



Greater Wellington - Regional Pest Management Strategy

Operational Plan 2008 - 2009

Quality for Life



greater WELLINGTON
REGIONAL COUNCIL

Biosecurity





Regional Pest Management Strategy 2002-2022

Pest Animals and Pest Plants

Operational Plan 2008-2009

Biosecurity Department

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1. Introduction

1.1 Background

The Greater Wellington Regional Council Pest Management Strategy 2002 – 2022 (the strategy) was prepared in accordance with the *Biosecurity Act 1993*. The strategy was approved by Greater Wellington on 17 September 2002.

This Operational Plan seeks to implement year seven of the strategy and continue to advance the aims and objectives of the strategy. The strategy is currently undergoing the five year review process.

The reviewed strategy is proposed to take effect in late 2008.

1.2 Linkage to the Regional Pest Management Strategy

This Operational Plan has been prepared in accordance with section 85 of the *Biosecurity Act 1993*. The Plan identifies and outlines the nature and scope of activities Greater Wellington intends to undertake in the implementation of its Regional Pest Management Strategy for the financial year 2008– 2009.

The strategy contains objectives specific to individual pests and outlines the means by which Greater Wellington, as Management Agency, will achieve those objectives.

The strategy has clearly defined rules to be met by all land occupiers. Greater Wellington has responsibility to ensure land occupiers are aware of, and meet, their obligations for pest management on their properties. Greater Wellington can also undertake pest control operations where there is recognised regional benefit.

1.3 Implementation

The purpose of the Operational Plan is to implement the Regional Pest Management Strategy for the Wellington region. The principal objectives are to minimise the actual and potential adverse and unintended effects of pests on the environment, the economy and the community, and maximise the effectiveness of individual pest plant and pest animal management via a regionally co-ordinated response.

1.4 Review

The Operational Plan will be reviewed and reported on annually. The Plan may be amended to ensure that the objectives of the strategy will be achieved within its term. The *Biosecurity Amendment Act 1997* allows Greater Wellington to make minor changes to the strategy, provided that it is satisfied that the change will not have any significant effects on the rights and obligations of any persons.

The strategy must be reviewed at least once every five years. Following a review, Greater Wellington may leave the strategy unchanged, or amend or revoke it. The five year review is currently in its final stages, with the reviewed strategy proposed to take effect in late 2008. The current strategy remains in place until the new strategy is finalised.

1.5 Integration with Annual Plan

As far as practicable, the Operational Plan has been integrated with Greater Wellington's Annual Plan. The Annual Plan also provides an overview of related pest management activities for the 2008/09 year. Implementation costs are included in the Annual Plan.

1.6 Areas of responsibility

This plan and the strategy are based on the following core areas of Greater Wellington's responsibility.

- **Regulation (standards and enforcement)**
Standards, rules and restrictions are set and compliance enforced with penalties, when and where necessary.
- **Inspection and monitoring**
Regular property inspections ensure that rules and regulations are being met and changes in pest densities are determined over time.
- **Direct control**
Greater Wellington funds and undertakes pest control in some circumstances as a service for regional benefit.
- **Advice and education**
Free advice is given to raise awareness of pest problems and to provide land occupiers with the information to control their own pests.
- **Community initiatives**
Guidance and support is provided for community driven initiatives to control pests.
- **Cost recovery**
A full cost recovery operational service is available for pest control.
- **Biological control**
If approved biological control agents become available, then Greater Wellington may elect to utilise them. Biocontrol is currently a key tool in the management of various pest plants and rabbits.

1.7 Principle Legislation and Policy references

- *Biosecurity Act 1993* and amendments
- Regional Pest Management Strategy 2002–2022.

1.8 Pest management categories

Pest management policies are dependent on the phase or degree of infestation. Therefore, all pests have been allocated specific pest management categories (refer **Figure 1**). With the five year review of the RPMS, the current infestation curve has been expanded (refer **Figure 2**).

The invasion pattern of many species tends to follow an ‘S-shaped’ pattern (**Figure 1**). The important characteristics of the curve are a long tail at the beginning of a species’ invasion as the pest establishes itself, a steep rise as the pest finds suitable habitats, and then a flattening off as these habitats reach carrying capacity.

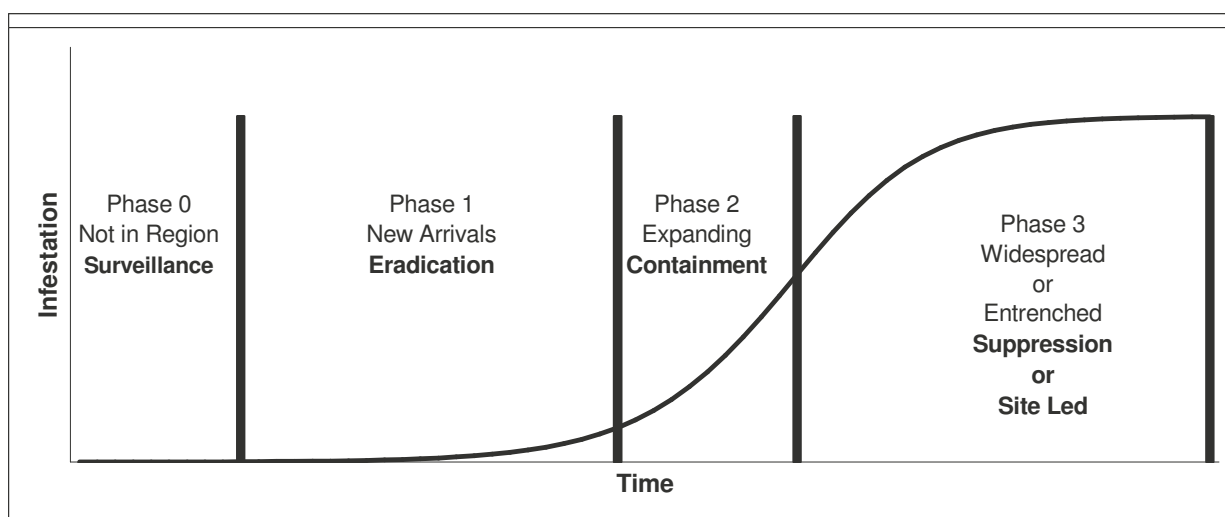


Figure 1. Conceptual phases of a pest through time in relation to its appropriate management. Modified from P. Williams, 1997, *Ecology and Management of Invasive Weeds*, Department of Conservation.

- **Phase 0 – Surveillance species:**

These are specific species which are currently being considered for possible inclusion in the reviewed strategy. They may not be established in the region but may be present in neighbouring regions. These species are known to be invasive. Regional pest plant surveillance programmes are in place to detect new arrivals.

- **Phase 1 – Recent arrivals limited in distribution:**

These species have been classified as Eradication pests. They are of limited distribution and density and have the potential to have serious adverse effects. Every attempt will be made to eradicate these pests.

- **Phase 2 – Expanding in range and density:**

These species have been classified as Containment pests. They are established but still have a limited to moderate distribution. Clear areas will be kept clear.

- **Phase 3 – Established in most or all available habitat:**

These species have been classified as either Suppression pests or Site-Led pests.

Suppression pests are widespread and have the ability to spread rapidly over long distances. Eradication or restriction of range is not achievable and the policy is to suppress pest densities to minimise adverse impacts.

Site-Led pests are well established throughout the region and it is not cost effective to attempt control on a region wide scale. Therefore, management is focused on specific sites where the pests have the most serious impact and benefits of control are greatest. The Site-Led category has been divided into three management programmes:

1. Managing environmental pests in important environmental places.
2. Managing pests when and where they affect human health.
3. Managing agricultural pests to mitigate impacts on adjacent properties.

Expanded infestation curve for the proposed RPMS:

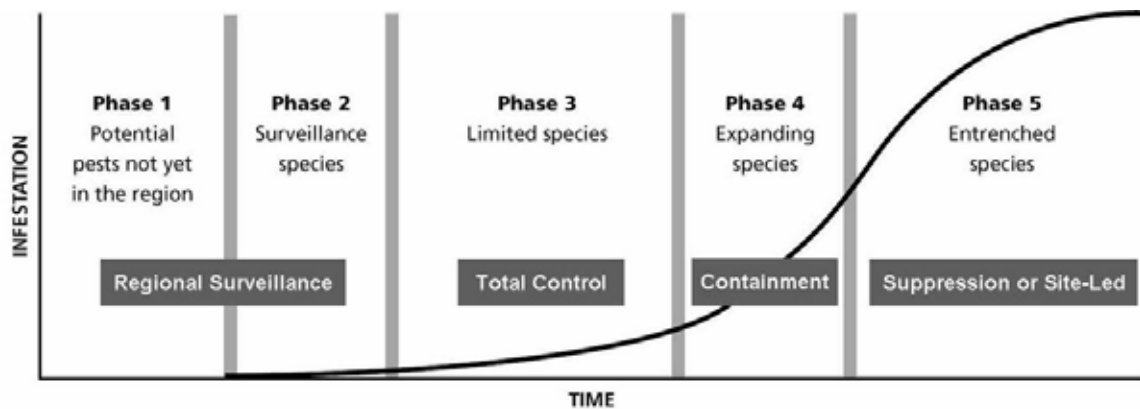


Figure 2: Phases of a pest through time in relation to its appropriate management. Adapted from Greater Wellington’s Regional Pest Management Strategy, published April 2003.

The proposed expanded infestation curve (refer **Figure 2**) has been adapted from the original RPMS to better describe the initial infestation stages of a pest species. Phase 0 has been replaced with Phase 1 and 2, with the Surveillance category expanded to 1: pests not yet in the region, and 2: new pests with limited distribution. The management policies for the 5 phases of the expanded curve are described in the table below.

The expanded infestation curve will become current when the proposed RPMS is approved.

Infestation phase	Phase characteristics	Management policies
Phase 1	Potential pest not currently in the region	Regional Surveillance
Phase 2	Recent arrival limited in distribution	Regional Surveillance
Phase 3	Limited in distribution and density	Total Control
Phase 4	Established but have not reached full distribution	Containment
Phase 5	Widespread or entrenched in most or all available habitat	Suppression or Site-Led

2. Pest Animals

2.1 Performance targets and measures

2.1.1 Containment species – rooks

Aim: To manage rooks as a Containment category pest to levels that protects production systems at a cost of \$55,480

Objective	Means of Achievement
<ol style="list-style-type: none">1. Have no active breeding rookeries outside the Containment zone (refer Appendix 1) by December 2008.2. Annually report the location of known rookeries and number of active nests.3. Annually report the density of rooks at known sites.	<ul style="list-style-type: none">• Undertake direct control by service delivery where rooks are known to exist.• Survey rook populations annually in areas where they are known to exist and where new infestations are reported.• Support appropriate research initiatives, including biological control should it become available.• Ensure compliance with the Strategy rules in order to achieve the Strategy objectives.• Encourage Horizons Regional Council to actively pursue management of rooks within their region that complements Greater Wellington’s rook containment programme.• Annually inspect pet shops and rook keepers to prevent the sale of rooks.

2.1.2 Suppression species– rabbits

Aim: To minimise the adverse impacts of feral rabbits throughout the region at a cost of \$102,200

Objective	Means of Achievement
<p>1. Ensure that no area in the region exceeds Level 5 on the Modified McLean Scale at any one time.</p> <p>(See Appendix 2 for the Modified McLean Scale of rabbit infestation).</p>	<ul style="list-style-type: none">• Undertake direct control by service delivery to control rabbits on riverbeds, esplanades or similar public commons to ensure that rabbits do not exceed Level 5 of the Modified McLean Scale.• Ensure compliance with the Strategy rules in order to achieve the Strategy objectives.• Survey land in high to extreme rabbit prone areas to determine the extent of rabbit infestation.• Make occupiers aware of their responsibilities for rabbit control.• Provide information and publicity to enhance public awareness of the threat rabbits pose to the region.• Release biological control agents for the control of feral rabbits when appropriate.• Support research initiatives including biological control.• Annually inspect pet shops to prevent the sale of feral rabbits.

2.1.3 Site-Led species – magpies

Aim: To manage magpies to minimise adverse human health and environmental impacts in the Wellington region at a cost of \$43,800

Objective	Means of Achievement
<ol style="list-style-type: none"> 1. Upon receiving complaint of magpies attacking members of the public, dispose of those magpies within 10 working days. 2. Identify conservation impacts of magpies on native fauna by supporting research initiatives. 3. Establish representative population trend monitoring sites for magpies. 	<ul style="list-style-type: none"> • Undertake direct control by service delivery of magpies where there is known to be a threat of injury to members of the public, or complaint(s) are made to that effect within 10 working days. • Respond to landowners wanting to undertake magpie control within 15 working days of receiving a request for information and/or assistance. • Provide advice, education and assistance to occupiers wanting to undertake magpie control. • Support appropriate research initiatives into magpie impact on conservation values. • Annually inspect pet shops to prevent the sale of magpies.

2.1.4 Site-Led - Mount Bruce (Pukaha) predator buffer

Aim: Complement the native flora and fauna restoration programme undertaken by the Department of Conservation, Rangitaane o Wairarapa and the National Wildlife Trust at the Mount Bruce Scenic Reserve at a cost of \$40,880

Objective	Means of Achievement
<ol style="list-style-type: none"> 1. To enhance the survival of native flora and fauna species in and around the Mount Bruce Scenic Reserve. 	<ul style="list-style-type: none"> • Undertake a predator control programme over an area of approximately 2,223 hectares that is contiguous to the Mount Bruce Scenic Reserve.

2.1.5 Feral and unwanted cats as a threat to biodiversity

Aim: Minimise the biodiversity impact of feral and unwanted cats at a cost of \$36,500

Objective	Means of Achievement
<ol style="list-style-type: none"> 1. Reduce the adverse environmental impacts of feral and unwanted cats on native fauna. 2. Reduce the incidence of unwanted cats being released into the wild and thus becoming a threat to native wildlife. 3. Prevent the establishment of unwanted cat colonies in areas of ecological significance. 	<ul style="list-style-type: none"> • Provide information and publicity to enhance public awareness of the threat feral and unwanted cats pose to the native fauna of the region. • Provide financial assistance to domestic cat desexing programmes in partnership with select organisations and businesses. • Work with communities to remove populations of stray or unwanted cats. • Undertake direct control of feral and unwanted cats by service delivery as part of the integrated pest management of Key Native Ecosystems (KNEs) and other selected sites.

2.1.6 Site Led – Key Native Ecosystem and Reserves Management

Aim: To protect indigenous biodiversity in a comprehensive selection of Key Native Ecosystems and Reserves at a cost of \$523,169

Objective	Means of Achievement
<ol style="list-style-type: none"> 1. Achieve a measurable improvement in the ecological health and diversity of KNEs and selected Reserves using a range of suitable indicators. 	<ul style="list-style-type: none"> • Ensure KNEs are legally protected into perpetuity. • Establish and implement integrated pest management plans for all KNEs and selected Reserves. • Undertake direct control by service delivery of pests identified in integrated pest management plans. • Facilitate the involvement of community groups where appropriate.

Objective	Means of Achievement
	<ul style="list-style-type: none"> • Co-ordinate site management with other biodiversity initiatives where possible. • Use biological control agents where appropriate and support relevant biological control research initiatives. • Monitor site recovery using a range of ecological indicators. • Manage external pressures that are inconsistent with Key Native Ecosystem Management objectives. • Provide public education and advice to foster biodiversity management outside formal KNE and Reserve programme areas. • Maintain holistic management in existing managed KNE and Reserve areas. • Where KNEs are identified on Territorial Local Authority land, seek funding from the relevant authority to form financial partnerships.

3. Pest Plants

3.1 Performance targets and measures

3.1.1 Surveillance species

Aim: To determine the extent of specific plant species within the Wellington region at a cost of \$220,095

Objectives	Means of Achievement
<ol style="list-style-type: none">1. Maintain a priority list of “Yet to Arrive” species of significant potential risk to our regional values.2. To ascertain the presence or absence of these target species within the region and initiate appropriate response activities for each new incursion.3. Report new incursions species status and the level of management response required.	<ul style="list-style-type: none">• List and rank pest plant species following nationally recognised assessment procedures.• Record all new infestations of surveillance species.• Investigate infestations and report proposed actions to the Manager, Biosecurity.• Develop category descriptions for high risk transmission pathways. Identify potential site locations within the region to plan annual inspections.• Complete surveys of at risk sites. Establish predictive indicators to determine potential future sites.• Provide information and publicity to enhance public awareness of surveillance species.• Inspect plant outlets to ensure no surveillance species are being sold.• Actively participate in MAFBNZ National Interest Pest Programme partnerships.

3.1.2 Total Control species

Aim: To eradicate specific pest plants from the Wellington region at a cost of \$325,995

Objective	Means of Achievement
<ol style="list-style-type: none"> 1. All known sites of total control species will be controlled on an annual basis, prior to reaching maturity, to prevent further spread. Depending on the plant species and seasonal weather variations sites may require multiple visits annually. 2. Where new infestations are reported, inspections and initial control of these infestations will be undertaken as soon as practicable. 3. All new infestations will be surveyed to map the extent of the infestation. 	<ul style="list-style-type: none"> • Undertake direct control by service delivery. • Identify new sites of total control species through incidental reports by Biosecurity Officers, the public or through the regional pest plant surveillance programme. • Annually inspect all plant outlets to ensure eradication species are not being sold. • Provide information and publicity to enhance public awareness of total control species. • Collate data from inspections for regional trend reporting.

3.1.3 Containment species

Aim: To reduce the adverse impacts of specific pest plants within defined areas of the Wellington region at a cost of \$203,808

Objective	Means of Achievement
<ol style="list-style-type: none"> 1. Ensure that the species is contained within the designated area's 2. Control all sites of Darwin's barberry, evergreen buckthorn and sweet pea shrub outside of the containment zones on an annual basis. 3. Reduce the densities of boneseed outside of the containment zones. 4. Ensure specific species within the containment zones are controlled by occupiers on an annual basis. 	<ul style="list-style-type: none"> • Undertake direct control by service delivery. • Undertake inspections within containment zones to ensure occupiers control specific species. • Annually inspect all plant outlets to ensure containment species are not being sold. • Provide information and publicity to enhance public awareness of containment species. • Support development and initiation of Biological Control opportunities to suppress the pest species. • Support Territorial Local Authorities individual programmes to control species they select through establishment of containment zones specific to their needs.

3.1.4 Suppression species

Aim: To minimise the adverse impacts of specific pest plants throughout the Wellington region at a cost of \$268,955

Objective	Means of Achievement
<p>1. Suppress selected pest species throughout the region to minimise their adverse impacts.</p>	<ul style="list-style-type: none"> • Annually inspect a selection of known infestations throughout the region to determine levels of control by landowners. • Respond to all queries and complaints relating to these species. • Where required, ensure occupier control is undertaken. • Provide information and publicity to enhance public awareness of suppression species. • Where it is considered practical, biological control agents will be used to assist with the management of species considered as pests in the RPMS. • Actively support Landcare Research and NIWA in their efforts to provide viable agents for suppressing selected species. • Annually inspect a selection of known infestations throughout the region to determine whether natural pathogens are attacking pest species. • Inspect Biological Control agents release sites to map agent spread in relation to pest plant infestation. Monitor the affect on target pest plant species. • Provide information and publicity to enhance public awareness of Biological Control Agents.

3.1.5 Site-Led boundary and human health species

Aim: To minimise the externality impacts of specific pest plants on land that is clear or being cleared of the pest plant at a cost of \$57,226

Objective	Means of Achievement
<p>1. Prevent the spread of gorse, ragwort and variegated thistle onto properties that are clear or being cleared of these species.</p>	<ul style="list-style-type: none"> • Where a complaint has been received from an adjoining occupier, that complaint shall be investigated in accordance with strategy rules. • Where it is considered practical, biological control agents will be used to assist with the management of site led species in these areas. • Provide information and publicity to enhance public awareness of these pest species, as well as other pest species considered invasive.

3.1.6 Site Led – Key Native Ecosystem and Reserves Management

Aim: To protect indigenous biodiversity in a comprehensive selection of Key Native Ecosystems and Reserves at a cost of \$304,660

Objective	Means of Achievement
<p>1. Achieve a measurable improvement in the ecological health and diversity of KNEs and selected Reserves using a range of suitable indicators.</p>	<ul style="list-style-type: none"> • Ensure KNEs are legally protected into perpetuity. • Establish and implement integrated pest management plans for all KNEs and selected Reserves. • Undertake direct control by service delivery of pests identified in integrated pest management plans. • Facilitate the involvement of community groups where appropriate. • Co-ordinate site management with other biodiversity initiatives where possible. • Use biological control agents where appropriate and support relevant biological control research initiatives.

Objective	Means of Achievement
	<ul style="list-style-type: none"> • Monitor site recovery using a range of ecological indicators. • Manage external pressures that are inconsistent with Key Native Ecosystem Management objectives. • Provide public education and advice to foster biodiversity management outside formal KNE and Reserve programme areas. • Maintain holistic management in existing managed KNE and Reserve areas. • Where KNEs are identified on Territorial Local Authority land, seek funding from the relevant authority to form financial partnerships.

4. Indicative costs and funding sources

The table below outlines indicative costs and funding sources:

Revenue Sources	Pest Animals \$	Pest Plants \$
General Rate	1,163,900	1,380,700
External Income ¹	120,500	-
Internal Income ²	312,000	-
Total Revenue/Expenditure	1,596,400	1,380,700

¹ Cost recovery work, joint ventures, product sales

² Greater Wellington's Parks Department – forest health

5. Implementation report

A report on the Operational Plan and the success or otherwise of its implementation will be prepared no later than five months after conclusion of the financial year. Copies of the report will be available to the public.

6. Regional Pest Management Strategy Review process

Under the Biosecurity Act the Regional Pest Management Strategy (the strategy) is required to be reviewed every five years following the commencement date, or where it has been five years since it was reviewed. The first five year review is now nearing completion. Greater Wellington intends approving the revised strategy before the end of 2008. The existing strategy remains operable until the strategy review is approved, including the completion of any appeal.

The review is commenced when Greater Wellington publicly notifies a proposed strategy and provides an opportunity for the community to have input into the pest management objectives for the region.

Following consideration of public submissions on the proposed strategy, amendments made as a result, and acceptance of Greater Wellington's decisions, the final reviewed strategy is publicly notified and becomes the new current strategy.

6.1 Purpose of the strategy

The purpose of the strategy is to provide a strategic and statutory framework for management of selected pest animal and pest plant species (pests) in the Wellington region. The strategy is authorised under the Biosecurity Act 1993. The current strategy was approved in September 2002, and is still in place. The strategy runs for 20 years, and is reviewed every five years.

The strategy aims to:

- minimise the actual and potential adverse and unintended effects of pests on the environment, economy, biodiversity and the community; and
- maximise the effectiveness of individual pest management through a regionally co-ordinated response.

6.2 How the pest species are decided

A cost-benefit analysis (CBA) is undertaken for all new species that are proposed for the strategy. This decides what control, if any, is to be undertaken and what level of management is needed for the species. The CBA works in conjunction with the infestation curve, which designates the different management policies. The infestation curve has been updated in the new proposed strategy.

6.3 Changes recommended

A number of changes and additions have been recommended to part two of the strategy. These changes aim to address additional problem species, or change the requirements for current species to further address their impacts.

All pest species are categorised into one of the following headings:

- Regional Surveillance
- Total Control
- Containment
- Suppression
- Site-led – Boundary Control/Human Health/Biodiversity.

There are also categories for Key Native Ecosystem (KNE) Management, and Reserves Management which lists large numbers of species for potential management only in these areas.

6.3.1 Recommended changes to pest animal species include:

Regional Surveillance – Argentine ant, Australian subterranean termites, Darwin’s ant, red-eared slider turtle are all new additions to the strategy.

Total Control – rooks have been moved from containment control.

Site-led Biodiversity – possums, feral goats, feral deer, feral pigs, feral and unwanted cats, gambusia and koi carp have all been moved from KNE led species.

Site-Led Human Health – wasps are a new addition, and magpies have been moved from solely Site-Led.

6.3.2 Recommended changes to pest plant species include:

Regional Surveillance – this is an extensive list. Refer to the proposed strategy for new additions.

Containment Species – the containment zones for boneseed, evergreen buckthorn, hornwort and sweet pea have all changed.

A new containment zone for Hutt City has been proposed to allow Hutt City Council to continue service delivery on selected species (old man’s beard, banana passionfruit, cathedral bells).

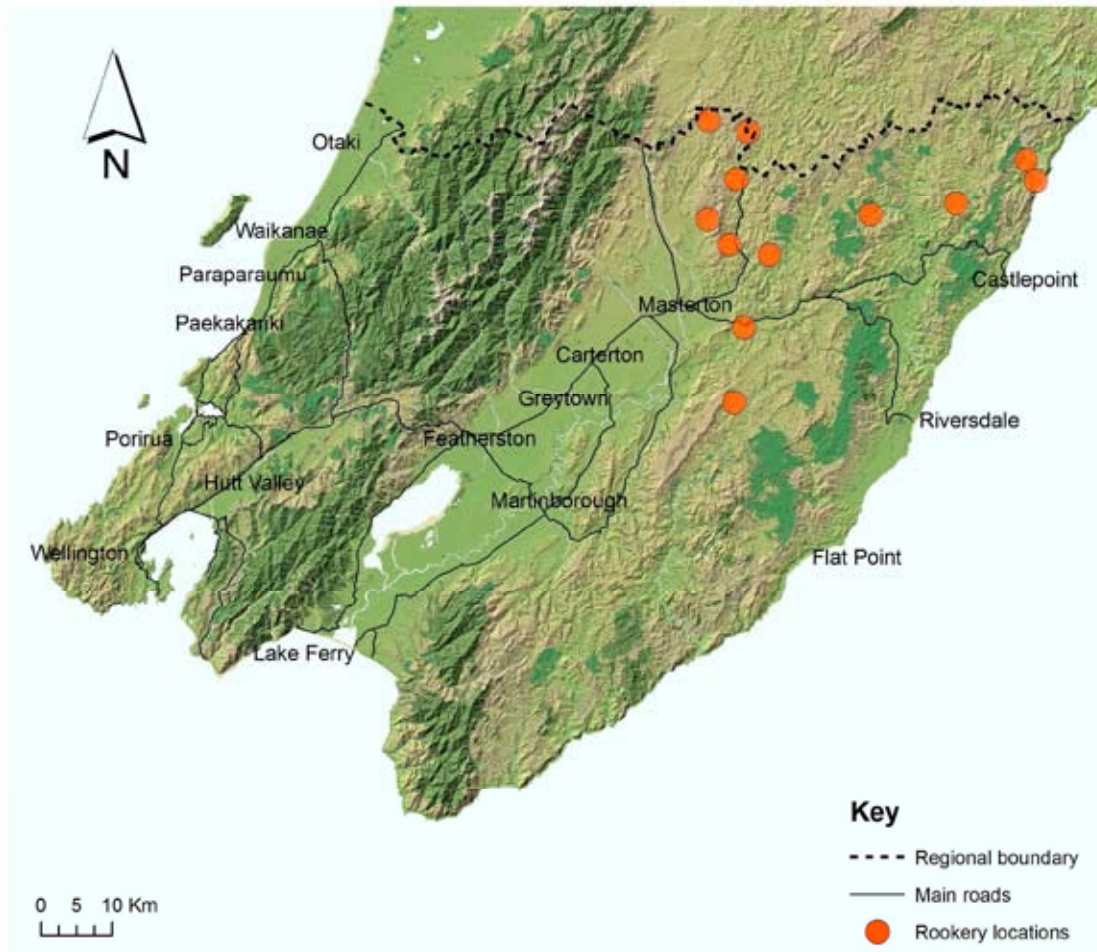
Site-led Boundary Control – banana passionfruit, cathedral bells, nodding thistle, old man’s beard and wild ginger have all been moved from the suppression category. Changes have been proposed to the clearance distances for gorse.

Site-Led Human Health - blackberry and hemlock are new additions to the strategy.

6.4 How this affects the Operational Plan Report

It is likely that the proposed strategy will be approved and made during the 2008/09 financial year. If this is the case, then performance outcomes to stated objectives for the new and additional species will be included in the 2008–2009 Operational Plan Report.

Appendix 1



Modified McLean Scale

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

Water, air, earth and energy – elements in Greater Wellington’s logo that combine to create and sustain life. Greater Wellington promotes **Quality for Life** by ensuring our environment is protected while meeting the economic, cultural and social needs of the community

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Possum

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