

PART I:

INTRODUCTION AND BACKGROUND



1 INTRODUCTION

1.1. Title

This document is known as the Regional Pest Management Strategy 2007-2012 (the Strategy or RPMS) for the Auckland region.

1.2. Proposer

The proposer for this RPMS is the Auckland Regional Council (the Council or the ARC).

1.3. Purpose & Goal

The purpose of the RPMS is to provide a strategic and statutory framework for efficient and effective management of plant and animal pests in the Auckland region.

The overall goal of the RPMS is to assist and facilitate the regional community in creating and maintaining sustainable pest-free natural and man-made habitats.

While this Strategy primarily focuses on pest management, achievement of the above goal will require an integrated approach to biosecurity and natural heritage between ARC, various local authorities, agencies and the community. It is anticipated that implementation of this RPMS will, over time, improve biodiversity, protect regional values and reduce the need for pesticides, by reducing the incidence of pests within the region.

1.4. Objectives

In carrying out its functions with respect to pest management, the ARC shall:

- a. Minimise actual and potential adverse and unintended effects associated with the targeted pests; and
- b. Maximise the effectiveness of individual pest management via a regionally co-ordinated approach; and
- c. Have particular regard to kaitiakitanga and shall recognise and provide for the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu and other taonga.

1.4. Preparation Process

This Strategy was prepared following a process of public consultation. In December 2005 the ARC released the 'Protecting Our Natural Environment: A discussion document for pest management in the Auckland region' for public submission. It provided a review of the Council's pest management achievements over the course of the last RPMS, and suggested a number of changes to the existing strategy, proposed to shape the future direction of pest management in the Auckland region. Submissions were called for on a wide range of strategy matters. In particular, the discussion document suggested a number of additional species that ARC Biosecurity Staff considered were appropriate to include in a pest management strategy.

The Council received 292 submissions on the discussion document. The suggested inclusion of several plant and animal species was opposed by some submitters, however more than 49 additional plant species and 9 additional animal species were suggested for inclusion by submitters. The Council used the information and the list of candidate pests gathered from the submissions as a basis for developing the proposed Strategy.

The proposed Regional Pest Management Strategy for the Auckland region was formally notified under the Biosecurity Act 1993 for the purpose of receiving public

comment/submissions on the Auckland region’s pest issues. The Council received 158 submissions on the Proposed RPMS. Hearings were held in late March/early April 2007. A decision was then made by Council, and publicly notified and distributed to submitters.

Any submitter that disagrees with any decision on his or her submission is able to appeal that decision to the Environment Court (refer Table 1.5a) within 15 working days. If no appeals are received within that timeframe the Strategy can be made operative by Council resolution and publicly notified.

Table 1.5a: Major steps in the Strategy Review Process

Action/Activity	Date/Proposed Date
RPMS Discussion Document released for public comment	1 December 2005
↓	
Submissions closed on Discussion Document	7 March 2006
↓	
Discussion Document submissions analysed	7 March – 26 May 2006
↓	
Proposed RPMS notified for public submissions	8 November 2006
↓	
Submissions closed on the Proposed RPMS	9 February 2007
↓	
Hearings held	Late March/Early April 2007
↓	
Board of Inquiry makes recommendations to Council	Mid July 2007
↓	
Council makes decisions on Final RPMS and all submissions	Late July 2007
↓	
Decisions released/Final RPMS publicly notified	Early August 2007
↓	
RPMS made operative or go to appeal	Late August 2007

1.5. Area of Strategy Effect

The Strategy has effect over the entire Auckland region as constituted by the Local Government Amendment Act 1992 (refer Figure 1.6a). The region covers 16,140 km², although 70% of this is coastal and marine waters. It encompasses the cities of North Shore, Waitakere, Auckland, Manukau, and the districts of Rodney, Papakura and part of Franklin. The proposed Strategy will replace the existing Auckland Regional Pest Management Strategy 2002-2007, once it is made operative.

1.6. Commencement and Duration

The Strategy shall become operative on the date that the Council’s resolution adopting the Strategy is publicly notified. This is expected to be 28 August 2007, although this date is subject to references to the Environment Court.

The Strategy will remain in force for 5 years until 27 August 2012, unless a review establishes that it should be extended, amended or revoked (refer section 15.2).

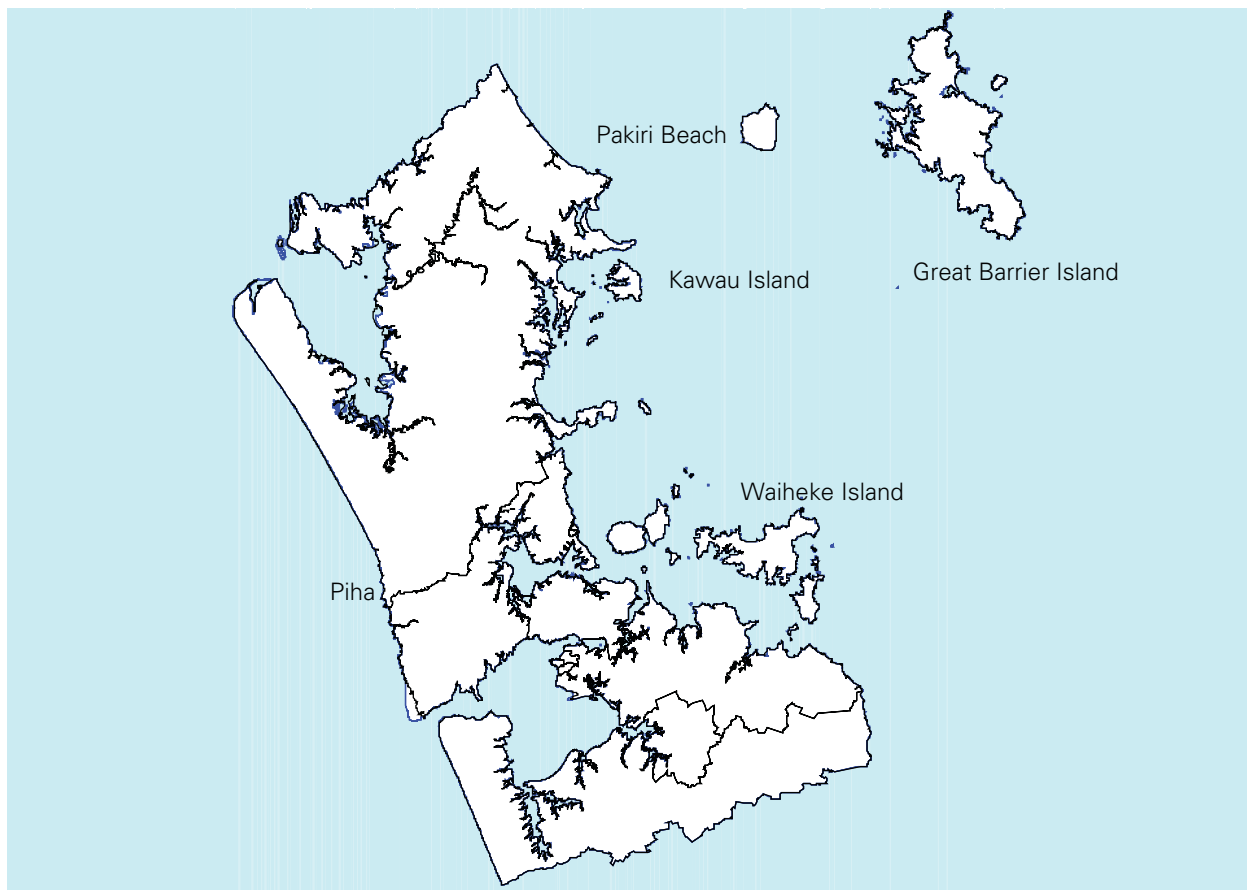


Figure 1.6a: The Auckland Region

1.7. Document Structure

Part I: Introduction

Part I contains introductory and background information relating to the Biosecurity Act 1993 and the development of the RPMS. It includes a description of the Auckland region, effects of the RPMS, the statutory framework for development of RPMS, key principles of the strategy, management obligations and the responsibilities of affected parties.

Part II: Pest Management Programmes

Part II contains information specific to each of the pest plants and animals addressed in this RPMS. It includes a description of each pest and its impacts, along with the objectives, Rules, and management methods to be employed. The Community Initiative Programmes are also described.

Part III: Administrative Systems and Processes

Part III contains information on strategy powers, funding, regulatory management, monitoring of strategy objectives and exemptions.

Part IV: Other Management Programmes and Initiatives

Part IV contains information on the Council's policies on the provision of advice and education, commitment to biological control programmes, site-led control programmes, vector control programmes, the Hauraki Gulf Controlled Area, and cross boundary issues.

Part V: Research Programme

Part V sets out the manner by which ARC will investigate potential pest species, and includes a list of those plants and animals for which further research is currently considered necessary. The organisms listed in this Part are **not** declared pests.

Part VI: Appendices

Part VI contains additional information for interpretation of the RPMS, including definition of terms and acronyms used in the Strategy, an index of all plant and animal species mentioned within the Strategy, maps of specific areas referred to within the Strategy and references.

2 STATUTORY FRAMEWORK

2.1. Legislative Background

Pursuant to the Biosecurity Act 1993, regional councils are the agencies responsible for processing and approving RPMSs. They must evaluate a proposal and decide whether or not to notify the proposed RPMS (section 72). Following the notification of a proposed RPMS (section 78), the regional council can approve and make the final Strategy, subject to appeals by submitters to the Environment Court (sections 79A-79F).

In addition to the above, regional councils can also:

- Prepare a proposal for an RPMS (under section 71); and/or
- Be a management agency appointed to implement an RPMS. The requirements of pest management agencies are set out in section 84, which include preparing operational plans (section 85).

Under the Biosecurity Act 1993, regional councils have no statutory obligation to undertake pest management actions. If it so wished, a regional council could confine itself to processing and making an RPMS that has some other body as the management agency.

However, the ARC has, through its Regional Policy Statement (RPS), recognised pest management as a significant issue for the Auckland region and will prepare and implement an updated pest management strategy for plant and animal pests. Section 14.4.3 of the RPS states:

“The ARC will take a pro-active role in developing strategies and will consult with the regional community, including constituent Territorial Local Authorities, on priorities.”

2.2. Regional Pest Management Strategies

The principal means by which regional councils undertake pest management is via the preparation of a Regional Pest Management Strategy. As stated previously, a regional council may propose, approve and implement a Regional Pest Management Strategy. Section 72(1)(a), (b) and (ba) state that a regional council shall notify a proposal for a Regional Pest Management Strategy only if it 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; ”

Section 72(1)(a), (b) and (ba) require regional councils to assess whether public action is appropriate and necessary, whilst considering whether an RPMS is appropriate. Furthermore, section 72(1)(c) of the Biosecurity Act 1993 directs that prior to proposing a Regional Pest Management Strategy, a regional council must demonstrate that:

- “(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.”

These evaluation elements of the Biosecurity Act 1993 ensure that the ARC must follow a well-considered and rational process in deciding which pests to address in a pest management strategy. The process followed by the ARC is described in section 3.3 of this Strategy.

2.3. Prerequisites for a Proposal – Cost Benefit Analysis

The Biosecurity Generic Guidelines Group¹ outlines a three-step process for determining whether a species should be included in a pest management strategy:

- 1 Initial screening of candidate pests to determine adverse effects – section 72(1)(c) of the Act;
- 2 Determining for each pest species whether benefits exceed costs and whether regional intervention will achieve greater results than individual intervention – section 72(1)(a) and (b);
- 3 Identifying the exacerbators and beneficiaries in relation to each pest – section 72(1)(ba) and also required under section 77.

Each of these steps is described in turn in the following sections.

The Biosecurity Generic Guidelines Group states that

“where no or only a minor change is proposed to the existing Strategy it should not be necessary to re-examine benefits, costs and assumptions made with respect to pest species addressed in that Strategy – the ‘old’ section 72 analysis should still apply. However, if new pests are to be included in the reviewed Strategy or a greater level of regional intervention (e.g. new land occupier obligations or additional service delivery) then a new section 72 analysis for those pests is appropriate.”

A full report documenting assumptions, screening of pests and Cost Benefit Analysis (CBA) calculations and conclusions for those species for which they are required, is contained in a separate document

“Cost Benefit Analysis and Assumptions, Animal and Plant Species Considered for Inclusion in the Proposed Auckland Regional Pest Management Strategy 2007-2012, a supporting document to satisfy the requirements of section 72 of the Biosecurity Act 1993”.

Auckland Regional Council, September 2006.

The CBA document is a supporting document to this Strategy and can be viewed at the ARC Information Centre (ground floor, 21 Pitt Street, Auckland) or a printed copy obtained by phoning (09) 366 2000 or by emailing biosecurity@arc.govt.nz.

2.3.1 Section 72(1)(c)

Section 72(1)(c) stipulates that the Council must consider that a species is capable of causing serious harm in terms of:

- Economic impacts
- Human health or enjoyment
- Conservation values
- Maori values
- Soil resources or water quality

Council undertook the section 72(1)(c) assessment using a model known as the ‘Meister Analysis’. This model was prepared by Professor Anton Meister of Massey University as a process for screening species that are nominated for inclusion in a pest management strategy.

¹ Biosecurity Generic Guidelines Group. *A Guide to Reviewing Regional Pest Management Strategies*. A report prepared on behalf of regional councils, December 2005.

The model is not a comprehensive assessment model, rather it is a means of establishing whether a species warrants further consideration against the criteria laid out in sections 72(1)(a), (b) and (ba) of the Biosecurity Act.

The first step of the Meister Analysis consists of a series of questions and suggestions as to what to look for or how to assess impacts of the candidate pests. With regard to non-economic effects of the candidate pests, the following questions were addressed to determine the seriousness of their impact or potential impact:

- What is the current distribution of the species?
- What proportion of the region or habitat type is affected?
- What do we know about the biological capability and success rate of the species?

The second step is to determine the current and potential impacts of the species with respect to the following areas:

- Endangered Species
- Maori Culture
- Species Diversity
- Production
- Soil Resources
- Recreation
- Water Quality
- International Trade
- Human Health

It is noted that this assessment refers to the impacts of the species itself, not the effects of a potential strategy to manage that species. The impacts are ranked on a simple scale (nil, low, medium, high) using the best possible information available.

The third step summarises all the initial information and the impact evaluations made in the above process. This gives a basic indication of the potential impacts of the species and is given a rating (minor, moderate or major) for assessment of effects. If the analysis produced

predominantly nil or low impacts, the pest was rated as “minor” and if predominantly moderate or high impacts were shown, the pest was rated as ‘moderate’ or ‘major’ respectively. For example, if a species scored ‘H’ in two or more categories, it was given a ‘major’ rating. If the species scored ‘M’ in two or three categories it was given a ‘moderate-major’ rating.

Meister Analyses for all species are contained within the supporting document.²

Based on the information gained through the Meister Analysis process, a hierarchy of pest categories (refer to Table 5.1a of this document for further explanation of the categories) was developed for plant species:

(i) Total Control Pest Plants

- Incidence of the species is low.
- Eradication is possibly and realistically achievable within stated timeframes.

(ii) Containment Pest Plants

- Species is too widespread within the region for eradication to be realistic.
- Landowner/occupier control, on a boundary control basis or targeted area reduction basis, is considered appropriate to limit spread of this species from existing infestations, when coupled with restrictions on sale, propagation, distribution and exhibition.

(iii) Surveillance Pest Plants

- Species is too widespread to warrant direct control, but restriction on sale, propagation, distribution and exhibition is considered appropriate to limit further human-assisted spread.
- Limited control may be undertaken in site-led programmes.

² *Cost Benefit Analysis and Assumptions, Animal and Plant Species Considered for Inclusion in the Proposed Auckland Regional Pest Management Strategy 2007-2012, a supporting document to satisfy the requirements of section 72 of the Biosecurity Act 1993.* Auckland Regional Council, October 2006.

2.3.2 Section 72(1)(a)

Section 72(1)(a) requires that the regional council can only notify a proposed Strategy if it 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 into account the likely consequences of inaction or alternative courses of action;”

This can be determined for each species through a CBA. Due to the complexities of the different species proposed for inclusion in the proposed Strategy, a single CBA model was unable to be used to assess all proposed species. The following outlines the CBA models used and the types of proposed pest categories each model was used for. An explanation of the different Pest Plant categories is given in section 5.1 of this document.

A brief description of the CBA models used is given in (i) to (iii) below, however further information regarding the above CBA models, along with the actual CBA assessment for each species, is given in the supporting document:³

(i) Total Control and Containment Pest Plants

For species proposed for inclusion as Total Control or Containment Pest Plants, the CBA method used is known as the Harris Model, which was developed by consultant Simon Harris for use by all regional councils. It relies on a number of assumptions, especially in the costs of environmental weeds. The Harris Model assesses individual pest species for several scenarios – Do Nothing, Total Control and Containment. The costs of controlling the pests are compared with the Net Present Value of the damage caused by the pest and from this can be derived a preferred strategy for dealing with the pest.

CBA for these species was undertaken by ARC Biosecurity staff and peer reviewed by Market Economics Ltd.

(ii) Surveillance Pest Plants

For species proposed for inclusion as Surveillance Pest Plants, the Harris Model described above cannot be used, as the model does not fully take account of the costs and benefits associated with a ban on sale, propagation, distribution and exhibition.

Market Economics Ltd was contracted by the ARC to develop a CBA model that takes account of commercial costs and benefits, and to undertake an assessment of the proposed Surveillance Pest Plants. CBA was undertaken by Market Economics Ltd for species that were indicated by the Nursery & Garden Industry Association⁴ to be of commercial value to the ornamental horticulture industry. It is noted that for the majority of Surveillance Pest Plants, a full CBA assessment was not warranted, due to the very low or nil impact to industry of any ban on sale, propagation, distribution and exhibition.

(iii) Animal Pests

The two CBA models used for plant species were not applicable for animal species, therefore a new model, developed by Environment Canterbury, was modified and used by ARC Biosecurity staff. Modifications included a qualitative assessment of costs and benefits of strategic options. This was used to determine which methods would be most appropriate for each organism. As with plant species, a full CBA assessment was only undertaken for those species for which additional external costs resulted from the proposed methods.

CBA for these species was undertaken by ARC Biosecurity staff and peer reviewed by the Centre for Biodiversity and Biosecurity⁵.

2.3.3 Section 72(1)(b)

Section 72(1)(b) requires that the regional council can only notify a proposed Strategy if it is of the opinion that:

³ Ibid.

⁴ Pers. comm. email: Bob Wynyard, Nursery and Garden Industry Association; 15 May 2006.

⁵ The Centre for Biodiversity and Biosecurity is a Joint Research Initiative between Landcare Research and the University of Auckland.

“b) The net benefits of regional intervention exceed the net benefits of an individual’s intervention;”

The ARC considers that pests contained in this Strategy, in the various categories, require regional intervention because:

- They are capable of, or currently are, causing significant adverse effects on the environment or production values; some problems are too large and cross too many property boundaries for individuals to effectively deal with (e.g. possums which occur throughout the region in numerous different habitats); and
- Potential pests have not yet established in the region but are present in a neighbouring region and pro-action is required to prevent infestation into the Region; and
- There is a need for co-ordinated control efforts to successfully manage pests; and
- Some pests are best managed by experienced and qualified people; and
- Other pests are too widespread but by increasing publicity on their effects, greater control may be undertaken; and
- There is a need to prevent landowners/ occupiers imposing costs on other parties.

In the Council’s opinion the net benefits of the Strategy outweigh the costs. Also, in the Council’s opinion, there are clear net benefits to the regional community of having strategy rules and the Council undertaking control and providing assistance to landowners/ occupiers. For the most part, landowners/occupiers are both exacerbators of pest problems and beneficiaries of pest control. Further information regarding section 72(1) (b) is given in the supporting document.⁶

⁶ *Cost Benefit Analysis and Assumptions, Animal and Plant Species Considered for Inclusion in the Proposed Auckland Regional Pest Management Strategy 2007-2012, a supporting document to satisfy the requirements of section 72 of the Biosecurity Act 1993.* Auckland Regional Council, October 2006.

2.3.4 Section 72(1)(ba)

Beneficiaries and exacerbators were identified for each species that passed the 72(1)(a) and (b) tests and which Council believed should be included within the RPMS. These are summarised in Table 15.1a of this document, and are also described within the supporting document.⁷

2.4. Relationships with other Statutes & Regulations

Section 7 of the Biosecurity Act 1993 outlines the relationship of that Act with other legislation. In general, nothing in an RPMS can affect or detract from other legislation, regulations or Rules of law relating to pest management, except as specified in section 7(2)(a) and (b) of the Act. These include:

- Soil Conservation Act 1941
- National Parks Act 1980
- Forests Act 1949
- Fisheries Act 1983
- Wildlife Act 1953
- Conservation Act 1987
- Health Act 1956
- Trade in Endangered Species Act 1989
- Animal Welfare Act 1999
- Resource Management Act 1991
- Wild Animal Control Act 1977
- Customs & Excise Act 1996
- Reserves Act 1977
- Misuse of Drugs Act 1975
- Hauraki Gulf Marine Park Act 2000

Several Acts which may impact upon the RPMS, particularly in the areas of funding, control methods, service delivery and monitoring, are identified below:

- Local Government Act 2002
- Health & Safety in Employment Act 1992
- Local Government (Rating) Act 2002
- Hazardous Substances & New Organisms Act 1996
- Resource Management Act 1991

⁷ Ibid.

It is noted that New Zealand, as a signatory to the 1993 International Convention on Biological Diversity, has international obligations to biodiversity. These are fulfilled, in part, by the New Zealand Biodiversity Strategy (2000), which is coordinated by DoC.

ecosystems and habitats, such as the native forest and regenerating scrublands, the coastal environment, wetlands, lakes and rivers and their margins.

This RPMS was prepared within the framework of the relevant objectives, policies and methods of the RPS, and is considered to be consistent with them.

2.5. Relationship with other Policy

Section 76(4) of the Biosecurity Act 1993 states that:

“... A proposal for a regional pest management strategy shall not be inconsistent with:

- (a) Any national or regional pest management strategy (whether relating to the same region or any other region or regions) concerning the same organism; or
- (b) Any regulation; or
- (c) Any regional policy statement or regional plan prepared under the Resource Management Act 1991.”

At present, there are operative Regional Pest Management Strategies in the neighbouring Northland and Waikato regions, and national strategies for bovine tuberculosis, varroa mite and American foulbrood. At the national level, consultation between central and local government is needed to avoid inconsistencies and conflict. Ongoing cross boundary communication assists in avoiding potential inconsistencies at the regional level (refer section 21 of this document).

The relationship between the RPMS and the Regional Policy Statement and Regional Plans is outlined in the following sections.

2.5.1 The Regional Policy Statement

The Auckland Regional Policy Statement (RPS) was made operative in August 1999 and has since been subject to a number of Plan Changes. The RPS recognises that pests are an issue in the Auckland region, and Chapter 14 outlines the issues, objectives, policies, methods and reasons relating to pests. In addition, Chapter 6 of the RPS provides for the protection of natural heritage, and recognises the importance of native flora and fauna and natural

2.5.2 Regional Plans

The ARC has prepared, and is preparing, a number of regional plans which have influenced the development of this RPMS and may impact on its implementation.

These include:

- The Auckland Regional Plan: Coastal
- The Auckland Regional Plan: Farm Dairy Discharges
- The Auckland Regional Plan: Sediment Control
- The Proposed Auckland Regional Plan: Air, Land and Water

Any actions taken to implement the RPMS would be undertaken in accordance with the provisions of the above Regional Plans, and any relevant District Plans prepared by Territorial Local Authorities.

2.6. Effects of Strategy Implementation

Section 76(1)(j) and (k) of the Biosecurity Act 1993 requires that a proposal for an RPMS must specify what the effects of implementation of the RPMS are likely to be, with respect to the following matters:

- on the relationship of Maori and their culture and traditions with their ancestral lands, waters, sites, waahi tapu and taonga – section 76(1)(j);
- on the environment – section 76(1)(k)(i); and
- on the marketing overseas of New Zealand products – section 76(1)(k)(i).

A brief discussion of the likely effects of implementation of the Strategy on these matters is given in the following sections.

2.6.1 On the relationship of Maori and their culture and traditions with their ancestral lands, waters, sites, waahi tapu, and taonga

The effects of implementing different pest control methods will depend on the particular sites and areas of the region to be controlled. In general, the beneficial effects are that the adverse effects of pests will be avoided, remedied, or mitigated. No species of indigenous flora or fauna will be the focus of control under this RPMS.

Potential adverse effects of implementing the RPMS include those of tikanga (e.g. safety for people who may breach tapu associated with areas), kaitiakitanga (e.g. effects of manipulating habitats), taonga (e.g., effects of chemicals on water, fish, shellfish and indigenous birds) and waahi tapu (e.g. effects of chemicals on special places). In general, tangata whenua favour a combination of pest control methods to ensure that potential adverse effects on ancestral taonga are avoided.

2.6.2 On the environment

This RPMS will provide for the maintenance and enhancement of natural environments such as indigenous ecosystems, water quality and soil resources. The overall goal of the RPMS is set out in Section 1.3 of this Strategy, which seeks to create and maintain sustainable pest-free habitats.

Pest control measures have the potential to cause unintended effects on the environment. For example, removal of pest plants, if not undertaken appropriately, may result in increased soil erosion on steep land, or may result in reduced habitat for some native fauna. ARC's Biosecurity Standard Operating Procedures and Weed Control Manual set out guidelines for the appropriate means of pest control, to minimise unintended effects.

The discharge of contaminants into the environment in the implementation of this RPMS will be addressed through the consultative processes and monitoring procedures established under the Resource Management Act 1991 (the RMA) and relevant regional plans.

It should be noted that ARC has an Indemnity with Watercare Services Ltd with respect to avoiding, remedying or mitigating potential adverse effects of pest control activities on water quality within any water supply catchment.

The RPMS will also provide for the human environment through the protection of human health and safety and maintenance of amenity and recreation values. The economic environment will be provided for through protection of both the productive capacity of land and the quality of primary produce.

The specific pest plant effects being avoided or mitigated are identified in Part II of this Strategy, including sustainability of natural and developed ecosystems, ecological processes and biological diversity.

2.6.3 On the marketing overseas of New Zealand products

This RPMS will generally not affect the marketing overseas of New Zealand products. However, in some cases productivity of land will be enhanced through pest management, and quality of primary produce will be maintained or enhanced. Possible concerns from international markets and consumers regarding the use of chemicals in control programmes and consequent residue issues may have implications for the control methods used.

Implementation of the Strategy will have positive effects on the natural environment of the Auckland region. The natural environment of New Zealand is promoted overseas within the tourism industry and is also used as a promotional tool by other industries.

It is noted that some plant species included as Surveillance Pest Plants within this Strategy (e.g. arum lily) may currently be grown by some parties for distribution to overseas markets. Implementation of this Strategy would therefore impact on the ability of those parties to continue this practice.

However, it is noted that under section 80D of the Biosecurity Act, any person may apply for an exemption to the Rules of a Regional Pest Management Strategy, where the requirements of that section can be met. Details of the exemption process are given in section 18 of this Strategy.

3 PLANNING FRAMEWORK

3.1. Key Principles of the Strategy

The following key principles were formulated following an internal review of the existing Regional Pest Management Strategy and from submissions received to the public discussion document preceding this Strategy. They are also based on feedback from landowners/occupiers and key pest liaison groups, knowledge of current pest issues at both the regional and national level, potential harm that could be caused by a range of plant and animal species, and changes in community attitudes to pest management. The principles will help guide pest management policy within the Auckland region.

- a) Promoting community awareness and ownership of pest issues is fundamental to achieving long-term goals.

Explanation: It is recognised that there may be times when regulation is required to ensure objectives are being met, however education and advice are important and cost-effective mechanisms to ensure better pest management.

- b) A number of high-threat pest species that are currently at low levels throughout the region could be eradicated.

Explanation: It is considered desirable to control these pests prior to them reaching levels where it would be extremely difficult and costly to manage them, and values would be compromised.

- c) The primary responsibility for management of pest plant and animals rests with landowners/occupiers. The ARC will provide advice and community education on the threats and control of pests.

Explanation: Landowners/occupiers have ultimate responsibility for managing their own land. Clear

messages need to be conveyed to the public on these responsibilities. It is important that landowners/occupiers see consistency of application of policy in relation to widespread pests.

- d) Individual High Conservation Value (HCV) sites may need to be protected from a range of pest plants and animals at the same time, and may also require restoration/revegetation efforts to be effective in the long term. This is known as integrated site-led pest control.

Explanation: In some areas there will be a benefit to the region if the ARC carries out control. This is particularly true of plant and animal pests where specialised techniques and control methods are required, or important values are at risk.

- e) Pest-free areas should be maintained as pest-free where possible. Particular attention will be focussed on the islands of the Hauraki Gulf, several key peninsulas, and a small group of dune-lakes with the highest conservation and water quality values.

Explanation: The best form of pest management is keeping pests out of pest-free areas, for example, through the Hauraki Gulf Controlled Area restrictions. This is achieved through education of the public, surveillance programmes and a rapid response to invasions, backed up with regulatory measures to ensure compliance. The Department of Conservation (DoC) administers large areas in the Hauraki Gulf, and integrated pest management programmes have been developed in partnership with DoC, including preventing movement of pests to most Hauraki Gulf islands and eradication of existing pests. Similarly, key high-value duneland lakes need to be protected from exotic freshwater fauna release. This can be achieved via public education, regulation, monitoring, and surveillance by ARC staff and adjoining landowners/occupiers, and control programmes in some cases.

- f) A targeted Biosecurity rate based on land value will continue to be used to fund most activities. However, cost-recovery will be enforced in cases of non-compliance.

Explanation: The use of a targeted Biosecurity rate to fund the RPMS is based on the principal that the regional community benefits from the implementation of the RPMS. Such benefits include biodiversity protection, increased primary production and greater asset values achieved through fewer pests.

Those persons who do not control pests that adversely affect their neighbours or the regional community should bear the costs of the work to meet the RPMS standards. This can be done through imposing charges on those persons and/or recovering costs of any enforcement action.

- g) The ARC will work with government agencies, local councils, community groups and iwi to manage pest issues.

Explanation: Pest management is not solely the responsibility of the ARC. A number of Crown agencies, local councils, community groups, industry organisations and iwi carry out pest management operations, and the ARC will assist such operations where appropriate.

- h) Regulation will be used to prevent sale, propagation, distribution and exhibition of pests and to protect pest-free land from nearby infestations.

Explanation: Ever since legislation was first passed regarding pest management in New Zealand, regulation has failed to contribute significantly to the reduction of pests. Regulation will primarily be used to protect landowners/occupiers that are carrying out control and are adversely affected by their neighbours who are not (i.e. exacerbators). This includes responding to complaints. It will also be used to enforce restrictions on the sale, propagation, distribution and exhibition of pests and restrictions on the movement of pests into and through controlled areas such as the Hauraki Gulf.

- i) The ARC will continue to advocate to central government for greater integration of national and regional pest management activities.

Explanation: The ARC has relationships with other central government pest management agencies. It is important that all agencies with pest management responsibilities work together for the benefit of the environment.

- j) ARC pest control is conducted, and advice given, utilising best environmental practice methods and recognised humane methods for animal pests, according to Biosecurity Standard Operating Procedures.

Explanation: The ARC recognises the need for feral animal control to achieve positive environmental outcomes. At the same time, the ARC promotes the humane treatment and control of all feral animals. The ARC also acknowledges that best practice methods must be used for its own operations, and promoted for the region, in order to prevent soil and water contamination, excess long-term costs or other unintended effects, such as soil erosion resulting from control of pest plants on hillsides; or removal of pest plants used as native fauna habitats.

The Biosecurity Standard Operating Procedures include specific guidelines on the use of pesticides, and require the method of least disturbance to be used wherever practicable. The public is encouraged to undertake pest control activities in accordance with the Standard Operating Procedures, which are available on request from ARC.

3.2. Infestation Curve Model

The ARC has adopted the following ‘infestation curve model’ to guide decision making on pest management issues. It is a simple descriptive model originally developed by Horizons Regional Council, which is now used by the majority of regional councils in New Zealand with respect to pest management. The model demonstrates basic pest population dynamics^{8,9}, and helps to determine the appropriate Strategy objectives and management programmes for individual pests. Generally, the lower a pest is situated on the curve the more its distribution is restricted. Control of pests

⁸ Kormondy, EJ (1969) *Concepts of Ecology*. Prentice-Hall Inc. Page 64.

⁹ Panetta, FD. Identifying and managing the next century’s problem weeds. Paper presented to NZ Plant Protection Society Seminar, 1994.

situated near the start of the curve will be more cost effective and control or even eradication may be feasible. There are benefits of controlling these low incidence pests for most landowners/occupiers throughout the region, as operations are essentially preventative actions. Those pests higher on the curve are more widespread and therefore are more difficult and costly to control, with the beneficiary of control more likely to be the immediate or neighbouring landowner/occupier. Attempts to eradicate widespread weeds are unlikely to be feasible, although there may be benefit in controlling these pests in areas of high

conservation value, or in particular parts of the region where they may be less common. A number of New Zealand's more serious pests are high on the infestation curve, for instance possum and gorse.

The infestation curve shown in Figure 3.2a below is a model and should only be used as a guide. Some pest species can be widespread (e.g. possum) yet because of the attributes of the pest and the available control methodologies, large areas can be successfully controlled for a relatively low cost.

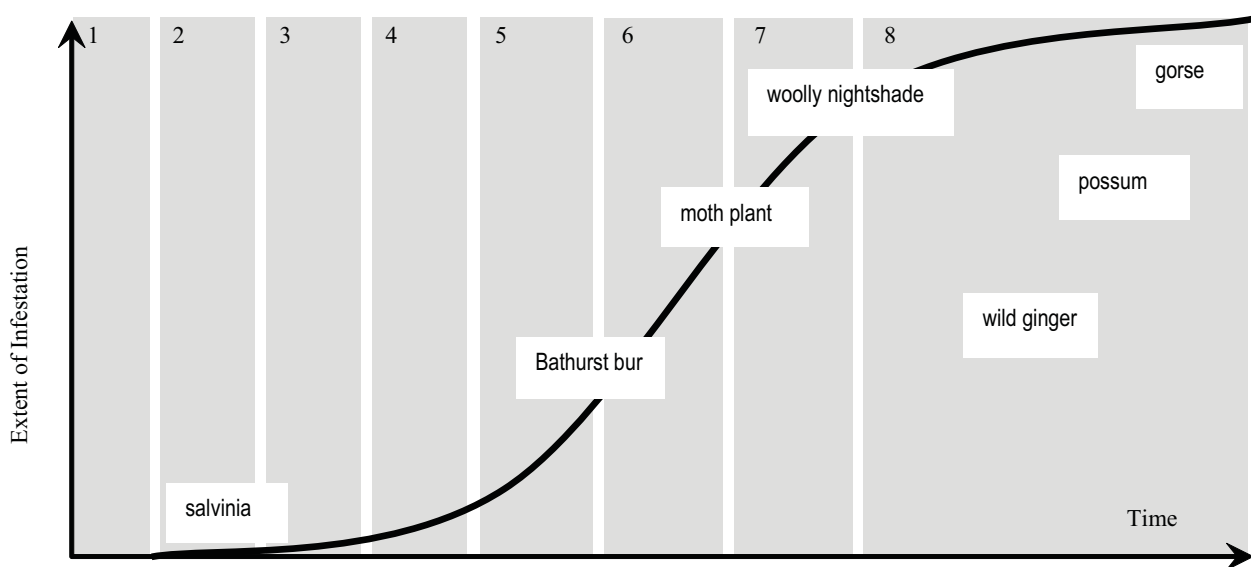


Figure 3.2a Infestation Curve Model for the Auckland region (based on a model developed by Horizons Regional Council).

The infestation curve model has three phases divided into eight zones:

- First is the 'lag phase' which is the initial slow establishment phase – when a pest has just started to become established and is very limited in its distribution (curve is almost flat, zones 1-3);
- Second is the 'explosion phase' when a pest is still restricted in its range but densities and range are increasing rapidly (curve is steep, zones 4-6);
- Third is the 'established phase' when growth slows as the pest fills most of its available habitat or niche (the curve levels off again, zones 7-8).

3.3. Decision Making Framework

In determining which species to include in the Strategy, a decision framework was developed, which identified a number of variables with respect to each species. Such variables included:

- The Assessment of Effects Impact Level determined through the Meister Analysis (refer section 2.3.1 of this document, above);
- The invasiveness of the species (measured using both the DoC and Esler Weediness Indices);
- Nomination by regional community;
- Feedback from consultation;
- Whether the species is declared a pest in adjoining regions, and if so, what status it had;
- Whether the species was declared an 'Unwanted Organism' by the Ministry of Agriculture and Forestry (MAF) or was contained within the list of National Pest Plant Accord (NPPA) species; and
- Any additional relevant information (such as toxicity, etc.); and
- Whether the species meets the requirements of section 72 of the Biosecurity Act with respect to Cost Benefit Analysis (refer to section 2.3 of this document, above).

4 STRATEGY RESPONSIBILITIES AND OBLIGATIONS

The following parties have specific obligations and responsibilities under the RPMS:

4.1. Auckland Regional Council

For the purposes of this RPMS, the ARC will administer and overview the development and implementation of the RPMS in accordance with its powers under section 13 of the Biosecurity Act 1993.

With respect to the RPMS, the ARC is specifically responsible for:

- a) Proposing, notifying, processing and approving the Strategy: Pursuant to sections 71, 72, 73, 78 and 79A-F of the Biosecurity Act 1993;
- b) Overseeing the implementation of the Strategy: Pursuant to sections 81, 82, 84, 85 and 88 of the Biosecurity Act 1993.

4.1.1 Management Agency

The ARC is the Management Agency responsible for implementing this Strategy. This involves applying the tactics and measures that ensure that the objectives of the RPMS are being achieved. It also includes developing and administering systems to ensure that funding, monitoring and review processes are consistent with the requirements of the Biosecurity Act 1993 and any other statutory provisions.

The ARC, in determining that it shall be the Management Agency, is satisfied that it meets the requirements of section 84(3) of the Biosecurity Act 1993 in that:

- a) The Council is accountable to those persons that provide the funds to implement the RPMS, through the representation and annual reporting requirements established in the Local Government Act 2002; and
- b) The Council is acceptable to those persons that provide the funds to implement the RPMS and to those persons who may be subject to the management provisions of the RPMS; and
- c) The Council has the management capacity, competency and expertise available to carry out the implementation of the RPMS through public education, field operations, monitoring, audit, support of community initiatives, legal processing/litigation, ability to fund, and reporting on progress.

The manner in which the ARC will undertake its responsibilities is detailed in Part III 'Administration Systems and Processes' of this Strategy.

4.1.2 Small Scale Control Measures

During the lifetime of the RPMS, the ARC may be required to undertake rapid response to new pest problems (e.g. the invasion of a pest not previously present in the region or New Zealand). Small scale management programmes under section 100 of the Biosecurity Act 1993 can be used once these pests have been declared unwanted organisms where:

- a) An unwanted organism present in the region could cause serious adverse and unintended effects unless early action to control it is taken; and
- b) The organism can be eradicated or controlled effectively by small-scale measures within three years of commencing measures to control the organism, because:

- distribution of the organism is limited; and
 - technical means to control the organism are available; and
- c) The taking of all the measures (including the payment of any amount to a person for the purpose of compensating that person for a loss) is likely to cost less than an amount for the time being prescribed for the purposes of this section by the Governor-General by Order in Council; and
- d) The taking of those measures is unlikely to result in a significant monetary loss to any person, other than a person who has contributed to the presence or spread of the organism by failing to comply with the Act or any pest management strategy.

4.2. Territorial Local Authorities

Territorial local authorities have the same responsibilities and obligations as any other landowner/occupier in the region with respect to this Strategy, unless specifically noted. Because of their major land holdings and position in the community, territorial local authorities are encouraged to prepare coordinated pest management plans for land that they administer, to complement the RPMS. It is noted that there are specific requirements for landowners of roadside verges, as outlined in sections 4.3(iii) and 18 of this Strategy.

4.3. Landowners/occupiers

Landowners/occupiers of land infested with pests are generally the exacerbators of the pest problem, although they may not have originally introduced the pest. However, landowners/occupiers are the major beneficiaries of any control action. It follows that those occupying land should be required to undertake management and control of pests in most cases. In lease and rental situations the responsibility may be determined in the lease or rental agreements. There are other Rules and regulations relating to the treatment and management of animal and plant pests, and all landowners/occupiers should contact their local district or city council, and regional council, to ensure they comply with them, e.g. the Resource Management Act 1991; Air, Land and Water Plan; weed management plans and codes of practice. The main landowners/occupiers are identified as follows:

(i) Private Land

Private landowners/occupiers, territorial local authorities and the ARC are required to control pests on their land, in the manner and to the standards prescribed in Part II of the Strategy.

(ii) Crown Land

The Crown must, for a number of reasons, be treated differently from private individuals. Under section 87 of the Biosecurity Act 1993, the Crown can agree to be bound by the Strategy, and contribute to its funding. However, a pest management strategy cannot require the Crown to be bound.

Crown land accounts for approximately 60,000 ha or 11.8 % of the region. Central government agencies occupying the Crown estate have been identified as being significant beneficiaries or exacerbators to pest management in the region (refer to Table 13.1a of this document).

(iii) Roadside Verge

Section 6 of the Biosecurity Act allows an RPMS to specify whether or not private landowners/occupiers are responsible for the control of pests on adjoining roadside verges.

This RPMS chooses not to make such a specification, therefore **responsibility for control of pests on roadside verges lies with the owner of the land**, i.e. the roading authority. However, for unformed roads, the responsibility for control of pests under the RPMS is the land occupier who physically occupies the land.

The construction and maintenance of roads clearly exacerbate weed problems. Roads have long been recognised as acting as vectors for the spread of pests. Pest plants establishing on roadside verges can quickly spread to adjoining properties and can also cause visibility problems. This is particularly evident where roads pass through native habitats or pasture lands.

Further information regarding the responsibility of roading authorities with respect to roadside verges is given in section 20 of this Strategy, along with the responsibilities of landowners/occupiers with respect to rail corridors, quarries and saleyards, which are also major vectors for the spread of pests.

