for control methods.
- Carry out random field inspections to determine if land occupiers have completed their control programme and met the requirements of the Strategy.
- Carry out enforcement action where required to ensure land occupiers meet their obligation to control Chilean Needlegrass as outlined in the Strategy Rules.
- On the default of a land occupier not meeting their obligation to control Chilean Needlegrass the Council will carry out the work and recover all expenses from the occupier.
- At the Council's discretion destroy isolated Chilean Needlegrass plants found during an inspection.
- Require that land occupiers, or other persons, do not spread the seed of Chilean Needlegrass from infested areas to clear areas by movement of stock, hay, soil, vehicles or machinery.
- Encourage the use of proven land management techniques such as cultivation and improved pasture species to control Chilean Needlegrass.
- Increase public awareness of the threat of Chilean Needlegrass.

Performance Measures

- Respond to all complaints regarding Chilean Needlegrass within 5 working days.
- No new infestations resulting from known sites of Chilean Needlegrass established in Marlborough.
- 100% land occupier compliance with the requirements of the Strategy Rules.

Strategy Rules

1. Land occupiers shall destroy all Chilean Needlegrass (*Nassella neesiana*) plants on land that they occupy, with the exception of the properties classified as 'Core' (Refer Map 5), where the land occupier shall destroy all Chilean Needlegrass (*Nassella neesiana*) plants within 10 metres of property boundaries, before they produce seed.

   A breach of this rule will create an offence under Section 154(r) of the Biosecurity Act and may result in default work under Section 128 of the Biosecurity Act.

2. Land occupiers are required to notify the Council of any infestation of Chilean Needlegrass (*Nassella neesiana*), that was not previously known, on land that they occupy.

   A breach of this rule will create an offence under Section 154(r) of the Biosecurity Act.

3. No person shall knowingly spread or cause to be spread plant parts of Chilean Needlegrass (*Nassella neesiana*) including seed and soil likely to contain seed from an infested site.

   A breach of this rule will create an offence under Section 154(r) of the Biosecurity Act.

6.1.4 Contorta Pine (*Pinus contorta*)

Description of the Problem / Reasons for the Strategy

Pinus contorta, also known as Lodgepole Pine, originates from North America. Contorta Pine was planted all over New Zealand by farmers for shelter and by previous government authorities for the control of erosion. It exists in plantation areas and in a wilding situation in various locations across New Zealand. Infestations in South Marlborough occur in the Branch and Leatham catchments, in the Wye Reserve and south into the Waihopai Valley and on the Red Hills in the Raglan Range through to Molesworth Station.

Pinus contorta is regarded as a high risk species that spreads vigorously from individual plants or plantations into ungrazed native grasslands and scrublands due to its wind-blown seed and can change open tussock grassland ecosystems into closed canopy, single species forest. It could potentially impact on the following:

- Landscape values - particularly disruption of existing open and often treeless landscapes.
- Indigenous biodiversity values - spread can dominate or degrade the habitats of indigenous flora and fauna.
- Existing pastoral uses - grazing species can be shaded out by taller growing trees.
- Future land use opportunities - wilding dominated land is more expensive (than open grassland) to convert to other uses such as improved pasture or managed forest.
- Hydrology - dense wilding stands covering a significant percentage of a catchment (usually >20%) will reduce water yields.

The Council and the Department of Conservation have been managing the spread of Contorta Pine as a plant pest outside this Strategy. In some cases, this has been ongoing for many years while in other cases, the control programme is relatively new. These programmes were put in place in order to contain the spread of Contorta from its current locations in south Marlborough.

The Department of Conservation has a management plan to control Contorta Pine and other associated wilding conifer species. The objective is to contain the spread of known infestations from the Branch and Leatham River catchments. The Department also has a joint programme with Land Corp to manage Contorta in the Molesworth Station area.

The Council and the Department have a joint management response to contain the spread of Contorta Pine from the Wye Reserve area.

At the present time *Pinus contorta* infestations are still able to be contained in South Marlborough at a reasonable cost.

It is well known that Contorta Pine plantations may also be present with a mixture of other wilding conifer species that can have particular impacts on intrinsic values. For the purpose of this Strategy the primary focus will be to control *Pinus contorta*, however Council will encourage occupiers, Government agencies and communities to control other species of wilding trees that pose a threat in south Marlborough. Examples of other associated species are: Scots, Mountain and Corsican Pine.

Objective

"To prevent the spread of Contorta Pine from the Contorta Containment Areas shown on Map 6 into other areas of South Marlborough."

Means of Achievement

The land occupier will:

- Be responsible for the control of Contorta Pine spreading out of the Contorta Containment Areas (with the exception of the Wye Reserve Contorta Pine Containment Area), before the trees reach the ability to produce seeding cones.

- Notify the Council of any infestation of Contorta Pine that was not previously known, on land that they occupy.

The Council will:

- In partnership with the Department of Conservation implement a management programme to control the spread of Contorta Pine from the Wye Reserve Contorta Pine Containment Area as shown on Map 6 before the trees reach the ability to produce seeding cones.

- In partnership with the Department of Conservation carry out inspections to monitor for the presence of Contorta Pine on land surrounding the Contorta Containment Areas.

- Provide advice and information on the control of Contorta Pine, and other associated wilding conifer species to affected land occupiers and other interested parties.

- Encourage land occupiers to control other species of wilding conifer pines that are deemed to be a threat and causing impacts.

Performance Measures

- No new infestations of Contorta Pine established outside the known containment areas in South Marlborough.

- Implementation of the Department of Conservation, Landcorp and the Council's management plans to control Contorta Pine.

Strategy Rules

1. Land occupiers must destroy all Contorta Pine (*Pinus contorta*) on the land they occupy before they develop cones and produce seed, unless;

   The land occupiers land is located directly adjacent to Wye Reserve Contorta Pine Containment Area (refer Map 6)

   A breach of this rule will create an offence under Section 154(r) of the Act and may result in default work under Section 128 of the Biosecurity Act.

2. Land occupiers are required to notify the Council of any infestation of Contorta Pine (*Pinus contorta*) identified outside the Wye Reserve Contorta Pine Containment Area (refer Map 6).

   A breach of this rule will create an offence under Section 154(r) of the Act.

6.1.5 Kangaroo Grass (*Themeda triandra*)

Description of the Problem / Reasons for the Strategy

Kangaroo Grass is a large perennial grass that originates from Africa. It is an invasive species, which will form dense patches and can exclude preferred pasture species. It is considered to be a valuable grass in the dry areas of Australia, where it is grazed following burning. Once it produces a seed head again, it becomes unpalatable to stock and must be re-burned. In Marlborough, this grass cannot be utilised using this burn and graze regime due to forestry and the fire risk. The result has been large infestations of mature Kangaroo Grass that has little or no feed value.

Infestations of Kangaroo Grass exist at two locations in the North Island and in Nelson. In the Marlborough Sounds this plant pest occurs both in isolated patches and over widespread areas. The infestations cover an estimated area of 125 hectares.

Objective

"To prevent any increase in the distribution and density of Kangaroo Grass and reduce infestation levels where possible."

Means of Achievement

The land occupier will:

- Be responsible for the control of Kangaroo Grass on their land to the standard specified in the control programme and in compliance with the Strategy Rules.
- Notify the Council when their Kangaroo Grass 'control programme' has been completed.
- Notify the Council of any infestation of Kangaroo Grass which was not previously known on their land.
- Ensure that they, or persons visiting their property, do not spread the seed of Kangaroo Grass from infested areas to clear areas by movement of stock, hay, soil, vehicles machinery or by other means.

The Council will:

- Provide advice and information on the control of Kangaroo Grass to affected land occupiers and other interested parties.
- Carry out field inspections to monitor for the presence of Kangaroo Grass plants on properties surrounding known sites.
- Assist and encourage effective control through co-ordination and facilitation of annual 'control programmes' for land occupiers known to have infestations of Kangaroo Grass. The scope of the control programme shall include, but will not be restricted to the following:
    - Land occupier obligations.
    - Timeframe required for completion of control.
    - Recommendations for control methods.
- Carry out random field inspections to determine if land occupiers have completed their 'control programme' and met the requirements of the Strategy.
- Carry out enforcement action where required to ensure land occupiers meet their obligation to control Kangaroo Grass as outlined in the Strategy Rules.
- On the default of a land occupier not meeting their obligation to control Kangaroo Grass the Council will carry out the work and recover all expenses from the land occupier.
- At the discretion of the Council, remove isolated Kangaroo Grass plants found during a field inspection.
- Require that land occupiers, or other persons, do not spread the seed of Kangaroo Grass from infested areas to clear areas by movement of stock, hay, soil deposits, vehicles or machinery.

- Encourage the use of land management techniques such as increased soil fertility and improved pasture species to control Kangaroo Grass.

- Support research, which seeks to identify the most appropriate land management techniques and control methods for controlling Kangaroo Grass.

Performance Measures

- Respond to all complaints regarding Kangaroo Grass within 5 working days.

- No new infestations resulting from known sites of Kangaroo Grass established in Marlborough.

- 100% land occupier compliance with the requirements of the Strategy Rules.

Strategy Rules

1. Land occupiers shall destroy all Kangaroo Grass (*Themeda triandra*) plants, on land that they occupy, with the exception of the properties classified as 'Core' (Refer Map 7), where the land occupier shall destroy all Kangaroo Grass (*Themeda triandra*) plants within 5 metres of property boundaries, before they produce seed.

   A breach of this rule will create an offence under Section 154(r) of the Biosecurity Act and may result in default work under Section 128 of the Biosecurity Act.

2. Land occupiers are required to notify the Council of any infestation of Kangaroo Grass (*Themeda triandra*), that was not previously known, on land that they occupy.

   A breach of this rule will create an offence under Section 154(r) of the Biosecurity Act.

3. No person shall knowingly spread plant parts of Kangaroo Grass (*Themeda triandra*), including seed and soil likely to contain seed from an infested site.

   A breach of this rule will create an offence under Section 154(r) of the Biosecurity Act.

6.1.6 Nassella Tussock (*Nassella trichotoma*)

Description of the Problem / Reasons for the Strategy

Nassella Tussock is a perennial tussock that originates from South America. It can grow up to 70 cm high and a mature plant can produce up to 120,000 seeds. These seeds have the potential to spread 10 km in strong winds. The seed has the ability to remain viable in the soil for many years. Nassella Tussock is well adapted to invade and smother other grassland species and is largely unpalatable to livestock. It will also compete with native species. If left uncontrolled, the result can be a dense ground cover of Nassella Tussock.

Nassella Tussock is recognised as a weed of national significance in Australia and as a weed in the USA. In New Zealand, a localised infestation is present in Auckland and the Hawkes Bay in the North Island and extensive infestations exist in Marlborough and North Canterbury. Localised infestations exist through to Central Otago. In Marlborough, 499 (2006) properties are known to have an infestation of Nassella Tussock. Infestations range from isolated patches to widespread infestations and cover an estimated area of 91,000 hectares.

Objective

"To prevent any increase in the distribution and density of Nassella Tussock and reduce infestation levels where possible."

Means of Achievement

The land occupier will:

- Be responsible for the control of Nassella Tussock on their land, to the standard specified in the control programme and in compliance with the Strategy Rules.
- Notify the Council when their Nassella Tussock 'control programme' has been completed.
- Notify the Council of any infestation of Nassella Tussock, which has not previously been identified on their land.

The Council will:

- Provide advice and information on the control of Nassella Tussock to affected land occupiers and other interested parties.
- Carry out field inspections to monitor for the presence of Nassella Tussock plants on properties surrounding known sites.
- Assist and encourage effective control through co-ordination and facilitation of annual 'control programmes' for land occupiers known to have infestations of Nassella Tussock. The scope of the control programme shall include, but will not be restricted to the following:
    - Land occupier obligations.
    - Timeframe required for completion of control between May to December calendar period.
    - Recommendations for control methods.
- Carry out random field inspections to determine if land occupiers have completed their 'control programme' and met the requirements of the Strategy.
- Carry out enforcement action where required to ensure occupiers meet their obligation to control Nassella Tussock as outlined in the Strategy Rules.

- On the default of a land occupier not meeting their obligation to control Nassella Tussock the Council will carry out the work and recover all expenses from the occupier.

- At the Council's discretion remove isolated Nassella Tussock plants found during a field inspection.

- Increase public awareness as to the threat of Nassella Tussock.

Performance Measures

- Respond to all complaints regarding Nassella Tussock within 5 working days.

- No new infestations resulting from known sites of Nassella Tussock established in Marlborough.

- No increase in the density of Nassella Tussock on a number of properties identified as case study sites for the purpose of the Strategy by 2017.

- 100% land occupier compliance with the requirements of the Strategy Rules.

Strategy Rules

1. Land occupiers are required to annually destroy all Nassella Tussock (*Nassella trichotoma*) plants, before they produce seed on land that they occupy, unless

   The land occupier has been directed otherwise to destroy all Nassella Tussock (*Nassella trichotoma*) plants on the land they occupy, by the time specified in a Notice of Direction to that effect issued by the Council in accordance with Section 122 of the Biosecurity Act 1993.

   A breach of this rule will create an offence under Section 154(r) of the Act and may result in default work under Section 128 of the Biosecurity Act.

2. Land occupiers are required to notify the Council of any infestation of Nassella Tussock (*Nassella trichotoma*), that was not previously known, on land that they occupy.

   A breach of this rule will create an offence under Section 154(r) of the Biosecurity Act.

6.1.7 Nodding Thistle (*Carduus nutans*)

Description of the Problem / Reasons for the Strategy

Nodding Thistle is spiny biennial herb, which will grow to 1.6 metres high and originates from Eurasia. It spreads by seed and displaces preferred pasture species on both arable and high country farming systems. If left uncontrolled, it will form dense thickets that impede stock access.

Nodding Thistle infestations exist throughout New Zealand except for Westland. In Marlborough, a scattered infestation exists over most of the drier pastoral country. Nodding Thistle tends to prefer areas with a lower rainfall.

Objective

"To minimise the spread of Nodding Thistle on to properties that are clear of Nodding Thistle."

Means of Achievement

The land occupier will:

- Be responsible for the control of Nodding Thistle on their land and comply with the requirements specified in the Strategy Rule.

The Council will:

- Carry out inspections to determine if occupiers have destroyed all Nodding Thistle plants within 100 metres of their property boundaries where a complaint has been received and agricultural and/or environmental values will be affected.
- Carry out enforcement action where required to ensure occupiers meet their obligation to control Nodding Thistle as outlined in the Strategy Rule.
- Provide advice and information on the control of Nodding Thistle to affected occupiers and other interested parties.
- To release biological control agents for Nodding Thistle throughout Marlborough.

Performance Measures

- Respond to all complaints in relation to Nodding Thistle within 5 working days.
- 100% compliance for complaints regarding Nodding Thistle where agricultural and/or environmental values will be affected.

Strategy Rules

1. Occupiers shall destroy all Nodding Thistle (*Carduus nutans*) plants, within 100 metres of their property boundaries, where the adjoining land is clear of Nodding Thistle (*Carduus nutans*) and the spread of Nodding Thistle (*Carduus nutans*) will affect agricultural and/or environmental values.

   A breach of this rule will create an offence under Section 154(r) of the Biosecurity Act and may result in default work under Section 128 of the Biosecurity Act.

6.1.8 Ragwort (*Senecio jacobaea*)

Description of the Problem / Reasons for the Strategy

Ragwort is a fast growing, erect biennial plant that originates from Eurasia. It is a prolific seeder and will displace preferred pasture species. The plant is also toxic to stock, causing liver damage in cattle and horses.

Ragwort is recognised as a weed in six states of the USA and in the British Isles. Ragwort infestations exist throughout New Zealand. In Marlborough, infestations exist in the Rai Valley, the Marlborough Sounds and on the North Bank of the Wairau Valley. Ragwort tends to prefer areas with a higher rainfall.

Objective

"To prevent the spread of Ragwort on to properties that are clear of Ragwort."

Means of Achievement

The land occupier will:

- Be responsible for the control of Ragwort on their land and comply with the requirements specified in the Strategy Rule.

The Council will:

- Carry out inspections to determine if land occupiers have destroyed all Ragwort plants within 50 metres of their adjacent property boundaries where a complaint has been received and agricultural and/or environmental values will be affected.
- Carry out enforcement action where required to ensure land occupiers meet their obligation to control Ragwort as outlined in the Strategy Rule.
- Provide advice and information on the control of Ragwort to affected land occupiers and other interested parties.
- To release biological control agents for Ragwort throughout Marlborough.

Performance Measures

- Respond to all complaints in relation to Ragwort within 5 working days.
- 100% compliance for complaints regarding Ragwort where agricultural and/or environmental values will be affected.

Strategy Rules

1. Land occupiers shall destroy all Ragwort (*Senecio jacobaea*) plants within 50 metres of their property boundaries where adjoining land is clear of Ragwort (*Senecio jacobaea*) and the spread of Ragwort (*Senecio jacobaea*) will affect agricultural and/or environmental values.

   A breach of this rule will create an offence under Section 154(r) of the Biosecurity Act and may result in default work under Section 128 of the Biosecurity Act.

6.1.9 Reed Sweet Grass (*Glyceria maxima*)

Description of the Problem / Reasons for the Strategy

Reed Sweet Grass is a large rhizomatous grass which originates from Europe. It grows along the margins of a wide range of both flowing and standing watercourses. It forms dense, impenetrable stands of emergent marginal vegetation which impede drainage, displace native vegetation and disrupt recreational activities. It has been implicated in the cyanide poisoning of livestock.

Reed Sweet Grass infestations exist throughout New Zealand. It is a troublesome drainage weed in many areas of New Zealand. Indications are that this species is still spreading. In Marlborough, infestations exist in the Grovetown Lagoon, Roberts Drain, Gibsons Creek and on d'Urville Island. It is suspected that there are more sites of this invasive species in the District.

Objective

"To prevent any increase in the distribution of Reed Sweet Grass and reduce infestation levels outside the Grovetown Lagoon."

Means of Achievement

The Council will:

- Contain Reed Sweet Grass infestations within the Grovetown Lagoon.
- Destroy all Reed Sweet Grass infestations outside the Grovetown Lagoon.
- Monitor for the presence of Reed Sweet Grass in waterways throughout Marlborough.
- Provide advice and information on the identification of Reed Sweet Grass to land occupiers and other interested parties.

Performance Measures

- No new infestations resulting from previously known infestations of Reed Sweet Grass in Marlborough.
- A reduction in the infestation level of Reed Sweet Grass by 2017.

Strategy Rules

1. Where land occupiers have water running through their property, they are required to notify the Council of any infestation of Reed Sweet Grass (*Glyceria Maxima*) in the waterway.

   A breach of this rule will create an offence under Section 154(r) of the Act.

6.1.10 White-Edged Nightshade (*Solanum marginatum*)

Description of the Problem / Reasons for the Strategy

White-Edged Nightshade is a large shrub or tree, which has aggressive spines and originates from North Africa. It will grow up to 3 metres high and will form dense thickets, which become impenetrable and displace preferred pasture species. It will also displace native species.

White-Edged Nightshade is recognised as a weed in California in the USA. In New Zealand, infestations exist throughout the North Island and at localised sites in the South Island. In Marlborough, five properties are known to have infestations of White-Edged Nightshade. Infestations range from isolated patches to widespread infestations and cover an estimated area of 680 hectares.

Objective

"To prevent any increase in the distribution and density of White-Edged Nightshade and reduce infestation levels where possible."

Means of Achievement

The land occupier will:

- Be responsible for the control of White-Edged Nightshade on their land to the standard specified in the control programme and in compliance with the Strategy Rules.
- Notify the Council when their White-Edged Nightshade 'control programme' has been completed.
- Notify the Council of any infestation of White-Edged Nightshade, which was not previously known on their land.

The Council will:

- Provide advice and information on the control of White-Edged Nightshade to affected land occupiers and other interested parties.
- Carry out field inspections to monitor for the presence of White-Edged Nightshade plants on properties surrounding known sites.
- Assist and encourage effective control through co-ordination and facilitation of annual 'control programmes' for land occupiers known to have infestations of White-Edged Nightshade. The scope of the control programme shall include, but will not be restricted to the following:
    - Land occupier obligations.
    - Timeframe required for completion of control.
    - Recommendations for control methods.
- Carry out random field inspections to determine if land occupiers have completed their 'control programme' and met the requirements of the Strategy.

- Carry out enforcement action where required to ensure land occupiers meet their obligation to control White-Edged Nightshade as outlined in the Strategy Rules.
- On the default of an occupier not meeting their obligation to control White-Edged Nightshade, the Council will carry out the work and recover all expenses from the occupier.
- At the Council's discretion remove isolated White-Edged Nightshade plants found during an inspection.

Performance Measures

- Respond to all complaints regarding White-Edged Nightshade within 5 working days.
- No new infestations resulting from known sites of White-Edged Nightshade established in Marlborough.
- 100% land occupier compliance with the requirements of the Strategy Rules.

Strategy Rules

1. Land occupiers shall destroy all White-Edged Nightshade (*Solanum marginatum*) plants, on land that they occupy, with the exception of the property classified as 'Core' (Refer Map 8), where the land occupier shall destroy all White-Edged Nightshade (*Solanum marginatum*) plants within 100 metres of property boundaries, before they produce seed.

   A breach of this rule will create an offence under Section 154(r) of the Act and may result in default work under Section 128 of the Biosecurity Act.

2. Land occupiers are required to notify the Council of any infestation of White-Edged Nightshade (*Solanum marginatum*), that was not previously known, on land that they occupy.

   A breach of this rule will create an offence under Section 154(r) of the Biosecurity Act.

6.2 Animal Pests

Common Name	Scientific Name
Feral Rabbits	*(Oryctolagus cuniculus)*
Possums	*(Trichosurus vulpecula)*

6.2.1 Feral Rabbits (*Oryctolagus cuniculus*)

Description of the Problem / Reasons for the Strategy

The Feral Rabbit is a small to medium sized herbivore that originates from Europe. Feral Rabbits were released in New Zealand in the late 1700s and 1800s as a food source. They quickly adapted to New Zealand's conditions and have thrived in our environment. High Feral Rabbit population levels affect soil and water quality, have a detrimental impact on economic production and increase the risk of soil erosion. Factors such as topography, climate, aspect and altitude all contribute to the variation in the Feral Rabbit population that exists from one area to another.

Feral Rabbit infestations exist throughout New Zealand. The most Feral Rabbit prone areas of Marlborough are the Upper Awatere Valley, the Clarence Catchment, the Dashwood area and the coastal country between Blind River and Ward. These areas have a history of a Feral Rabbit problem. Other areas, which have experienced a Feral Rabbit problem include the Upper Waihopai Valley and the Upper Wairau Valley. At present, Feral Rabbit populations are significantly lower than in the past, due to the effect of Rabbit Haemorrhagic Disease.

Objective

"To minimise the impacts that Feral Rabbits have on pasture production, crops, forestry plantations and soil conservation values in Marlborough by maintaining Feral Rabbit populations at levels at or below the maximum allowable level identified for the two sub-regions, the 'Upper Awatere/Clarence' and the 'Remainder of area within the District'.

Means of Achievement

The land occupier will:

- Be responsible for the control of Feral Rabbits on their land, to the Standard specified in the 'control programme' and in compliance with the Strategy Rule.
- Notify the Council when their Feral Rabbit 'control programme' has been completed.

The Council will:

- Provide advice and information on the control of Feral Rabbits to affected land occupiers and other interested parties.
- Carry out inspections to ensure that Feral Rabbit populations are not allowed to exceed the maximum allowable level anywhere in Marlborough.
- Monitor Feral Rabbit population trends in high rabbit prone areas.
- Monitor Rabbit Haemorrhagic Disease immunity levels in rabbit populations that are persistently above the maximum allowable levels.

- Assist and encourage effective control through coordination and facilitation of 'control programmes' for land occupiers known to have rabbit populations that persist above the maximum allowable level. The scope and control programme shall include, but will not be restricted to the following:
  - Land occupier obligations.
  - Timeframe required for completion of control.
  - Recommendations for control methods.
- Carry out random field inspections to determine if land occupiers have completed their 'control programme' and met the requirements of the Strategy.
- Carry out enforcement action where required to ensure land occupiers meet their obligation to control Feral Rabbits as outlined in the Strategy Rule.
- On the default of a land occupier not meeting their obligation to control Feral Rabbits the Council will carry out the work and recover all expenses from the land occupier.

Performance Measures

- Feral Rabbit population levels not exceeding level four on the McLean scale in the area identified as the "Upper Awatere/Clarence" sub-region (Refer Table 6 below).
- Feral Rabbit population levels not exceeding level three on the McLean scale in the area identified as the "Remainder of area within District" sub-region (Refer Table 6 below).

Strategy Rule

1. Land occupiers shall maintain Feral Rabbit (*Oryctolagus cuniculus*) populations, on land that they occupy, at or below the maximum allowable level on the Modified McLean Scale, as outlined in Table 6 and Table 7 below and on Map 9.

   A breach of this rule will create an offence under Section 154(r) of the Biosecurity Act and may result in default work under Section 128 of the Biosecurity Act.

Table 6 - Maximum Allowable Feral Rabbit Populations

Sub-Regions		Maximum Allowable Population Level - Modified McLean Scale
Upper Awatere/Clarence	Map 9	Level 4
Remainder of area within District	Map 9	Level 3

Table 7 - Modified McLean Scale

Scale	Feral Rabbit Infestation
1	No sign seen. No Feral Rabbits seen.
2	Very infrequent sign seen. Unlikely to see Feral Rabbits.
3	Sign infrequent with faecal heaps more than 10 metres apart. Odd Feral Rabbit may be seen.
4	Sign frequent with some faecal heaps more than 5 metres apart, but less than 10 metres apart. Groups of Feral Rabbits may be seen.
5	Sign very frequent with faecal heaps less than 5 metres apart in pockets. Feral Rabbits spreading.
6	Sign very frequent with faecal heaps less than 5 metres apart over the whole area. Feral Rabbits may be seen over whole area.
7	Sign very frequent with 2-3 faecal heaps often less than 5 metres apart over the whole area. Feral Rabbits may be seen in large numbers over the whole area.
8	Sign very frequent with 3 or more faecal heaps less than 5 metres apart over the whole area. Feral Rabbits likely to be seen in large numbers over the whole area.

6.2.2 Possums (*Trichosurus vulpecula*)

Description of the Problem / Reasons for the Strategy

The Possum originates from Australia and was released in New Zealand in the late 1800s to establish a fur trade similar to that flourishing in Australia at the time. They selectively browse preferred plant species and cause extensive canopy defoliation in native forest. They also cause economic damage in exotic forest plantations. Research indicates that Possums will prey on ground and tree nesting birds and their eggs. The Possum is a recognised vector in the spread of the disease bovine tuberculosis to domestic livestock.

Populations of the Possum exist in New Zealand's North, South and Stewart Islands. Populations vary from low to extremely high depending on habitat. In Marlborough, Possum populations vary according to habitat types and the effect of control programmes implemented by agencies and individuals. However, on the offshore islands in the Marlborough Sounds there are currently no Possums. Collectively these islands (which are shown in Map 10) cover 26,400 hectares of land that is free from Possums.

Objective

"To prevent the establishment of Possums on offshore islands in the Marlborough Sounds."

Means of Achievement

- The Strategy Rule prohibits the release or spread of Possums onto offshore islands in the Marlborough Sounds.

The Council and the Department of Conservation will:

- Investigate reported sightings of Possums on offshore islands in the Marlborough Sounds within 5 working days.

- Maintain a publication outlining the importance of ensuring Possums are not transported on to offshore islands accidentally.

- Maintain public awareness signs erected on major offshore islands advising people that they are free of Possums.

- Maintain public awareness signs erected on major public access jetties on the mainland advising the public that offshore islands in the Marlborough Sounds are free of Possums.

Performance Measures

- All reported sightings of Possums on offshore islands in the Marlborough Sounds investigated within 5 working days by the Council or Department of Conservation.

- Maintain a public awareness campaign through the production of educational pamphlets and signage.

Strategy Rules

1. No person shall knowingly communicate or cause to be communicated, otherwise spread or release Possums (*Trichosurus vulpecula*) on to any offshore island, as specified in Map 10, in the Marlborough Sounds.

   A breach of this rule will create an offence under Section 154(r) of the Biosecurity Act.

7 Surveillance Pests

The Council has different approaches to surveillance of pests. There is a 'passive' approach to surveillance of pests. Information passed on from the community can alert the Council to potential threats from unwanted organisms entering Marlborough. Information may also be received from adjoining regions or districts in their respective pest management activities and at times information is received from a national level from the Ministry for Primary Industries who may declare certain species to be unwanted organisms. In some cases, such as where there is a national led approach to dealing with a specific pest, the Council will assist in undertaking surveillance activities of the particular species. In other cases the Council will determine whether there is a need to investigate new threats.

A secondary aspect to the 'passive' approach is in terms of monitoring the pests that are listed in the National Plant Pest Accord and also generally in terms of the Council's staff being alert to new pests when out undertaking their duties.

There is an 'active' approach for the pests described as "Surveillance" in this Strategy. These pests have a specific means of achievement in relation to activities carried out by the Council which include monitoring and recording information on the spread and density of such pests, gathering information on their impacts and looking at options for control. Pests included in the Surveillance category of the Strategy fall within the active approach. Through the life of the Strategy, the Council wants to get a better understanding of the distribution and impacts of the pests for further evaluation.

Regardless of approach, intervention by the Council's staff occurs where there is potential risk arising from new pests or new pest sites.

The Council has the ability under the Act to respond to incursions of pests not included in the Strategy.

The Council also plays an important advocacy and advice role for the wider community when dealing with surveillance pests.

Common Name	Scientific Name
Blue Morning Glory	*Ipomoea indica*
Climbing Asparagus	*Asparagus scandens*
Cotton Thistle	*Onopordum acanthium*
Darwin Ants	*Doleromyrma darwiniana*
Egeria	*Egeria densa*
Kahili Ginger and Yellow Ginger	*Hedychium gardineramum and H. Flavescens*
Lagarosiphon	*Lagarosiphon major*
Purple Loosestrife	*Lythrum salicaria*

7.1 Surveillance Pests

7.1.1 Blue Morning Glory (*Ipomoea indica*)

Description of the Problem / Reasons for the Strategy

Blue Morning Glory is a high climbing perennial evergreen vine, which originates from the tropics. It has a large blue flower. The stems are twinning and running with hairy and triangular heart shaped leaves. The plant spreads vegetatively, with nodes fastening to the soil and sending out new roots. Passing animals or weeding can spread broken plant pieces, which will form a new plant. It has the potential to become a major weed in a variety of habitats where it will displace native species.

Blue Morning Glory is found scattered across the North Island. Isolated infestations exist on the West Coast and in Marlborough.

7.1.2 Climbing Asparagus (*Asparagus scandens*)

Description of the Problem / Reasons for the Strategy

Climbing Asparagus is a scrambling or climbing perennial, which originates from South Africa. It forms dense patches on the ground or sub-canopy in most forest types and smothers small native plants. It has long-lived tubers that resprout easily and well dispersed seeds.

Scattered infestations of Climbing Asparagus exist in the North Island. Isolated infestations of Climbing Asparagus exist in the Marlborough Sounds.

7.1.3 Cotton Thistle (*Onopordum acanthium*)

Description of the Problem / Reasons for the Strategy

Cotton Thistle is a vigorous biennial thistle which originates from the Eastern Mediterranean. It invades and colonises pastures, is drought tolerant and resistant to commonly used hormone sprays. It will form dense infestations if left uncontrolled. These displace preferred pasture species and impede access for stock.

Small infestations of Cotton Thistle are found in the Hawkes Bay, Canterbury and Otago. There are two isolated infestations of Cotton Thistle in Marlborough.

7.1.4 Darwin Ants (*Doleromyrma darwiniana*)

Description of the Problem / Reasons for the Strategy

Darwin Ants are an invasive species of ant that originate from Australia. They multiply very quickly, have a huge appetite and utilise any food source they can find. They are a serious indoor problem and will predate on native ants, insects and earthworms. They can kill baby birds in their nests. They are a particular threat to organic growers and gardeners.

7.1.5 Egeria (*Egeria densa*)

Description of the Problem / Reasons for the Strategy

Egeria is a submerged aquatic perennial that will form dense stands that reduce oxygen levels in the water. It originates from South America and competes vigorously with native aquatic species. It will also block drains and impede river water flows. It spreads through shoot fragments, a process often aided by humans. Egeria grows in freshwater aquatic systems.

Egeria is recognised as a weed in five states in the USA. Widespread infestations of Egeria exist in the northern half of the North Island and scattered infestations exist in the southern half of the North Island and the northern half of the South Island. In Marlborough, localised infestations of Egeria exist in waterways on the lower plains of the Wairau Valley.

7.1.6 Kahili Ginger and Yellow Ginger (*Hedychium gardineramum* and *H. Flavescens*)

Description of the Problem / Reasons for the Strategy

Wild Ginger is an upright summer green coloured perennial herb that originates from India. It grows in wasteland on forest margins, roadsides and river margins and in former gardens. It spreads through underground stems and displaces native species in forest margins, especially where there are gaps.

Wild Ginger infestations exist throughout the North Island and isolated infestations exist in a few scattered localities in the South Island, apart from those in cultivation. In Marlborough, numerous localised infestations of Wild Ginger exist at abandoned homesteads and in gardens throughout the Marlborough Sounds.

7.1.7 Lagarosiphon (*Lagarosiphon major*)

Description of the Problem / Reasons for the Strategy

Lagarosiphon is a submerged bottom-rotting perennial which grows up to 5 metres tall. It originates from South Africa. It grows quickly, forming dense mats that block waterways and displace native plants. It is a major weed in hydroelectric dams, also impeding irrigation, drainage and other water uses.

Infestations of Lagarosiphon are scattered throughout the North Island but are more localised in the North and East of the South Island. Infestations exist in many of the lowland waterways on the Wairau Valley and in garden ponds in the Districts urban areas.

7.1.8 Purple Loosestrife (*Lythrum salicaria*)

Description of the Problem / Reasons for the Strategy

Purple Loosestrife is an erect, summer-green perennial herb growing to 1-2 metres with a taproot and fibrous roots. It originates from Europe, Western Asia and North Africa. It forms dense surface mats and has a dense flower spike of purple-magenta flowers. These are followed by blackish seed capsules. It rapidly invades damp ground, wetlands and shallow water. It quickly overtops native species and blocks waterways.

Infestations of Purple Loosestrife are found in the North Island near Levin and in Canterbury, Otago and Southland. Small infestations exist in urban gardens in Marlborough.

7.1.9 Pest Management Programme for Surveillance Pests

Objective

"To monitor the distribution, the impacts and the spread of Surveillance pests, fund appropriate research projects regarding surveillance pests and educate the public as to their identification and most appropriate method of control."

Means of Achievement

The Council will:

- Undertake surveys and record the information to determine the distribution and density of Surveillance Pests in Marlborough.
- Fund appropriate research projects to gather information on the impacts of and the most appropriate control techniques for Surveillance Pests.
- Fund Landcare Research projects to develop biological control for Surveillance Pests.
- Provide advice and information to landowners as to the identification and most appropriate methods of control for Surveillance Pests.
- Complete an impact and/or cost benefit analysis for all Surveillance Pests by 2017.

Performance Measures

- Respond to all enquiries in relation to Surveillance Pests within 5 working days.
- Presence, density and impacts of each Surveillance Pest surveyed and recorded by 2017.
- Provide educational material referring to the identification and control of Surveillance Pests.

PART FOUR

Management and Administrative Provisions

8 Powers Conferred

To achieve the purpose of the Strategy and to give effect to its objectives and means of achievement, the Council will use the statutory powers from Part 6 of the Act as listed in Table 8 below.

The Principal Officer of the Marlborough District Council shall appoint Authorised Persons and Accredited Persons, for the purpose of exercising functions, powers and duties, under the Act. Many of these functions, powers and duties relate to the implementation of this Strategy.

Authorised persons shall be limited to using those powers specified on his or her instrument of appointment. The powers specified in the instrument of appointment are based on the powers identified in Table 8.

Authorised persons will have the power to request information from occupiers under Section 43 of the Act.

Table 8 - Administrative Powers under the Act

Administrative Powers	Reference in the Biosecurity Act	Level of Delegation
The appointment of authorised and accredited persons Delegation to authorised persons	Section 103(3) and (7) Section 105	Principal Officer of the Marlborough District Council.
Power to act on default Liens Declaration of restricted place Declaration of controlled area Options for cost recovery Failure to pay Offences	Section 128 Section 129 Section 130 Section 131 Section 135 Section 136 Section 154	Environment Committee
Duty to provide information Power to require assistance Powers of inspection Power to record information General powers Use of dogs and devices Power to seize evidence Power to seize abandoned goods Power to intercept baggage etc. Power to examine organisms Power to give directions	Section 43 Section 106 Sections 109, 110 and 112 Section 113 Section 114 Section 115 Section 118 Section 119 Section 120 Section 121 Section 122	Authorised person

9 Regulatory Management

This section of the Strategy outlines the Council's policy and provisions relating to achieving the Strategy Rules and giving effect to the objectives for individual pests.

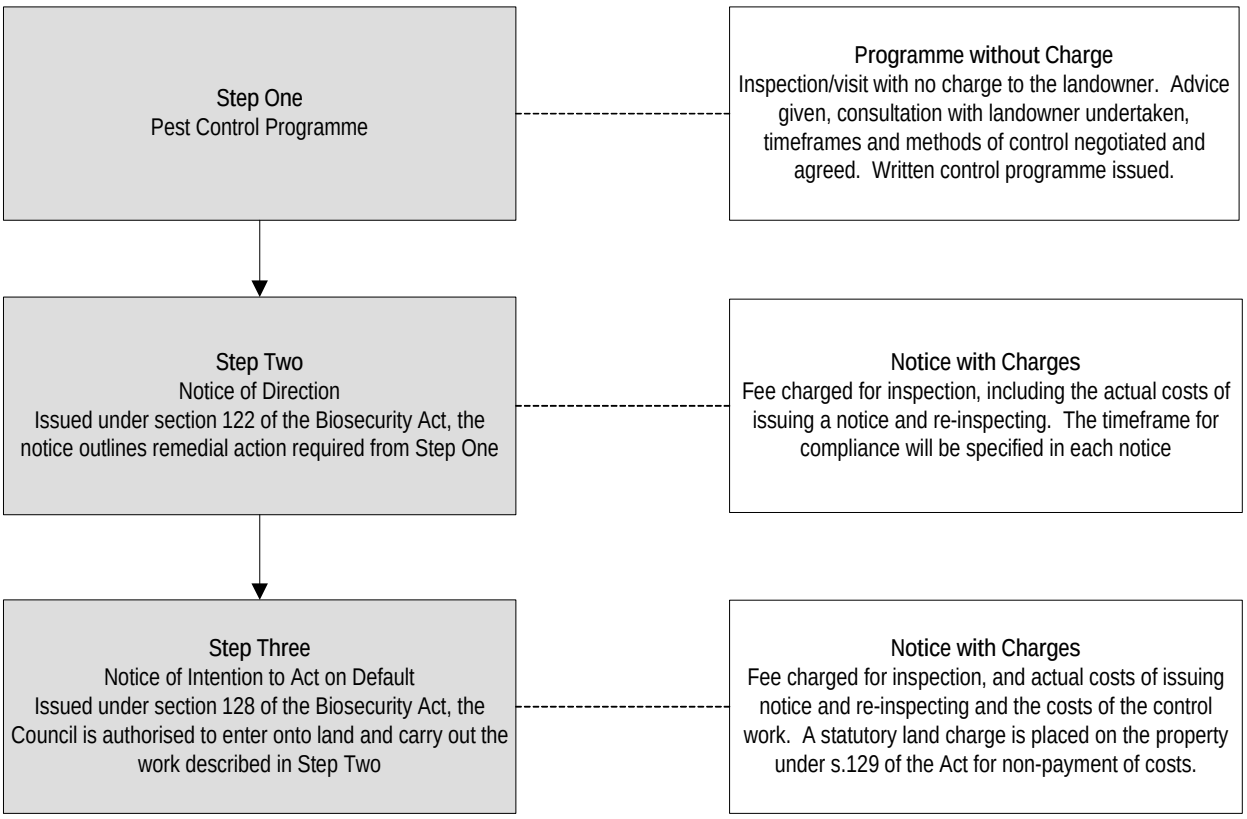
9.1 Policy

The Council places a strong emphasis on consultation and encouragement in the first instance to solving pest problems. While this approach is supported by the community, there is also an expectation that enforcement provisions will be used in the event that a land occupier fails to meet the obligations and standards prescribed in Part Three of this Strategy. In this situation an authorised person of the Council will:

- Advise the occupier/s of their non-compliance and direct they take remedial action; and
- Follow up the initial inspection to confirm what remedial action has been taken and identify any outstanding requirements.

In circumstances of continued non-compliance, the authorised person will report to the Council who may, in turn, use the enforcement provisions of the Act. The procedure outline in Figure 2 will be used in relation to these enforcement provisions.

Figure 2: Strategy Enforcement Compliance Process



9.2 Failure to Comply with a Notice of Direction

Where a Notice of Direction has been given to an occupier under Section 122 of the Act and when the occupier has not complied with the requirements of the direction within the time specified, then the Council may enter onto the land specified in the direction, and carry out or cause to be carried out, the works or measures specified in the direction or such other works or measures (including prosecution action) as is reasonably necessary or appropriate for the purpose of giving effect to the requirements of the direction.

9.3 Offences

Any person who, without reasonable excuse, fails to comply with the reasonable directions given to that person, or a reasonable requirement made of that person in accordance with, and for the purpose of the Act and Strategy, by an authorised person, or the assistant of an authorised person, may commit an offence against Section 154 of the Act. The Council will in appropriate cases bring prosecutions against persons who do not act on the directions or requirements issued by the authorised person who will give effect to the Strategy.

9.4 Recovery of Costs Incurred

The Council will recover the costs and expenses reasonably incurred by it carrying out the work and measures as a debt due from the occupier for whom the direction was given.

9.5 Exemption Provisions

The Council may upon the written request of a land occupier, exempt any person from any requirement in any Strategy Rule included in Part Three of this Strategy.

Before granting an exemption under section 80D of the Act, the Council shall be satisfied that:

- The requirement has been substantially complied with and that further compliance is unnecessary; or
- The action taken or provision made in respect of the matter to which the requirement relates is as effective or more effective than actual compliance with the requirement; or
- The prescribed requirements are clearly unreasonable or inappropriate in the particular case; or
- Events have occurred that make the prescribed requirements unnecessary or inappropriate in the particular case; and

that the granting of the exemption will not significantly prejudice the attainment of the objectives of the Strategy.

On receipt of any request, the Council will advise the occupier within 10 working days of its decision whether or not to exempt from any requirement in any Strategy Rule included in Part Three of the Strategy. Any exemption may be subject to conditions ensuring that:

- Measures are taken to minimise any adverse and unintended effects of the pest; or
- Any beneficial effects associated with the pest are safeguarded or enhanced.

10 Integrated Management and Cross-Boundary Issues

The aim of integrated management is to promote the purpose of the Strategy by minimising the effects of cross-boundary issues and promoting efficient and effective pest management.

Cross-boundary issues may occur where the environmental effects of one resource use are felt in another part of the environment (for example, water quality may be affected by the discharge of herbicides). Cross-boundary issues may also exist in relation to pests located in different regions in that the distribution of plants is really constrained to administrative boundaries. To minimise the effects of cross-boundary issues, the Council will use the following procedures:

- Pursuant to Section 76(4) of the Act, have regard to any national or regional pest management strategy concerning the same organism, any regulation, any regional policy statement, or regional plan prepared under the Resource Management Act 1991;
- Liaise as appropriate with the Ministry for Primary Industries over pest management issues which are best dealt with or co-ordinated at the national level;
- Liaise as appropriate with Nelson City Council, Tasman District Council and Environment Canterbury Regional Council on cross-boundary issues pertaining to pest management;
- Liaise as appropriate with other regional councils on matters of pest management which are relevant to more than one region;
- Liaise with and encourage other authorities to adopt policies, practices or measures which will avoid, mitigate or remedy adverse effects associated with pests and/or with making submissions in respect of documents prepared by other authorities.

Co-ordination with other pest management strategies will be achieved through a process based on consultation and communication between the Council and other persons or other organisations proposing strategies. Any other strategies proposed by the Council will be consistent with this Strategy.

11 Monitoring

The Council will monitor the effects of this Strategy, and thereby how well the objectives of the Strategy are being achieved, through a number of techniques, including the following:

- Maintaining a register of complaints relating to pests included in the Strategy.
- The measurement of pest densities and distribution over the duration of the Strategy.
- Inspections to ascertain the area infested by a pest and the potential habitat of a pest.
- Recording the monitoring of compliance and in the event of non-compliance, the use of enforcement provisions of the Act.
- The collection of data relating to the number of plants or animals destroyed on properties identified as 'case study' sites.

The Council must prepare an operational plan within 3 months of the Strategy being approved - a requirement of the Act. The operational plan identifies and outlines the nature and scope of activities the Council intends to undertake in the implementation of the Strategy. The plan will be reviewed annually and a report prepared by the Council. These reports are available to any stakeholder or member of the public on request.

12 Funding

12.1 Rationale

The presence of pests has significant costs, monetary and non-monetary, on others, including impacts on conservation values, water quality, human health and safety, Maori culture, production and recreational values. In the absence of the Strategy the control of the pests identified in Part Three would rely on voluntary actions. However the Council has determined that the Strategy is likely to provide more effective and efficient control at a district level, resulting in significant net savings to the community through a co-ordinated pest control programme.

The main funding principle to be applied to this Strategy then, is that those who benefit from control or those who contribute to the continuation or deterioration of a pest problem, should pay for the administration and implementation of the Strategy and, where appropriate, the costs associated with the control of these pests.

Land occupiers may be both beneficiaries and exacerbators. Consequently land occupiers will in the first instance fund the direct control of pest management on their property. The only exception to land occupiers directly being responsible for the control of pests are those pests classified as “total control”. Total control pests are of limited distribution, but have the potential to cause adverse effects to both the economic wellbeing and conservation values. Because landowners and the community both benefit from intervention, the Council will implement the control measures in respect of these pests.

Furthermore land occupiers will contribute towards the collective costs of implementing the Strategy in recognition of their ‘share’ of public benefits anticipated from intervention. These public benefits relate to the conservation and production benefits that land occupiers collectively accrue from efficient and effective pest management in Marlborough.

12.2 Alternative to Funding District Intervention

The alternative to funding district intervention is of course to do nothing. The Council is satisfied that its intervention is necessary in order to protect individual and district investments from the costs exposed by uncooperative occupiers. The Council has completed an assessment of the costs and benefits of implementing the Strategy and the subsequent impacts on agricultural production and conservation values (*Meeting the Requirements of the Biosecurity Act 1993: Economic evaluation of Regional Pest Management Strategy - Simon Harris 2001 and 2006 reports*). The assessment indicates that intervention provides significant net benefits to the district.

12.3 Strategy Costs

The costs to administer and implement the Strategy are indicated in Table 9. Administration and implementation costs principally relate to:

- Inspections, monitoring and surveillance;
- Undertaking direct control of total control pests;

- Undertaking biological control initiatives;
- Provision of education and advice;
- Enforcement of Strategy Rules; and
- General administration functions.

In addition to these costs there are also indirect costs associated with land occupier obligations to control pests. The estimated annual costs to land occupiers of controlling these pests, which include labour costs and resources, are estimated to be approximately $3 - 5 million per annum.

12.4 Funding Sources

The Council has determined that achieving the purpose and objectives of this Strategy benefits land occupiers collectively and there is a level of "public good" (that is, the community generally benefits from the implementation of the Strategy).

Therefore the Council has determined that an allocation from district wide and geographic area rates is the most appropriate funding basis having regard to:

- The extent to which the Strategy relates to the intent of land occupiers;
- The extent to which direct or indirect benefits are likely to accrue to property occupiers;
- The collective benefits to property occupiers relative to the collection of revenue; and
- The extent to which property characteristics contribute to the pressure or prevalence of pests.

12.4.1 District and Geographic Rate Revenue

A proportion of the general type rates levied on separately rateable properties in Marlborough under Section 5 of the Rating Powers Act 1988.

12.4.2 Pest Management Contribution

Crown land occupiers, namely the Department of Conservation, Transit New Zealand, Land Information New Zealand and KiwiRail subject to confirmation by Order in Council, and by negotiation contribute a set annual sum for the duration of the Strategy and be bound by the obligations imposed in the pest management programmes in Part Three. Crown agencies own a significant area of land that is non-rateable but contributes significantly towards pest problems in Marlborough.

12.4.3 Recovery of Direct Control Costs for "Total Control" Pests

12.4.3.1 Marlborough District Council Initiatives

As indicated in the Funding Rationale, the Council has determined that the wider community benefits from assurances that ultimately these pests are eradicated. A level of benefit has also been derived for individual land occupiers whose land these pests occupy. Therefore, the Council will recover 25% of the costs of direct control of these pests from these land occupiers (where the land occupier is clearly identifiable). The remainder of the costs will be recovered through the Council's rate revenue.

12.4.3.2 Marlborough District Council and Department of Conservation Joint Initiatives

The Council and Department of Conservation have determined that these pest control regimes shall be funded by equal share. The allocation of costs shall be determined annually through a consultative process between the Council and the Department.

12.5 Costs

Table 9 - Indicative Costs and Sources of Fund

Pest Management	2012/2013 $	2013/2014 $	2014/2015 $	2015/2016 $	2016/2017 $
Total Expenditure	990,776	1,029,388	1,061,280	1,086,304	1,084,355
Total Revenue	990,776	1,029,388	1,061,280	1,086,304	1,084,355
Council Rates	970,776	1,008,746	1,039,978	1,064,285	1,061,581
External Revenue	20,000	20,642	21,302	22,019	22,774

Note: These costs are indicative only and will be subject to change and apportionment of Council overheads. Actual costs will be determined through the Long Term Council Community Plan process.

12.5.1 Rating Provisions

Remission and Postponement: Rates remissions and postponements will be considered in terms of Part VII of the Rating Powers Act 1988, on application by the ratepayer.

Additional Charges: Additional charges will be imposed on rates remaining unpaid as provided for under Section 132 of the Rating Powers Act 1988, in accordance with the Council's resolutions made from time to time.

12.5.2 Compensation

This Strategy does not provide for compensation under Section 76(1)(n) of the Act to be paid to any persons as a result of losses incurred as a direct result of the Strategy.

MAPS

List of Maps

Map 1: Area of Jurisdiction - Marlborough District 89

Map 2: Upper Wairau Broom & Gorse Containment Control Area.....90

Map 3: Upper Awatere Broom Containment Control Area - Fringe Area.....91

Map 4: Upper Awatere Broom Containment Control Area - Core Area 92

Map 5: Chilean Needlegrass Containment Regime - Core Area 93

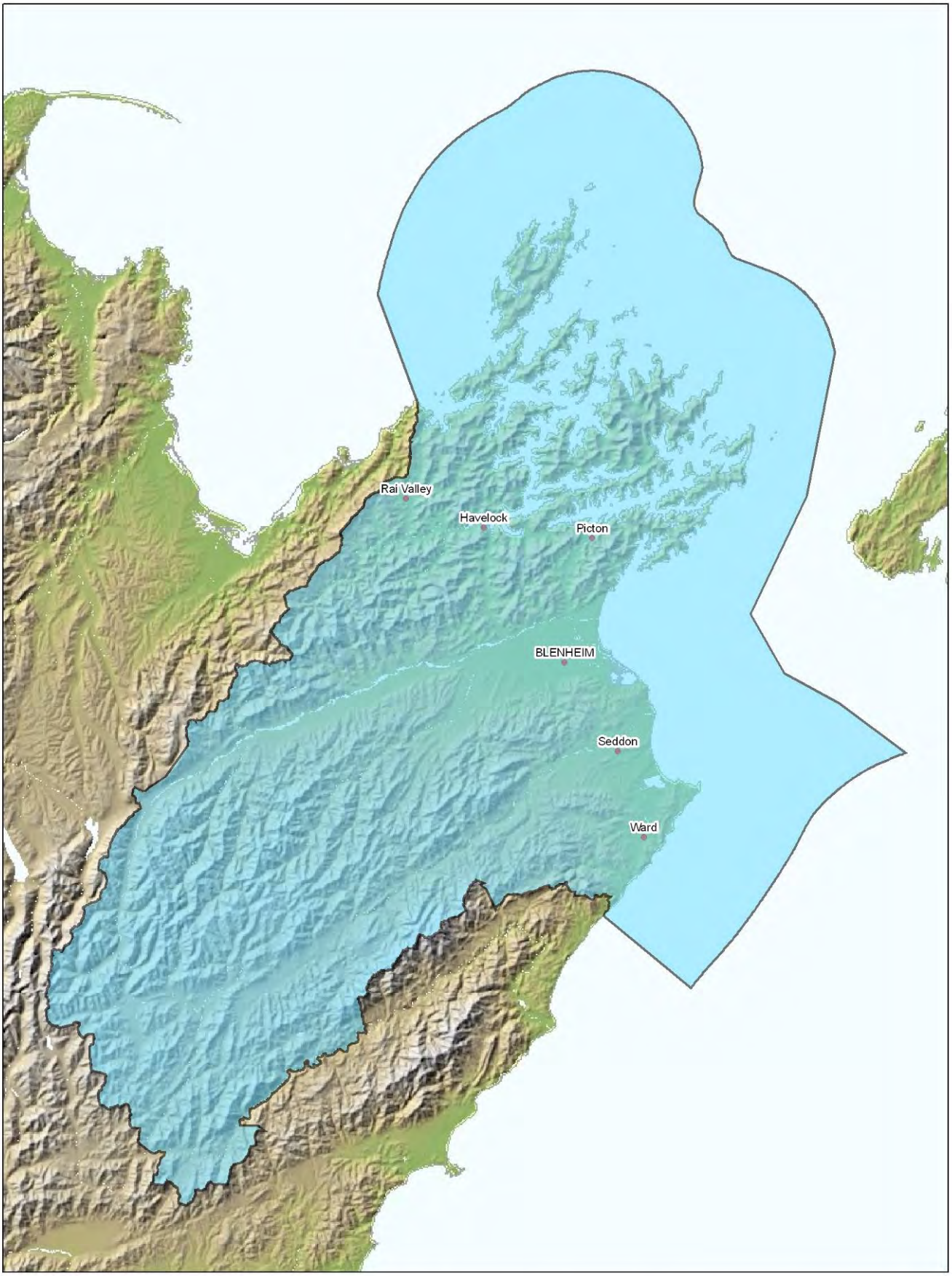
Map 6: Contorta Pine - Containment Areas 94

Map 7: Kangaroo Grass - Containment Regime - Core Area 95

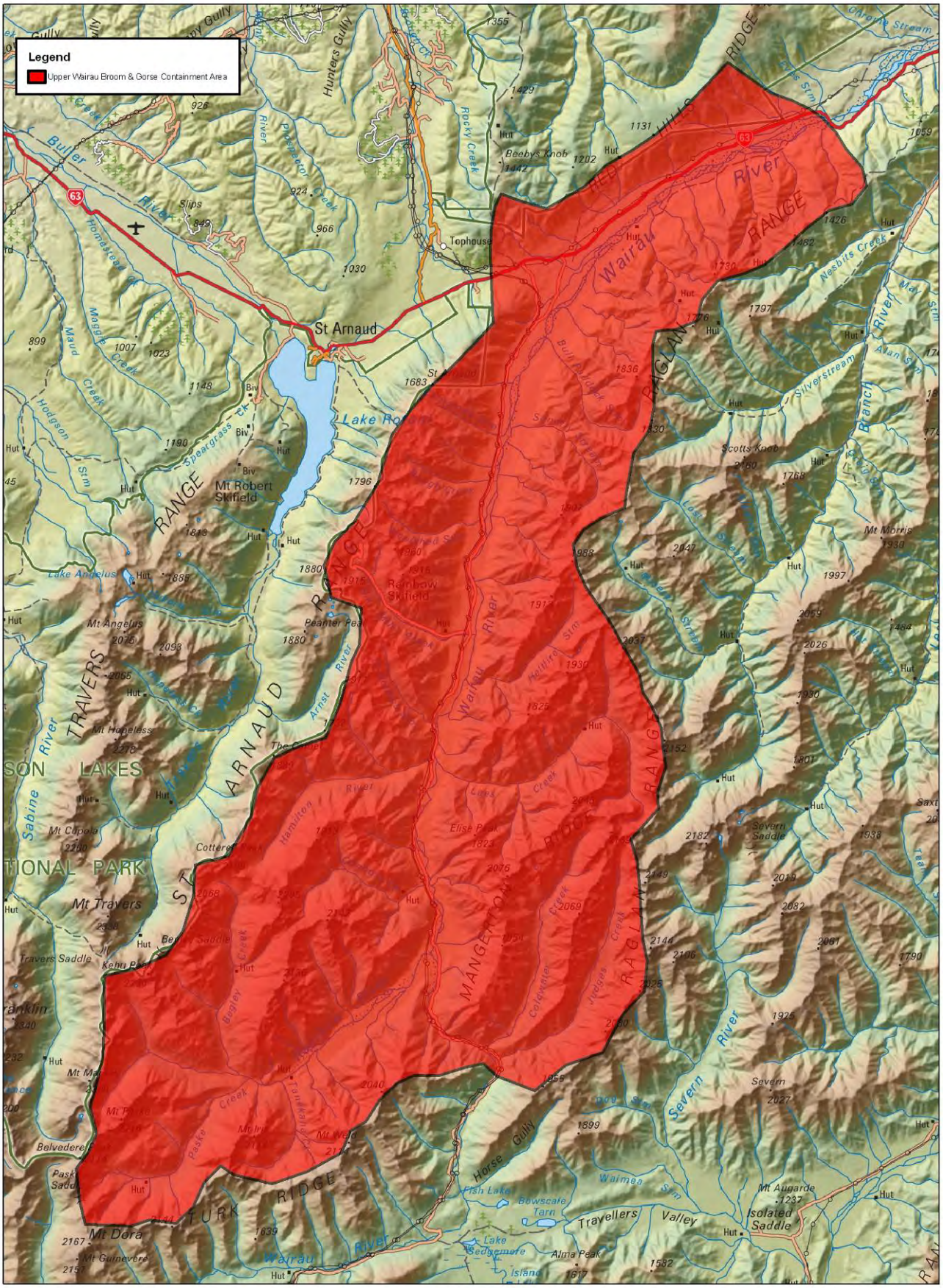
Map 8: White-Edged Nightshade Containment Regime - Core Area.....96

Map 9: Rabbit Containment Control Regime.....97

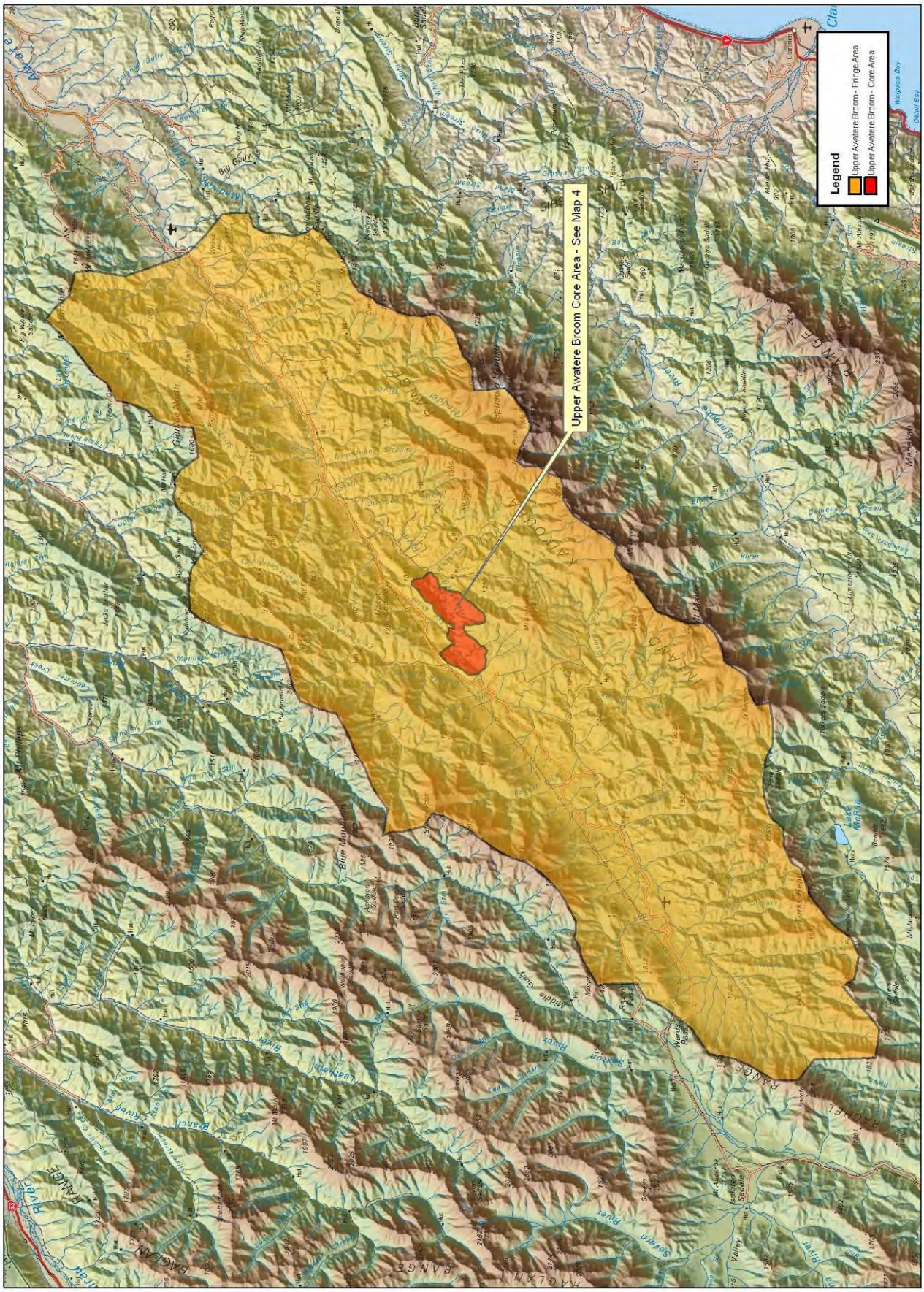
Map 10: Containment Regime for Brushtail Possums 98



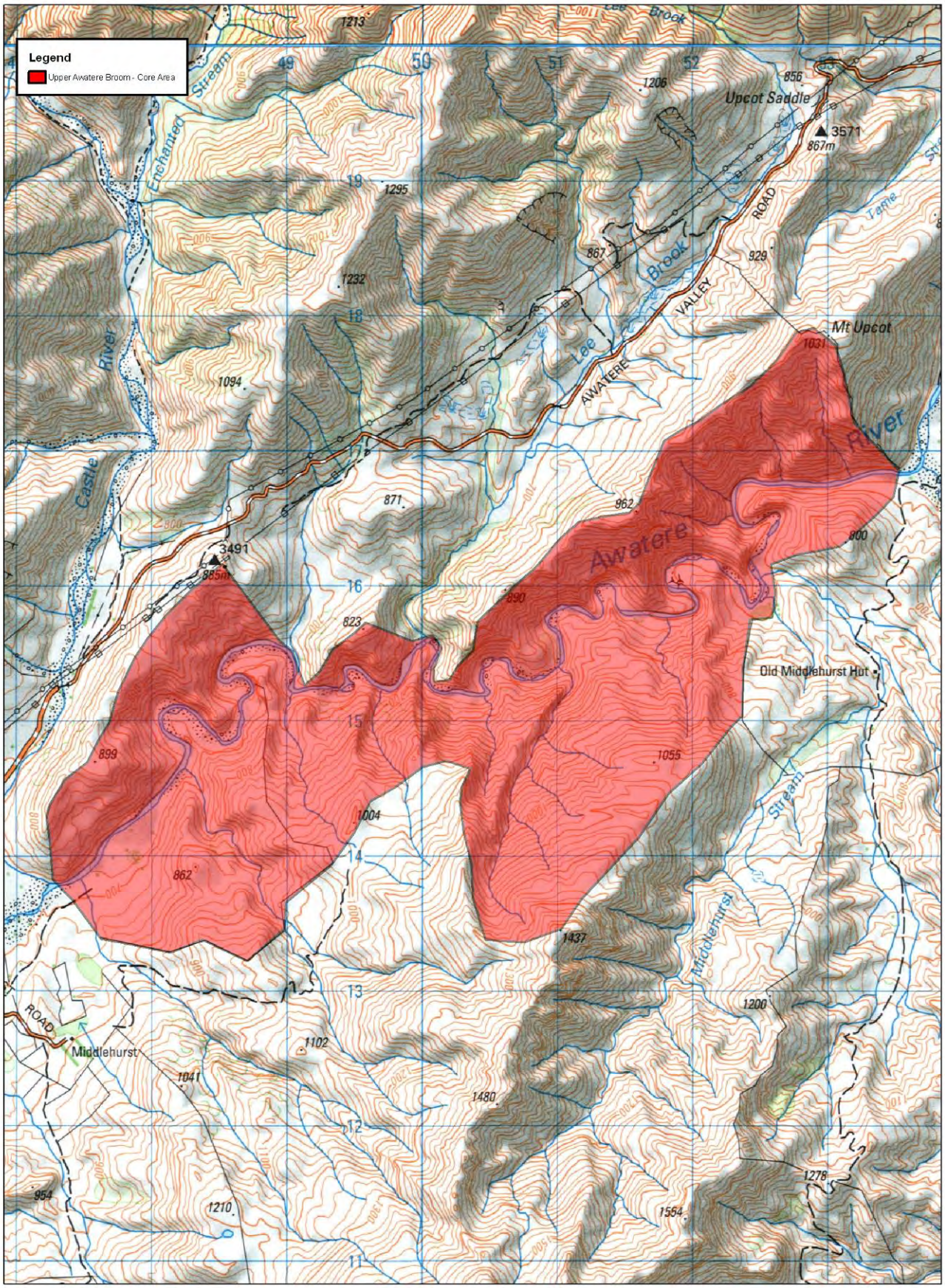
Map 1: Area of Jurisdiction - Marlborough District



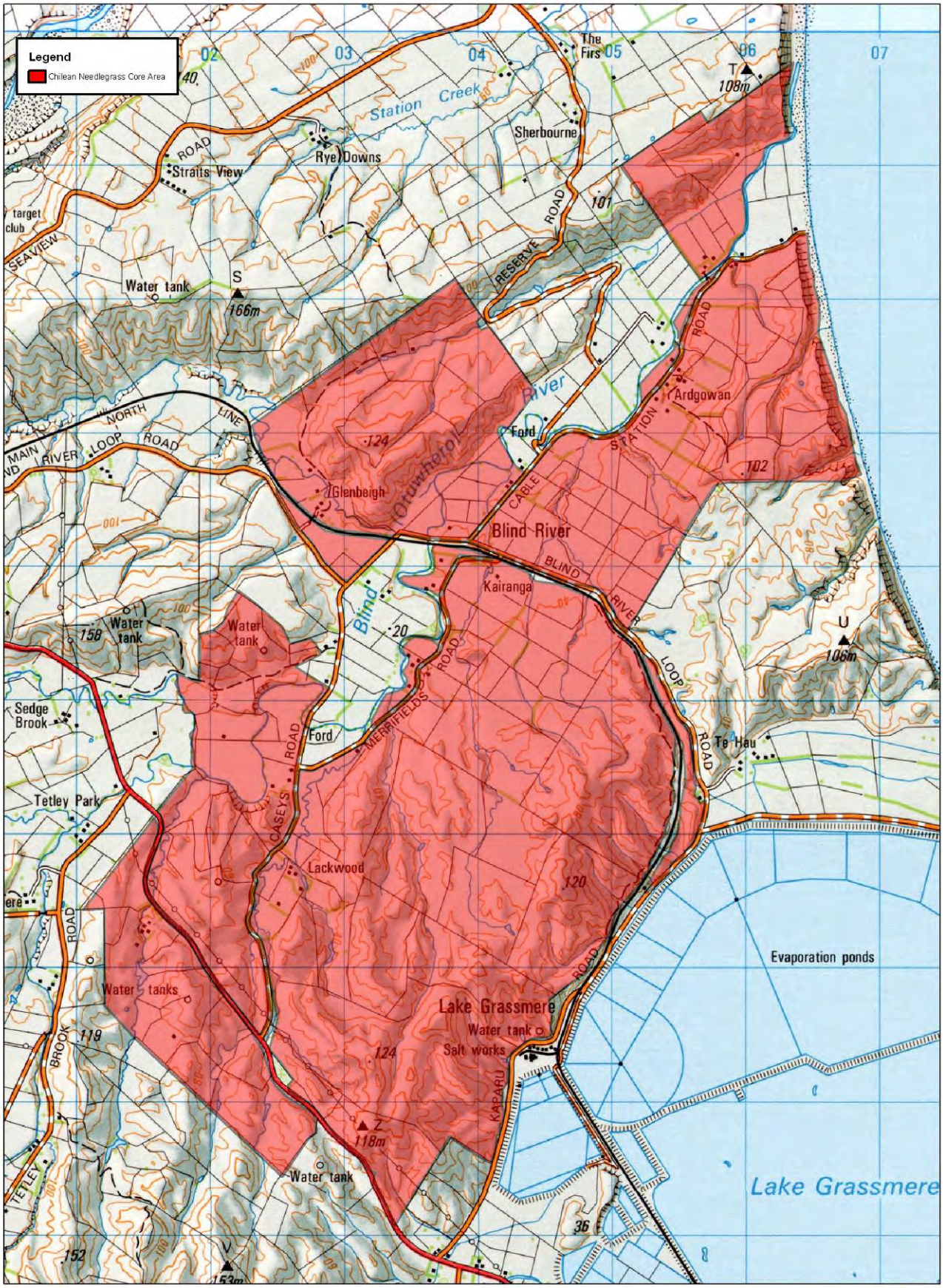
Map 2: Upper Wairau Broom & Gorse Containment Control Area



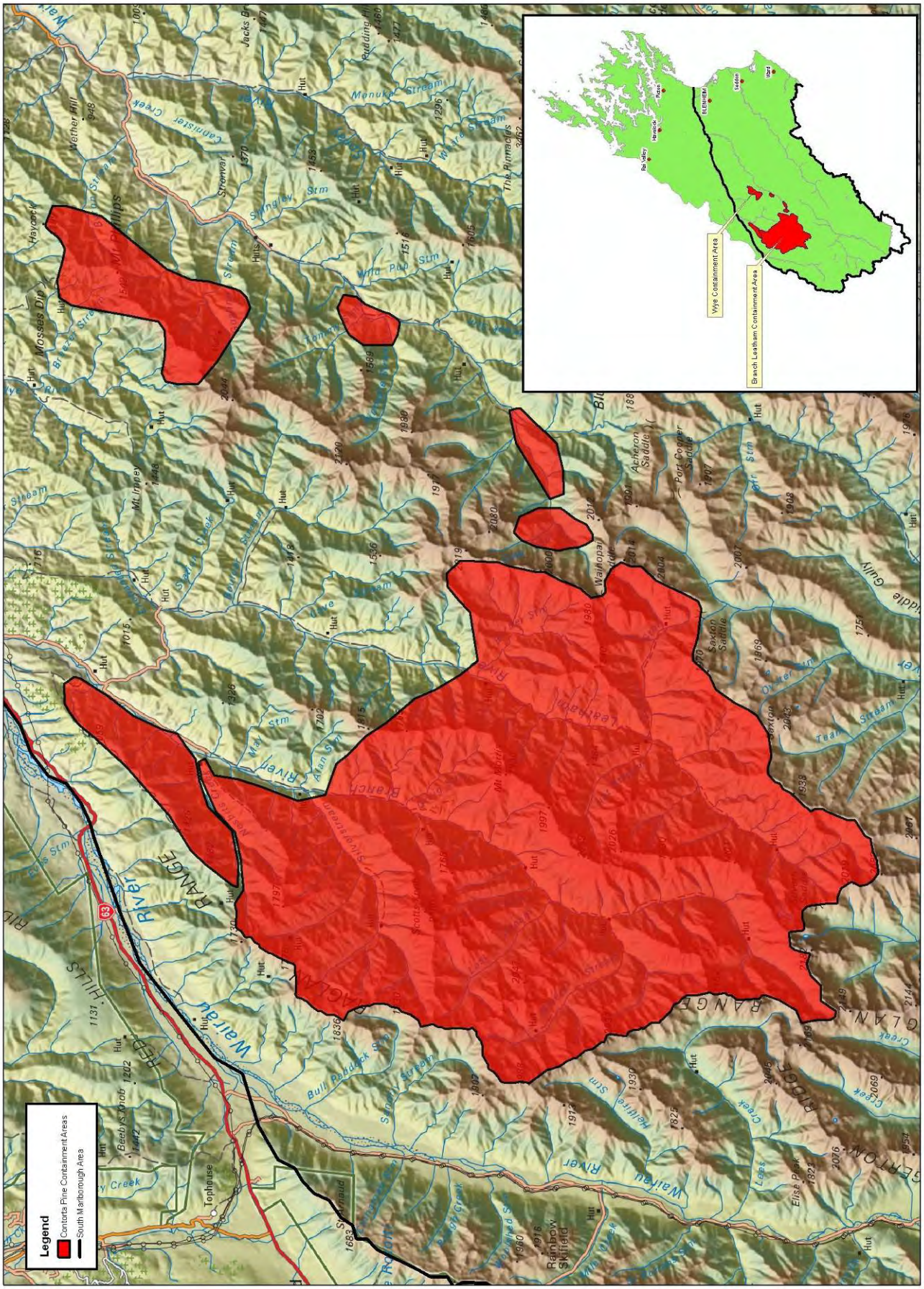
Map 3: Upper Awatere Broom Containment Control Area - Fringe Area



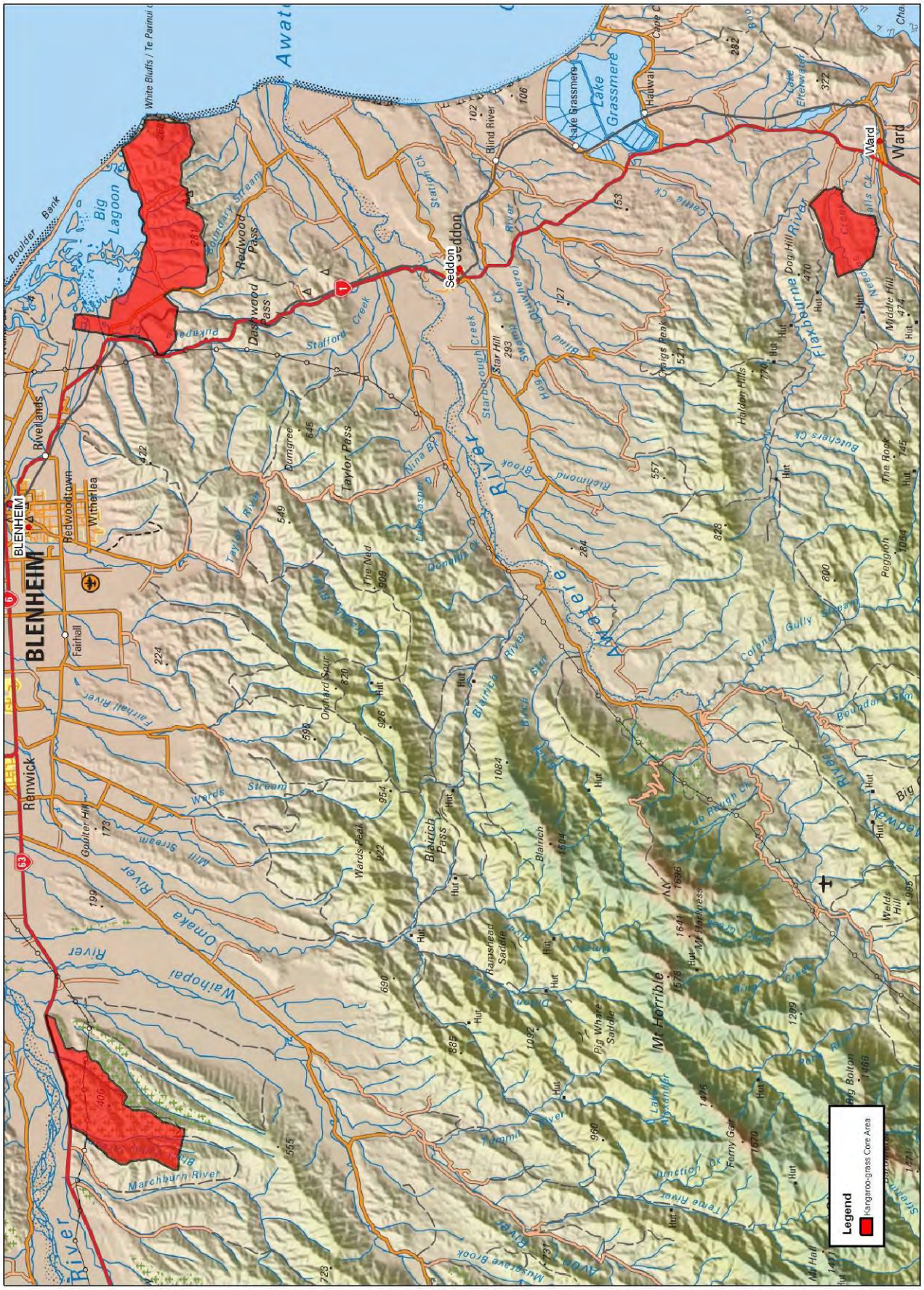
Map 4: Upper Awatere Broom Containment Control Area - Core Area



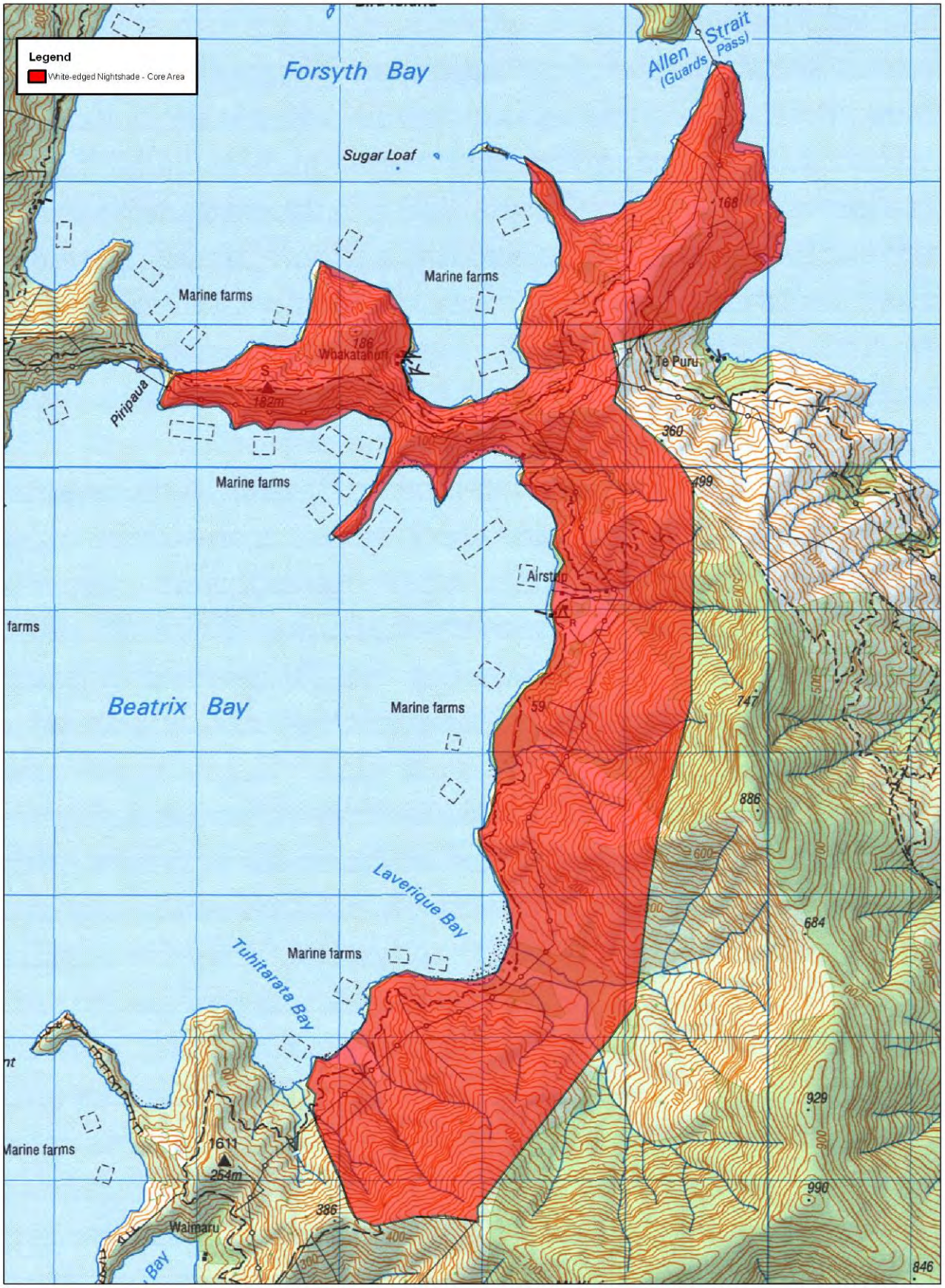
Map 5: Chilean Needlegrass Containment Regime - Core Area



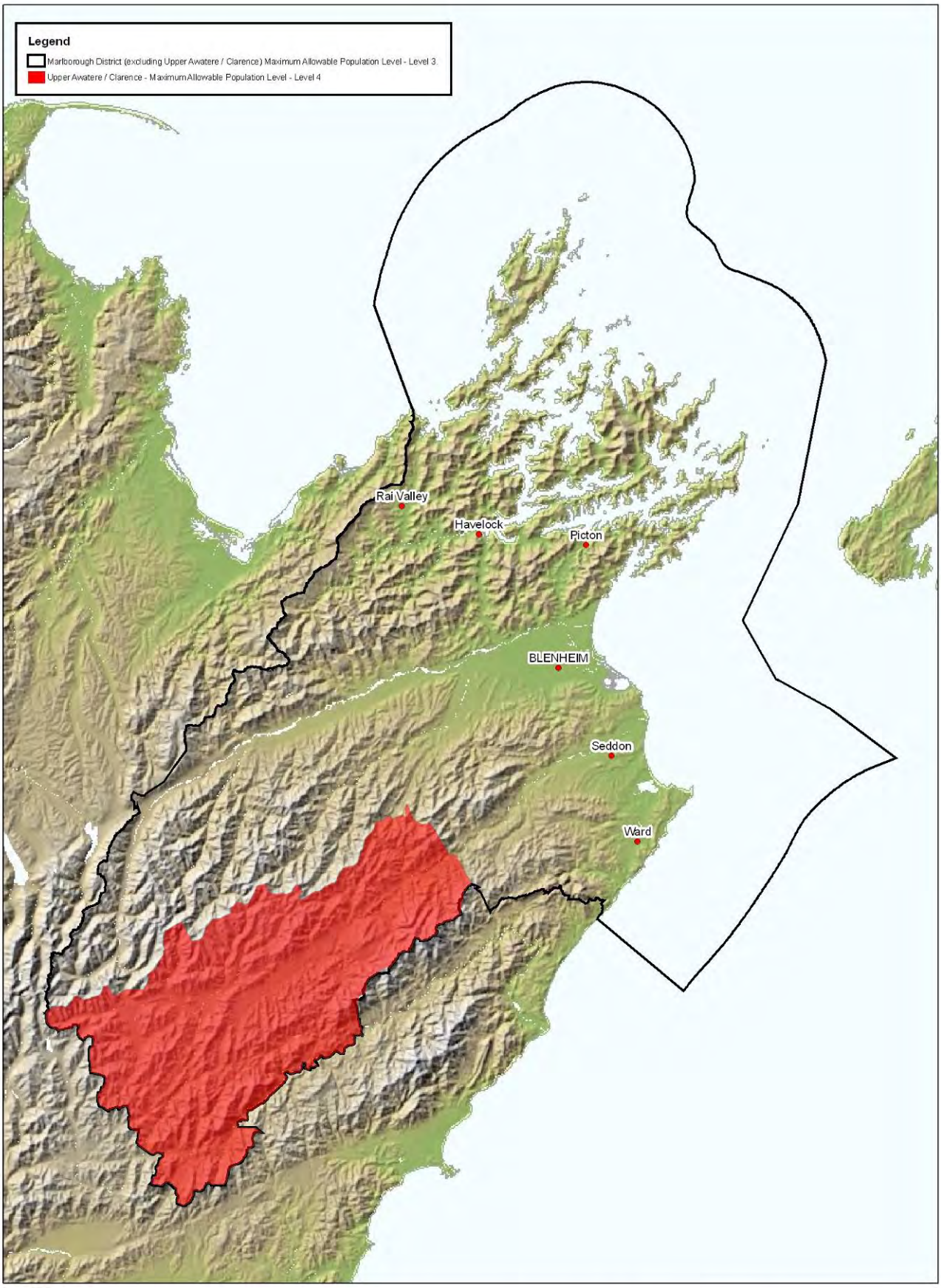
Map 6: Contorta Pine - Containment Areas



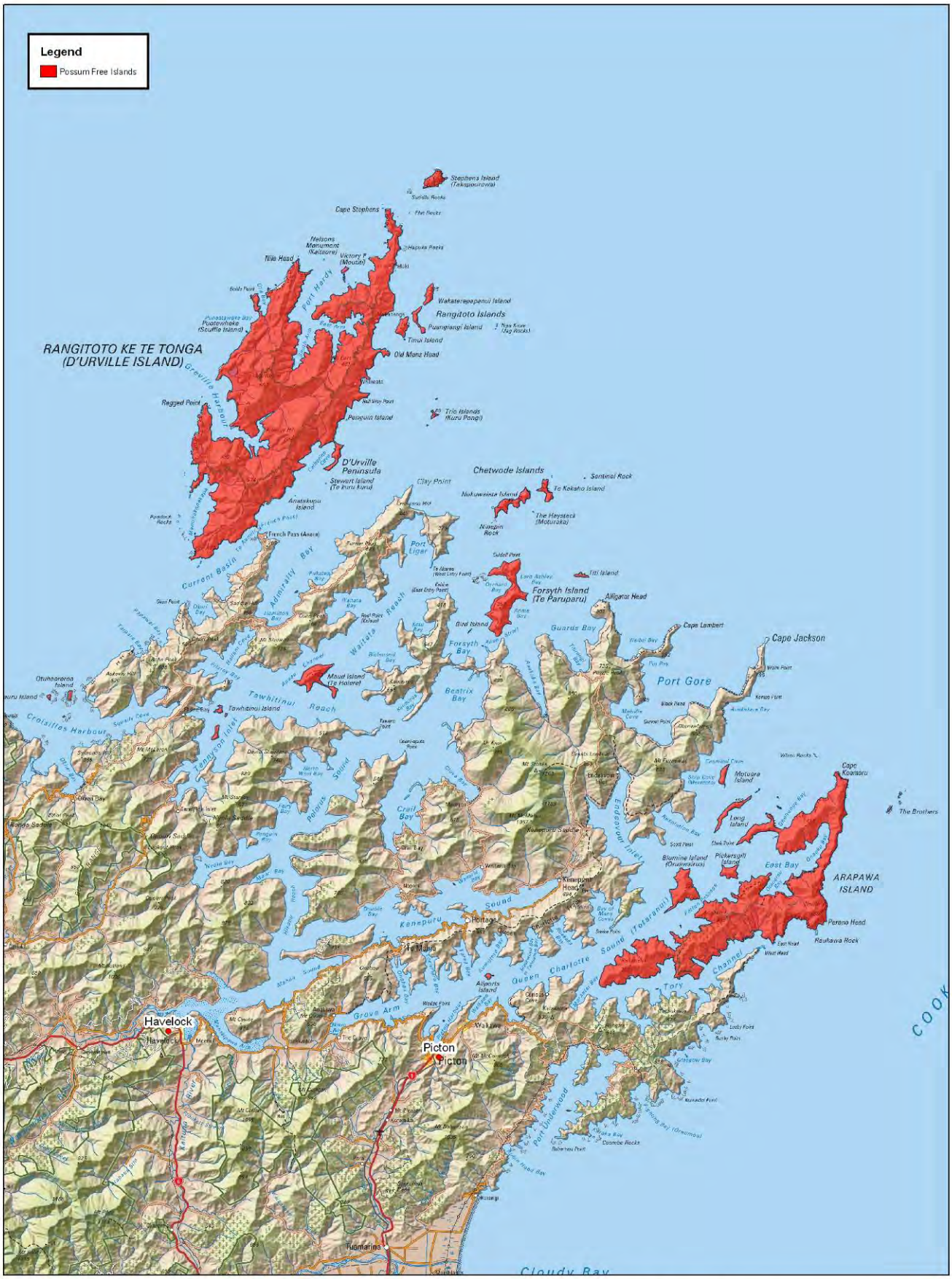
Map 7: Kangaroo Grass Containment Regime - Core Area



Map 8: White-Edged Nightshade Containment Regime - Core Area



Map 9: Rabbit Containment Control Regime



Map 10: Containment Regime for Brushtail Possums

Marlborough Sounds Offshore Islands that are currently Possum Free
Total Area = 26,400 Ha.

APPENDICES

List of Appendices

Appendix 1: Meaning of Words 101

Appendix 2: Explanation of Strategy Rules 107

Appendix 3: Alternative Options for Managing Pests 109

Appendix 4: Impacts of Pest and Parties Affected 113

Appendix 1: Meaning of Words

This section provides the meaning of words used in the Strategy and in the Biosecurity Act 1993 and the Resource Management Act 1991. Words marked with a + are as defined in the Biosecurity Act 1993, while words marked with a * are as defined in the Resource Management Act 1991.

Act	means the Biosecurity Act 1993 (including any amendments).
Apply	In relation to a controlled herbicide or pesticide means to drop from an aircraft, to lay as a bait or to spray, dust, sprinkle, wipe, place or pour on the ground or any vegetation.
Appropriate	means as determined to be appropriate by the Council or their officers acting under delegated authority.
Authorised Person+	means a person for the time being appointed an authorised person under Section 103 of the Act.
Beneficiary	means the receiver of benefits accruing from the implementation of a pest management measure or the Strategy.
Biological Control	means the introduction or establishment of living organisms, which will prey on, or adversely affect a pest.
Chief technical officer+	means a person appointed a chief technical officer under Section 101 of the Act.
Contain	means to prevent a pest spreading from a property or part of a property to other properties or part of a property.
Containment pest	refers to pests where the occupier of the land where the pest is present is required to control the pest as defined in a Strategy Rule(s) specified in the Strategy.
Costs and Benefits+	includes costs and benefits of any kind, whether monetary or non-monetary.
Control programme	Means a document produced and issued by the Council to an Occupier each year that provides information on the recommended control measures, timeframes and Occupier obligations for a pest organism to assist Occupiers in achieving the Strategy Rules.
Council	means the Marlborough District Council.
Core property	means a property classified as 'Core' that has a scattered infestation of a plant pest across the entire property, where there is a requirement to comply with a particular Strategy Rule.
Crown Land	means land vested in Her Majesty and administered by a Minister for the time being charged with the administration of the Department of State that has control of the land; and includes all and for the time being forming part of any National Park, any reserve within the meaning of the Reserves Act 1977, and all unoccupied lands of the Crown.
Department+	has the same meaning as in the State Sector Act 1988.
Destroy	means pull, breakdown, demolish, make useless, kill, cause to cease to exist.
Director-General+	means the chief executive of the Ministry.
District Council	means a district council constituted under Part 1A of the Local Government Act 1974.

Ecosystem	means a dynamic complex of plant, animal and micro-organism communities and their non-living environment, interacting as a functional unit.
Effect	unless the context otherwise requires, the term 'effect' includes: • any positive or adverse effects; and • any temporary or permanent effect; and • any past, present or future effect; and • any cumulative effect which arises over time or in combination with other effects regardless of the scale, intensity, duration or frequency of the effect, and also includes: • any potential effect of high probability; and • any potential effect of low probability which has a high potential impact.
Encroached	The invasion of pests onto an adjacent property or properties.
Endemic	Where a pest is in high densities and is common to the location.
Enforce	means to compel, observance with the law.
Environment+	includes— (a) Ecosystems and their constituent parts, including people and their communities; and (b) All natural and physical resources; and (c) Amenity values; and (d) The aesthetic, cultural, economic, and social conditions that affect or are affected by any matter referred to in paragraphs (a) to (c) of this definition.
Eradicate	means to totally clear from a property, region or part of that region.
Exacerbator	means a person, who by their actions or inaction, contributes to the creation, continuance, or exacerbation of a particular pest management problem.
Externality impacts	means adverse and unintended effects imposed upon others.
Farm land	means land used or intended to be used solely or principally for agricultural or horticultural purposes or the keeping of bees or poultry or other livestock; and 'farming' and 'farming purposes' have corresponding meanings.
Fringe property	means a property classified as 'Fringe' that has an isolated infestation of a plant pest where there is a requirement to comply with a particular Strategy Rule.
Indigenous	means native to an area.
Inspector+	means a person who is appointed an inspector under Section 103 of this Act.
Intrinsic values*	in relation to ecosystems, means those aspects of ecosystems and their constituent parts which have value in their own right, including - 1. Their biological and genetic diversity; and 2. The essential characteristics that determine an ecosystem's integrity, form, functioning, and resilience.

Local authority*+	means a regional council or territorial authority.
Management Agency+	means the Department, authority, or body corporate specified in a pest management strategy as the agency given the task of implementing the Strategy.
Management Regime	refers to system of administration.
Means of Achievement	refers to general management options or tactics by which the Marlborough District Council will achieve an objective(s).
Minister+	means a Minister of the Crown; and (a) In relation to a national pest management strategy, means the Minister who recommended the making of the order under Section 68 making the Strategy; and (b) In relation to a proposal for a national pest management strategy that has been notified, means the Minister who notified the proposal.
Ministry+	means the Department of State that, with the authority of the Prime Minister, is for the time being responsible for the administration of this Act.
Mitigate	means reduce or moderate the severity of something.
Monitor	means to observe the occurrence or non-occurrence of a pest.
Natural and physical resources+	means— (a) Organisms of all kinds; and (b) The air, water, and soil in or on which any organism lives or may live; and (c) Landscape and land form; and (d) Geological features; and (e) Structures of all kinds; and (f) Systems of interacting living organisms and their environment.
Objective	means a statement of a desired but specific environmental outcome.
Occupier+	(a) In relation to any place physically occupied by any person, means that person; and (b) In relation to any other place, means the owner of the place; and (c) In relation to any place, includes any agent, employee, or other person, acting or apparently acting in the general management or control of the place.
Operational Plan	Plan prepared by the management agency under Section 85 of the Act.
Organic material+	Subject to subsection (2) of this section, means any material that is or contains— (a) Material derived from an organism; or (b) An excretion or secretion of an organism,— (whether or not it also contains material derived from a human being or contains the secretions of a human being).

Organism+	(a) Does not include a human being or a genetic structure derived from a human being. (b) Includes a micro-organism. (c) Subject to paragraph (a) of this definition, includes a genetic structure that is capable of replicating itself (whether that structure comprises all or only part of an entity, and whether it comprises all or only part of the total genetic structure of an entity). (d) Includes an entity (other than a human being) declared by the Governor-General by Order in Council to be an organism for the purposes of the Act. (e) Includes a reproductive cell or developmental stage of an organism. (f) Includes any particle that is a prion.
Plant	means any plant, tree, shrub, herb, flower, nursery stock, culture, vegetable, or other vegetation; and also includes any fruit, seed, spore and portion or product of any plant; and also includes all aquatic plants.
Person+	includes the Crown, a corporation sole, and a body of persons (whether corporate or unincorporate).
Pest+	means an organism specified as a pest in the Pest Management Strategy.
Pest agent+	in relation to any pest, means any organism capable of— (a) Helping the pest replicate, spread, or survive; or (b) Interfering with the management of the pest.
Pest management strategy+	means a strategy, [made] under Part 5 of this Act, for the management or eradication of a particular pest or pests.
Principal Officer	means the Principal Administrative Officer of the Regional or Unitary Council and in relation to the Marlborough District Council, means the Chief Executive of the Council.
Region	in relation to a unitary authority, means the region in respect of which it has the functions, duties, and powers of a regional council.
Regional council	has the same meaning as in the Local Government Act 2002, and includes the Chatham Islands Council and unitary authorities.
Regulations	means regulations made under this Act.
Responsible minister+	means the Minister who, under the authority of any warrant or with the authority of the Prime Minister, is for the time being responsible for the administration of this Act
Restricted organisms+	means any organism for which a containment approval has been granted in accordance with the Hazardous Substances and New Organisms Act 1996 (including any approval deemed to have been granted under Sections 254(1), 254(3), 254(8)(a), 255(1), 255(2), 256, 258(1), and 258(3)).
Restricted place+	means any [place] that an inspector or an authorised person has declared to be a restricted place under Section 130 of this Act.

Risk goods	means any organism, organic material, or other thing, or substance, that (by reason of its nature, origin, or other relevant factors) it is reasonable to suspect constitutes, harbours, or contains an organism that may— (a) Cause unwanted harm to natural and physical resources or human health in New Zealand; or (b) Interfere with the diagnosis, management, or treatment, in New Zealand, of pests or unwanted organisms.
River*	means a continually or intermittently flowing body of fresh water; and includes a stream and modified watercourse; but does not include any artificial watercourse (including an irrigation canal, water supply race, canal for the supply of water for electricity power generation, and farm drainage canal).
Road*	has the same meaning as in Section 315 of the Local Government Act 1974.
Strategy Rule	means a rule included in a pest management strategy in accordance with Section 69B or Section 80B of the Act.
Surveillance pests	refers to pests where Council will monitor their distribution, their spread and their impacts over the term of the Strategy.
Sustainable management	means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while— (a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and (b) Safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and (c) Avoiding, remedying, or mitigating any adverse effects of activities on the environment. **This definition is the purpose of the Resource Management Act 1991.
Territorial authority*	has the same meaning as in Section 2(1) of the Local Government Act 1974.
Terrestrial Plants	means plants of or on dry land.
Total Control Plant Pests	refers to pests where Council and/or the Department of Conservation will undertake control work. Plant pests will be treated by a recognised method before they seed and Rooks will be treated when appropriate.
Unitary authority+	means territorial authority that, by virtue of Section 37N (1) of the Local Government Act 1974, has the functions, duties and powers of a regional council in respect of a region under its control.

Unwanted Organism+	means any organism that a chief technical officer believes is capable or potentially capable of causing unwanted harm to any natural and physical resources or human health; and (a) Includes— (i) Any new organism, if the Authority has declined approval to import that organism; and (ii) Any organism specified in the Schedule 2 of the Hazardous Substances and New Organisms Act 1996; but (b) Does not include any organism approved for importation under the Hazardous Substances and New Organisms Act 1996, unless— (i) The organism is an organism which has escaped from a containment facility; or (ii) A chief technical officer, after consulting the Authority and taking into account any comments made by the Authority concerning the organism, believes that the organism is capable or potentially capable of causing unwanted harm to any natural and physical resources or human health.
Water*	(a) Means water in all its physical forms whether flowing or not and whether over or under the ground: (b) Includes fresh water, coastal water, and geothermal water: (c) Does not include water in any form while in any pipe, tank, or cistern

Appendix 2: Explanation of Strategy Rules

Pest	Explanation
Total Control Plant Pests	The rule preventing the sale, propagation and distribution of pests (unwanted organisms) helps to reduce the number and/or extent of these pests. Notifying the Council of the presence of the specified pests will enable the Council to update its records, map new sites of these pests, carry out control work before they spread, determine whether new control regimes should be considered and provide advice and information to land occupiers where appropriate.
Total Control Animal Pests	The rule preventing the sale, propagation and distribution of pests (unwanted organisms) helps to reduce the number and/or extent of this pest. Notifying the Council of the presence of Rooks will enable the Council to update its records, map new sites of these pests, carry out control work before they spread, determine whether new control regimes should be considered and provide advice and information to land occupiers where appropriate. Rooks require professional control. Consequently the rules prohibit a range of activities, which may make Rooks difficult for the Council to monitor and control.
Containment Control Plant Pests	The rule for containment control pests preventing the sale, propagation and distribution of pests (unwanted organisms) helps to reduce the number and/or extent of these pests. Notifying the Council of the presence of new sites of specified pests will enable the Council to update its records, map new sites of these pests, carry out control work before they spread, determine whether new control regimes should be considered and provide advice and information to land occupiers where appropriate. By requiring the destruction of all plants before they produce seed, an infestation cannot spread and the density of the infestation should decrease over time. On properties classified as 'Core', the infestation is considered too high to practically destroy all plants before they seed. By requiring the destruction of all plants before they produce seed within a specified distance of adjacent property boundaries, the risk of an infestation spreading onto an adjacent property is reduced. In the Upper Wairau Broom and Gorse Containment Control Area, the low level of broom and gorse infestation warrants the destruction of all plants before they seed. In the Upper Awatere Broom Containment Control Area in the area classified as "Fringe", the low level of broom infestation warrants the destruction of all plants before they seed. In the Upper Awatere Broom Containment Control Area in the area classified as "Core", destroying plants in the riverbed and around the perimeter of this area, will prevent the spread of broom into the area defined as "Fringe".

Pest	Explanation
Containment Control Animal Pests	The rule controlling rabbits requires occupiers to maintain rabbit populations at or below a threshold level to minimise the effects of rabbits on agricultural values and soil conservation. The rule preventing the sale, propagation and distribution of rabbits (unwanted organisms) helps to reduce the number and/or extent of this pest. The rule preventing any person from spreading possums onto an offshore island in the Marlborough Sounds will prevent the establishment of such pests on offshore islands. These islands are currently free from possums and the Council aims to prevent their establishment and as a result protect conservation values.
Surveillance Pests	The rule preventing the sale, propagation and distribution of pests (unwanted organisms) helps to reduce the number and/or extent of these pests.

Appendix 3: Alternative Options for Managing Pests

Pest	Alternative Options	Reasons for preferring the measures specified in the Strategy
Total Control Plant Pests (Marlborough District Council Initiative) African Feather Grass, Bathurst Bur, Bur Daisy, Chinese Pennisetum, Giant Needlegrass, Parrots Feather and Saffron Thistle	Do nothing Require land occupiers to destroy all plants on land they occupy	Due to the limited distribution of these plant pests, there is substantial regional benefit in controlling them. To 'do nothing' would not achieve the objective and would result in significant net costs to the community as a result of reduced agricultural production. To require occupiers to destroy all plants would be unlikely to achieve the objective.
Total Control Plant Pests (Marlborough District Council/Department of Conservation Initiative) Boneseed, Cathedral Bells, Climbing Spindleberry, Eel Grass, Evergreen Buckthorn, Madeira Vine, Moth Plant, Senegal Tea and Spartina Grass	Do nothing Require land occupiers to destroy all plants on land they occupy	Due to the limited distribution of these plant pests, there is substantial regional benefit in controlling them. To 'do nothing' would not achieve the objective and would result in significant net costs to the community as a result of reduced conservation values. To require land occupiers to destroy all plants would be unlikely to achieve the objective.
Total Control Animal Pests Rooks	Do nothing Require land occupiers to destroy Rooks on land they occupy	Due to the limited number of Rooks, there is substantial regional benefit in controlling them. To 'do nothing' would not achieve the objective and would result in significant net costs to the community as a result of reduced agricultural production Rooks require professional control due to their wary nature and this option is not considered appropriate.
Containment Control Plant Pests		
Broom and Gorse	Do nothing Require land occupiers to destroy all plants on land they occupy	The alternative option of 'do nothing' would not achieve the objective and would result in significant additional cost to the community as a result of reduced agricultural production. This option was considered inappropriate due to the widespread distribution of these plant pests.

Pest	Alternative Options	Reasons for preferring the measures specified in the Strategy
Upper Wairau Broom and Gorse Containment Area	Do nothing	The alternative option of 'do nothing' would not achieve the objective and would result in significant additional cost to the community as a result of reduced agricultural production.
Upper Awatere Broom Containment Area	Do nothing Require land occupiers to destroy all plants on properties classified as 'Core'	The alternative option of 'do nothing' would not achieve the objective and would result in significant additional cost to the community as a result of reduced agricultural production. To require land occupiers to destroy all plants in the area classified as 'Core' was considered impractical due to the level of infestation of Broom in this area.
Chilean Needlegrass	Do nothing Require land occupiers to destroy all plants on properties classified as 'Core'	The alternative option of 'do nothing' would not achieve the objective and would result in significant additional cost to the community as a result of reduced agricultural production. To require land occupiers to destroy all plants on properties classified as 'Core' was considered impractical due to the level of infestation of needlegrass on these properties.
Contorta Pine	Do nothing	The alternative option of 'do nothing' would not achieve the objective and would result in wilding pines continuing to spread.
Kangaroo Grass	Do nothing Require land occupiers to destroy all plants on properties classified as 'Core'	The alternative option of 'do nothing' would not achieve the objective and would result in significant additional cost to the community as a result of reduced agricultural production. To require land occupiers to destroy all plants on properties classified as 'Core' was considered impractical due to the level of infestation of Kangaroo Grass on these properties.
Nassella Tussock	Do nothing Boundary control regime	The alternative option of 'do nothing' would not achieve the objective and would result in significant additional cost to the community as a result of reduced agricultural production. A Boundary Control regime for Nassella Tussock would not be suitable as the seed of Nassella Tussock will blow up to 10 km in strong winds

Pest	Alternative Options	Reasons for preferring the measures specified in the Strategy
Nodding Thistle	Do nothing Require land occupiers to destroy all plants on land they occupy	The alternative option of 'do nothing' would not achieve the objective and would result in significant additional cost to the community as a result of reduced agricultural production. This option was considered inappropriate due to the widespread distribution of this plant pest.
Ragwort	Do nothing Require land occupiers to destroy all plants on land they occupy	The alternative option of 'do nothing' would not achieve the objective and would result in significant additional cost to the community as a result of reduced agricultural production. This option was considered inappropriate due to the widespread distribution of this plant pest.
Reed Sweet Grass	Do Nothing Total Control	The alternative option of "do nothing" would result in Reed Sweet Grass spreading. The alternative option for total control would result in a substantial cost for little Council benefit using existing control/technology.
White-Edged Nightshade	Do nothing Require land occupiers to destroy all plants on properties classified as 'Core'	The alternative option of 'do nothing' would not achieve the objective and would result in significant additional cost to the community as a result of reduced agricultural production. To require land occupiers to destroy all plants on properties classified as 'Core' was considered impractical due to the level of infestation of White-Edged Nightshade.
Containment Control Animal Pests		
Feral Rabbits	Do nothing	The alternative option of 'do nothing' would not achieve the objective and would result in significant additional cost to the community as a result of reduced agricultural production and the effects on soil conservation.
Possums	Do nothing	The alternative option of 'do nothing' may achieve the objective but the result may also be possums becoming established on one or more offshore islands in the Marlborough Sounds. This would result in significant net costs to the community as a result of reduced conservation values.

Pest	Alternative Options	Reasons for preferring the measures specified in the Strategy
Surveillance Pests		
Surveillance Pests	Do nothing	The alternative option of 'do nothing' would not provide Council with an objective to record information on the impacts, the density and distribution of these pests. This information will be important when reviewing the Strategy in 5 years' time for developing future policies.

Appendix 4: Impacts of Pest and Parties Affected

Pest	Potential and Actual Adverse Effects	Principal Beneficiary/Exacerbator	Beneficiary		Exacerbator	
			Minor	Major	Minor	Major
Total Control Pests						
African Feather Grass	Diminished pasture and livestock production	Occupier		✓		✓
		Dairy, meat and wool sector	✓			
		Regional community		✓		
		Recreationalists	✓			
		Conservation values	✓			
Bathurst Bur	Diminished pasture and livestock production	Occupier		✓		✓
		Dairy, meat and wool sector	✓		✓	
		Regional community		✓		
Boneseed	Displaces native species in coastal areas	Conservation interests		✓		
		Regional community		✓		
		Recreationalists	✓			
		Occupier	✓			✓
Bur Daisy	Diminished pasture and livestock production	Occupier		✓		✓
		Dairy, meat and wool sector	✓		✓	
		Regional community		✓		
Cathedral Bells	Smothers and displaces native vegetation	Conservation interests		✓		
		Regional community		✓		
		Recreationalists	✓			
		Occupier	✓			✓
Chinese Pennisetum	Diminished pasture and livestock production	Occupier	✓			✓
		Dairy, meat and wool sector		✓		
		Regional community		✓		
		Conservation values	✓			
Climbing Spindleberry	Smothers native vegetation	Conservation interests		✓		
		Regional community		✓		
		Recreationalists	✓			
		Occupier	✓			✓
Eel Grass	Smothers native aquatic vegetation in waterways and impedes recreational activities and water flow	Conservation interests		✓		
		Regional community		✓		
		Recreationalists		✓		
		Occupier	✓			✓
Evergreen Buckthorn	Displaces and invades native vegetation in forest, scrub and coastal margins	Conservation interests		✓		
		Regional community		✓		
		Recreationalists	✓			
		Occupier	✓			✓

Pest	Potential and Actual Adverse Effects	Principal Beneficiary/Exacerbator	Beneficiary		Exacerbator	
			Minor	Major	Minor	Major
Giant Needlegrass	Diminished pasture and livestock production	Occupier		✓		✓
		Dairy, meat and wool sector	✓		✓	
		Regional community		✓		
Madeira Vine	Smothers native vegetation	Conservation interests		✓		
		Regional community		✓		
		Recreationalists	✓			
		Occupier	✓			✓
Moth Plant	Smothers native vegetation	Conservation interests		✓		
		Regional community		✓		
		Recreationalists	✓			
		Occupier	✓			✓
Parrots Feather	Invades and displaces native vegetation. Impedes drainage and causes economic impact on production land.	Primary industries		✓		
		Conservation interests		✓		
		Regional community		✓		
		Recreationalists		✓		
		Occupier	✓			✓
Saffron Thistle	Diminished pasture and livestock production	Occupier		✓		✓
		Dairy, meat and wool sector	✓		✓	
		Regional community		✓		
Senegal Tea	Invades and displaces native vegetation. Impedes drainage and causes economic impact on production land.	Primary industries		✓		
		Conservation interests		✓		
		Regional community		✓		
		Recreationalists		✓		
Spartina Grass	Invades and displaces native vegetation and accelerates sedimentation in estuaries	Occupier	✓			✓
		Regional community	✓			
		Conservation values		✓		
		Recreationalists	✓			
		Marine users	✓			
Containment Control Pests						
Broom	Diminished pasture and livestock production	Occupier		✓		✓
		Dairy, meat and wool sector		✓	✓	
		Regional community	✓			
		Conservation values	✓			
Contorta Pine	Diminished pasture and livestock production. Invades and displaces native vegetation.	Occupier		✓		✓
		Dairy, meat and wool sector		✓		
		Regional community		✓		
		Conservation values		✓		
		Recreationalists		✓		

Pest	Potential and Actual Adverse Effects	Principal Beneficiary/Exacerbator	Beneficiary		Exacerbator	
			Minor	Major	Minor	Major
Gorse	Diminished pasture and livestock production	Occupier		✓		✓
		Dairy, meat and wool sector		✓	✓	
		Regional community	✓			
		Conservation values	✓			
Kangaroo Grass	Diminished pasture and livestock production	Occupier		✓		✓
		Dairy, meat and wool sector		✓	✓	
		Regional community	✓			
		Conservation values	✓			
Nassella Tussock	Diminished pasture and livestock production	Occupier		✓		✓
		Dairy, meat and wool sector		✓	✓	
		Regional community	✓			
		Conservation values	✓			
Nodding Thistle	Diminished pasture and livestock production	Occupier		✓		✓
		Dairy, meat and wool sector		✓	✓	
		Regional community	✓			
		Conservation values	✓			
Ragwort	Diminished pasture and livestock production	Occupier		✓		✓
		Dairy, meat and wool sector		✓	✓	
		Regional community	✓			
		Conservation values	✓			
Reed Sweet Grass	Invades and displaces native vegetation. Impedes drainage and causes economic loss of production	Primary industries		✓		
		Conservation interests		✓		
		Regional community		✓		
		Recreationalists		✓		
White-Edged Nightshade	Diminished pasture and livestock production	Occupier		✓		✓
		Dairy, meat and wool sector		✓	✓	
		Regional community	✓			
		Conservation values	✓			
Feral Rabbits	Damage pasture, crops, pine tree plantations and affect soil quality	Occupier		✓		✓
		Dairy, meat and wool sector		✓		
		Forestry sector		✓		
		Regional community	✓			
		Conservation values		✓		
Possums	Defoliate native species, damage plantation species and spread Bovine TB	Occupier		✓		✓
		Dairy, meat and wool sector		✓		
		Forestry sector		✓		
		Regional community		✓		
		Conservation values		✓		

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