Horizons Regional Council

Regional Pest Management Plan

2017-2037

horizons
regional council

REGIONAL PEST MANAGEMENT PLAN 2017-2037

On 26 September 2017 the Council resolved to make the Horizons Regional Pest Management Plan 2017-2037 operative pursuant to section 77 of the Biosecurity Act 1993.

The Horizons Regional Pest Management Plan 2017-2037 will become operative on 28 November, 2017.

Signed under the Common Seal of the Manawatu-Whanganui Regional Council
In the presence of:

Bruce Gordon
Chair

Michael McCartney
Chief Executive

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Foreword

Pest management is a joint effort between the regional councils, their communities and a host of other agencies that have a role in managing the effects of pests on economic and environmental values. This *Regional Pest Management Plan 2017 to 2037* (the Plan) uses the provisions of the Biosecurity Act 1993 to support that effort.

The 2012 amendments to the Biosecurity Act include the introduction of the National Policy Direction (NPD). Embedded in the purpose of the NPD is greater consistency between regional council pest management plans and the introduction of the principle of "good neighbours". The *Regional Pest Management Plan* meets these directives by adopting programme types that are consistent with the NPD and adopting the use of good neighbour rules only where they are appropriate for the management of the spread of pests across boundaries.

The Plan also continues with earlier objectives from Horizons previous pest plant and pest animal management strategies to exclude those pests that have yet to reach the Region and eradicate those where the infestations are localised enough to make eradication a plausible prospect. Where eradication is not feasible, but containment is possible, the Plan has objectives to progressively contain and reduce the extent of a suite of pests to reduce their effects. Finally, for possums and rabbits, which are widespread species, the Plan has objectives for sustained control to limit their effects.

Horizons Regional Council is committed to the efficient and effective management of the threats imposed by pest plants and animals on the Region's economy and environment. This Plan supports that commitment by providing the regulatory backbone for regional pest management.

Michael McCartney
CHIEF EXECUTIVE

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Part One: Plan Establishment

1. INTRODUCTION

1.1. THE MANAGEMENT AGENCY

In recognition of its regional leadership role under the Biosecurity Act 1993 (the Act), Horizons (the trading name of the Manawatu-Wanganui Regional Council) is the management agency for this Regional Pest Management Plan. Horizons' Regional Pest Management Plan 2017-2037 (the Plan) builds on and replaces the previous regulatory (Biosecurity Act) components of the Regional Pest Animal Management Strategy (2009) and the Regional Pest Plant Management Strategy (2007) in accordance with 2012 amendments to the Act, the introduction of the National Policy Direction for Pest Management 2015 (NPD), and the submissions received by Horizons.

1.2. PURPOSE

The purpose of the Plan is to outline the regulatory framework for efficient and effective management or eradication of specified animal and plant organisms in the Manawatu-Wanganui Region so as to:

- Prevent, reduce, or eliminate the adverse effects of those organisms and their management; and
- Maximise the effectiveness of individual pest management action by way of a regionally coordinated approach.

There are many organisms in the Manawatu-Wanganui Region that are considered undesirable or a nuisance. However, it is only where a subject is capable of causing an adverse effect in the region, where a planned approach would be more effective than voluntary management, and where the benefits of a regional plan outweigh the costs of that plan that regional management is warranted. The Act contains prerequisite criteria that must be met to justify such intervention. This Plan signals which organisms should be classified as pests and managed on a regional basis based on those criteria.

The Plan empowers Horizons to exercise the relevant advisory, service delivery, regulatory and funding provisions available under the Act in delivering the specific objectives identified in Part Two of this Plan.

1.3. COVERAGE

The Plan takes effect within the administrative boundaries of the Region (*Map 1-1*) as defined by the Local Government (Manawatu-Wanganui Region) Reorganisation Order 1989, *Gazette* p2351. The Manawatu- Wanganui Region covers a land area of approximately 22,215 square kilometres in the lower Central North Island, and extends 12 miles (19.3 km) out to sea.

1.4. DURATION

This Plan has a duration period of 20 years and takes effect on the date that it is made operative in accordance with Section 77 of the Act and as indicated by the date that the common seal of the Manawatu-Wanganui Regional Council is affixed to this Plan. The termination date shall be December 2037. A review of each section of the Plan will begin within 10 years of this Plan being affixed with the common seal of the Manawatu- Wanganui Regional Council (i.e. 2027). Otherwise, Horizons has the ability to initiate a review in particular circumstances (*see Section 6.3*).

1.5. TERMS AND DEFINITIONS

A description of terms used in the Plan can be found in the Glossary at the end of this document.

1.6. DOCUMENT STRUCTURE

The Act has specific requirements for the Regional Pest Plan.

PART ONE: PLAN ESTABLISHMENT

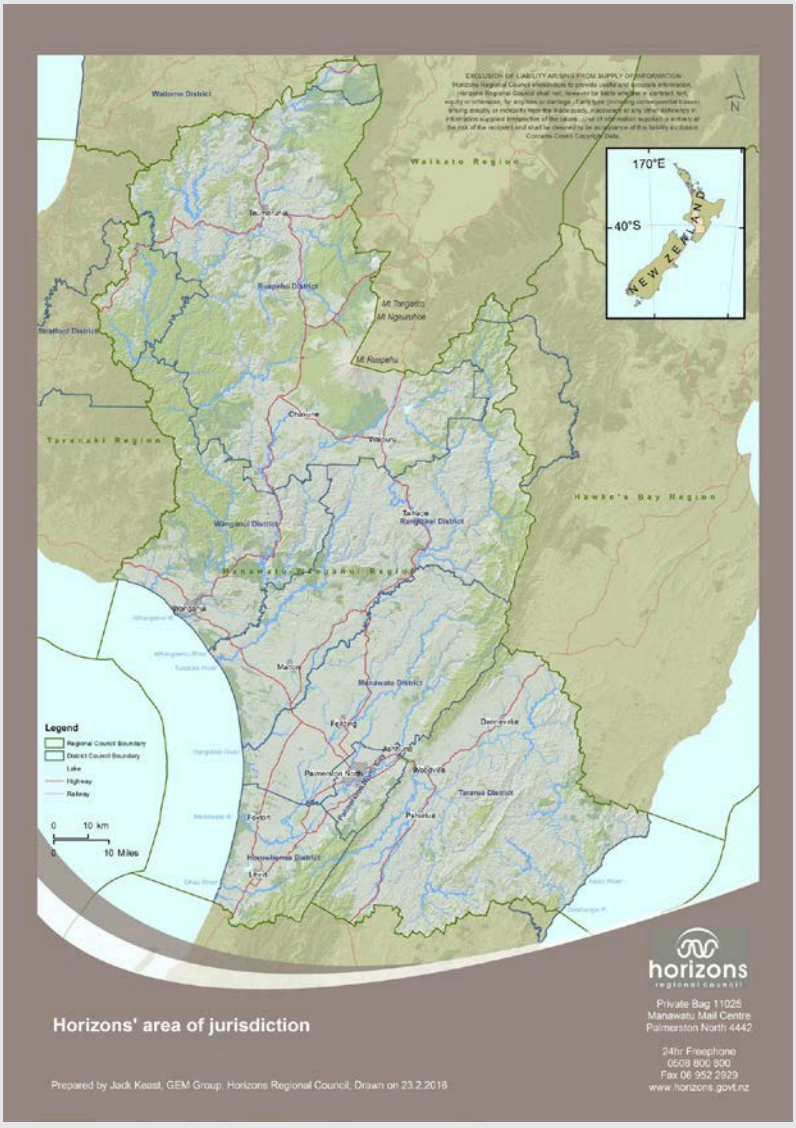
Part One contains introductory information that will assist the reader's understanding of the Plan. It sets out the statutory requirements of identifying the management agency, the Plan's purpose, coverage or jurisdictional area of the Plan, and the Plan's duration. Part One lists the specific pests to be managed under the Plan and the specific programme description (as described in the NPD) that they will be manged under. Finally, this Part includes relevant statutory background, and the general responsibilities and obligations of those affected by the Plan.

PART TWO: PEST MANAGEMENT

Part Two sets out the management regime for the pests that feature in the Plan. It sets out the reason for a pest's inclusion, the principal measures for management, and applicable rules. Part Two also includes how the Plan will be monitored and reviewed.

PART THREE: PROCEDURES

Part Three describes the administrative and management procedures as prescribed by the Act. This part lists the powers conferred under the Act, enforcement matters, the exemption process and describes generically how the Plan will be funded. This Part draws on documents incorporated by reference including the analysis of costs and benefits, the analysis of exacerbators and beneficiaries, and general funding considerations.



Map 1-1: Regional Administrative Boundaries and Horizons' area of jurisdiction.

2. ORGANISM STATUS

Section 2 identifies which organisms are classified as pests under the Plan and which are assigned as 'any other organism to be controlled'. It also indicates the programme or programmes that will be utilised to meet the desired pest management objectives as described throughout *Section 5.4* of this Plan.

2.1. ORGANISMS CLASSIFIED AS PESTS

The animals and plants listed in *Table 2-1* and *Table 2-2* are classified as pests under this Plan, and assigned to a New Zealand-wide control designation embraced by regional councils. *Section 5.1* of this Plan sets out the detail of each of the programmes, but in summary they are:

1. Exclusion programme (preventing establishment);
2. Eradication programme;
3. Progressive containment programme (rolling back); and
4. Sustained control programme.

These designations follow the directions on setting objectives laid out in the NPD (Section 4) as the intermediate outcomes that the Plan seeks to achieve. The NPD also identifies "Protecting Values in Places" as an intermediate outcome. Horizons has opted to use non-regulatory approaches to protecting specific values in specific places and so these do not feature in this Plan. Horizons' pest management aspirations for site-led approaches specifically for protecting biodiversity are described in Chapter 6 of Horizons' Regional Plan and Policy Statement (the One Plan).

Pests prohibited from sale and distribution

In accordance with Section 52 of the Act, the pests listed in *Table 2-1* and *Table 2-2* must not be knowingly communicated (or caused to be communicated), released (or caused to be released) or spread unless in accordance with this Plan or as otherwise permitted under Section 52 of the Act. Under Section 53 of the Act, any person in charge of these organisms should not offer for sale, or propagate, breed, or multiply the organisms unless permitted by a chief technical officer.

Other organisms banned from propagation and release to the wild

The Plan is one of a number of legislative components that restrict the distribution, sale, liberation or propagation of pests.

For example, mammals such as feral pigs, feral goats, all deer (including red and fallow), moose, chamois, and that are classified as "wild animals" under the Wild Animal Control Act 1977, and their liberation to the wild is prohibited under Section 11 of that Act. Department of Conservation (DOC) has the statutory authority to act on illegal liberations of such wild animals not otherwise covered in this Plan. Horizons will work with DOC to collectively address the issue of illegal liberations.

The liberation of any introduced aquatic life (including exotic fish) to water bodies, where the species is otherwise absent, is prohibited by the Conservation Act 1987. DOC and the Fish and Game Council (in relation to sports fish) have the statutory authority to act on illegal liberations of fish not otherwise covered in this Plan.

Horizons will work with these agencies to collectively address the issue of illegal liberations of fish. The liberation of birds is also regulated by these two agencies.

The sale, distribution, and propagation of any Unwanted Organism or "UWO" (as recognised and registered by a Chief Technical Officer) is controlled under the Biosecurity Act 1993. The UWO register maintained by the Ministry for Primary Industries (MPI) contains a long list of plants and animals including insects and other invertebrates, as well as diseases - not all of which appear in this Plan. While not requiring direct involvement from Horizons, any discovery of plants and animals in Horizons Region that are Unwanted Organisms but not listed in this Plan will be reported to the lead agency.

The UWOs that appear in this Plan are indicated with "UWO" and the lead central government agency (either MPI or DOC) in *Table 2-1* and *Table 2-2* of this Plan. In the case of the management of these pests Horizons will take a pivotal role and work with the central government agency to regulate the distribution of these pests.

Newly imported organisms are regulated under the Hazardous Substances and New Organisms Act 1996 by the Environmental Protection Authority. Members of the public and industry must check with Horizons, DOC, the Fish and Game Council, MPI, and the Environmental Protection Authority before releasing any plants and animals to the wild.

2.1.1. PEST ANIMALS

Species	Exclusion	Eradication	Progressive Containment	Sustained Control
Wallaby species (pg. 2929) *Macropus species*	✓ Horizons/MPI (UWO MPI)			
Possum (pg. 58) *Trichosurus vulpecula*				✓ Horizons
Rabbit (feral) (pg. 58) *Oryctolagus cuniculus*				✓ Horizons/Occupier
Rook (pg. 31) *Corvus frugilegus*		✓ Horizons (UWO MPI)		

Table 2-1: Animal organisms classified as pests, their control programmes under this Plan and the agency responsible for management

The animals are listed alphabetically by common name. The page numbers quoted refer to the page on which the description of the species can be found. While Horizons will take the lead on exclusion of wallaby, the eradication of rooks, the sustained control of possums (limited to rateable land under the auspices of a Horizons-led Possum Control Operation), and the release of calicivirus for rabbits, Horizons' activity does not absolve the occupier of their legal obligations to report and assist Horizons in the control of these pests, or undertake control as required by rules.

2.1.2. PEST PLANTS

Species	Exclusion	Eradication	Progressive Containment	Sustained Control
African feather grass (pg.31) *Cenchrus macrourus*		✓ Horizons		
Alligator weed (pg. 31) *Alternanthera philoxeroides*		Horizons (UWO MPI)		
Arrowhead (pg. 31) *Sagittaria montevidensis*		Horizons (UWO DOC)		
Australian sedge (pg. 37) *Carex longebrachiata*			✓ Occupier	
Banana passionfruit (pg. 37) *Passiflora tripartita (all varieties), P. tarminiana, P. mixta, P. pinnatistipula, P. x rosea*			✓ Horizons	

Table 2-2: Plant organisms classified as pests, their control programmes under this Plan, and the agency responsible for management.

Species	Exclusion	Eradication	Progressive Containment	Sustained Control
Blackberry (pg. 37) *Rubus fructicosus agg.*			✓ Occupier	
Blue passion flower (pg. 31) *Passiflora caerulea*		✓ Horizons		
Humped Bladderwort (pg. 29) *Utricularia gibba*	✓ Horizons (UWO DOC)			
Boneseed (pg. 37) *Chrysanthemoides monilifera*			✓ Horizons (UWO MPI)	
Broom species (exotic) (pg. 37) *Cytisus scoparius, Calicotome spinosa Genista monspessulana, Spartium junceum*			✓ Occupier	
Californian bulrush (pg. 29) *Schoenoplectus californicus*	✓ Horizons			
Cathedral bells (pg. 31) *Cobaea scandens*		✓ Horizons		
Chilean needle grass (pg. 29) *Nassella neesiana*	✓ Horizons			
Giant and Chilean rhubarb (pg. 31) *Gunnera tinctoria, G. manicata and all varieties*		✓ Horizons (UWO DOC)		
Chinese pennisetum (pg. 32) *Cenchrus purpurascens*		✓ Occupier / Horizons		
Climbing alstromeria (pg. 32) *Bomarea caldasii*		✓ Horizons		
Climbing spindleberry (pg. 32) *Celastrus orbiculatus*		✓ Horizons (UWO DOC)		
Contorta pine (pg. 37) *Pinus contorta*			✓ Horizons / Occupier	
Darwin's barberry (pg. 38) *Berberis darwinii*			✓ Horizons / Occupier (UWO DOC)	
Dwarf mountain pine (pg. 38) *Pinus mugo*			✓ Horizons/Occupier	
Eelgrass (pg. 38) *Vallisneria australis*			✓ Horizons	
Egeria (pg. 38) *Egeria densa*			✓ Horizons (UWO DOC)	

Species	Exclusion	Eradication	Progressive Containment	Sustained Control
Evergreen buckthorn (pg. 38) *Rhamnus alaternus*			✓ Horizons / Occupier (UWO DOC)	
Field horsetail (pg. 38) *Equisetum arvense*			✓ Horizons/Occupier (UWO MPI)	
Gorse (pg. 38) *Ulex europaeus*			✓ Occupier	
Grey willow (pg. 39) *Salix cinerea*			✓ Horizons / Occupier (UWO DOC)	
Heath rush (pg. 29) *Juncus squarrosus*	✓ Horizons			
Himalayan balsam (pg. 32) *Impatiens glandulifera*		✓ Horizons		
Hornwort (pg. 39) *Ceratophyllum demersum*			✓ Horizons (UWO DOC)	
Knotweed (Asiatic and giant) (pg. 32) *Fallopia japonica and Reynoutria sachalinensis*		✓ Horizons (UWO MPI)		
Lagarosiphon (pg. 39) *Lagarosiphon major*			✓ Horizons (UWO DOC)	
Manchurian wild rice (pg. 29) *Zizania latifolia*	✓ Horizons (UWO DOC)			
Moth plant (pg. 39) *Araujia sericifera*			✓ Horizons / Occupier (UWO DOC)	
Mountain pine (pg. 39) *Pinus unicinata*			✓ Horizons/Occupier	
Nodding thistle (pg. 39) *Carduus nutans*			✓ Occupier	
Nassella tussock and Mexican feather grass (pg. 32) *Nassella trichotoma and N. tenuissima*		✓ Horizons UWO MPI)		
Noogoora bur (pg. 29) *Xanthium strumarium*	✓ Horizons			
Old man's beard (pg. 39) *Clematis vitalba*			✓ Horizons / Occupier (UWO DOC)	
Phragmites australis (pg. 29) *Phragmites australis*	✓ Horizons (UWO DOC)			

Species	Exclusion	Eradication	Progressive Containment	Sustained Control
Purple loosestrife (pg. 32) *Lythrum salicaria*		✓ Horizons (UWO DOC)		
Queensland poplar (pg. 32) *Homalanthus populifolius*		✓ Horizons (UWO MPI)		
Reed sweetgrass (pg. 40) *Glyceria maxima*			✓ Horizons	
Rum cherry (pg. 32) *Prunus serotina*		✓ Horizons (UWO MPI)		
Saffron thistle (pg. 29) *Carthamus lanatus*	✓ Horizons			
Sagittaria (pg. 29) Sagittaria platyphylla	✓ Horizons			
Scots pine (pg. 40) *Pinus sylvestris*			✓ Horizons / Occupier	
Senegal tea (pg. 32) *Gymnocoronis spilanthoides*		✓ Horizons		
Spartina (pg. 33) *Spartina (all species and hybrids)*		✓ Horizons/DOC		
Sweet Pittosporum (pg. 29) *Pittosporum undulatum*	✓ Horizons (UWO MPI)			
Tussock hawkweed (pg. 29) *Hieracium lepidulum*	✓ Horizons (UWO MPI)			
Tutsan (pg. 40) *Hypericum androsaemum*			✓ Occupier (UWO MPI)	
Variegated thistle (pg. 40) *Silybum marianum*			✓ Occupier	
Woolly nightshade (pg. 33) *Solanum mauritianum*		✓ Occupier / Horizons (UWO MPI)		
Yellow bristlegrass (pg. 40) *Setaria pumila*			✓ Occupier	
Yellow ragwort (pg. 40) *Jacobaea vulgaris*			✓ Occupier	

The plants are listed alphabetically by common name. The page numbers quoted refer to the page on which the description of the species can be found. While Horizons will take the lead on exclusion and eradication pest plants, and the lead on some of the progressive containment pest plants (limited to their control within the containment zones), Horizons' activity does not absolve the occupier of their legal obligations to report and assist Horizons in the control of these pests, or undertake control as required by rules.

3. PLANNING AND STATUTORY BACKGROUND

3.1. STRATEGIC BACKGROUND

Pest management influences, and is influenced by, the way land and water is used and managed. Horizons has several planning or operational mandates that have regional pest management implications. Occupiers and the wider community, either as beneficiaries or exacerbators or both, are a fundamental part of the framework. The inherent nature of regional pest management planning processes under the Act provides the most efficient mechanism to reduce or prevent pest impacts on a region's economic, environmental, social and cultural values. The Plan is therefore central to the implementation of all pest management activity. This comprehensive linkage is reflected in the Council's biosecurity mission to "safeguard Horizons' regional economy and environment from the damage caused by harmful organisms".

One of the key drivers for Horizons' pest management future includes building and enhancing relationships and a collaborative approach to managing pests. *Figure 3-1* depicts the key strategic relationships that influence or are influenced by Horizons' regional pest management Plan.

Figure 3-1: Strategic relationships of regional pest management

Long-term Plan (LTP) and Annual Plan

The LTP and annual planning processes define the resources that Horizons anticipates will be needed to accomplish the objectives set out in the Plan. These processes provide Horizons' community with the ability to regulate the speed and cost of implementing the Plan. These processes also identify the rate of implementation of other activities that have aspects of pest management within them, such as the Sustainable Land Use Initiative (SLUI), the Whanganui Catchment Strategy (WCS) and works under Horizons' flood control and drainage schemes.

The One Plan

The One Plan is Horizons' principal document dealing with matters for which Horizons is responsible under the Resource Management Act 1991 (RMA). In keeping with the RMA's general principles, the One Plan's policies, methods and regulations seek to protect the Region's economy, natural heritage and landscape. The Plan provides a crucial tool in achieving the goals outlined in the One Plan by providing the regulatory framework for integrating the control of pests that affect the success of One Plan objectives for soil conservation, biodiversity and flood protection.

National Biosecurity Strategy

The New Zealand Biosecurity Strategy came into effect in 2003 and sets the scene for the expectations for nationally integrated pest management under the NPD (discussed in *Section 3.5*). The general expectations are:

- That there is clear and effective national leadership and coordination of pest management activities within central government, local government and the private sector;
- That there are transparent and effective performance measures to monitor and forecast the establishment of pest impacts and pathways;
- That the Crown meets its obligation as a landowner; and
- That there is a routine programme of national and regional communication and coordination, including ongoing assessment and review.

MPI is the lead agency in biosecurity at the national level.

National Biodiversity Strategy

The New Zealand Biodiversity Strategy was launched in 2000 and is coordinated by DOC. This strategy outlines the actions undertaken to implement New Zealand's requirements under the Convention on Biological Diversity, which was ratified by the New Zealand Government in 1993. The term 'biodiversity' relates to the variety of biological life and the natural patterns it forms, and includes genetic diversity, the diversity of species and habitat diversity. The New Zealand Biodiversity Strategy identifies that the maintenance of biodiversity in New Zealand is under great threat from invasive species. Effective biosecurity is a key need for the protection of biodiversity.

Neighbouring Councils

Horizons shares boundaries with Greater Wellington, Taranaki, Waikato and Hawke's Bay regional councils. Pest management is typically about effective and creative pathway management to prevent pest spread. It is in the interests of efficient and effective pest management to ensure that the pest management objectives between neighbouring councils are not inconsistent with each other. In developing this Plan, Horizons has remained cognisant of, and has given regard to the aims and objectives of existing pest management plans or strategies of neighbouring councils. In working with other regional councils, Horizons continues to pursue better pathway management approaches especially the inter-regional movement of risk goods, vehicle movements, and stock, in conjunction with other active partners from central government and industry. Horizons, Hawkes Bay, and Greater Wellington regional councils work collaboratively on the management of rooks for instance.

Māori

The relationships between Māori, their culture and traditions and their ancestral lands, waters, sites, wāhi tapu, and taonga are among the specific values to protect from the effects of pests under the Biosecurity Act, as well as an important consideration under the Local Government Act 2002, RMA, and Treaty settlement legislation. The Plan is one of the avenues to build synergy and co-operation between Māori organisations and Horizons as partners in managing the Region's natural resources.

Occupiers and the Wider Community

The task of strategic pest management is much greater than can be dealt with by Horizons alone. The Plan is very much about Horizons' ability and capacity to manage the effects of pests on the Region's economy and environment, using regulation as guided by national legislation and policy direction. In the wider context of strategic pest management, successful pest control relies on occupiers and the community to work jointly with Horizons to achieve the aims and aspirations outlined in the Plan.

Non-Regulatory Biosecurity Programmes

Over the duration of forming this Plan, Horizons proposed a Regional Biosecurity Strategy to detail the nonregulatory and aspirational aspects of pest management that cannot otherwise be incorporated into a Plan, such as Horizons' site-led pest management approach, thinking on pathway management plans, the use of social marketing, and the programmed investigation of potential pests. Further work on such a document is a project in development. Meanwhile, those who are interested in Horizons' annual objectives for non-regulatory biosecurity activity (including site-led programmes) can turn to Horizons Annual Operational Plans (one each for Pest Plant, Pest Animals, and Biodiversity) for information.

3.2. LEGISLATIVE BACKGROUND

Regional councils undertake local government activities and actions under several legislative mandates. While embracing pest management is not solely dependent on a particular statute, its effectiveness is correlated to the purpose of the particular statute. All regional councils in New Zealand have favoured the Biosecurity Act 1993 for preparing and operating regional pest management plans. The successful implementation of the rules specified in this Plan is wholly dependent on Horizons' powers under the Biosecurity Act. *Figure 3-2* depicts the main legislative instruments Horizons must account for when implementing the Plan.

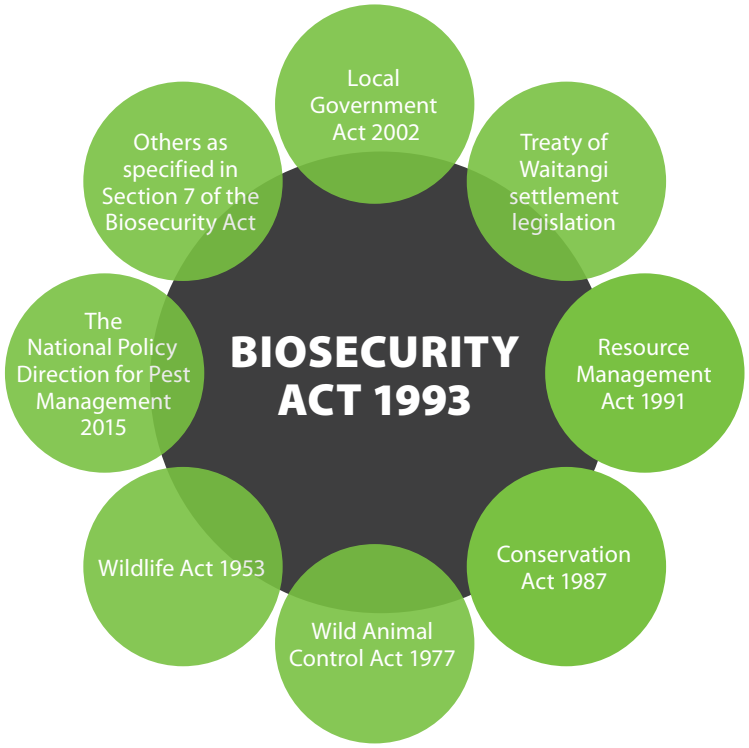


Figure 3-2: Biosecurity-relevant legislation

In preparing this Plan, Horizons has taken into account the Act and subsequent legislative amendments to it, including the NPD. This Plan has been considered, planned and funded pursuant to Part 5 of the Act (particularly Sections 70 to 76 of the Act). While the Act is the cornerstone of the Plan, nothing in the Plan is to affect or derogate from other legislation or national directions relating to pest management. To Horizons knowledge, this Plan is consistent with the requirements in Section 7 of the Act, and the pest management activities contained herein are in accordance with relevant New Zealand legislation.

3.3. RELATIONSHIP WITH OTHER PEST MANAGEMENT PLANS AND PATHWAY MANAGEMENT PLANS

A regional pest management plan must not be inconsistent with any national or regional pest management plan (whether relating to the same region or any other region or regions) concerning the same organism, or inconsistent with a pathway management plan.

Horizons has had regard to the aims and objectives of existing pest management plans and strategies of neighbouring regional councils, and continues to work collaboratively with neighbouring regions to ensure that policies for managing pests near regional boundaries are as mutual as possible. Horizons is also cognisant of, and has given regard to the control of Unwanted Organisms that are in the Plan and also under the auspices of central government agencies. Horizons will continue to work with DOC and MPI to ensure that the implementation of Horizons' Plan is not inconsistent with their objectives for Unwanted Organisms or new national pest management plans as they arise.

At the present date (August 2017), there are no pathway management plans affecting the Region, or affected by this Plan.

3.4. RELATIONSHIP WITH MĀORI

One specific purpose of a regional pest management plan under the Act is to provide for the protection of the relationship between Māori and their ancestral lands, waters, sites, wāhi tapu, and taonga, and to protect those aspects from the adverse effects of pests. Māori involvement in biosecurity is an important part of exercising kaitiakitanga. Māori also carry out significant pest management through their primary sector economic interests and as land owners and/or occupiers.

The Local Government Act also requires councils to recognise and respect the Crown's responsibilities under the Tiriti o Waitangi - Treaty of Waitangi. It also requires councils to maintain and improve opportunities for Māori to contribute to decision-making processes. This includes considering ways to help Māori to contribute. While these responsibilities and requirements are much greater than can be addressed though pest plan decisionmaking alone, Horizons specifically included iwi authorities in the public engagement process while forming the Plan.

As Treaty settlements progress between central government and Treaty claimant entities, Horizons' pest planning may need to further evolve to give further and more specific recognition to the effect of pests on Māori values. Until then, Horizons has ensured that there is nothing in this Plan that prevents functional engagement with Māori stakeholders at either the strategic or operational level of Plan implementation.

3.5. RELATIONSHIP WITH THE NATIONAL POLICY DIRECTION

The NPD was prepared by the Minister for Primary Industries in accordance with Section 56 of the Act, and came into effect on 24 September 2015. The purpose of the NPD is to ensure that activities under Part 5 of the Act (Pest Management) provide the best use of available resources for New Zealand's best interests and align with one another, when necessary, to contribute to the achievement of the purpose of Part 5.

The following steps in *Table 3-1* have been undertaken to comply with the NPD.

NPD requirements	Steps taken to comply
Programme descriptions	The types of programmes as described in Part 2 (Pest Management) of the Plan are in accordance with Section 5 of the NPD.
Setting objectives	The contents of *Section 5.2* of the Plan are described in accordance with Section 4 of the NPD.

NPD requirements	Steps taken to comply
Analysing benefits and costs	Analyses of benefits and costs (ABC) have been undertaken in accordance with Section 6 of the NPD. An evaluation of the level of ABC required, titled *"Horizons' Amended Proposed Regional Pest Management Plan 2017-2037: National Policy Direction - Section 6(1) analysis", accompanies this Plan. An evaluation of the benefits and costs, titled "Horizons' Amended Proposed Regional Pest Management Plan 2017-2037: Analysis of benefits and costs following the National Policy Direction for Pest Management Section 6(2-4))"* accompanies this Plan.
Funding rationale	The funding rationale has been developed in accordance with Section 7 of the NPD. The analysis titled *"Horizons' Amended Proposed Regional Pest Plan 2017-2037: Allocation of costs following the National Policy Direction for Pest Management (Section 7)"* accompanies this Plan.
Good neighbour rules	The good neighbour rules have been developed so as to achieve consistency with Section 8 of the NPD. The analysis titled *"Horizons' Amended Proposed Regional Pest Plan 2017-2037: Analysis of Good Neighbour Rules following the National Policy Direction for Pest Management (Section 8)"* accompanies this Plan.

Table 3-1: Steps to ensure compliance with National Policy Direction

4. RESPONSIBILITIES AND OBLIGATIONS

4.1. RESPONSIBILITIES OF THE MANAGEMENT AGENCY

As the management agency responsible for implementing this Plan, Horizons will:

- Within 3 months of the Plan becoming operative, prepare an Operational Plan for its implementation;
- Review the Operational Plan annually, and, if it thinks fit, amend it;
- Prepare a report on the Operational Plan and its implementation not later than five months after the endof each financial year; and
- Make copies of the Operational Plan and reports on its implementation available to the public.

The principal measures by which Horizons will implement this Plan are identified in relation to individual pest animals and pest plants described throughout *Section 5.3* of this Plan. The detailed manner in which Horizons will undertake its management responsibilities is set out in Part 3 (Procedures) of this Plan.

4.2. COMPENSATION AND DISPOSAL OF RECEIPTS

The Plan does not provide for compensation to be paid to any persons as a result of losses incurred as a direct result of any obligations under the Plan or its implementation. Should there be any net proceeds arising in the course of implementing the Plan, distribution shall be in accordance with Section 100I of the Act.

4.3. RESPONSIBILITIES OF OWNERS AND/OR OCCUPIERS

Pest management is an individual's responsibility in the first instance. This is primarily because occupiers generally contribute to the pest problem and in turn benefit from the control of pests. The term Occupier has a wide definition under the Act and includes:

- The person who physically occupies the place; and
- The owner of the place; and
- Any agent, employee, or other person acting or apparently acting in the general management or control of the place.

Under the Act, place includes: any building, conveyance, craft, land or structure and the bed and waters of the sea and any canal, lake, pond, river or stream.

Under Part Two of the Plan, occupiers/landowners are responsible for managing pest populations in accordance with the rules in this Plan. Failure to meet rule requirements can lead to regulatory action being taken against an occupier/owner. However, in specific situations, Horizons will carry out or facilitate pest control where it is:

- In the interests of the wider community to do so;
- More cost effective for Horizons to do so;
- On a user pays basis or in an agreed rating district; or
- Part of regulatory default action.

Occupiers have a duty to report the presence of pests to Horizons and to refrain from the sale, propagation, distribution or harbouring of pests.

An occupier cannot prevent the entry of a duly authorised person onto private land, at any reasonable time, for the purpose of establishing the presence or absence of pests, and/or for managing pests in accordance with this Plan or compliance with biosecurity law. While the methods of control are the prerogative of the occupier, compliance with the requirements under other legislation (for example, the RMA or the Hazardous Substances and New Organisms Act 1996) must also occur.

This Plan treats all private land equitably and emphasises the responsibilities and obligations of all land owners and/or occupiers, including Māori. Council acknowledges the complex and variable relationships of Māori land ownership and occupation. This includes multiple owners (including lessees) or a range of corporate management systems under the Companies Act 1993 or Te Ture Māori Whenua Act 1993. Where owners and/or occupiers are unknown, the Maori Land Court; or the Registrar of Companies may help to identify and communicate with them.

4.4. CROWN AGENCIES AND STATE OWNED ENTERPRISES

Horizon's identifies five central government agencies (including State Owned Enterprises (or SOEs)) occupying the Crown estate in the Manawatu-Wanganui Region. K In addition to implementing good neighbour rules, Horizons will also continue to pursue and maintain formal and informal relationships with Crown agencies to achieve the objectives of this Plan. As they are not Crown agencies in the strict sense, SOEs can be bound by any rule under the Plan.

In some circumstances it may be appropriate for Horizons and a Crown agency/SOE to negotiate an agreement of specific actions and timeframes to bring about compliance with the Plan, or otherwise achieve the outcomes of the Plan (through alternatives to meeting the rule framework). One method of recording any agreement is in the form of a Memorandum of Understanding (MoU). MoU's are discussed in further detail in Section 5.3.5. A MoU may set out a range of matters, including (where applicable) any exemption granted in accordance with the exemption process detailed in *Section 7.1.5* of the Plan.

4.4.1. DEPARTMENT OF CONSERVATION

DOC administers 423,777 ha (approximately 19% of the total land area) in the Manawatu-Wanganui Region. DOC is an occupier (though not always the sole occupier) or public conservation land under the Reserves Act 1977, National Parks Act 1980 and the Conservation Act 1987, and may also hold land under the Wildlife Act 1953 and Wild Animal Control Act 1977. There are three DOC operational regions with part of their areas within the Horizons boundaries. DOC has particular interest and expertise in the area of pest threats to indigenous biodiversity values.

4.4.2. LAND INFORMATION NEW ZEALAND

Land Information New Zealand (LINZ) administers approximately 1,280 ha of vacant and non-rateable land. LINZ also has responsibility for unalienated Crown land in the Region and surplus railway land.

4.4.3. KIWIRAIL

KiwiRail is a State Owned Enterprise and is responsible for managing a rail corridor of approximately 522 km, as well as land and rail infrastructure, on behalf of the Crown, in the Manawatu-Wanganui Region. This accounts for approximately 1,600 ha of non-surplus railway land. For this Plan, KiwiRail is synonymous with "rail authority".

4.4.4. NEW ZEALAND DEFENCE FORCE

The New Zealand Defence Force (NZDF) has three main installations within the Region (Ohakea Air Force Base, Linton Army Camp and Waiouru Army Camp and its surrounding training area) as well as smaller properties located throughout the region. The total area occupied is approximately 62,000 ha.

4.4.5. NEW ZEALAND TRANSPORT AGENCY

The NZ Transport Agency is the roading authority for State Highways. NZ Transport Agency manages approximately 1,216 km of road and roadside verges and as such is subject to the conditions relating to the management of pests on road verges identified in *Section 4.6* of this Plan.

4.5. TERRITORIAL LOCAL AUTHORITIES

Section 73 (3) (k) of the Act requires that Horizons specifies the actions that local authorities may take to implement the Plan. There are 10 Territorial Local Authorities (TLAs) wholly or partly contained within the Manawatu-Wanganui Region (see Map 1-1: Regional Administrative Boundaries *and Horizons' area of jurisdiction*.). They are: Horowhenua District, Palmerston North City, Tararua District, Manawatu District, Rangitikei District, Whanganui District, Ruapehu District, Stratford District, Taupo District and Waitomo District.

Each territorial authority will be bound by the rules in this Plan, with the exception of situations where adjoining occupiers of road reserves are deemed responsible in accordance with *Section 4.6*. Each territorial authority will be responsible for meeting its costs of complying with this Plan. The only TLA not affected is Taupo District, which does not administer land or roads in the Manawatu-Wanganui Region.

MOU's setting out roles and responsibilities for pest management between Horizons and the TLAs will be established or renewed. Such agreements will, among other things:

- Identify an annual operational plan to which the TLA agrees to be bound;
- State which species are to be controlled, and where, and best practice control methods suggested;
- State expected timeframes for completion of work;
- Incorporate existing agreements such as non-toxin agreements between TLAs and their clients (ratepayers); and
- Encourage machine hygiene and the prevention of pest spread.

Where applicable, MOU's may also set out any exemption granted by Horizons in accordance with the process set out in *Section 7.1.5* of the Plan.

4.6. OCCUPIERS OF ROAD RESERVES

Section 6(1) of the Act states that:

> Where a pest management plan or a pathway management plan applies to land adjoining a road, the plan may state that the land includes, for the purposes of the plan, all or any of the portions of road bounded by -
>
> a. The boundary of that land abutting that road; and
> b. Lines extended from the end of that portion of boundary to the middle line of the road; and
> c. The middle line of the road connecting those extended lines.

The management of infestation on road or adjacent reserves is a critical part of managing the spread of pests from property to property along road corridors. The roading authorities and adjacent occupiers are each responsible for managing their respective side of the boundary. Generally, the boundary will be taken as the fenced boundary between a public road and the land adjoining the road. Where the road reserve boundary is unknown it shall be taken as 10 m from the road centre line, unless this includes another occupier's land, which in this case, the distance (that will be less than 10 m) will be adjusted accordingly.

In situations where it may be unreasonable to expect pest control to be undertaken (e.g. steep topography, unstable surfaces, or safety concerns), an occupier of road reserve has the option of seeking an exemption in accordance with the process set out in *Section 7.1.5* of this Plan.

Roading Authorities

Except where a rule prevents occupier control of pests, roading authorities are responsible for controlling pests (as described in Part Two of this Plan) on road reserves that they occupy in the following situations:

- Rest areas;
- Weigh pits and stockpile areas;
- Road reserves where road works have contributed to the establishment of named pests;
- Other isolated areas of road reserves for safety reasons; and
- Road reserves adjacent to land where the landowner is undertaking programmed pest management.

Occupiers

Except where a rule prevents occupier control of pests, adjacent landowners are responsible for controlling pests (as described in Part Two of this Plan) on road reserves in the following situations:

- Unformed (paper) roads that they occupy, or are contiguous to the land they occupy;
- On the adjacent landowners side of the fence on land beyond 10 m of the road centre line where the road reserve boundary is unknown;
- Where fences encroach into a surveyed road reserve, the occupier adjoining the road reserve must be responsible for pests within that
  fenced area;
- Where adjacent occupiers do not support the use of toxins to control pests (e.g. organic farming practices), the occupier must engage with the appropriate roading authority to identify alternative measures.

These provisions do not apply to private roads such as internal farm tracks, windfarm roads, or the roads within the NZDFS' Waiouru Military Training Area. In these cases, rules apply as stated within Part Two of the Plan.

4.7. GOOD NEIGHBOUR RULES

Certain pests in this Plan have a good neighbour rule. The good neighbour rules included in this Plan have been assessed as complying with the 'Directions on Good Neighbour Rules' as set out in Section 8 of the NPD in the document titled *"Horizons' Amended Proposed Regional Pest Plan 2017-2037: Analysis of Good Neighbour Rules following the National Policy Direction for Pest Management (Section 8)"*. In summary, good neighbour rules can be used and enforced where:

- Without the rule, due to the characteristics of the pest it would spread to nearby land causing unreasonable costs to the occupier of that land (the Affected Occupier);
- The Affected Occupier is taking reasonable measures to manage the pest or its impacts; and
- The requirements to comply with the rule are reasonable relative to the costs that the Affected Occupier would incur from the pest spreading.

A good neighbour rule focuses on managing the costs incurred by the Affected Occupier due to the spread of pests from the property of the other neighbour. Horizons considers such rules to be useful to ensure that a person who is going to the trouble of managing certain pests on the land that they occupy is not incurring unreasonable ongoing costs resulting from a neighbour not doing the same.

The good neighbour rules in this Plan apply to land within a specified distance of the boundary of the Affected Occupiers' land. The specified distance is based on the characteristics of the pest that the rule applies to. In the case of pest plants this distance takes into account the maximum unaided dispersal distance of seed from that plant (these distances are set out in *Table 5-10*). In the case of possums and rabbits, it is the distance that Horizons can reasonably estimate abundance on both sides of the boundary to determine if there is a likelihood of spread from the neighbour.

Horizons is of the view that the specified distances for control are reasonable relative to the costs that may be incurred from spread of the pest. This has been supported through the benefit and costs and clause 8 analysis undertaken by Horizons – see the document is titled *"Horizons' Amended Proposed Regional Pest Management Plan 2017-2037: Analysis of benefits and costs following the National Policy Direction for Pest Management Section 6(2-4)" and "Horizons Amended Proposed Regional Pest Management Plan 2017-2037: Analysis of Good Neighbour Rules following the National Policy Direction for Pest Management (Section 8)".*

4.7.1. REASONABLE MEASURES EXPLAINED

Another important component (or trigger) of the good neighbour rules is whether an Affected Occupier is taking 'reasonable measures' to control the pest. Reasonable measures (and unreasonable costs) are not defined in the Act, but it is helpful to provide some scope to assessing these two things.

Reasonable measures are actions that result in the effective management of the pest where the cost of control is less than the benefits derived from future management of the land. An exacerbating neighbour creates unreasonable cost when the Affected Occupier is undertaking reasonable measures but is experiencing costs due to ongoing control being required because the pest is spreading from the neighbour's land.

Occupiers participating in a Horizons-led pest control programme (such as obliging Horizons-led progressive containment pest plants programme or being part of the PCO programme on the land that they occupy) is accepted by Horizons to be a reasonable measure for the purpose of any good neighbour rule.

When assessing whether reasonable measures are in place, Horizons' Authorised Persons will otherwise look for evidence of pest management. Consideration will be given to the following:

- Physical Factors where inspection reveals immediate evidence of:
  - » Target pest destruction such as dead plants;
  - » Cleared areas from cutting and/or cutting and treating;
  - » Paddocks with the majority of land cover being pasture that may contain treated plants, or small amounts of seedlings/regrowth to be treated;
  - » The presence or evidence of use of toxic bait, or traps, or other devices in sufficient quantity and state, such that they would result in the management of the pest.
- Records (evidence may include but is not limited to):
  - » Evidence of recent contracted work such as invoices for sprays, baits, or ammunition, or contract labour;
  - » Tallies of animals killed, animal tails, receipts of payment for animal skins (with tally) or fur (with weight);
  - » Before and after photographs of the site;
  - » A current and forecasted property/paddock spray plan or pasture management/development plan that identifies long term control of pest;
  - » Results of a monitoring operation done in accordance with a recognised (published or certified) monitoring protocol.
  - » A history of opting into a Horizons-led pest management programme.

Horizons' Authorised Persons may consider other evidence that would demonstrate that the Affected Occupier is undertaking reasonable measures to control the pest on their land. The affected occupier must demonstrate that they are doing more than what is required by a good neighbour rule in this Plan.

4.8. CLEAR LAND RULE

The intent of the Clear Land rule is to focus pest control efforts on keeping clear land clear and therefore stopping further spread of these pest plants within the Region. A clear land rule acknowledges that, while it is not practicable to eradicate 'progressive containment' pest plants in all circumstances, small infestations can and should be eradicated. These rules apply when the infestation of the pest on 'clear land' is within an infestation threshold size for the particular pest species. The 'threshold infestation sizes' are set out in *Table 5-10* as a m^2 or hectare area. If the infestation is within the threshold it is considered that the benefits of clearing the pest outweigh the costs of doing so.

A difference between a good neighbour rule and a clear land rule is that a good neighbour rule is enforced only to manage the spread of a pest between properties, whereas a clear land rule is enforced to reduce the incidence of the pest locally where it is economically prudent to do so. The rules in tandem have the effect of preventing expansion of the pest in areas that are presently clear or being cleared of the pest within the Manawatu-Wanganui region.

4.9. APPROVED MANAGEMENT PLANS

An approved management plan is a documented pest management plan that describes the levels of service for management of pests where they must be managed to reduce spread. They are written by the agency required to have such a plan as stated in a rule, usually as an alternative to achieving the specifications contained in that rule on the level of pest clearance or timing of the delivery of the service. The intent of an Approved Management Plan is to meet the objective by reducing the spread of that pest from the place(s) that they occupy. Horizons' Principal Officer or their delegate must be satisfied that the proposal will meet that objective.

Part 2

PEST MANAGEMENT

Part Two: Pest Management

5. PROGRAMMES AND ATTRIBUTES

In preparing management objectives and identifying the principle measures for implementing pest management programmes, Horizons undertakes an analysis to determine the most sensible, equitable, practical and affordable management solution for each pest or class of pest under an appropriate designation.

5.1. PEST MANAGEMENT PROGRAMMES

The pests, and any other organisms to be controlled, will be managed under one of the following pest management programmes. The definition of these programmes are consistent with national definitions of "intermediate outcomes" contained in the NPD and are based on an assessment of invasion extent and the ability to achieve desired control levels for the particular pests. The programmes are described as follows:

5.1.1. PREVENTING ESTABLISHMENT: EXCLUSION PROGRAMME

The intermediate outcome is to search for subject pests and prevent the establishment of the pest which is present in New Zealand but not yet established the Region, and which has the potential to become a serious pest in the future. Section 100V of the Act may be used to instigate emergency control of new incursions of pests that are not otherwise listed in this Plan.

5.1.2. ERADICATING: ERADICATION PROGRAMME

The intermediate outcome is to eradicate the pest in an area. In the short to medium term, eradication involves reducing infestation levels of the subject to zero levels. This category includes potentially invasive pests where their rate of increase or geographic extent is not well known, but is assumed to be at low densities or low geographic spread.

5.1.3. ROLLING BACK: PROGRESSIVE CONTAINMENT PROGRAMME

The intermediate outcome is to contain and reduce the geographic distribution of the pest to an area over time. Containment usually arises in situations where the subject is at high densities in part of the Region, but of low extent or limited range. Eradication is not feasible, but it is feasible to prevent the pest from spreading to other parts of the Region or to eradicate the pest from other parts of the Region.

5.1.4. MANAGING EXTERNALITIES: SUSTAINED CONTROL PROGRAMME

The intermediate outcome is to provide for the ongoing control of the pest so as to reduce its impact and its spread to other properties. The focus is on the densities of a subject and ensuring they do not reach a level where they are causing significant externality impacts. Sustained control is a strategy for pests of low to moderate densities but of such wide geographical spread that they cannot be easily eradicated.

5.1.5. PROTECTING VALUE IN PLACES: SITE-LED PEST PROGRAMME

The intermediate outcome is to exclude, or eradicate, from that place; or to contain, reduce or control within that place; the pests that are capable of causing damage to a place (site) and its values. With reference to the programme type "Protecting Values in Places", Horizons is opting to take a non-regulatory approach to managing pests in significant places and so the programme type "Protecting Values in Places" does not feature in the Plan at this time.

5.2. OBJECTIVES

The NPD prescribes the following matters to be encompassed within an objective for each organism or classes of organisms:

- The particular adverse effect/s of the subject on the matters listed in Section 54(a) of the Act;
- Pest management intermediate outcome/s to be achieved;
- The geographic area to which the objective applies;
- The extent to which the outcome will be achieved (if applicable);

- The period within which the outcome is expected to be achieved; and
- If the period for achieving the outcome is more than 10 years, what is intended to be achieved in the first 10 years of the Plan, or during the current term of the Plan prior to the next review *(if applicable)*.

To this end, the Objectives Section for each pest specifies the duration and outcomes for each pest, and the particular adverse effect being addressed by the Plan (See Pest Management Attributes – *Section 5.4*).

5.3. PRINCIPAL MEASURES

The Act requires a Regional Pest Management Plan to indicate the principal measures (actions) that will be used in the Plan to achieve the objectives (s70(2)(c)(iv)). The following principal measures are grouped under four main categories. The activities that may occur within each category are provided as a suite of possibilities that may be applied as appropriate.

5.3.1. REQUIREMENT TO ACT

Occupiers or other persons will be required to act where Plan rules dictate:

a. Pests are to be controlled or destroyed;
b. Management plans are to be prepared and submitted;
c. The presence of pests is to be reported;
d. Any actions that are to be reported (type, quantity, frequency, location, programme completion); and
e. Pests are not to be spread (propagation, sale, distribution), pathways are to be managed (machinery, gravel, animals).

Occupiers or other persons will also be required to act as necessary to comply with the Biosecurity Act 1993.

5.3.2. COUNCIL INSPECTION

This measure may include Horizons staff as Authorised Persons undertaking:

a. Property visits or surveys to determine the presence or absence of pests, compliance with rules and management programmes, or to identify areas for which control programmes will apply (places of value, exclusion zones, movement control areas);
b. Regulatory management (rule enforcement, action on default, prosecution, exemptions);
c. Limited control action where it is effective and cost efficient to do so; and
d. Effectiveness monitoring where it is more effective and cost efficient than to do so independently.

5.3.3. SERVICE DELIVERY (INCLUDING BIOCONTROL)

Horizons may undertake service delivery as follows:

a. Where it is funded to do so within a rating area;
b. On a user-pays basis;
c. Providing control tools, including sourcing and distributing biological agents or provisions.

5.3.4. ADVOCACY AND EDUCATION

Horizons may undertake:

a. The provision of any of a broad suite of general purpose education, advice, awareness and publicity activities concerning pests, pathways and their control to occupiers and the general public;
b. Encouragement of occupiers to carry out pest control;
c. Facilitating or funding community and occupier self-help groups and committees;
d. Assisting other agencies with control, advocacy and the sharing or sourcing of funding;
e. The promotion of industry requirements and best practice to contractors and occupiers;
f. Encouragement of occupiers and other persons to report the presence of pests or to control them; and
g. Facilitating or commissioning research.

5.3.5. MEMORANDA OF UNDERSTANDING (MOU)

Horizons may develop MOUs with an Occupier to achieve the following:

a. Establish agreed levels of services from those Occupiers to act to control pests on their land;
b. Consider alternative methods of pest control to comply with the rule framework, including good neighbour rules in this Plan, and in doing so deliver pragmatic levels of service that achieve the objectives of the Plan.

Where applicable, MoU may also record the outcome of any exemption process under *Section 7.1.5* of the Plan. These aspects of an MoU will be legally binding, and enforceable in accordance with the Act.

Matters which may be provided for in an MoU with respect to any exemption include (without limitation):

- A description of the exemption including the rule or rules that the occupier is exempt from meeting;
- The reasons for exemption;
- An annual operational plan or alternative action to which the occupier agrees to be bound;
- The species to be controlled, and where, and best practice control methods;
- Expected timeframes for completion of work and the period of any exemption;
- Any existing agreements between roading authorities and Crown agencies and their neighbours (ratepayers) that are relevant to the management of the pests in this Plan, e.g. non-toxin agreements; and
- Reference to other published standards, codes of practice, or other guidelines that lead to a mutual and publically transparent agreement on levels of service such as (for instance) best practice guidelines for machine hygiene that aid in the prevention of pest spread.

MOUs shall be publically available.

5.3.6. PESTS IN THIS PLAN ARE PROHIBITED FROM SALE AND DISTRIBUTION

As stated in *Section 2.1* above, the pests listed in this Plan are prohibited from sale, breeding, propagation and distribution in accordance with Section 52 and Section 53 of the Act, except where otherwise specified.

Section 52 Obligation:

No person shall knowingly communicate, cause to be communicated, release, or cause to be released, or otherwise spread any pest or unwanted organism except:

a. In the course of and in accordance with the Plan; or
b. As provided in an emergency regulation made under Section 150 of the Act; or
c. For a scientific purpose carried out with the authority of the Minister; or
d. As permitted either generally or specifically by a chief technical officer.

Section 53 Obligation:

The owner or person in charge of an organism which that person knows or suspects constitutes a pest to be managed in this Plan must not:

a. Cause or permit that organism to be in a place where organisms are offered for sale or are exhibited; or
b. Sell or offer that organism for sale; or
c. Propagate, breed, or multiply the pest or unwanted organism or otherwise act in such a manner as is likely to encourage or cause the propagation, breeding, or multiplication of the pest or unwanted organism.

The exemption to the Section 53 obligation is where the Chief Technical Officer permits an owner or person in charge of an organism to carry out an Act. The reason for declaring that these pests are banned from sale and distribution under this Plan is to prevent their further spread through negligent liberations or ignorance, and to remind the regional community of their general obligations under the Act.

Breach of any of the provisions of these Section of the Act is an offence under the Biosecurity Act. The penalties for a breach of Sections 52 and 53 for an individual person is a fine of up to $100,000 or up to five years in jail, or both. For a corporation the fine is up to $200,000.

5.4. PEST MANAGEMENT ATTRIBUTES

The following sections describe the pest management attributes for each pest or group of pests to be managed under this Plan. This section also describes any rules that will be used to achieve the objectives of the Plan.

For each pest or group of pests listed the Act requires a Regional Pest Management Plan to describe the reasons for inclusion (and why it is more appropriate than relying on voluntary action), the objectives of pest management (see *Section 5.2* above) and the principal measures used to achieve the objectives (see *Section 5.3* above).

Section 71 (d) of the Act requires that Horizons be satisfied that the pests are capable of causing at some time an adverse effect on at least one of a number of values listed in italic below. To inform the evaluation of the Plan in this regard, Horizons has grouped the values into three broad categories:

- Production pests – those that affect the value of *economic wellbeing, or affect animal welfare;*
- Environmental pests – those that affect the *viability of threatened species of organisms, the survival and distribution of indigenous plants or animals, or affect the sustainability of natural and developed ecosystems, ecological processes and biological diversity, or affect soil resources and water quality;* and
- Social / amenity pests – those pests that affect human health, social and cultural wellbeing, or affect *the enjoyment of the recreational value of the natural environment.*

The Act also includes the *relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga* as a value that Horizons may consider affected by pests. This set of values sit across all three of the broad categories that Horizons has used to evaluate pests in the region.

These effects are reported for each pest or group of pests under "Effect" in *Table 5-1, Table 5-4, Table 5-9* and *Table 5-19* respectively.

5.5. EXCLUSION PROGRAMME

Horizons' Exclusion Programme covers species for which Horizons has opted to be the lead agency or partner for managing new incursions into the Region. These pests are present in New Zealand, but outside the Manawatu-Wanganui Region. They have the potential to expand their range into the Manawatu-Wanganui Region and become a problem. At the time of writing this Plan, these pests are not yet known to have establiadzsfdgshed self-sustaining populations in the Region, or they have recently been eradicated.

Horizons' management of new incursions is not limited to these pests. If other organisms appear (as new incursions) in the Region, Horizons can opt to undertake small-scale eradication programmes of those species under Section 100V of the Act, without the need to reference those organisms in the Plan.

Species	Description	Effect
Humped bladderwort (pg. 29)	A sprawling submerged aquatic plant with finely divided thread-like leaves, with tiny round bladders (often black) which trap small aquatic invertebrates. Small yellow flowers (from summer to autumn). Forms dense mats and is capable of invading wetlands and ponds, potentially displacing native *Utricularia* species.	Environmental Pest, absent from Region
Californian bulrush (pg. 29)	A tall dense clump-forming rush found on coastal river banks and estuaries. A small site of this environmental weed (near Taumarunui) has been eradicated.	Environmental Pest, Eradicated
Chilean needle grass (pg.30)	An erect, tussocky perennial grass. Primarily a production pest plant affecting pastoral farming, but capable of invading indigenous ecosystems also.	Production Pest, absent from Region
Heath rush (pg. 30)	An erect, tussocky perennial grass. Primarily a production pest plant affecting pastoral farming, but capable of invading indigenous ecosystems also.	Production Pest, absent from Region

Species	Description	Effect
Manchurian wild rice (pg. 30)	A large-growing grass that grows on the margins of wetlands and waterways. This environmental pest plant is classified nationally as unwanted organism. Regulated also by the Ministry for Primary Industries.	Environmental Pest, absent from Region
Noogoora bur (pg. 30)	An herbaceous weed with 'bur' fruits. This production pest plant affects economic wellbeing (mainly the value of wool).	Production pest, absent from Region
Phragmites australis (pg. 30)	A large reed forming dense beds on the edges of water. This is an environmental pest plant and is classified nationally as an unwanted organism. Regulated also by the Department of Conservation.	Environmental Pest, absent from Region
Saffron thistle (pg. 30)	An herbaceous weed, this production pest plant affects pastoral productivity.	Production Pest, absent from Region
Sagittaria platyphylla (pg. 30)	An invasive aquatic herb, this environmental pest plant is capable of invading indigenous aquatic ecosystems.	Environmental Pest, absent from Region
Sweet Pittosporum (pg. 30)	A shrubby tree, this environmental pest plant is capable of invading indigenous scrub ecosystems.	Environmental Pest, absent from Region
Tussock hawkweed (pg. 30)	An herbaceous weed found in grassland, roadsides, and river beds. This environmental pest plant is capable of invading indigenous ecosystems.	Environmental Pest, absent from Region
Wallaby species (pg. 30)	Specifically dama and Bennett's wallaby, which are a small to mid-sized macropod mammal. The macropods are distinguished from other marsupial mammals by their propensity to hop on their hind legs, using their muscular tail for balance. Wallabies are production pest animals that mainly affect pastoral and horticultural values. They also affect native ecosystems through selective browse of understory plants. Classified nationally as an unwanted organism. Regulated also by Ministry for Primary Industries.	Production and Environmental pest, absent from Region

Table 5-1: Organisms on Horizons' Exclusion Programme

The page numbers quoted refer to the page on which the management regime for each species can be found.

Reason for Inclusion

The pests on the Exclusion Programme, classed as production or environmental pests, are capable of causing adverse effects to the productive capacity of the Region, or to the Region's environmental values, as indicated by the Description and Effect of each of the pests in *Table 5-1* above. They are grouped because the management regime is the same. The geographic area that the Plan applies to under this Programme is the whole Region.

For the pest plants listed in the Exclusion Programme, the Plan is more appropriate than relying on voluntary action because under voluntary action there is likely to be a delay between the arrival of the pest and taking action before the obvious effects of these pests are felt.

For wallaby, the Plan is more appropriate than relying on voluntary action because under voluntary action there is likely to be a delay between the arrival of wallaby and tacking action before the obvious effects of this pest is felt. Also, one of the potential vectors of the spread of this pest is intentional liberation. Having the Plan provides Horizons with the tools (rules) to minimise and manage intentional liberation.

Management Regime

Management regime for Exclusion Programme pests	
OBJECTIVES For the duration of the Plan (2017 – 2037), exclude the pests listed in Table 5-1 from the entire Region to prevent their establishment and prevent their adverse effects on economic well-being and the environment. **AIMS** • Detect these pests before they become widely established in the Region. • Facilitate a quick response through appropriate funding that will enable the control or management of these species on rateable land. • In the first 10 year period of the Plan to 2027, eradicate the pests listed in Table 5-1 if they are introduced into the Region.	**PRINCIPAL MEASURES** **Service delivery** Subject to feasibility, Horizons will undertake control of these pests in the Region if they are detected. **Council inspection** Horizons may conduct surveillance programmes for these pests. **Advocacy and education** Horizons may carry out programmes to increase awareness of the exclusion programme and the threat posed by these pests. These pests will be incorporated into generic biosecurity advocacy programmes, including information on preventing their dispersal. **Requirement to act** Occupiers must inform Horizons of the presence of these pests on their land. Occupiers will act in accordance with the Act and with the rules for exclusion pests detailed in Table 5-3. This will aid in the detection of the pests if they arrive in the Region and prevent purposeful importation of the pests without Horizons knowledge.
MONITORING The pests listed in *Table 5-1* will be monitored in accordance with Section 6.1 of this Plan.	**OUTCOMES** Economic losses to the primary production sector by these pests are avoided. Native ecosystems are protected from the significant adverse effects of these pests and their management.

Table 5-2: Management regime for Exclusion Programme pests

Specific Rules

Specific rules for Exclusion Pests	
Rule	**Explanation**
Duty to Inform Rule 5.3.1	All occupiers who become aware of the pests listed in *Table 5-1* in the place they occupy must inform Horizons of the presence of those pests within five working days of the discovery of the pest.
Wallaby Rule 5.3.2	No person shall possess a live dama or Bennett's wallaby, or any other pest in *Table 5-1* in the Region without prior written permission from Horizons.
	A breach of these rules will create an offence under Section 154N(19) of the Act. Any person or corporation who fails to comply with these rules is liable to penalties as prescribed under Section 157(5) of the Act.

Table 5-3: Specific rules for Exclusion Pests

5.6. ERADICATION PROGRAMME

Horizons' eradication programme covers species for which Horizons has opted to be the lead agency or partner for eradicating the pests from the Region. These pests are present in the Manawatu-Wanganui Region but are limited in their size or extent of infestation, or their eradication is feasible and a cost-effective solution to protecting production or environmental values into the future. Many of these organisms are environmental or production pest plants. The rook (listed first) is the only pest animal included.

Species	Description	Effect
Rook (pg. 34)	A social bird from the crow family. Adult is glossy black, approximately 50 cm in length and weighs 350-500 gm. Rooks feed in flocks and can cause significant damage to crops such as newly sown cereals, ripening peas, broad beans, potatoes, pumpkins, walnuts, and fruit. On pastoral land they eat insects such as grass grubs, but any benefits are greatly outweighed by direct damage to pasture, and indirect effects such as opening up pasture to weed infestation and triggering soil erosion. Through effective past control rooks are largely restricted to the Tararua District, although there remain small rookeries in the Manawatu and Taihape areas and rooks are still seen near Ohakune. There is a large area of suitable habitat (farmland with cropping) west of the main ranges that could support many more birds. Due to their ability to disperse over long distances, there is a persistent threat of invasion into currently clear areas from residual populations in the Region, and a potential threat of re-invasion from neighbouring regions. Current evidence suggests that rooks will increase in numbers to economically damaging levels if uncontrolled.	Production Pest
African feather grass (pg. 35)	A robust rhizomatous perennial grass that forms dense tussock up to 2m tall. A distinctive yellow/purple flower (from November to April) on a narrow cylindrical stem up to 300 mm long. Known sites in Whanganui, the Rangitikei, Horowhenua and along the Manawatu River in the Tararua District. Unpalatable to stock and can outcompete pasture. Possibly some environmental effects as it prefers damp situations in swampy areas and along borders of streams, though will grow in a range of soil types including sand.	Production Pest
Alligator weed (pg. 35)	An aquatic perennial herb with floating stems that form dense floating mats. Waxy oval / egg shaped leaves in opposite pairs. Flowers (from December to February) are white in small papery florets in clover-like heads up to 13 mm in diameter. Known only at one site near Taumarunui. Grows quickly and can infest swamps, ponds, lagoons, stream banks, dune hollows and drains. Has also the potential to cause economic losses to lowland pasture and cropping land.	Environmental and Production Pest
Arrowhead (pg. 35)	A robust, stem-less, rhizomatous aquatic plant. Young plants have ribbon-like leaves and grow submerged. Older plants emerge above the water with glabrous leaves that are shaped like an arrowhead up to 28 cm long and 23 cm wide. Currently known at two sites in the Region (near Whanganui city and Levin township). An invasive weed with the potential to block waterways and invade wetlands.	Environmental Pest
Blue passion flower (pg. 35)	A hairless vine with angular shoots with five-lobed leaves. Purple-white flowers (from December to April). Low infestations in the Region, and only known from Whanganui City, Dannevirke and the vicinity of Levin. The number of residential gardens in which blue passion flower is being cultivated is currently unknown. Capable of causing damage to native bush areas by smothering shrubs and canopy trees. It can grow in coastal shrublands, lowland forests, forest margins and wasteland areas.	Environmental Pest

Species	Description	Effect
Cathedral bells (pg. 35)	A fast-growing perennial climber with leaflets in three pairs. Leaves dark green above, whitish underside, with a brown stalk ending in a twining tendril. Flowers (summer to autumn) are bell-shaped, green initially and colouring to purple after pollen production. Large winged seed. Currently known from 25 sites with less than 10 hectares affected in total. The growth habit is to carpet the understory of forests and smother canopy trees. This climber has the potential to become a major environmental pest problem in native forests, scrub and recreation areas.	Environmental Pest
Giant and Chilean rhubarb (pg. 35)	Both species are giant clump-forming summer-green herb growing up to 2 m tall. Rhubarb-like leaves approximately 80 cm by 100 cm, with soft prickles on main veins. Small greenish flowers (from October to November) on tall (1 m long) panicle rising from the base of the leaf stalks. Small (1.5 mm to 2 mm long) fruits are highly visible. Present in parks, botanic gardens and large private gardens, and in the wild along streams and drains. Current estimated area is 400 hectares. Chilean rhubarb has the potential to invade any steep wet cliff areas at the expense of indigenous habitat, and ability to invade pastoral drains. Considered a serious pest in Taranaki. While giant rhubarb has recently been reported as less invasive, the seedlings are difficult to tell apart.	Environmental Pest
Chinese *pennisetum* (pg. 35)	A tufted perennial grass that forms large tussocks around 1m high. Leaves are long and wiry. Flowers are purplish, bristly, cylindrical spikes. Now extends to around 1000ha. Generally unpalatable to stock. Does not compete successfully with dense pasture, but has the capability of affecting hill country pastures. Difficult to control once established. Small plants are difficult to distinguish from other grasses and rushes.	Production Pest
Climbing alstromeria (pg. 35)	A rhizomatous perennial vine with multiple twining stems. Pale green leaves are thin, elongated and pointed at the tips. Flowers are trumpet-shaped in dense drooping clusters. Flowers (mainly in spring or summer) are orange-red on the outside and yellow with red spots on the inside. Fruit is a capsule that splits to reveal bright orange/red fleshy seeds. Known from 8 sites in the Region. This shade tolerant vine has the capability of invading and smothering native forest and shrublands, particularly on margins such as tracks and fence lines.	Environmental Pest
Climbing spindleberry (pg. 35)	A deciduous hairless climber that can grow at least 12 m tall. Leaves are arranged alternately on the stem and are round to elliptical in shape. Flowers (from October to December) are green and inconspicuous. Fruit are showy and yellow, opening to expose a scarlet centre. Currently infesting approximately 110 ha. Aggressively invasive and shade tolerant, this weed is capable of invading and smothering native forest canopies and preventing forest regeneration by forming dense mats on the forest floor.	Environmental Pest
Himalayan balsam (pg. 35)	An herbaceous summer annual that can grow up to 3 m tall. Succulent reddish- green stem which is hollow and can range from 5 mm to 50 mm in diameter. Flowers are white to dark pink and resemble a British policeman's helmet. Balsam is frost-sensitive and dies back in winter. Found naturalised at 5 sites within the Region. Has the capability to compete with native plants for light, space, nutrient, and pollinators (bees) and can rapidly spread along gullies, riparian and forest margins, and into wetlands. On river banks, it can form dense monoculture stands that die back in winter, leaving bank prone to erosion.	Environmental Pest

Species	Description	Effect
Knotweed (pg. 35)	Upright perennial herb that can grow up to 3 m tall. Leaves are variable, oblong to spade-shaped and 50-140 mm long by 30-130 mm wide. Flowers are very small, white-greenish in colour and produced on long spikes in summer. Winged fruits. Presently known to be in isolated low density populations. Tolerates a range of conditions including shade, high temperature, high salinity, drought and floods. Can form dense thickets and once established, populations can be extremely persistent. Has the potential to be a severe problem in riparian margins and low-lying areas and is known to be a serious pest in Australia, US and UK.	Environmental Pest
Nassella tussock and Mexican feather grass (pg. 35)	Vigorous perennial grasses with numerous drooping fine and wiry leaves. The two species are similar to each other. Plants grow up to 1 m tall and have a dense fibrous root system. Flowers (from October to December) are open-branched panicles, purple in colour. Seeds are wind dispersed and can travel up to 16 km from the parent plant. Known from 1 site, near Kakariki, that covers approximately 2 ha. Has the capability to invade and replace desirable pasture species, reducing stock carrying capacity by up to 10%.	Production Pest
Purple loosestrife (pg. 35)	A slow growing, hairy, perennial herb that grows up to 2 m tall. Dense purple flowered spikes at the top of each branch that produce thousands of long-lived seeds. Dies back to root crowns over winter. Currently present in low numbers across the Region, with a total area of infestation of about 100 ha. Highly invasive of wetland areas, stream and lake margins, and drains. Has the potential to displace all other wetland plants in lowland wetlands, drastically altering native ecosystems. One of the worst wetland plants in the US.	Environmental Pest
Queensland poplar (pg. 35)	An evergreen shrub with grey bark. Smooth, hairless leaves are green on the upper side and silver to blue-green underneath. Distinctly heart-shaped leaf turns deep- red in autumn. Flowers (from September to November) are small and inconspicuous. Smooth, round, drooping fruit look like small green buttons. Known in Whanganui at 3 sites. Can seed prolifically and is shade tolerant. Capable of forming a sub-canopy under native forests, effectively displacing native vegetation through competition for light, water, nutrients and space.	Environmental Pest
Rum cherry (pg. 35)	A large deciduous tree growing up to 18 m tall with a canopy 8 m wide and a trunk diameter of 70 cm to 120 cm. Leaves are 60 mm to 140 mm long. Small flowers (10 mm-15 mm in diameter) have 5 white petals and are fragrant. Leaves turn bronze in autumn and flowers appear in profusion before new leaves emerge in spring. The fruit ripens to dark red / black. Known from one site in (Ohakune). Little is known of the ecological impact of this species in New Zealand, but it is known to be highly invasive in Europe and dense stands of seedlings have been reported as being present in open forest sites in New Zealand. Suspected to be capable of invading native forest margins. While mainly considered an environmental pest, leaves have been reported to have caused livestock poisoning.	Environmental Pest

Species	Description	Effect
Senegal tea (pg. 35)	A perennial aquatic herb that grows to more than 1 m tall. It has hollow stems (1 m to 1.5 m long and 5 mm to10 mm in diameter at first, increasing to 20 mm with age) which become prostrate and take root at nodes. It also has dark-green, slightly waxy, lance-shaped leaves (50 mm to 200 mm long by 25 mm to 50 mm wide) with serrated edges. Flowers (from November to April) are highly scented and clover-like. Known from 15 sites in the Region, located in Whanganui, Palmerston North and near Levin. Grows very quickly and is known to rapidly cover water bodies with a floating mat, excluding other plants and the animals that rely on those habitats. The effects of flooding are made much worse because infestations block drainage channels. Recreational activities, irrigation and navigation may also be affected.	Environmental Pest
Spartina (pg. 35)	An herbaceous perennial plant growing 0.4 m to 1.3 m tall, yellowish green in spring and summer, and turning light brown in autumn and winter. The leaves are 200 mm to 600 mm long and 150 mm broad at the base, tapering to a point. It produces flowers and seeds on only one side of the stalk. The flowers are a yellowish-green, turning brown by the winter. Currently known to occur on public land at 3 river mouth sites. Spartina is managed by DOC but has the potential to invade wetlands outside of public estate if not managed. New colonies may take some time to become established, but once they do, vegetative spread by rhizomes is rapid, smothering natural ecosystems and preventing birds like waders from feeding.	Environmental Pest
Woolly nightshade (pg. 35)	A shrub or small tree capable of growing as tall as 5 m. Leaves are large (100 mm to 25 mm long by 35 mm to 100 mm wide), and are light to dark green on the upper surface, white to yellowish green on the lower surface. Flowers occur in dense clusters (from January to December), usually mauve to purple in colour, or white. Occasionally produces a spherical berry (c. 10 mm in diameter), dull yellow in colour. Primarily bird-dispersed. Present in dense populations around Whanganui but currently sparse elsewhere in the Region. An estimated 100 ha of production land is infested with woolly nightshade with a further 630 ha of commercial forestry, marginal land and urban areas with scattered infestations. An aggressive and rapidly growing plant that can establish quickly in poorly managed land, hill country and forest margins. The species is very competitive and readily invades over the top of gorse.	Production Pest

Table 5-4: Organisms on Horizons' Eradication Programme
The page numbers quoted refer to the page on which the management regime for each species can be found.

Reason for Inclusion

The pests on the Eradication Programme, classed as production or environmental pests, are capable of causing adverse effects to the productive capacity of the Region, or to the Region's environmental values, as indicated in the Description and by the Effect of each of the pests in *Table 5-4*. It is appropriate that Horizons be involved in managing these pests through the Plan, because the successful eradication of these pests requires coordination of action at a regional scale, and the benefits of the control of many of these pests accrue to a wider community than those directly affected by the presence of the pests on their property. Occupiers must inform Horizons of the presence of these pests and allow Horizons to undertake management, otherwise the eradication objective for these pests is compromised. The following explains why it is more appropriate to include the pests listed in *Table 5-4* in the Eradication Programme of the Plan than to rely on voluntary action.

5.6.1. ROOK

The Plan is more appropriate than relying on voluntary action because the most effective methods for rook control are not available to the public and due to the tendency of rooks to become wary of control (e.g. shooting leads to rookery fragmentation and dispersal making control more difficult). Regional coordination of control is more cost effective than individual intervention. The geographic area that the Plan under this Programme applies to is the whole Region.

Management Regime

Management regime for rooks	
OBJECTIVES Over the duration of the Plan (2017 – 2037), eradicate breeding rookeries and progressively contain or reduce rooks, across the Region to reduce adverse effects on economic well-being. **AIMS** • Progressive reduction of known active rookeries on rateable land within the Region to fewer than 50 active rookeries within the first ten year period to 2027. • Reduce to zero levels breeding rookeries in the Region by 2037. • Reduce to zero levels rooks hatched from rookeries located in the Region by 2037.	**PRINCIPAL MEASURES** **Service delivery** Horizons will coordinate and conduct control operations on all rookeries, and on rook flocks where conditions are suitable. **Council inspection** Horizons may undertake active surveillance operations to determine the location of rookeries in the Region. Horizons may also undertake site specific investigations to determine damage. **Advocacy and education** Horizons will carry out programmes to increase awareness and promote community participation in the surveillance for rooks and rookery locations. **Requirement to act** Occupiers must inform Horizons of the presence of rookeries. Occupiers will act in accordance with the Act and with the rules for rooks as detailed in Table 5-6. These rules will prevent the fragmentation of existing rookeries through poor practice and to aid in the detection of new rookeries if established over the life of the Plan.
MONITORING Horizons will monitor the success of rook control using standard industry protocol and best practice guidelines (NPCA 2006A6)[1], which include operational success monitoring (percent kill estimates) and population census (number of active rookeries and active nests). Rooks will also be monitored in accordance with *Section 6.1* of this Plan.	**OUTCOMES** Major damage to crop and pasture production by rooks is avoided. The number of breeding rookeries are reduced to zero levels.

Table 5-5: Management regime for rooks

[1]Rooks: Best practice guidelines for the control and monitoring of pest rook populations. National Pest Control Agencies. August 2006.

Specific Rules

Specific rules for rooks	
Rule	**Explanation**
Rookery Management Rule 5.6.1	No person shall attempt to control rooks or rookeries without prior permission from an Authorised Person[2].
Duty to Inform Rule 5.6.2	All occupiers who become aware of rookeries in the place which they occupy must inform Horizons of thepresence of those rookeries within five working days of the discovery of the pest.
	A breach of these rules will create an offence under Section 154N(19) of the Act. Any person or corporation who fails to comply with these rules is liable to penalties as prescribed under Section 157(5) of the Act.

Table 5-6: Specific rules for rooks

5.6.2. ERADICATION PEST PLANTS

The Plan is more appropriate than relying on voluntary action because there is less likely to be a delay between the arrival of the pest and taking action before the obvious effects of these pests are felt. The geographic area that the Plan applies to under this Programme is the whole Region.

Management Regime

Management regime for Eradication Programme pest plants	
OBJECTIVES Over the duration of the Plan (2017 – 2037), eradicate the pest plants identified in Table 5-4 from the Region to eliminate their adverse effects on economic well-being and/or their effects on the environment. **AIMS** • With the exception of Chinese pennisetum and woolly nightshade, all known populations occurring on rateable land of the pest plants listed in *Table 5-4*, will be reduced to zero-levels within the first ten years of this Plan to 2027. • Reduce the population of Chinese pennisetum and woolly nightshade on rateable land to zero-levels by 2037. • Facilitate a quick response through appropriate funding within the first 10 years of this Plan (to 2027) that will enable the management of newly identified sites of the pest plants listed in Table 5-4 as they become known.	**PRINCIPAL MEASURES (Continued)** **Advocacy and education** Horizons will carry out programmes to increase awareness of the Eradication Programme and the threat posed by these pests. These pests will be incorporated into generic biosecurity advocacy programmes, including information on limiting dispersal of these pests. Horizons will engage with central government agencies for the effective eradication of these organisms from non-rateable land, including where the Crown is the occupier. This may involve the development of MOUs as set out in *Section 5.3.5* of this Plan.

[2]For the purpose of this Rule, control means shooting or any other disturbance of rooks or rookeries that cause rooks to become wary of control or cause rookeries to fragment and disperse. Control does not include the use of deterrents such as scarecrows and crucified rooks, which are "best practice" options for protection of arable land.

Management regime for Eradication Programme pest plants	
PRINCIPAL MEASURES **Service delivery** With the exception of Chinese pennisetum and woolly nightshade, Horizons will undertake the control of these plants on all known sites on rateable land. Where fiscal or other external restraints to achieving success prevent this, Horizons will work on the highest prioritised sites first. In the instance of Chinese pennisetum and woolly nightshade, Horizons will assist occupiers with the control of these plants. Horizons may undertake to release biocontrol agents for these pests where they are available and release is appropriate. **Council inspection** Horizons may conduct surveillance programmes for these pests.	**Requirement to act** Occupiers will be responsible for the control of woolly nightshade and Chinese pennisetum. The purpose for this rule is to place the onus on the Occupier to manage these pests. Occupiers will act in accordance with the Act and with rules for Eradication Programme pest plants as detailed in *Table 5-8*. Occupiers must inform Horizons of the presence of any of the eradication species on the land that they occupy. This rule is to ensure that that Horizons is aware of the location of these pests. TLA's, other roading authorities and rail authorities will be responsible for the control of infestations of these pests where they occur in the places they occupy in accordance with rule 5.8.2. The purpose of this rule is to ensure that those who are best placed to manage these pests safely in the road and rail corridor are responsible for control, and to ensure work on non-rateable land is undertaken.
MONITORING Horizons will monitor the success of Horizons' pest control activity by recording the extent and/or density of the subject pest in known areas where the pest has been controlled. Sites will be monitored for a further five years after zero level has been achieved. The organisms listed in Table 5-4 will also be monitored in accordance with *Section 6.1* of this Plan.	**OUTCOMES** Major loss of pastoral productivity by production pests on the Eradication Programme is avoided. No measurable effect to the success of Horizons' biodiversity programmes is attributable to environmental pests in the Eradication Programme. The subject pests will be eradicated from the Region.

Table 5-7: Management regime for Eradication Programme pest plants

Specific Rules

Specific rules for Eradication Programme pest plants	
Rule	**Explanation**
Duty to Inform Rule 5.8.1 All eradication pests	All occupiers (excluding the Crown, TLAs, roading and rail authorities) who become aware of any of the pests listed in Table 5-4 in the place which they occupy must inform Horizons of the presence of these pests within 5 working days of the discovery of the pest.
TLAs, Road and Rail Authorities Rule 5.8.2 All eradication pests	Every TLA, roading authority and rail authority must not less than once every calendar year identify the presence of the pest plants identified in *Table 5-4* where they occur within the road reserve as defined in *Section 4.6*, (or with respect to KiwiRail, the rail corridor), and other places they occupy. The pests must be managed in accordance with an agreed Approved Management Plan, with a report provided to Horizons on the outcome of the plan by 31 July for the previous calendar year (or within a time period as negotiated with an Authorised Person).

Specific rules for Eradication Programme pest plants	
Rule	**Explanation**
Occupier Responsibility Rule 5.8.3 Woolly nightshade and Chinese *pennisetum*	With the exception of the Crown, TLAs, roading and rail authorities; Every occupier must not less than a once year identify the presence of any woolly nightshade and Chinese pennisetum within the place they occupy. Upon discovery, the occupier must notify Horizons within 5 working days and then destroy all woolly nightshade and Chinese *pennisetum* in the place they occupy within 21 calendar days (or within a time period as negotiated with an Authorised Person).
Other Rateable Land Rule 5.8.4 For other eradication pests except Woolly nightshade and Chinese *pennisetum*	With the exception of woolly nightshade and Chinese *pennisetum*, where the occupier of a place is opposed to control of the pests listed in *Table 5-4* being undertaken by an Authorised Person, the occupier must, within 21 calendar days (or within a time period as negotiated with an Authorised Person) of being notified by an Authorised Person of the presence of the pest, destroy the pest(s) listed in *Table 5-4* located in the place they occupy. The occupier must notify Horizons when the pest is destroyed within 5 working days of it being destroyed.
	A breach of these rules will create an offence under Section 154N(19) of the Act. Any person or corporation who fails to comply with this rule is liable to penalties as prescribed under Section 157(5) of the Act.

Table 5-8: Specific rules for Eradication Programme pest plants

5.7. PROGRESSIVE CONTAINMENT PROGRAMME

Progressive Containment involves reducing the geographical distribution of the pest within the Region over time. Total eradication over the Region is not a cost-effective solution to protecting production or environmental values into the future, but preventing the spread limits the effects these pests have on these values. Coordination with TLAs and central government agencies is a key component of success. All of these organisms are environmental and/or production pest plants.

Species	Description	Effect
Australian sedge (pg. 55)	A perennial tussock-forming sedge. The leaves are Y-shaped in cross-section. Flowering stems are triangular in cross-section and sharply angled; flowers are grouped in catkin-like spikes that hang at the end of long, thin nodding stalks. The seed is a small, smooth triangular nut. A prolific seeder, with most seeds falling close to the parent plant. Distinguishable from other species of Carex in New Zealand by the way it shoots from the bottom of the original stalk and its distinctive flower/seed head. The plant normally flowers and seeds from October to February. It is generally not palatable to stock. It can form dense stands that exclude pasture species and will spread from infested land onto clear land. It does not compete successfully with well managed pastures. It is a difficult plant to control once established.	Production Pest
Banana passionfruit (pg. 46)	A large, vigorous, scrambling, evergreen vine with clinging tendrils. The leaves are toothed and three-lobed; the flowers are large, pink and tubular. Banana passionfruit flowers in winter-spring. The fruit are yellow when ripe, up to 12 cm long, cylindrical with a sweet-flavoured orange pulp surrounding seeds. Can smother forest canopies (up to 10 m high), topple shallow rooted trees and suppress indigenous regeneration. It can invade forest, margins, secondary forest as well as windbreaks, plantations, roadsides and wasteland.	Environmental Pest

Species	Description	Effect
Blackberry (pg. 55)	A prickly, scrambling perennial shrub growing to taller than 2 m. The leaves are compound in three to five oval toothed leaflets that are arranged in a five-fingered formation; the flowers are large and white or pink. It produces black edible berries and is spread via bird dispersal of seed and by cane extension. It forms impenetrable thickets if unchecked, although it does not compete successfully with well-managed pastures and the new canes are palatable to sheep. It will spread between properties from infested land onto clear land. It affects plantation forest establishment and suppresses other indigenous plants in scrub and forest margins. It can displace plant communities and restrict habitats of native organisms, and can reduce recreational and amenity values.	Production Pest
Boneseed (pg. 46)	A perennial shrub growing to 3 m with woody stems and many branches. The leaves are bright to dark green, alternate, toothed and practically hairless; the flowers are bright yellow, daisy-like, with 8-12 petals clustered at the ends of the branches. Flowers in September-February. Unlike most members of the daisy family, boneseed produces black coloured berries that are spread by birds. Boneseed is an aggressive coloniser that competes with indigenous species, especially in coastal areas, and is very tolerant of drought.	Environmental Pest
Broom species (exotic) (pg. 55)	Erect much-branched, almost leafless, deciduous woody shrubs 1.5-3 m tall. The leaves, when present, consist of three leaflets. The species of concern are the exotic Scotch (wild) broom (*Cytisus scoparious*), montpellier broom (*Genista monspessulana*), Spanish broom (*Spartium junceum*) and spiny broom (Calicotome spinosa). All species have golden-yellow flowers. These species flower in spring followed by the formation of explosive seed pods. The majority of seed dispersal occurs within 20 m of the parent plant and seed can remain viable in the soil for many years. Seedlings are palatable and unable to compete with productive pasture but once established in dense stands, it can shade out most species. It is spread between properties from infested land onto clear land, is widespread in river gravel and is a major contaminant in roading metal. It has the potential to spread rapidly and out-compete indigenous plant species of low-stature habitats.	Production Pest
Contorta pine (pg. 42)	A two-needled conifer capable of growing to 25 m, but also commonly stunted in growth with twisted branches. The species produces small green cones with a rough exterior after about four or five years. The cones remain closed for long periods of time before bursting open to release the fertile seeds. Seed dispersal is mainly by wind, with seed travelling up to 30 km from the parent plant, although most seed falls within 100 m of the parent plant. *Contorta* pine can grow in a wide range of habitats. *Contorta* pine poses a substantial threat across the Volcanic Plateau, especially in Tongariro National Park where it has been controlled for over 40 years. *Contorta* pine is a transformer weed in low-stature habitat such as tussock and alpine. It can also invade ungrazed land and can compete vigorously with commercial species within plantation forests. The subject species include *Pinus contorta subsp. contorta, and Pinus contorta subsp. murrayana.*	Environmental Pest

Species	Description	Effect
Darwin's barberry (pg. 46)	A spiny, thick stemmed woody evergreen shrub up to 4 m tall. The flowers are attractive, deep orange in colour, growing in simple drooping flower clusters up to 7 cm long; the dark purple berries have a bluish-white bloom. The small, shiny dark green holly-like leaves are alternate in clusters of three to five, together with five pronged, needle-sharp spines. Darwin's barberry flowers in July-September although flowers can still be present in January. Capable of invading forest margins and into light open forest (such as beech forest) where it can form impenetrable stands and prevent native regeneration. Can also grow on generally steeper pasture where stock grazing is not so intensive. It can block access to infrastructure and can restrict access to recreational areas. Poses a considerable threat to the open, cold beech forest of the Volcanic Plateau as well as the Ruahine and Tararua Ranges.	Environmental Pest
Dwarf mountain pine (pg. 42)	A small tree or multi-stemmed shrub with dense foliage and dark green rigid leaves. Leaves arranged in fascicles of two, 3-7cm long by 1-1.5mm wide. Seed wing oblong, approximately 1cm long. Wind dispersed seed. Invasion profile similar to *Contorta* pine - is a potential threat to indigenous ecosystems across the Volcanic Plateau.	Environmental Pest
Eelgrass (pg. 54)	A perennial freshwater aquatic plant which grows in lakes and flowing water and can grow to a height of 5.5 m. It is bottom rooting with stout rhizomes and long ribbon-like light green leaves growing from nodes at regular intervals along the rhizomes. There is no evidence of viable seed production in New Zealand, although mixed populations of this dioecious species do occur. Impacts on water bodies and the indigenous biodiversity supported by these systems. They can obstruct water bodies, grow rapidly and are capable of forming dense masses which out-compete indigenous aquatic species. The plants can also impede drainage, block water intakes, cause flooding and affect water quality. Requires deliberate planting to become established in a water body.	Environmental Pest
Egeria (pg. 54)	Egeria is a submerged perennial freshwater aquatic herb that grows in still and flowing waters. The plant is bottom rooted and produces long, slender and much branched leafy stems that grow to 4 or 5 m tall. It is larger and denser than *Lagarosiphon*, having 3-8 leaf whorls. Where the plant grows near the surface, it produces many white male flowers protruding just above the water surface in summer. The stems are brittle and fragment and root easily. Impacts on water bodies and the indigenous biodiversity supported by these systems. They can obstruct water bodies, grow rapidly and are capable of forming dense masses which out-compete indigenous aquatic species. The plants can also impede drainage, block water intakes, cause flooding and affect water quality. Dispersal is through the vectoring of vegetative fragments. Common vectors of dispersal include boats, trailers, water-skis, fishing equipment, eel nets, boots, dogs, kayaks, canoes, jet skis and coarse fish.	Environmental Pest
Evergreen buckthorn (pg. 46)	An evergreen shrub that grows to 20 m with leathery leaves which are glossy on the top surface, entire or with teeth that can be blunt or sharp. It is dioecious, with the female and male plants being very distinct from each other. The flowers are green, small, fragrant, 3-4 mm in diameter, with no petals, forming a loose branching cluster. Fruit are small, dark red berries ripening to black and produced only on female plants. Has the ability to form dense colonies, smothering indigenous plants and preventing establishment of indigenous plants. It can alter the structure of other indigenous forest ecosystems in a very short period of time. Poses a serious threat to coastal vegetation, competing strongly with indigenous coastal species, and can also restrict access to recreational areas. It also has the ability to colonise the margins of streams, forest margins and disturbed forests.	Environmental Pest

Species	Description	Effect
Field horsetail (pg. 55)	A perennial fern ally which is poisonous to livestock. It grows up to 80 cm tall, but dies back in winter. It prefers damp, open ground, particularly along stream and riverbanks. It is of limited distribution in New Zealand but is well established in Whanganui and Rangitikei, and is also found in the Manawatu and Horowhenua. While it spreads by rhizomes and small tubers, its control is extremely difficult. Effective management may be through the control of dispersal pathways. Has the capability to seriously affect pastoral productivity.	Production Pest
Gorse (pg. 55)	An evergreen 2–3 m tall shrub. The young stems are green, with the shoots and leaves modified into 1-3 cm green spines. Young seedlings produce normal leaves for the first few months; these are trifoliate, resembling a small clover leaf. The flowers are yellow, 1–2 cm and are produced throughout the year, but mainly in early spring. The fruit is a dark purplish-brown pod 2 cm long, partly enclosed by the pale brown remnants of the flower; the pod contains 2-3 small blackish, shiny, hard seeds, which are ejected when the pod splits open. Seeds remain viable for 30 years. It forms dense spiny thickets that prevent stock from grazing and reduces pasture production. It can spread between properties from infested to clean land and is a major production pest plant. It is widespread and present in high density throughout the country. The extent of dispersal via the seed bank, seed rain, through machinery and stock is considerable. It provides some benefits as a nursery plant for indigenous species, as a nitrogen fixer and a provider of pollen and nectar for bees. It can also stabilise steep slopes, which helps minimise the effects of erosion.	Production Pest
Grey willow (pg. 46)	A small deciduous tree growing to 7 m but often only 1-2 m. The leaves are shiny above and covered with soft grey hairs beneath. Catkins appear on the stems in spring before the leaves develop. Favours swampy areas and riverbanks, although will grow in a wide range of habitats up to 1,400 m asl. Dioecious, with male and female trees distinct from each other and it hybridises easily. An aggressive invader in wetlands, spreading rapidly to become the dominant vegetation, changing the composition of wetland habitat and interrupting ecological processes. Can impede water flow and increase the negative effects of flooding and is a particular threat to the Volcanic Plateau wetlands.	Environmental Pest
Hornwort (pg. 54)	A submerged freshwater perennial plant found in still or flowing water; often found in fertile, nutrient-rich waters but also grows in deep, clear lake waters to depths of 14 m. Hornwort does not have roots, instead having modified base leaves that anchor the plant into muddy substrates. Hornwort is often free floating with branched and brittle stems up to 7 m long. The leaves are forked with toothed edges and arranged in whorls of 7-12; the flowers are minute and no seed is set in New Zealand. Asexual propagation is via fragmentation of plant stems. Impacts water bodies and the indigenous biodiversity supported by these systems. They can obstruct water bodies, grow rapidly and are capable of forming dense masses which out-compete indigenous aquatic species. The plants can also impede drainage, block water intakes, cause flooding and affect water quality. Dispersal is through the vectoring of vegetative fragments. Common vectors of dispersal include boats, trailers, water-skis, fishing equipment, eel nets, boots, dogs, kayaks, canoes, jet skis and coarse fish. Rotting hornwort pollutes the water, which can kill any fauna present. Amenity and recreational values are impacted on as boating, fishing and swimming become difficult and unpleasant.	Environmental Pest

Species	Description	Effect
Lagarosiphon (pg. 54)	A vigorous perennial freshwater herb that grows submerged in lakes, ponds, rivers and streams. The leaves are arranged spirally around the stem, rather than whorled as is the case with other oxygen weeds, and are recurved backwards or downwards. The flowers are tiny, solitary, pink and female that do not produce seed in New Zealand. Oxygen weed is brittle, and fragments and roots easily. Impacts on water bodies and the indigenous biodiversity supported by these systems. They can obstruct water bodies, grow rapidly and are capable of forming dense masses which out-compete indigenous aquatic species. The plants can also impede drainage, block water intakes, cause flooding and affect water quality. Dispersal is through the vectoring of vegetative fragments. Common vectors of dispersal include boats, trailers, water-skis, fishing equipment, eel nets, boots, dogs, kayaks, canoes, jet skis and coarse fish.	Environmental Pest
Moth plant (pg. 46)	A perennial climber that is capable of growing up to 5 m or more. Leaves are opposite, dark green above, pale beneath. The flowers are white, fragrant, and bell-shaped, followed by large, pear-shaped pods containing kapok-like material surrounding the black seeds. Seed dispersal is by wind (in autumn and winter), with each pod containing many seeds. Any broken part of this plant weeps a milky white sap. Has the ability to compete with and displace indigenous species. In gardens, the fast growing and competitive nature of the plant can be a problem. The plant is poisonous and the sap has an irritant effect on contact. Moth plant can invade forest margins, disturbed habitat, riparian margins, banks and cliff faces, unmanaged areas and waste places.	Environmental Pest
Mountain pine (pg. 42)	Considered by many taxonomists to be a sub-species of Pinus mugo, mountain pine is distinguishable from dwarf mountain pine by cone characteristics. A tree 12-20m tall with dense foliage and dark green rigid leaves. Leaves arranged in fascicles of two, 3-7cm long by 1-1.5mm wide. Seed wing oblong, approximately 1cm long. Wind dispersed seed. Invasion profile similar to Contorta pine - is a potential threat to indigenous ecosystems across the Volcanic Plateau.	Environmental Pest
Nodding thistle (pg. 55)	A spiny-leafed (usually) biennial plant. The leaves are narrow and oblong, up to 18 cm long by 10 cm wide, with whitish margins at the bases of marginal spines. Flower stalks can be greater than 75 cm tall, with red-purple or (very rarely) white composite flowers. Flowers are followed by seed heads containing many seeds with thistledown. A highly aggressive agricultural pest affecting pasture production that is particularly invasive on light, sandy and volcanic soils. It can form dense stands of up to 150,000 plants/ha. Dense infestations obstruct livestock movement and prevent access to pasture. Nodding thistle produces 10,000 seeds per plant with 60-80% viability. Seed may be dormant in the soil for up to 20 years. A widespread plant and dispersal via the seed-bank, seed-rain, through machinery and stock is considerable.	Production Pest
Old man's beard (pg. 46)	A fast-growing, deciduous, perennial vine that on maturing becomes woody and brown or grey in colour. Young vines are ribbed and often purple. The leaf is composed of five leaflets; the flowers are creamy-white and loosely bunched (2-3 cm across). Old man's beard flowers in December-May, followed by very conspicuous fluffy greyish white seed heads in autumn through to early spring. A highly competitive vine that establishes rapidly in forest habitats, smothering canopy trees and forming dense carpets in the understorey, replacing indigenous species and suppressing regeneration. Old man's beard causes the collapse of forest fragments and is considered one of the country's worst weeds. The remaining forest habitat in the lowland and hill country of the Region is under extreme threat from Old man's beard. Old man's beard can affect forestry by reducing the vigour of young trees. On land that is not intensively grazed, old man's beard can encroach on to pastures leading to stock entanglement and death.	"Environmental Pest / Production Pest"

Species	Description	Effect
Reed sweetgrass (pg. 54)	Reed sweetgrass is a large, aggressive aquatic perennial grass with long, upright, shiny, hairless, green leaves < 1 cm-7 cm wide that can grow to between 30 cm and 60 cm above water. Flowers appear in spikelets on stout, erect stems and are pale green in colour with purple spots. Reed sweetgrass has an extensive root system producing a sprawling mat of rhizomes. It is found in wet areas and can also grow in stable flowing rivers. Impacts on water bodies and the indigenous biodiversity supported by these systems. They can obstruct water bodies, grow rapidly and are capable of forming dense masses which out-compete indigenous aquatic species. The plants can also impede drainage, block water intakes, cause flooding and affect water quality.	Environmental Pest
Scots pine (pg. 42)	A tree reaching up to 35m tall, with stout needles 2.5–7 cm long by 1-1.5 mm wide. Grey-green to blue-green leaves are silvery in appearance. Leaves are twisted. Similar to dwarf mountain pine and mountain pine but the cones are held on short stalks. Invasion profile similar to Contorta pine - is a potential threat to indigenous ecosystems across the Volcanic Plateau.	Environmental Pest
Tutsan (pg. 55)	An evergreen or semi-evergreen shrub up to 1.5 m tall. The flowers are pale yellow, appearing in clusters of 2-8 flowers. Fruits are red, becoming black when ripe. Tutsan leaves are pale green, often bluish-green below, egg-shaped and attached to stems at the broad end of the leaf. Tutsan flowers from November to February followed by fruit set. Seeds are dispersed primarily by birds. Tutsan is a highly invasive plant, especially of marginal production land, but can establish in riparian margins, forest margins and roadsides. Tutsan has also been recorded growing in shade under forest canopy. Tutsan escaped from cultivation in 1870 and is now found throughout New Zealand, favouring marginal land and higher rainfall areas. Tutsan is non-toxic but is unpalatable to stock.	Production Pest
Variegated thistle (pg. 55)	A robust erect annual. The glossy rosette leaves have white veins and blotches giving it a variegated look. The large purple flower is surrounded by many sharp spines. They are short lived, flowering and seeding in the summer following germination. Up to 6,000 seeds per plant can be produced and remain viable for more than 9 years. Plants are found in overgrazed pasture, wasteland, along roadsides and in drought prone areas. It also grows well on high fertility soils. Can form dense infestations, supressing pasture species. Can be injurious and toxic to stock.	Production Pest
Yellow bristlegrass (pg. 55)	A summer growing annual grass, with a seed head that consists of a large (up to 10 mm wide) golden to brown bristle. Flat leaf stem. Yellow bristle grass is an aggressive annual-seeding plant which spreads rapidly through pasture, reducing pasture quality. Cows don't willingly eat it, leading to low pasture utilisation. Grazing avoidance leads to rapid re-infestation and an opening for other weeds. Seeds pass through the rumen and are spread around the farm in dung. Seeds are also spread by water, soil movement, animals, and as contaminants of hay and maize. The barbed seeds stick to and are often carried in fur, feathers, or clothing.	Production Pest
Yellow ragwort (pg. 55)	A robust, branched, biennial or perennial plant up to 1.5 m tall. The plant emits an unpleasant smell when crushed. It produces a basal rosette of pinnately lobed leaves and numerous bright yellow flowers in flat-topped clusters in its second year. It flowers between November and April. It is competitive with pasture species and subsequently production is reduced when infestations occur. The plant contains alkaloids that are toxic to some stock. The plant is able to produce 50,000-150,000 seeds/plant, of which 70% may be viable. Sheep are effective in controlling small plants; however it is unpalatable to cattle, deer or horses. It is widespread in New Zealand. The extent of dispersal via the seed-bank, seed rain, through machinery and stock is considerable.	Production Pest

Table 5-9: Organisms on Horizons' Progressive Containment Programme

The page numbers quoted refer to the page on which the management regime for each species can be found.

Reason for Inclusion

Classed as production and/or environmental pests, the pest plants in the Progressive Containment Programme are capable of causing adverse effects to the productive capacity of the Region, and/or to the Region's environmental values, as indicated in the Description and by the Effect of each of the pests in Table 5-9. For these species, it is appropriate that Horizons regulate for their management in the Plan, because the successful containment of these species requires coordination of action at regional scale. The benefits of progressive containment accrue to a wider community than those directly affected by the presence of the pests on their property.

In some situations it is not possible to define a zone of containment on a map. This may be because the absolute distribution of the pest is not known, or that the distribution of the pest is generally considered region-wide but is known to be locally patchy. For these pests, a 'clear land' rule will apply as a means of ensuring that land that is at an early stage of infestation is made clear of the pest (keeping clear land clear), with a good neighbour rule then utilised as a means of reducing the spread. The appropriateness of having a plan to manage these pests compared to relying on voluntary action is discussed below.

Boundary Distance and Infestation Thresholds

To mitigate the lack of information regarding specific infestation locations and sizes, Horizons has taken a buffer and infestation size approach to applying the clear land and good neighbour rules. *Table 5-10* presents the threshold infestation size that pertains to the maximum size per property that the clear land rule applies for each pest and the nominal distance for management from the boundary for application in the good neighbour rule for each pest.

Species to be managed	Nominal distance for management from the boundary	Threshold infestation size
Australian sedge	Up to 10 m	0.5 ha (5000 m^2)
Banana passionfruit	Up to 50 m	0.1 ha (1000 m^2)
Blackberry	Up to50 m	0.25 ha (2500 m^2)
Boneseed	Up to 50 m	0.01 ha (100 m^2)
Broom	Up to 10 m	0.5 ha (5000 m^2)
Darwin's barberry	Up to 50 m	0.25 ha (2500 m^2)
Evergreen buckthorn	Up to 50 m	0.25 ha (2500 m^2)
Field horsetail	Up to 10 m	0.01 ha (100 m^2)
Gorse	Up to 10 m	0.5 ha (5000 m^2)
Grey willow	Up to 20 m	0.25 ha (2500 m^2)
Moth plant	Up to 20 m	0.25 ha (2500 m^2)
Nodding thistle	Up to 50 m	0.25 ha (2500 m^2)
Old man's beard	Up to 20 m	0.1 ha (1000 m^2)
Ragwort	Up to 20 m	0.25 ha (2500 m^2)
Tutsan	Up to 50 m	0.25 ha (2500 m^2)
Variegated thistle	Up to 50 m	0.25ha (2500 m^2)
Yellow bristle grass	Up to 10 m	0.25 ha (2500 m^2)

Table 5-10: Progressive Containment Programme Pest plants boundary distance and infestation thresholds for Good Neighbour and Clear Land rules

5.7.1. CONTORTA, DWARF MOUNTAIN, MOUNTAIN, AND SCOTS PINES

Contorta, dwarf mountain, mountain, and Scots pines are grouped on the basis that they are managed the same way for the same objective, inside the same Active Management Zone. The Active Management Zone is presented as *Map 5-1* in this Plan. The Plan is more appropriate than relying on voluntary action because the effects of these conifers tend to be biodiversity effects on indigenous habitats that are in the public interest more than the private interest to manage on private land. Having a Plan allows Horizons to share the costs of management between the public and private interests. The geographic area that the Plan applies to is the Active Management Zone for Contorta, dwarf mountain, mountain, and Scots pines (*Map 5-1*).

Management Regime

Management regime for Contorta, dwarf mountain, mountain, and Scots pines

OBJECTIVES

Over the duration (2017 – 2037) of the Plan progressively contain or reduce the incidence of Contorta pine, dwarf mountain pine, mountain pine, and Scots pine to reduce adverse effects on the environment.

AIMS

- to reduce Contorta pine, dwarf mountain pine, mountain pine, and Scots pine populations, within the Active Management Zone (*Map 5-1*).
- to work according to the aims and actions of the Nature Central Wilding Conifer Implementation Plan within the 10 year period to 2027 and beyond.

PRINCIPAL MEASURES

Service delivery

Horizons will undertake direct control of Contorta pine, dwarf mountain pine, mountain pine, and Scots pine, on rateable land within the Active Management Zone (Map 5-1), with a focus on preventing further spread. Horizons will not be responsible for site clean-up, landscaping or replacement of trees.

Horizons will not conduct control of Contorta pine, dwarf mountain pine, mountain pine, and Scots pine, outside of the Active Management Zone with the exception of prioritised sites of high natural value and site-led initiatives.

The New Zealand Defence Force (NZDF) has a control programme that commits to the management of wilding pines species on the land that they occupy.

The Department of Conservation (DOC) has a control programme that commits to the management of Contorta pine, dwarf mountain pine, mountain pine, and Scots pine on the Volcanic Plateau.

Council inspection

Horizons may conduct a surveillance programme for Contorta pine, dwarf mountain pine, mountain pine, and Scots pine.

Horizons will enforce control of Contorta pine, dwarf mountain pine, mountain pine, and Scots pine, where present in any road and rail reserves within the Active Management Zone, and in the Karioi Forest Zone.

PRINCIPAL MEASURES (Continued)

Advocacy and education

Horizons will incorporate Contorta pine, dwarf mountain pine, mountain pine, and Scots pine into advocacy programmes focused on the threats to and protection of environmental values. Horizons will collaborate with other agencies.

Horizons will maintain and enhance relationships with the key land management agencies on the Volcanic Plateau. There is the potential for MOUs to incorporate other species and allow for sharing of resources where responsibilities and outcomes are agreed on. Any MOUs will stipulate the requirement for control of Contorta pine, dwarf mountain pine, mountain pine, and Scots pine, to be under sustained management.

Horizons may implement a targeted awareness campaign that focuses on Contorta pine, dwarf mountain pine, mountain pine, and Scots pine.

Horizons will provide advice and information on Contorta pine, dwarf mountain pine, mountain pine, and Scots pine, to occupiers and other interested parties.

Requirement to act

Occupiers in the Active Management Zone for Contorta pine, dwarf mountain pine, mountain pine, and Scots pine must inform Horizons of the presence of and management of these species. These requirements will ensure that Horizons is aware of the presence of pests on land.

Occupiers will act in accordance with the Act, and the rules in *Table 5-12*.

Occupiers of the Karioi Forest Zone are responsible for the control of Contorta pine, dwarf mountain pine, mountain pine, and Scots pine as described in *Table 5-12* rules 5.12.1 and 5.12.2.

TLAs, other roading authorities and rail authorities will be responsible for the control of infestations of these pests where they occur in the places they occupy in accordance with rule 5.12.4. The purpose of this rule is to ensure that those who are best placed to manage these pests safely in the road and rail corridor are responsible for control, and to ensure work on non-rateable land is undertaken.

These rules will ensure the reduction of pest conifers in places where they can spread onto the sub-alpine habitats of habitats of the Volcanic Plateau, upper Ruahine Range and Tararua Range.

Management regime for Contorta, dwarf mountain, mountain, and Scots pines	
MONITORING	**OUTCOMES**
Horizons will monitor the success of the previous pest control event by recording the extent and/or density of Contorta pine, dwarf mountain pine, mountain pine, and Scots pine, in known areas where these species have been controlled by Horizons. Sites will be monitored annually for a further five years. Contorta pine, dwarf mountain pine, mountain pine, and Scots pine, will also be monitored in accordance with *Section 6.1* of this Plan.	Contorta pine, dwarf mountain pine, mountain pine, and Scots pine, are controlled to zero-levels within the Active Management Zone, and are controlled in conjunction with the other key agencies involved in land management on the Volcanic Plateau to protect the natural values of the Volcanic Plateau. A coherent strategic approach for management of Contorta pine, dwarf mountain pine, mountain pine, and Scots pine, results in protection of the natural values of indigenous habitats. High-value natural areas prioritised for protection under the Regional Biodiversity Programme are maintained free of Contorta pine, dwarf mountain pine, mountain pine, and Scots pine.

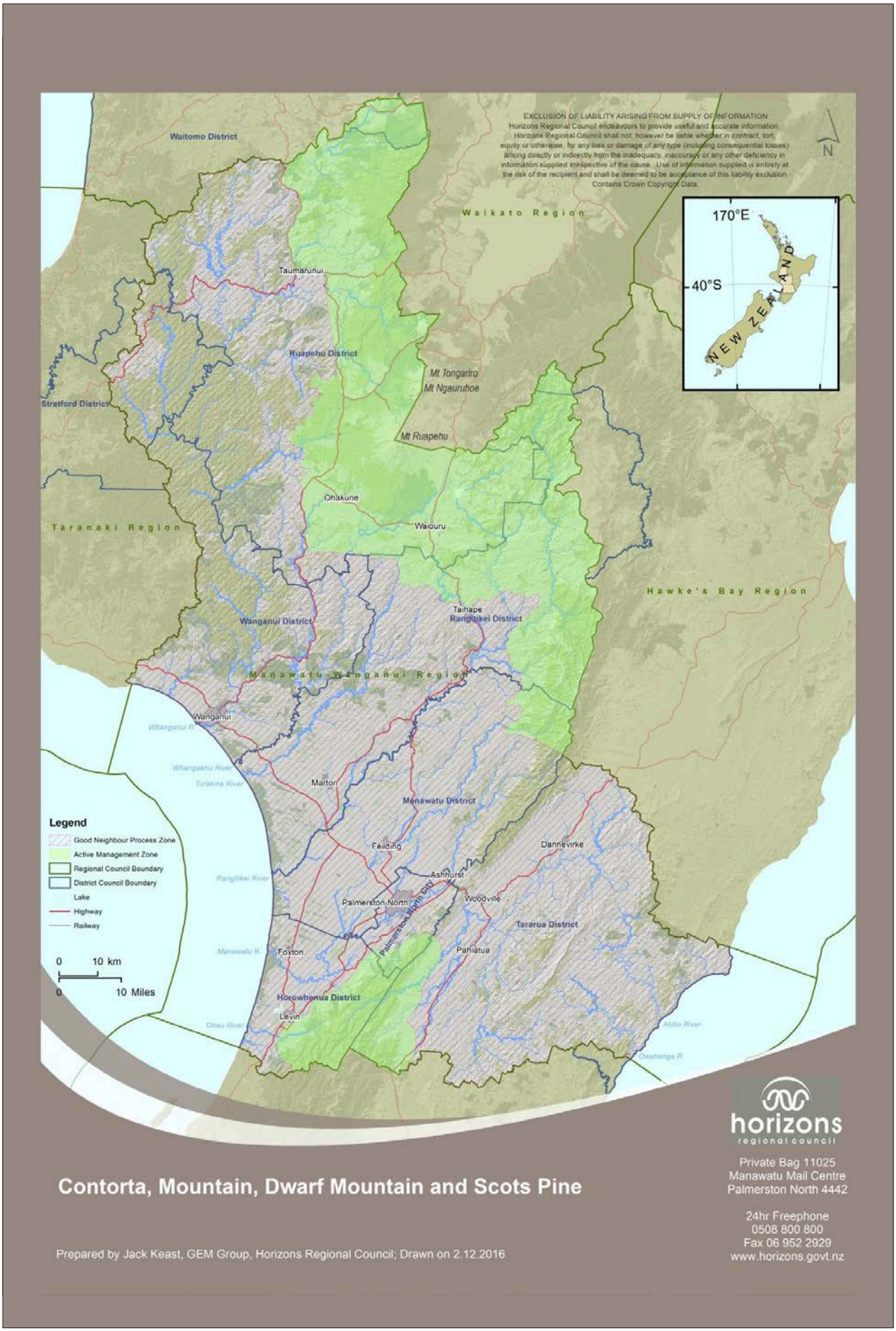
Table 5-11: Management regime for Contorta, dwarf mountain, mountain, and Scots pines

Specific Rules

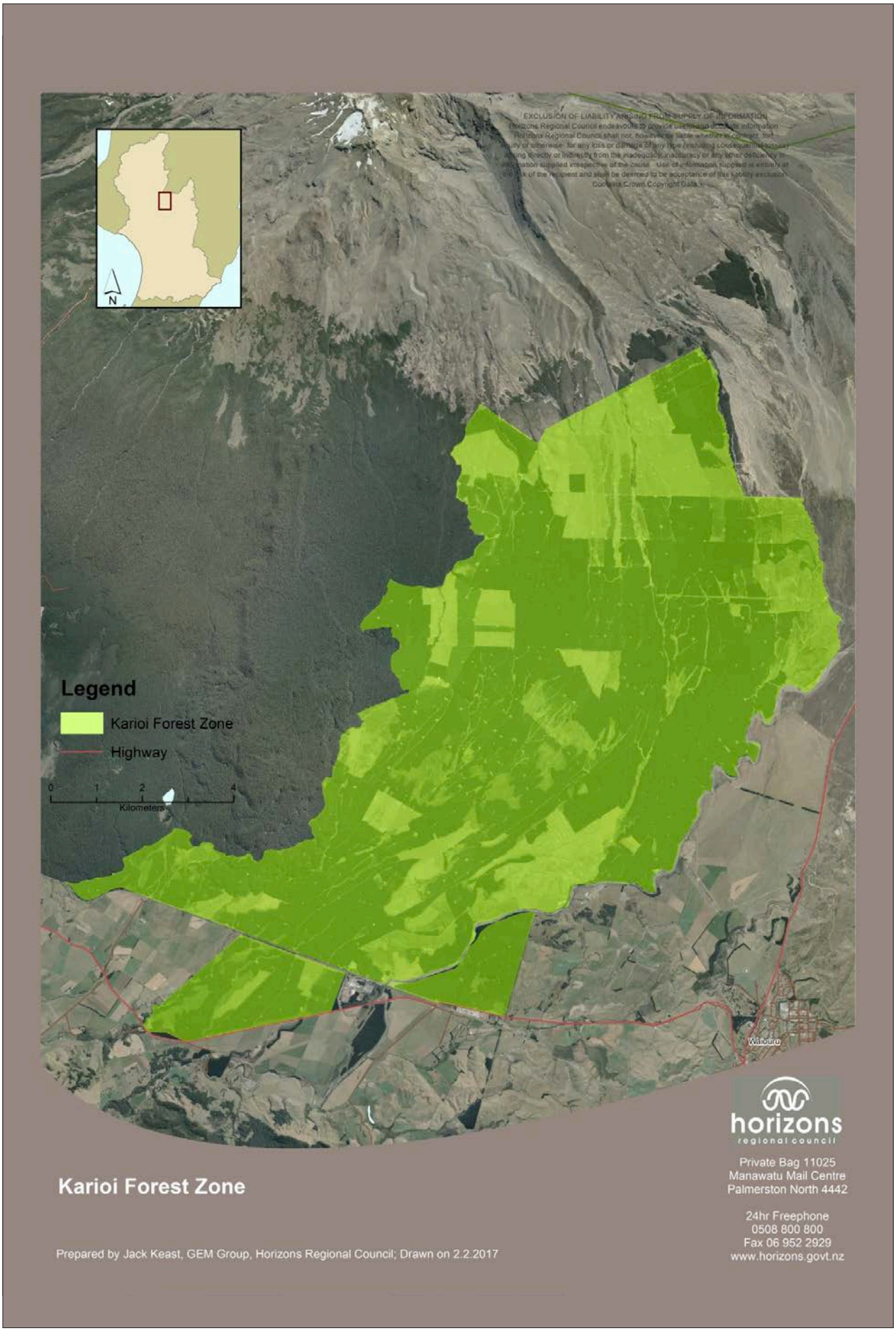
Specific rules for Contorta, dwarf mountain, mountain, and Scots pines	
Rule	**Explanation**
Karioi Forest Zone Progressive Containment Rule 5.12.1	An occupier of land within the Karioi Forest Zone (*Map 5-2*) must: i. destroy all *Contorta* pine, dwarf mountain pine, mountain pine, and Scots pine in the Karioi Forest Mixed Species Plantation Area at the time of harvest. An occupier must maintain to zero levels of these pests in compartments adjacent to, and within, recently felled compartments and exposed wetlands or stream margins. ii. maintain zero levels of all Contorta pine, dwarf mountain pine, mountain pine, and Scots pine within 30 metres of the Karioi Forest Mixed Species Plantation Area. iii. inspect every three calendar years, the area of the: • Karioi Forest Balance Area subject to control; and • Karioi Forest Mixed Species Plantation Area buffer (within 30 m of the current Karioi Forest Species Plantation Area); for *Contorta* pine, dwarf mountain pine, mountain pine, and Scots pine. All *Contorta* pine, dwarf mountain pine, mountain pine, and Scots pine found shall be destroyed by the occupier within 21 days of discovery (or as negotiated with an Authorised Person).
Karioi Forest Zone Monitoring Report Rule 5.12.2	The occupier(s) of the Karioi Forest must provide Horizons with annual reports detailing how rule 5.12.1 is being complied with. The annual reports must be provided by 31 July for the previous calendar year and: i. detail the physical area where destruction has been carried out; ii. detail the total area (in hectares) subject to ongoing management of *Contorta* pine, dwarf mountain pine, mountain pine, and Scots pine; and iii. provide a current map showing the extent of the Karioi Mixed Species Plantation Area.
Duty to Inform Rule 5.12.3	With the exception of the occupiers above, all occupiers of rateable land in the Active Management Zone for *Contorta* pine, dwarf mountain pine, mountain pine, and Scots pine, who become aware of these pests in the places the occupy, must inform Horizons of the presence of the pest(s) within 5 working days of the discovery of the pest.

Specific rules for Contorta, dwarf mountain, mountain, and Scots pines	
Rule	**Explanation**
TLAs, Road and Rail Authorities Rule 5.12.4	Every TLA, roading authority and rail authority must not less than once every calendar year identify the presence of *Contorta* pine, dwarf mountain pine, mountain pine, and Scots pine where they occur within the Active Management Zone for these species within the road reserve as defined in *Section 4.6*, (or with respect to KiwiRail, the rail corridor), and other places they occupy. The pests must be managed in accordance with an Approved Management Plan, with a report provided to Horizons on the outcome of the plan by 31 July for the previous calendar year (or within a time period as negotiated with an authorised person).
Other Private Land Rule 5.12.5	Where the occupier is opposed to action being undertaken by an Authorised Person to destroy *Contorta* pine, dwarf mountain pine, mountain pine, and Scots pine within the Active Management Zone for these species, the occupier must destroy the pests located in the place they occupy within 21 calendar days (or within a time period as negotiated with an Authorised Person) of being notified by an Authorised Person of the presence of these pests. The occupier must notify Horizons within 5 working days of the destruction of the pest.
	A breach of these rules will create an offence under Section 154N (19) of the Act. Any person or corporation who fails to comply with this rule is liable to penalties as prescribed under Section 157(5) of the Act.

Table 5-12: Specific rules for Contorta, dwarf mountain, mountain, and Scots pines



Map 5-1: Contorta, dwarf mountain, mountain, and Scots pine Active Management and Good Neighbour Process Zones



Map 5-2: The Karioi Forest Zone

5.7.2. OTHER MAPPED PROGRESSIVE CONTAINMENT PEST PLANTS

Banana passionfruit, boneseed, Darwin's barberry, evergreen buckthorn, grey willow, moth plant, and old man's beard are grouped into the "Other Mapped Progressive Containment Plants" on the basis that these are all managed by Horizons as the lead agency inside an Active Management Zone. The Active Management Zone is represented on maps pertaining to each of these pests within this Plan (Map 5-3 to Map 5-9). Outside the Active Management Zone (inside the Good Neighbour Process Zone), a good neighbour rule is used to reduce the spread of these pests. The Plan is more appropriate than relying on voluntary action because the effects of these plants are mainly biodiversity effects that are in the public interest more than the private interest to manage on private land. Having a Plan allows Horizons to share the costs of management between the public and private interest. The geographic area that the Plan applies to for the Other Mapped Progressive Containment Pest Plants is the whole region.

Management Regime

Management regime for other mapped Progressive Containment pest plants: banana passionfruit, boneseed, Darwin's barberry, evergreen buckthorn, grey willow, moth plant and old man's beard

OBJECTIVES

Over the duration of the Plan (2017 – 2037), progressively contain or reduce banana passionfruit, boneseed, Darwin's barberry, evergreen buckthorn, grey willow, moth plant, and old man's beard to and within the Good Neighbour Process Zone identified for these plants to reduce adverse effects on the environment.

AIMS

Over the first ten years of the Plan (to 2017):

- To reduce levels of banana passionfruit in the banana passionfruit
- Active Management Zone (*Map 5-3*).
- To reduce levels of boneseed in the boneseed Active Management (*Map 5-4*).
- To reduce levels of Darwin's barberry in the Darwin's barberry Active Management Zone (*Map 5-5)*.
- To reduce levels of evergreen buckthorn in the evergreen buckthorn Active Management Zone (*Map 5-6*).
- To reduce levels of willow with wetland habitat or where it threatens wetland habitat in the grey willow Active Management Zone (*Map 5-7*).
- To reduce levels of moth plant in the moth plant Active Management Zone (*Map 5-8*).
- To reduce levels of old man's beard in the old man's beard Active Management Zone (*Map 5-9*).
- To reduce or prevent the further spreading of these pests onto land that is clear or being cleared of the pest in the Good Neighbour Process Zone within the first 10 years of the Plan to 2027 and beyond.

PRINCIPAL MEASURES (Continued)

Council inspection
Horizons may conduct surveillance programmes in the Active Management Zone.

Advocacy and education
Horizons will carry out programmes to increase awareness of the Progressive Containment Programme and the threats posed by these pests.

Banana passionfruit, boneseed, Darwin's barberry, evergreen buckthorn, grey willow, moth plant and old man's beard will be incorporated into generic biosecurity advocacy programmes, including information on limiting dispersal of these pests.

Requirement to act
Occupiers of rateable land within the Active Management Zone must inform Horizons of the presence of these pests on their land. All Occupiers will act in accordance with the Act. These requirements will ensure that Horizons is aware of the presence of pests on land.

In situations where occupiers of rateable land inside the respective Active Management Zones oppose the control methods used by Horizons, those occupiers will become responsible for the control of banana passionfruit, boneseed, Darwin's barberry, evergreen buckthorn, grey willow, moth plant and old man's beard on the land they occupy in accordance with the good neighbour rule process outlined in *Section 4.7* of this Plan and the good neighbour rule detailed in *Table 5-14*. The purpose of this rule is to place onus of control onto occupiers who do not wish Horizons to control the pest for them.

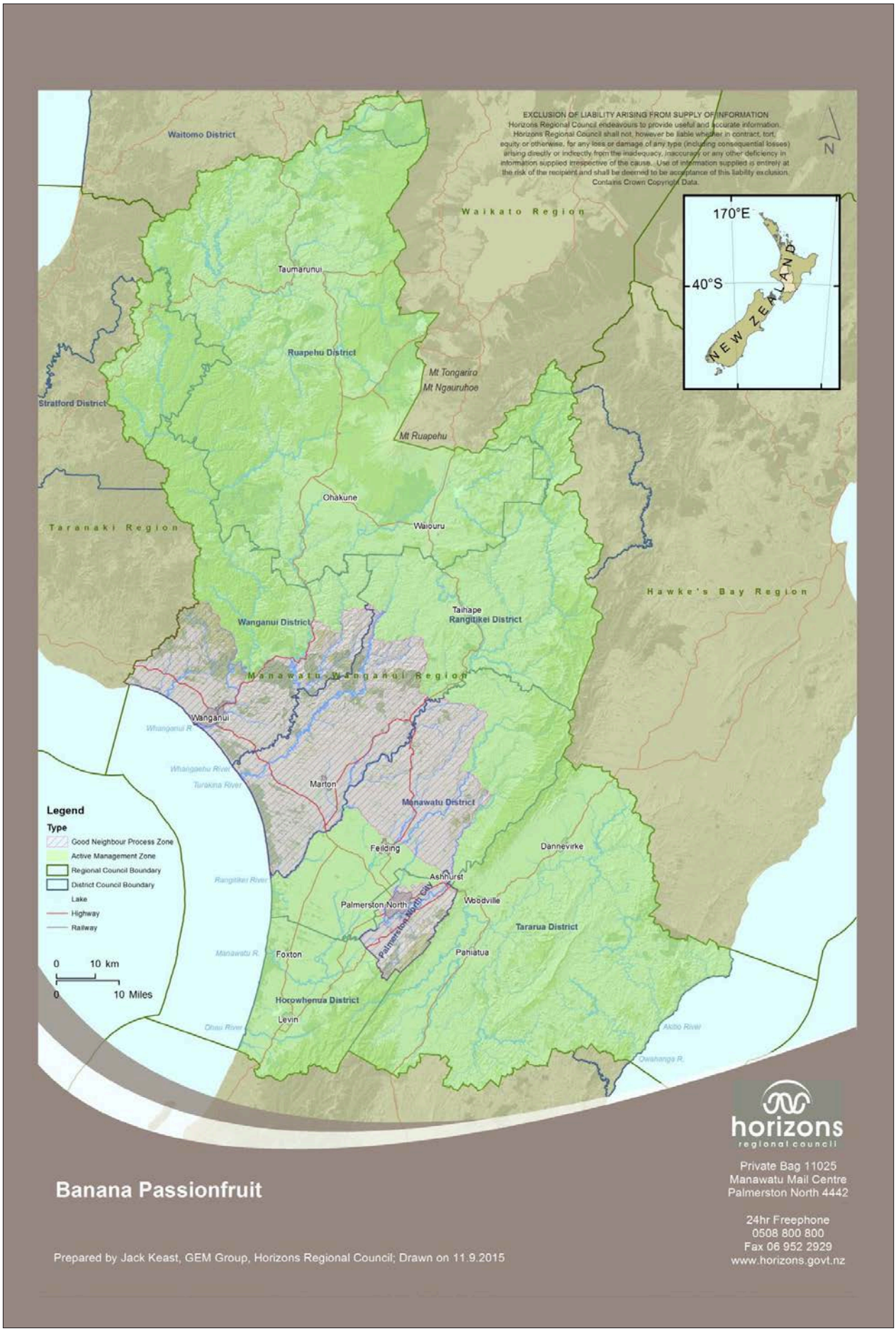
Management regime for other mapped Progressive Containment pest plants: banana passionfruit, boneseed, Darwin's barberry, evergreen buckthorn, grey willow, moth plant and old man's beard	
PRINCIPAL MEASURES **Service delivery** Horizons will undertake direct control of banana passionfruit, boneseed, Darwin's barberry, evergreen buckthorn, grey willow (where it is in or near a wetland habitat), moth plant, and old man's beard on rateable land within their respective Active Management Zones. Horizons may conduct control of these species outside their respective Active Management Zones and/or on non-rateable land under nonregulatory site-led management programmes or community initiatives, at Horizons' discretion. Horizons will work with Crown agencies, SOEs, and Territorial Local Authorities on the effective management of these species on nonrateable land. Horizons may undertake to release biocontrol agents for these pests where they are available and release is appropriate.	Outside their respective Active Management Zones, all occupiers are responsible for the control of banana passionfruit, boneseed, Darwin's barberry, evergreen buckthorn, grey willow, moth plant and old man's beard in accordance with the good neighbour rule process outlined in *Section 4.7* of this Plan, and the good neighbour and the clear land rules detailed in *Table 5-14*. These rules are to place onus onto Occupiers for keeping clear land clear, and managing the spread of pests onto neighbouring land of an Affected Occupier. Occupiers of non-rateable Māori owned land, Crown Agencies, TLAs, other roading authorities and rail authorities will be responsible for the control of infestations of these pests within the respective Active Management Zones of these pests where they occur in the places they occupy in accordance with rule 5.14.4. The purpose of this rule is to ensure that those who are best placed to manage these pests safely in the road and rail corridor are responsible for control, and to ensure work on non-rateable land is undertaken.
MONITORING Horizons will monitor the success of the previous pest control event by recording the extent and/or density of banana passionfruit, boneseed, Darwin's barberry, evergreen buckthorn, grey willow, moth plant and old man's beard in areas where the pest has been controlled by Horizons. Managed sites will be monitored annually for a further five years after zero-levels have been achieved. Banana passionfruit, boneseed, Darwin's barberry, evergreen buckthorn, grey willow, moth plant and old man's beard will also be monitored in accordance with *Section 6.1* of this Plan.	**OUTCOMES** Native ecosystems, riparian habitats, and soil conservation retirement blocks are protected from the adverse effects of banana passionfruit, boneseed, Darwin's barberry, evergreen buckthorn, grey willow, moth plant and old man's beard, and their management. Areas that are clear of banana passionfruit, boneseed, Darwin's barberry, evergreen buckthorn, grey willow, moth plant and old man's beard, remain clear of these species.

Table 5-13: Management regime for other mapped Progressive Containment pest plants

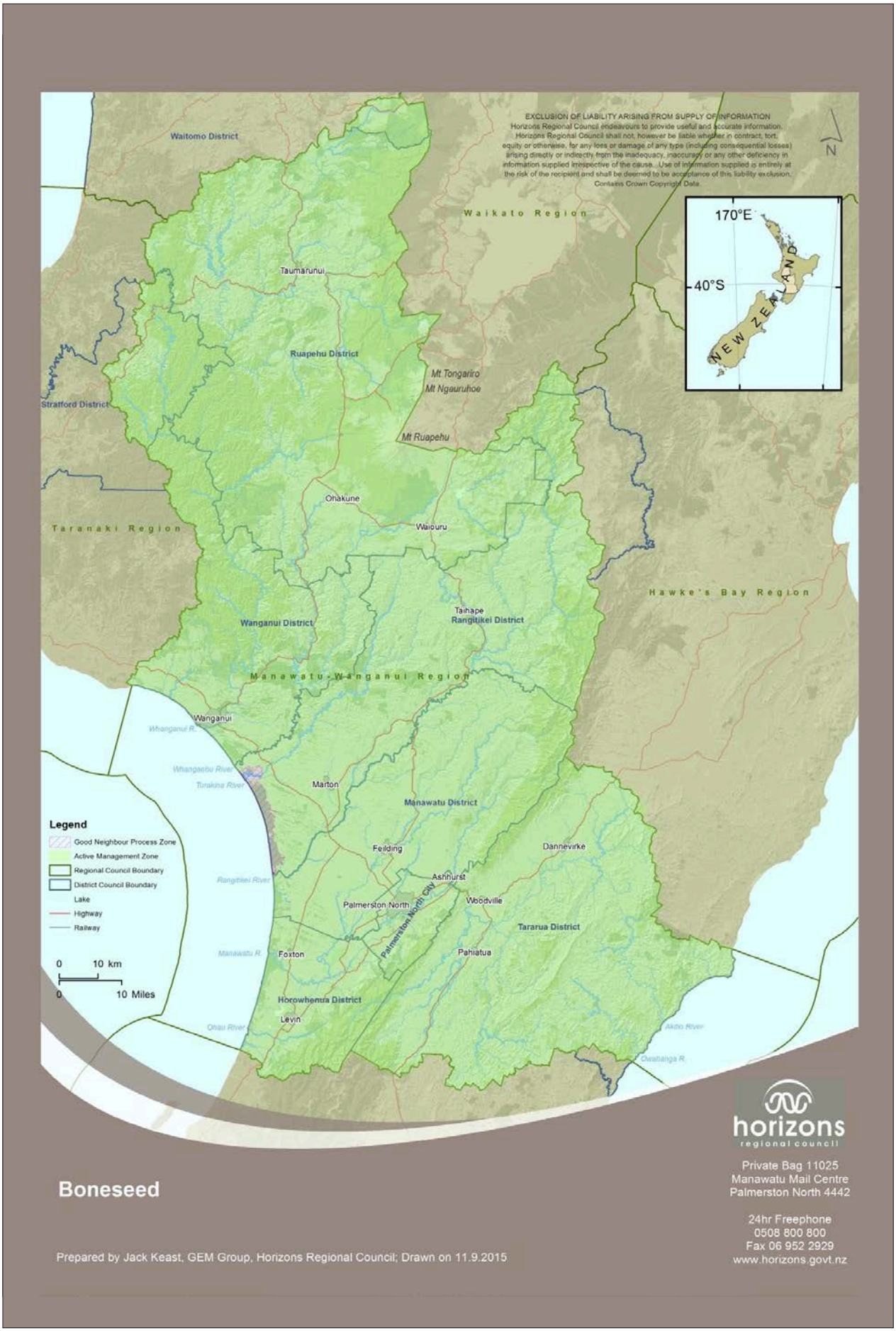
Specific Rules

Specific rules for mapped progressive containment pest plants	
Rule	**Explanation**
Duty to Inform Rule 5.14.1 Within the Active Management Zone	All occupiers of rateable land greater than 4 hectares within the respective Active Management Zone for banana passionfruit, boneseed, Darwin's barberry, evergreen buckthorn, grey willow, moth plant or old man's beard, who become aware of the presence of these pests in the place which they occupy, must inform Horizons of the presence of that pest within 5 working days of the discovery of the pest.
Rateable Land Rule 5.14.2 Within the Active Management Zone	Where the occupier of rateable land is opposed to action being undertaken by an Authorised Person to destroy banana passionfruit, boneseed, Darwin's barberry, evergreen buckthorn, grey willow, moth plant or old man's beard within the Active Management Zone, the occupier must, destroy the pests located in the place they occupy within 21 calendar days (or within a time period as negotiated with an Authorised Person) of being notified by an Authorised Person of the presence of these pests. The occupier must notify Horizons within 5 working days of the destruction of the pest.
TLAs, Road and Rail Authorities Rule 5.14.3 Within the Active Management Zone	Every TLA, roading authority and rail authority, must not less than once every calendar year identify the presence of banana passionfruit, boneseed, Darwin's barberry, evergreen buckthorn, grey willow, moth plant or old man's beard within the Active Management Zone, where they occur within the road reserve as defined in *Section 4.6*, (or with respect to KiwiRail, the rail corridor), and other places they occupy. The pests must be managed in accordance with an agreed Approved Management Plan, with a report provided to Horizons on the outcome of the plan by 31 July for the previous calendar year (or within a time period as negotiated with an Authorised Person).
Good Neighbour Rule 5.14.4 Within the Active Management Zone	Other occupiers of non-rateable land (including occupiers of non-rateable Māori owned land, and Crown Agencies) within the respective Active Management Zone for banana passionfruit, boneseed, Darwin's barberry, evergreen buckthorn, grey willow, moth plant or old man's beard must destroy these species within the place(s) they occupy within the 'nominal distance for management from the boundary' specified in *Table 5-10* for these pests, or have an Approved Management Plan in place to manage the spread of these pests, with respect to the boundary with an Affected Occupier within 21 calendar days of the discovery of the pest (or within a time period as negotiated with an Authorised Person). For this rule to apply, the Affected Occupier must be taking Reasonable Measures to destroy the pest on the land they occupy in the Active Management Zone. Reasonable Measures include participation in a Horizons-led Mapped Progressive Containment Pest Plant Programme.
Clear Land Rule 5.14.5 In the Good Neighbour Process Zone	All occupiers within the Good Neighbour Process Zone, where banana passionfruit, boneseed, Darwin's barberry, evergreen buckthorn, grey willow, moth plant, or old man's beard is present within the 'Threshold Infestation Size' specified in *Table 5-10*, must destroy that pest in the place(s) they occupy within 21 calendar days of the discovery of the pest(s) (or within a time period as negotiated with an Authorised Person).
Good Neighbour Rule 5.14.6 In the Good Neighbour Process Zone	With the exception of occupiers covered by rule 5.14.5, all occupiers within the Good Neighbour Process Zone (including the Crown, roading and rail authorities) must destroy any banana passionfruit, boneseed, Darwin's barberry, evergreen buckthorn, grey willow, moth plant or old man's beard in the place(s) they occupy within the 'nominal distance for management from the boundary' specified in *Table 5-10* for these pests, or have an Approved Management Plan in place to manage the spread of these pests, with respect to the boundary with an Affected Occupier within 21 calendar days of the discovery of the pest (or within a time period as negotiated with an Authorised Person). For this rule to apply, the Affected Occupier must be taking Reasonable Measures to destroy the pest on the land they occupy in the Good Neighbour Process Zone.
	A breach of these rules will create an offence under Section 154N(19) of the Act. Any person or corporation who fails to comply with this rule is liable to penalties as prescribed under Section 157(5) of the Act.

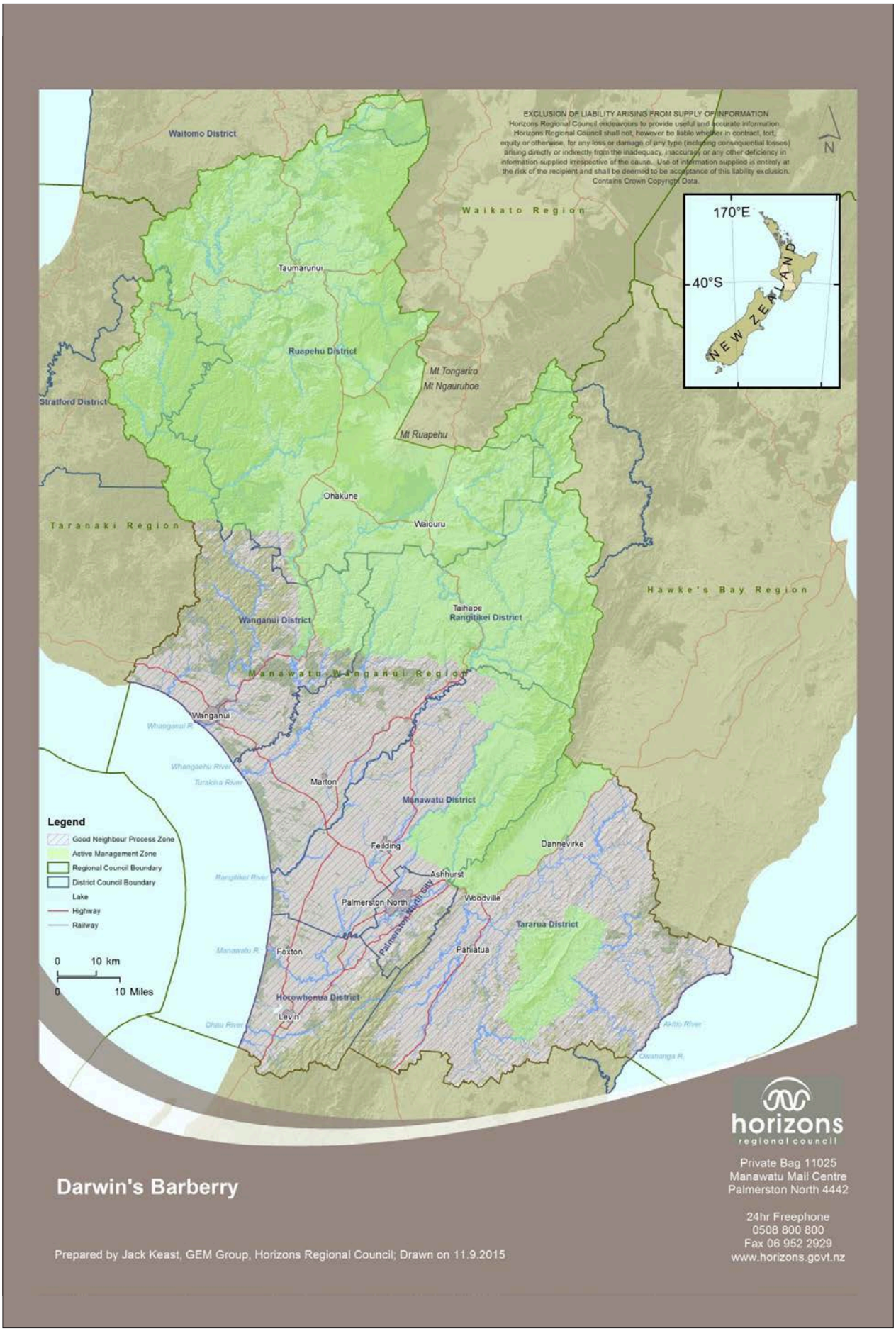
Table 5-14: Specific rules for mapped progressive containment plants



Map 5-3: Banana passionfruit Active Management and Good Neighbour Process Zones

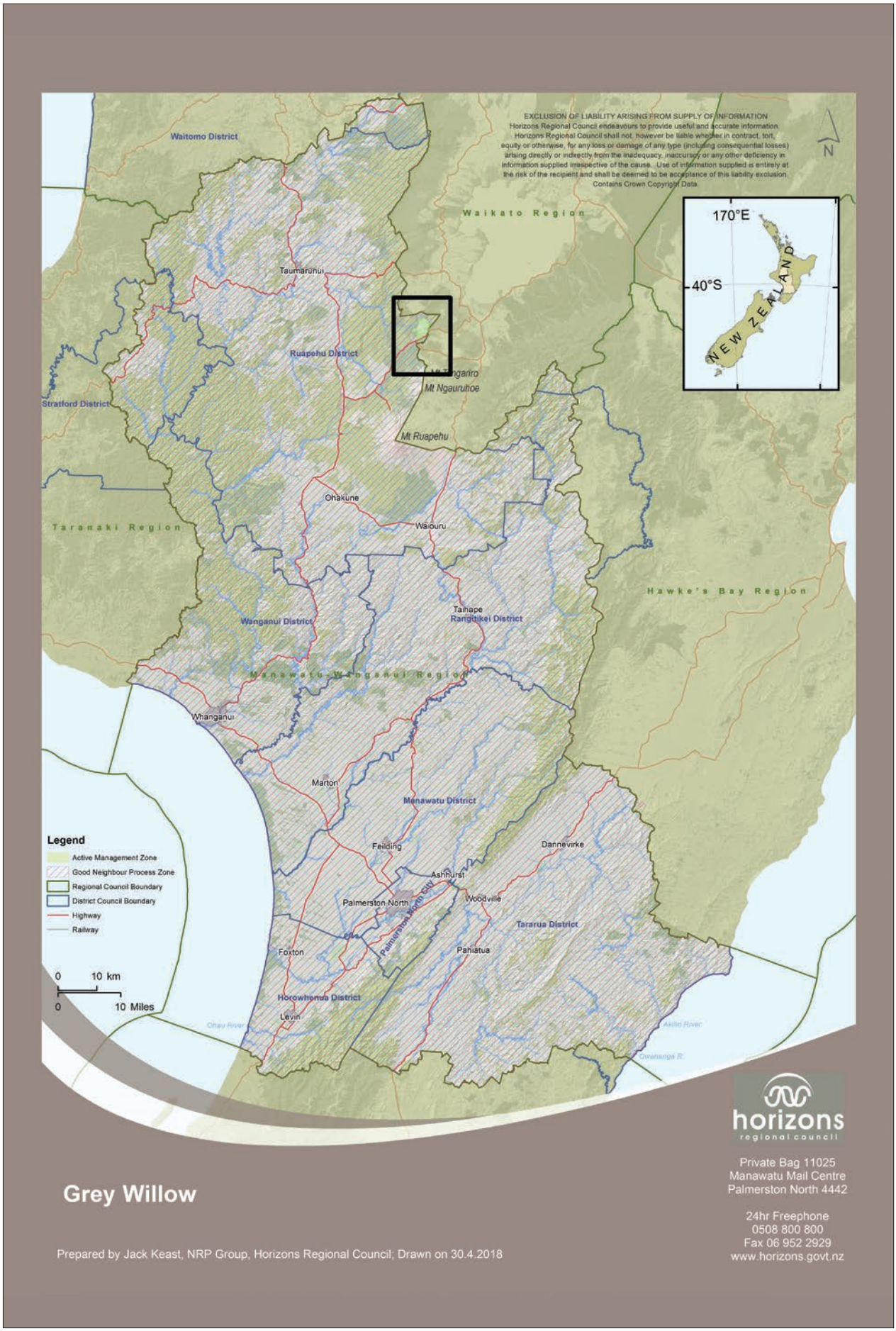


Map 5-4: Boneseed Active Management and Good Neighbour Process Zones

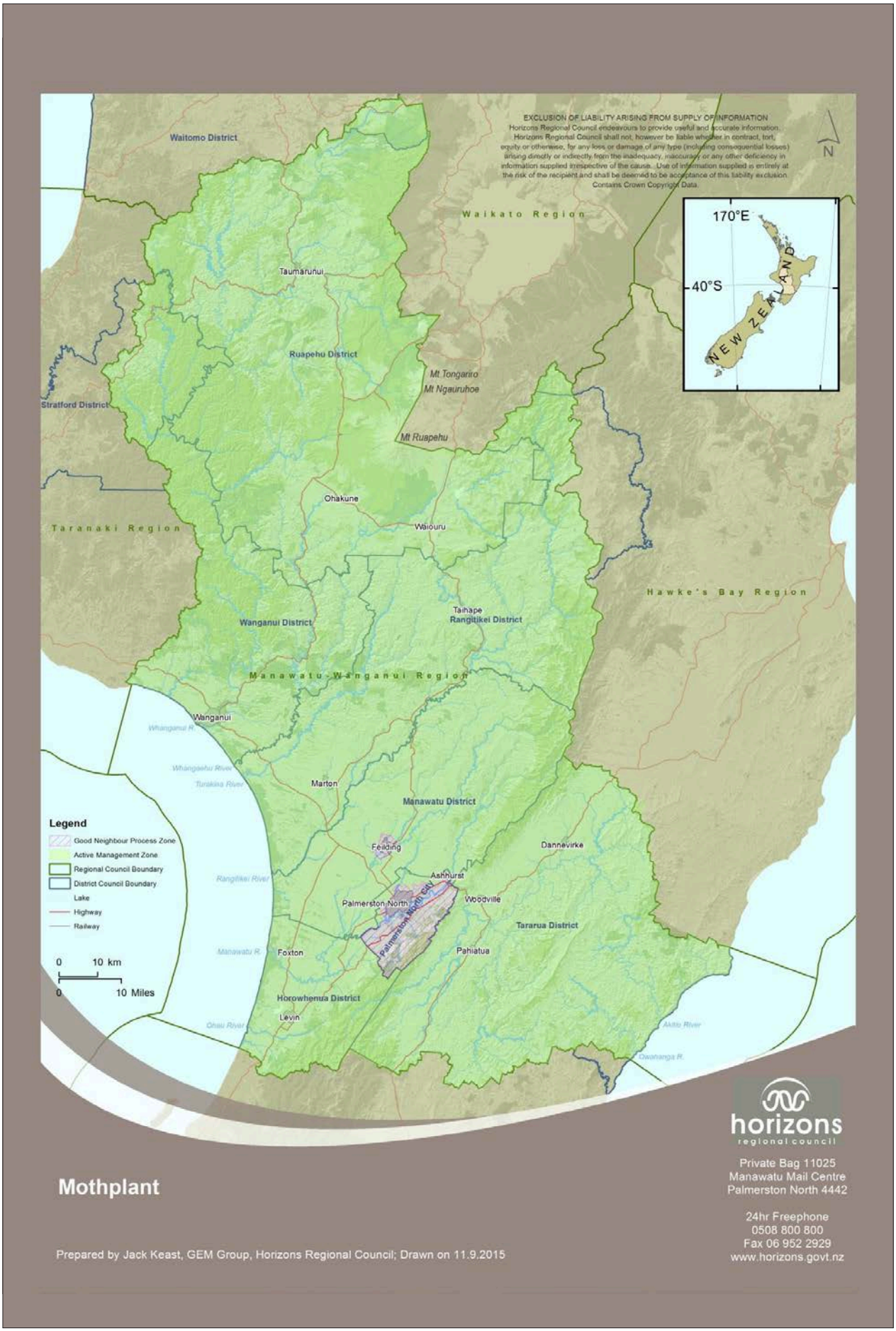


Map 5-5: Darwin's barberry Active Management and Good Neighbour Process Zones

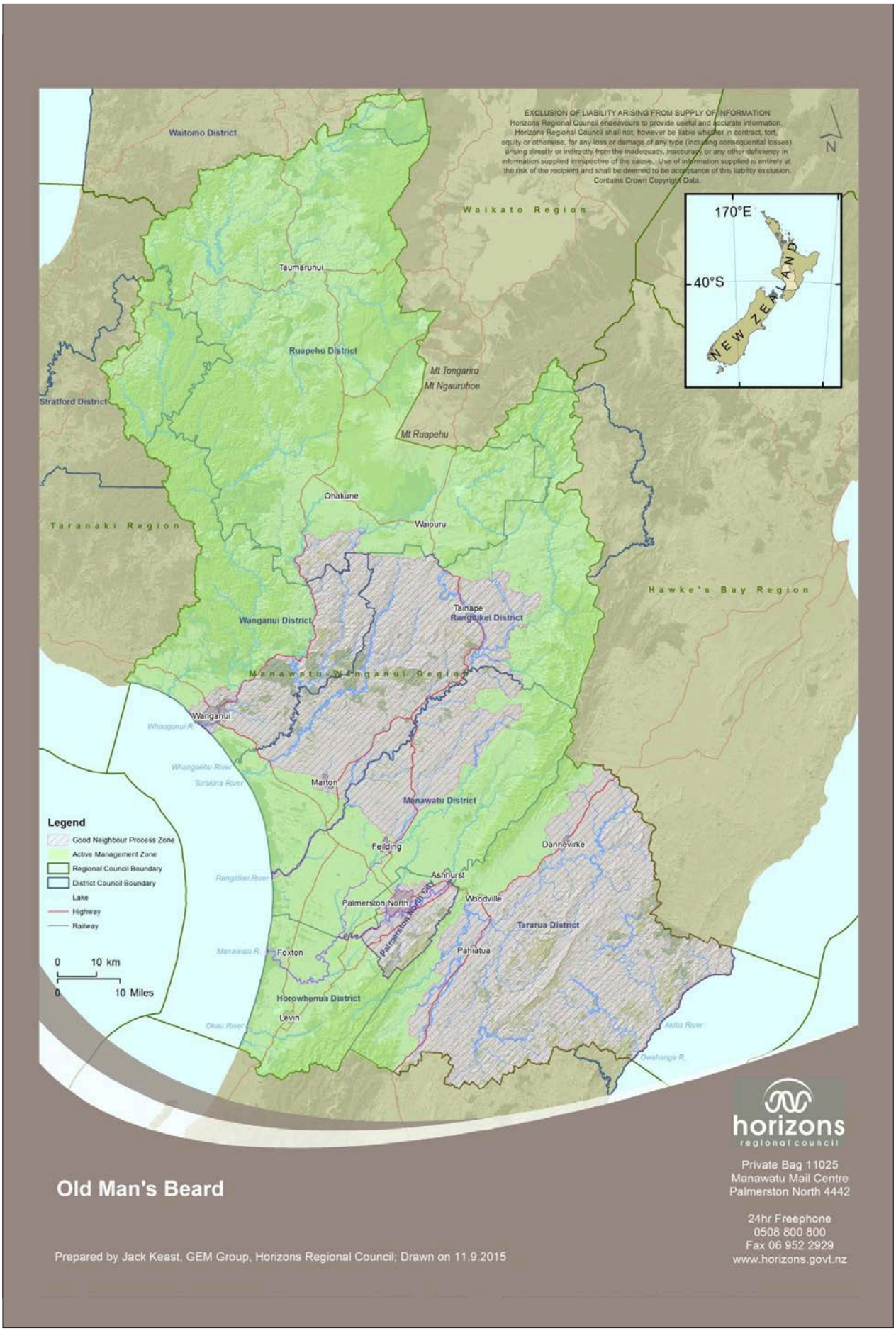
Map 5-6: Evergreen buckthorn Active Management and Good Neighbour Process Zones



Map 5-7: Grey willow Active Management and Good Neighbour Process Zones



Map 5-8: Moth plant Active Management and Good Neighbour Process Zones



Map 5-9: Old man's beard Active Management and Good Neighbour Process Zones

5.7.3. AQUATIC PEST PLANTS

Eelgrass, Egeria, hornwort, Lagarosiphon, and reed sweetgrass are grouped into the "Aquatic Pest Plants" on the basis that they are aquatic pests managed the same way for the same objectives. Their distributions cannot be mapped with any certainty at present. The Plan is more appropriate than relying on voluntary action because the main vector of these plants is intentional or inadvertent human induced spread. Managing behaviour through rules is a useful means for managing spread of these pests to lakes and waterways. The geographic area that the Plan applies to for Aquatic Pest Plants is the whole Region.

Management Regime

Management regime for Progressive Containment aquatic pest plants

OBJECTIVES

Over the duration of the Plan (2017 – 2037), progressively contain or reduce the number of sites across the Region affected by eelgrass, egeria, hornwort, lagarosiphon and reed sweetgrass to prevent further spread and reduce adverse effects on the environment.

AIMS

Within the first ten year period to 2017 (and beyond):

- To reduce the risk of the dispersal of aquatic pest plant species into lakes known to be clear of them within the 10 year period to 2027 and beyond.
- To reduce infestation of eelgrass, egeria, hornwort, lagarosiphon and reed sweetgrass at boat access, fishing, and swimming areas within the 10 year period to 2027 (where resources are available).
- To control new incursions of eelgrass, egeria, hornwort, lagarosiphon and reed sweetgrass within the 10 year period to 2027 and beyond, (where resources are available).

PRINCIPAL MEASURES

Service delivery

Horizons may undertake direct control of localised areas of infestation, or of newly discovered small infestations as and when required.

Horizons will oversee dispersal pathway management. Dispersal risk areas will be identified and targeted for management. The importance of interagency collaborations is recognised and such arrangements will be incorporated wherever possible into Horizons initiatives.

Such initiatives can include, but are not restricted to:

- erecting signage at both infested and non-infested sites advising of the risk of dispersal via boats, boat trailers, fishing gear, dogs, jet skis etc;
- erecting signage that advises of ways to implement good hygiene practices;
- producing flyers and/or pamphlets advising of ways to implement good hygiene practices;
- Localised weed control at public boat access and swimming areas to minimise the risk of transfer.

PRINCIPAL MEASURES (Continued)

Collaboration between Horizons and other agencies will be pursued. Horizons may undertake to release biocontrol agents for these pests where they are available and release is appropriate.

Council inspection

Horizons' may undertake surveillance programmes for areas vulnerable to invasion by these aquatic pest plant species. In the occurrence of a newly discovered infestation, an assessment of the feasibility of control will be made. Where justified and practicable, new incursions will be controlled.

Where new incursions are discovered attempts will be made to trace and confirm vectors. Where feasible, management of these incursions and vectors will be implemented.

Advocacy and education

Advocacy will be a fundamental component of this programme and is closely intertwined with the implementation of dispersal pathway management. All awareness campaigns will be consistent with the National Freshwater Pest Campaign, or any subsequent national awareness campaign. Advocacy initiatives can include, but are not restricted to:

- working with contractors to promote an ethic of responsible work practices and advocating for machine hygiene;
- continuing to work internally (e.g. with Operations Group) to ensure continuation of sustainable drain management practices and other such initiatives;
- targeting fishing groups (e.g. coarse fishers, eel fishers etc.) and increasing the awareness of the need for fishing gear hygiene;
- Liaising with managers and owners of properties with infestations to facilitate coordinated management of infestations and dispersal avenues;
- broader awareness programmes targeted at other lake user groups (i.e. the wider public);
- providing advice and information on these species to occupiers and other interested parties.

Requirement to act

Occupiers and the general public will act in accordance with the Act and the rules for containment aquatic plants detailed in *Table 5-16*. This will prevent the accidental or deliberate spread of these pest species.

Management regime for Progressive Containment aquatic pest plants	
MONITORING Horizons will monitor success by periodically recording the presence or absence of these weeds from the Regions' lakes. Eelgrass, egeria, hornwort, lagarosiphon, and reed sweetgrass will also be monitored in accordance with *Section 6.1* of this Plan.	**OUTCOMES** The distribution of eelgrass, egeria, hornwort, lagarosiphon and reed sweetgrass is restricted to current infestations or reduced.

Table 5-15: Management regime for Progressive Containment aquatic pest plants

Specific Rules

Specific rules for Progressive Containment aquatic plants	
Rule	**Explanation**
Non-dispersal Rule 5.16.1	No person will distribute, sell, exhibit, propagate or dispose of any eelgrass, hornwort, egeria, lagarosiphon or reed sweetgrass, except at Authorised Landfills or Authorised Green Waste Dump sites, or as authorised by a resource consent pursuant to the RMA.
Note	The pests in this Plan are prohibited from sale, display, distribution or propagation in accordance with Sections 52 and 53 of the Act.
	A breach of these rules will create an offence under Section 154 N(19) of the Act. Any person or corporation who fails to comply with this rule is liable to penalties as prescribed undersection 157(5) of the Act.

Table 5-16: Specific rules for Progressive Containment aquatic plants

5.7.4. OTHER NON-MAPPED PROGRESSIVE CONTAINMENT PEST PLANTS

Australian sedge, blackberry, broom species (exotic), field horsetail, gorse, nodding thistle, tutsan, variegated thistle, yellow bristlegrass, and yellow ragwort are grouped into the "Other Non-mapped Progressive Containment Pest Plants" on the basis that they are all production pests which are managed under the Plan through using a mix of a clear land rule and a good neighbour rule. These species are widespread but there are parts of the Region that are clear of these pests and it is desirable to keep those areas clear. The clear areas cannot be mapped, hence the name for this group. The Plan is more appropriate than relying on voluntary action because it provides a fair means by which the costs associated with the spread of the pests can be allocated to exacerbators. The Plan requires occupiers with small infestations to make the economically sensible decision to control these pests. The geographic area that the Plan applies to for the Other Non-Mapped Progressive Containment Pest Plants is the whole Region.

Management Regime

Management regime for the non-mapped suite of Progressive Containment plants: Australian sedge, blackberry, broom species (exotic), field horsetail, gorse, nodding thistle, tutsan, variegated thistle, yellow bristlegrass and yellow ragwort

OBJECTIVES

Over the duration of the Plan (2017 – 2037) to progressively contain or reduce the spread of Australian sedge, blackberry, broom species (exotic), field horsetail, gorse, nodding thistle, tutsan, variegated thistle, yellow bristlegrass and yellow ragwort over the entire Region to reduce adverse effects on economic wellbeing.

AIMS

Within the first ten year period to 2027 (and beyond):

- To reduce the occurrence and spread of Australian sedge, blackberry, broom species (exotic), field horsetail, gorse, nodding thistle, tutsan, variegated thistle, yellow bristlegrass, and yellow ragwort from infested land to clean land.
- To investigate and support biocontrol options for these species.

PRINCIPAL MEASURES

Service delivery

Horizons will encourage and assist occupiers with advice on pest management. Horizons may support the establishment of biocontrol programmes, including sourcing funding, initiating research or coordinating community groups. Where biocontrol agents are already available, Horizons will support initiatives to maintain self-sustaining populations of biocontrol agents throughout the Region, subject to resources.

Horizons may undertake to release biocontrol agents for these pests where they are available and release is appropriate.

MONITORING

Horizons will monitor the success of the previous pest control event by recording the extent and/or density of Australian sedge, blackberry, broom species (exotic), field horsetail, gorse, nodding thistle, tutsan, variegated thistle, yellow bristlegrass and yellow ragwort in areas where the pest has been controlled by Horizons.

Sites will be monitored annually for a further five years after zero-levels have been achieved.

Australian sedge, blackberry, broom species (exotic), field horsetail, gorse, nodding thistle, tutsan, variegated thistle, yellow bristlegrass and yellow ragwort will also be monitored in accordance with Section 6.1 of this Plan.

PRINCIPAL MEASURES (Continued)

Potential use of Pathway management plans

Horizons will investigate the feasibility of managing the spread of these species using pathway management plans.

Council inspection

Horizons may conduct surveillance for these pests.

Advocacy and education

Horizons will carry out programmes to increase awareness of the threats posed by these pests. These pests will be incorporated into generic biosecurity advocacy programmes, including information on limiting dispersal of these pests.

Requirement to act

The responsibility for the control of Australian sedge, blackberry, broom species (exotic), field horsetail, gorse, nodding thistle, tutsan, variegated thistle, yellow bristlegrass and yellow ragwort lies with the occupier.

Occupiers must act in accordance with the Act and the rules detailed in *Table 5-18*.

All Occupiers will be bound as a neighbour for the control of these pests, in accordance with the good neighbour rule process outlined in *Section 4.7* of this Plan and the good neighbour rule detailed in *Table 5-18*.

These rules will ensure the management of smaller infestations by Occupiers (keeping clear land clear), while placing the onus of reducing the spread of the pests into Occupiers which have large infestations of pests who are neighbours of Affected Owners.

OUTCOMES

Native ecosystems, riparian habitats and soil conservation retirement blocks are protected from the adverse effects of Australian sedge, blackberry, broom species (exotic), field horsetail, gorse, nodding thistle, tutsan, variegated thistle, yellow bristlegrass and yellow ragwort.

Water quality is protected from excessive nitrate loadings that may be attributed to gorse and broom.

Areas that are clear of Australian sedge, blackberry, broom species (exotic), field horsetail, gorse, nodding thistle, tutsan, variegated thistle, yellow bristlegrass and yellow ragwort remain clear of these species.

The spread of Australian sedge, blackberry, broom species (exotic), field horsetail, gorse, nodding thistle, tutsan, variegated thistle, yellow bristlegrass and yellow ragwort will be reduced.

Table 5-17: Management regime for the other non-mapped suite of Progressive Containment plants

Specific Rules

Specific rules for other non-mapped Progressive Containment plants	
Rule	**Explanation**
Clear Land Rule 5.19.1	All Occupiers of a place greater than 4 hectares where Australian sedge, blackberry, broom species (exotic), field horsetail, gorse, nodding thistle, tutsan, variegated thistle, yellow bristlegrass and yellow ragwort is present within the 'Threshold Infestation Size' specified in *Table 5-10* for these pests, must destroy that pest within 21 calendar days of the discovery of the pest(s) (or within a time period as negotiated with an Authorised Person) in the place they occupy.
Good Neighbour Rule 5.19.2	All Occupiers of a place greater than 4 hectares must destroy any Australian sedge, blackberry, broom species (exotic), field horsetail, gorse, nodding thistle, tutsan, variegated thistle, yellow bristlegrass or yellow ragwort in the place(s) the occupy within the 'nominal distance for management of the boundary' specified in *Table 5-10* for these pests, or have an Approved Management Plan in place to manage the spread of these pests, with respect to the boundary with an Affected Occupier, within 21 calendar days of the discovery of the pest (or within a time period as negotiated with an Authorised Person). For this rule to apply, the Affected Occupier must be taking Reasonable Measures to destroy the pest on the place they occupy.
	A breach of these rules will create an offence under Section 154N(19) of the Act. Any person or corporation who fails to comply with this rule is liable to penalties as prescribed under Section 157(5) of the Act.

Table 5-18: Specific rules for other non-mapped Progressive Containment plants

5.8. SUSTAINED CONTROL PROGRAMME

Horizons' Sustained Control Programme covers species which Horizons seeks to control to levels where their impacts on economic values and/or environmental values are cost-effectively reduced (i.e. that the cost of control is less than the opportunity costs that arise if these pests go unmanaged). These pests are widespread and throughout Manawatu-Wanganui Region.

Species	Description	Effect
Possum (pg. 59)	An Australian marsupial originally introduced to create a fur trade. Adults range in size from 2-5 kg, possums have a rounded build, grey to black or orange-black fur, and a prehensile tail. They eat a large range of plants including trees, crops, gardens and pasture. They are also known to eat native insects and prey on native birds and their eggs. They are considered the number one animal pest in the Region because of their adaptability to different environments, and the extent and severity of damage they cause to both production and environmental values. Concerted effort by a number of agencies, including Horizons, has driven populations to low levels over much of the Region. The population will rapidly re-expand if left un-managed. Populations are very destructive to indigenous ecosystems – from localised extinctions of possum-preferred species, to forest canopy dieback and ecosystem change. Vectors for a number of pathogens – the best known being bovine tuberculosis (Tb), but also *Giardia, Cryptosporidium, and Leptospira.*	Production Pest, Environmental Pest and Social/Amenity Pest

Species	Description	Effect
Rabbit (feral) (p. 61)	An herbivorous mammal of 1-2 kg with a rounded body, long ears and a small tail. The fur colour is mainly buff, sprinkled with black, a reddish neck and white belly, or black. Breeding occurs throughout the year, with adult females capable of producing 45 to 50 young per year. Habitation is of forest margins, shrub lands and tall pasture habitats on most soil types, but they prefer short pasture on light, free-draining soils. Historically, feral rabbits have been a significant problem for farming in parts of the Region. At high infestation levels they can significantly damage new plantings of trees and crops, reduce the amount of palatable pasture, increase the amount of bare ground susceptible to erosion and pest plant invasion, and initiate erosion processes by burrowing. In indigenous habitats they can reduce vegetation species diversity by replacing vegetation dominated by perennial species with vegetation dominated by annuals, and replacing grasslands and shrub land with low, herbaceous and matforming vegetation. Even small populations can be a nuisance to bush remnant restoration programmes where they affect the re-establishment of the forest understorey and damage soil conservation, forestry and other new tree plantings. They can also be a local nuisance in urban and peri-urban areas, where small populations do a lot of damage to vegetable gardens, trees and nurseries.	Production, Environmental and Social/ Amenity Pest

Table 5-19: Organisms on Horizons' Sustained Control Programme
The page numbers quoted refer to the page on which the management regime for each species can be found.

Reason for Inclusion

The pests on the Sustained Control Programme are classed as production, environmental and social/amenity pests because they are capable of causing adverse effects on the productive capacity of the Region, affect biodiversity values, or ruin recreational spaces as indicated in the Description and by the effect of each of the pests in *Table 5-19*. It is considered more appropriate to include possums and feral rabbits in the Sustained Control Programme of the Plan than to rely on voluntary action as outlined in the preamble for each species or group of species below.

5.8.1. POSSUM

Possums are widespread but suppression of their populations can achieve cost effective gains in pastoral productivity and provides a level of protection from possum browse effects on indigenous habitats. To achieve region-wide benefits requires coordination of action at regional scale. With the anticipated withdrawal of OSPRI's Bovine TB vector management, there will be reduced levels of government funding for possum control. There is a risk that the levels of service for possum control will drop, creating a potentially greater risk of recurrence of the diseases possums can transmit if control in those areas does not continue.

The benefits of possum control therefore accrue to a wider community than those directly affected by the presence of the possums on their property. The Plan is more appropriate than relying on voluntary action because controlling the effects of possums will have a mix of public and private benefits and the cost of achieving the public benefit of the control of this pest on private lands is shared. The geographic area that the Plan applies to under this Programme is the area depicted as the Possum Management Area depicted on *Map 5-10*. Horizons PCO programme is as depicted in Horizons' Regional Pest Animal Management Operational Plan for the current year 1 July to 30 June.

Management Regime

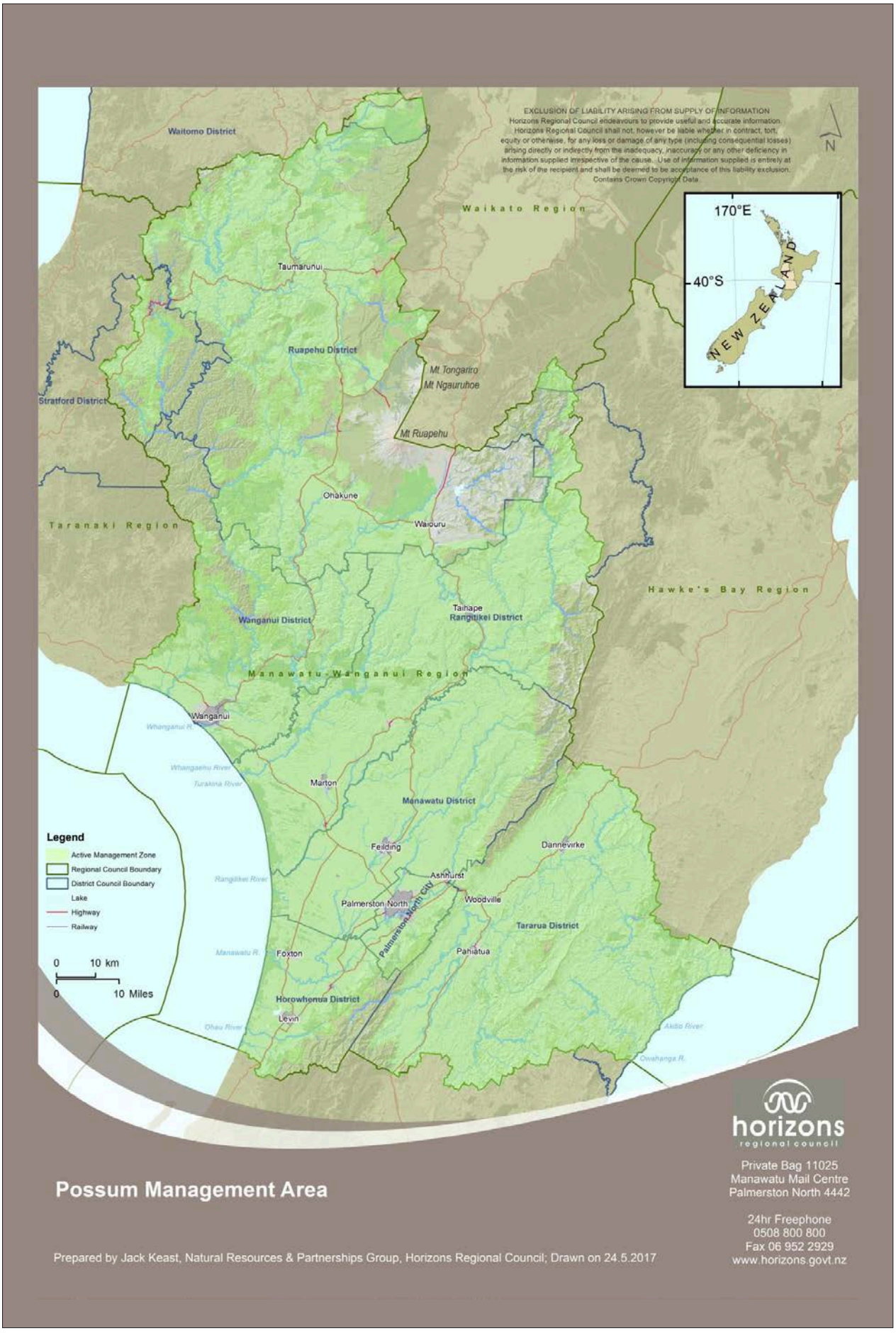
Management regime for Sustained Control of the possum	
OBJECTIVES Over the duration of the Plan (2017-2037) control possums across the Region to reduce adverse effects on economic wellbeing and the environment. **AIMS** • On average, the rateable land managed by Horizons as part of Horizons' Possum Control Operation (PCO) programme, maintains possum numbers below 10% residual trap catch (or equivalent measure) within the first ten years until 2027 and beyond.	**PRINCIPAL MEASURES (Continued)** **Council inspection** Horizons will conduct a surveillance monitoring programme for possums. **Advocacy and education** Horizons will carry out programmes to increase public awareness of the roles and responsibilities of occupiers and the threats posed by possums. Horizons will seek to integrate possum control work with Crown Agencies where their land is contained inside, or adjacent to, a possum control operation. The possum will be incorporated into generic biosecurity advocacy programmes, including information on limiting dispersal of these pests. **Requirement to act** All Occupiers must act in accordance with the Good Neighbour Rule process outlined in *Section 4.7* and the good neighbour rule detailed in *Table 5-21*. This will ensure that the onus of reducing the spread of possums is shared by the neighbours of Affected Occupiers. **Research** Horizons will investigate how to approach the OSPRI withdrawal.
PRINCIPAL MEASURES **Service delivery** Horizons will provide ongoing service delivery possum control in areas identified as part of Horizons' PCO programme to ensure that operational targets are achieved. Horizons will continue to work closely with OSPRI to ensure that, as OSPRI ceases possum control in specific areas, Horizons can be in a position to assume those areas into Horizons' PCO programme if resourcing is available.	
MONITORING Horizons will monitor possum density trends in Horizons-managed PCOs by 30 June every year, using standard industry protocols and best practice guidelines. Monitoring will also be in accordance with *Section 6.1* of this Plan. Horizons will audit the quality of possum control inputs for alignment with industry and Horizons' best practice for Horizons' PCOs on an annual basis, by 30 June.	**OUTCOMES** In areas of Horizons possum control programme damage to amenities, forestry, soil conservation planting, crops, horticulture, pasture production and native flora and fauna and risk of disease transmission from possums to livestock, pets and humans is limited to the levels provided by the maintenance of possums below 10% residual trap catch (or equivalent measure).

Table 5-20: Management regime for Sustained Control of the possum

Specific Rules

Specific rules for other non-mapped Progressive Containment plants	
Rule	**Explanation**
Good Neighbour Rule 5.22.1	All occupiers of: • Non-rateable land adjacent or within the Possum Management Area; or • Rateable land to which a Horizons Possum Control Operation has been denied access; Must ensure that possum density is maintained, on average, below 10% Residual Trap Catch (or equivalent measure of possum abundance) on the land they occupy within 200 m of the boundary of an Affected Occupier, or have an Approved Management Plan in place to manage the spread of possums, where the Affected Occupier is undertaking Reasonable Measures to control possums on the land that they occupy. Reasonable measures include the land being subject to a current Horizons Possum Control Operation.
	A breach of this rule will create an offence under Section 154N(19) of the Act. Any person or corporation who fails to comply with this rule is liable to penalties as prescribed under Section 157(5) of the Act.

Table 5-21: Specific rules for the possum



Map 5-10: Possum Management Area

5.8.2. RABBIT (FERAL)

Rabbits are widespread and can usually be effectively managed under voluntary action. However, it is appropriate that Horizons be involved in regulating these pests when voluntary action does not effectively manage the spread of large populations of rabbits from neighbours who are not controlling them. The Plan is also more appropriate than relying on voluntary action to ensure that the effects of rabbits do not become so great that it is beyond the capacity of private interests to manage them. The thresholds in the Plan are set to manage rabbits below this level. Further to this, the use and release of biocontrols requires region-wide coordination. The Plan includes the control of populations of rabbits of any origin that are no longer kept in domestic circumstances (i.e. feral). The Plan does not include the management of individual escapee domestic or pet rabbits that would otherwise, when recaptured, be kept within a fence or enclosure for domestic or farming purposes. The geographic area that the Plan applies to for rabbits is the whole Region.

Management Regime

Management regime for Sustained Control of feral rabbits

OBJECTIVES

Over the duration of the Plan (2017 – 2037) control feral rabbits across the Region to reduce adverse effects on economic wellbeing and the environment, including enjoyment of the natural environment.

AIMS

- Feral rabbit populations in rural areas to be kept below a level acceptable for reducing production damage for the 10 years to 2027 and beyond.

PRINCIPAL MEASURES

Service delivery

Horizons will strategically release biocontrol agents such as rabbit calici virus, in accordance with industry-agreed best practice guidelines. Horizons may provide service delivery in selected sites valued for biological diversity or soil conservation where it is deemed rabbits are a threat to environmental values.

Horizons may conduct control operations on small populations of rabbits, or provide tools for rabbit control, in urban or peri-urban situations where control by occupiers would otherwise be difficult.

Horizons may assist land occupiers and self-help groups to develop coordinated pest control programmes in areas where a pest problem is identified and coordinated control would be the most efficient means of addressing the problem.

PRINCIPAL MEASURES (Continued)

Horizons may provide user-pays pest control services to individual landowners and self-help groups upon request or by negotiation. Costs will be calculated and recovered on a case by case basis.

Council inspection

Where rabbit numbers are reported of being above Modified McLean Scale level 5, Horizons will conduct specific inspections to determine compliance with the rule.

Advocacy and education

Horizons will carry out programmes to increase awareness of the roles and responsibilities of occupiers programme and the threats posed by rabbits. The feral rabbit will be incorporated into generic biosecurity advocacy programmes, including information on limiting dispersal of these pests.

Requirement to act

All Occupiers must act in accordance with the good neighbour process outlined in *Section 4.7* and the good neighbour rule detailed in *Table 5-23*. This will ensure that the onus of reducing the spread of rabbits is shared by the neighbours of Affected Occupiers.

MONITORING

Horizons will undertake periodic monitoring to establish regional trends in the feral rabbit population, and will report results in the annual monitoring report by November of the year the data is collected.

Horizons will assay populations every third year for regional trends in rabbit haemorrhagic disease (RHD) virus immunity, in accordance with industry protocols, and will report results in the annual report by November of the year the data are collected.

Monitoring and reporting will also be in accordance with *Section 6.1* of this Plan.

OUTCOMES

Severe pastoral losses and soil damage caused by rabbit population explosions are avoided.

Any unreasonable costs imposed by a neighbour who is not controlling feral rabbits are avoided.

Table 5-22: Management regime for Sustained Control of feral rabbits

Specific Rules

Specific rule for feral rabbits	
Rule	**Explanation**
Good Neighbour Rule 5.24.1	Upon the discovery of rabbits at level 5 (or higher) of the Modified McLean Scale (*Table 5-24*), all Occupiers must destroy feral rabbits located in the place(s) they occupy so as to maintain populations below level 5 of the Modified McLean Scale within 200m of their boundary, or have an Approved Management Plan to manage the spread of rabbits, with respect to the boundary with an Affected Occupier, within 21 calendar days of discovery (or within a time period as negotiated with an Authorised Person). For this rule to apply, the Affected Occupier must be taking Reasonable Measures to destroy rabbits in the place they occupy.
	A breach of this rule will create an offence under Section 154N(19) of the Act. Any person or corporation who fails to comply with this rule is liable to penalties as prescribed under Section 157(5) of the Act.

Table 5-23: Specific rules for feral rabbits

The Modified McLean Scale

Level	Description
1	No sign found. No rabbits seen.
2	Very infrequent sign present. Unlikely to see rabbits.
3	Pellet heaps spaced 10m or more apart on average. Odd rabbits seen; sign and some pellet heaps showing up.
4	Pellet heaps spaced between 5m and 10m apart on average. Pockets of rabbits; sign and fresh burrows very noticeable.
5	Pellet heaps spaced 5m or less apart on average. Infestation spreading out from heavy pockets.
6	Sign very frequent with pellet heaps often less than 5m apart over the whole area. Rabbits may be seen over the whole area.
7	Sign very frequent with 2-3 pellet heaps often less than 5m apart over the whole area. Rabbits may be seen in large numbers over the whole area.
8	Sign very frequent with 3 or more pellet heaps often less than 5m apart over the whole area. Rabbits likely to be seen in large numbers over the whole area.

Table 5-24: The Modified McLean Scale of Rabbit Infestation (NPCA 2012)

6. MONITORING

6.1. MEASURING THE EXTENT TO WHICH THE OBJECTIVES ARE BEING ACHIEVED

Monitoring provides a measure of how effective work conducted under this Plan has been. It highlights areas of success and areas where improvements are required. Robust spreadsheets and databases will be utilised to capture and store data collected during the monitoring of this Plan. Data collected in the field will be entered regularly so that the Plan can be reported on in an accurate way at any time.

There are three areas of monitoring required in order to report on the success of the pest management programmes. They are:

1. Establish whether, and to what degree, occupiers, plant nurseries, plant and pet retail outlets, stakeholders and members of the public are complying with the Plan, i.e. compliance monitoring.
    - Horizons will periodically inspect plant nurseries, pet shops and retail outlets (including aquatic pet shops) in the Region to ensure no pest plants or pest animals are being propagated, sold or offered for sale. Inspections will search for pests banned from sale, distribution and propagation under this Plan and the National Pest Plant Accord list. Availability of pests for purchase will be noted. Site visits are to be recorded and comments made on outcomes and actions taken where required.
    - After Horizons receives a complaint regarding a pest, properties may be inspected for pest infestations. All complaints will be logged in a complaints register and inspections recorded. The process, outcome and Horizons' response will also be recorded.
    - Roading and rail authorities will undertake surveillance monitoring of all roadside and rail verges for pest plant infestations at least once a year. The results and actions taken will be reported as part of the annual report to Horizons, as required by this Plan.
2. Establish the mortality rate and effectiveness of control techniques. Determine to what degree the objectives are being met, i.e. success monitoring.
    - All direct control work conducted by Horizons will be logged, citing control techniques employed. Follow-up visits and any further control work will also be logged.
    - Success rates will be recorded and entered into Horizons' database.
    - Biological control agents will be periodically surveyed, and levels and distribution of biocontrol agents will be recorded and/or mapped.
    - Where Memoranda of Understanding exist between Horizons and other agencies, the parties will meet periodically to discuss the work programme. Work conducted by Horizons under such arrangements will be monitored in the same manner as other work conducted by Horizons under this Plan. Other parties may be requested to provide monitoring of any control work they may have conducted independent of Horizons' control work.
    - Prior to and following control, infestation size and, where appropriate, density or an index of density will be recorded. This data will be entered into Horizons' database to enable comparisons to be drawn between pre- and post-control.
    - Maps will be produced annually for each species, indicating areas of work and known infestation levels.
    - Control work events and result data will be checked against the timeframes associated with each objective.
    - The monitoring methodology will be reviewed as required to ensure that information on infestation size, density and location is logically and consistently collected across the Region in a manner which is as comprehensive as required while remaining simple to apply.
3. Establish the extent to which the objectives are being achieved, i.e. outcome monitoring.
    - For exclusion and eradication pest programmes, the outcome measure is the continued absence of the pest from the Region as it may be assumed that the result is protection of production and environmental values. This may be achieved by under taking either:
        - » Active monitoring, i.e. undertaking surveillance of areas vulnerable to invasion; or
        - » Passive monitoring, i.e. investigating reports from occupiers or the public on the presence of the pests.

- For the Progressive Containment Pest Programme, the outcome measure is the degree of reduction of the area of these pests inside the active management zones and/or the continued zero level status of the pest inside the active management zones, as it may be assumed that the result is protection of production and environmental values.
- For sustained control pests, the outcome measure is the speed at which boundary complaints are responded to and resolved.
- Investigate with key Māori stakeholders the provision for cultural monitoring to assess the effectiveness of pest control operations where there is a likelihood of non-target impacts on taonga species.

6.2. MONITORING MANAGEMENT AGENCY PERFORMANCE

Horizons will report annually, by November, on work conducted over the previous financial year to achieve the objectives of the Plan. Reporting will include (but is not restricted to) the following performance measures:

- The results of inputs, outputs and outcomes monitoring as detailed in *Section 6.1* above. Reasons for changes in pest population or infestation number, size or density (positive or negative) will be explained;
- The results of outcomes and outputs monitoring as detailed in any programmes to identify and control new incursions;
- The change (positive or negative) in the extent of biocontrol agents and suggested reasons for the change.
- The results of trials;
- An evaluation of work programmes, including review of the operational plan and, if necessary amendment;
- Reporting on education initiatives with a statement on the perceived success of these, and guidance on the direction of future education work; and
- An overview of community initiatives including extent of work, methods and results. 6.3. Review of the Plan Monitoring the effects of the Plan will ensure that it is continuing to achieve its purpose and that relevant circumstances have not changed to such a significant extent that a review of the Plan is required. A review of the Plan may be needed if:

  a. There are changes to the Act and a review is needed to ensure that the Plan is not inconsistent with it;
  b. Other harmful organisms create problems, or have the potential to create problems, that can be resolved through integrating them into the Plan;
  c. Monitoring shows a significant change in the problems posed by pests or other organisms to be controlled covered by the Plan; or
  d. Circumstances change to such a significant extent that Horizons assesses that a review would be appropriate.

Failing the need to review the Plan under any of the above circumstances, the Plan will be reviewed in accordance with Section 100D of the Act. The next planned review will begin in 2027. Such a review may extend, amend or revoke the Plan; or leave it unchanged.

6.3. REVIEW OF THE PLAN

Monitoring the effects of the Plan will ensure that it is continuing to achieve its purpose and that relevant circumstances have not changed to such a significant extent that a review of the Plan is required. A review of the Plan may be needed if:

a. There are changes to the Act and a review is needed to ensure that the Plan is not inconsistent with it;
b. Other harmful organisms create problems, or have the potential to create problems, that can be
c. Monitoring shows a significant change in the problems posed by pests or other organisms to be
d. Circumstances change to such a significant extent that Horizons assesses that a review would be appropriate.

Failing the need to review the Plan under any of the above circumstances, the Plan will be reviewed in accordance with Section 100D of the Act. The next planned review will begin in 2027. Such a review may extend, amend or revoke the Plan; or leave it unchanged.

Part 3

PROCEDURES

Part Three: Procedures

7. POWERS CONFERRED

Manawatu-Wanganui Regional Council will use the statutory powers of Part 6 of the Act as shown in *Table 7-1* together with any other powers and regulations from the Act, so as to achieve the purpose and objectives of the Plan.

The Principal Officer (Chief Executive) of Manawatu-Wanganui Regional Council may appoint authorised persons for the purpose of exercising functions, powers and duties under the Act in relation to a regional pest management plan. Most of these functions, powers and duties relate to implementation of the Plan.

When carrying out his or her duties, an Authorised Person will be limited to using those powers specified in his or her instruments of appointment and within the constraints imposed by Section 7 of the Act with respect to provisions of certain other Acts. The powers specified within any instrument of appointment are based upon the powers identified in *Table 7-1* and reflect the officer's experience, technical competence and qualifications relevant to his or her responsibilities.

Administrative provisions	Biosecurity Act Reference
Administrative provisions	Biosecurity Act Reference
The appointment of authorised and accredited persons	Sections 103(3) (7)
Delegation to authorised persons	Section 105
Power to require assistance	Section 106
Powers of inspection	Sections 109 and 110
Entry in respect of offences	Section 111
Duties on exercising power of entry	Section 112
Power to record information	Section 113
General powers	Section 114
Application of articles or substances from aircraft	Section 114A
Use of dogs and devices	Section 115
Power to seize evidence	Section 118
Power to seize abandoned goods	Section 119
Power to intercept risk goods	Section 120
Power to examine organisms	Section 121
Power to apply article of substance to a place	Section 121A
Power to give directions	Section 122
Power to vaccinate	Section 123
Power to act on default	Section 128
Liens	Section 129
Declaration of restricted place	Section 130
Declaration of controlled areas	Section 131
Power to revoke	Section 133
Options for cost recovery	Section 135
Failure to pay	Section 136

Table 7-1: Powers from Part 6 to be used

Note: The procedures that are followed in the event of occupiers or other persons not complying with the rules or other general duties are set out in Section 7.1 below.

In addition, the Manawatu-Wanganui Regional Council has the power to prosecute where an offence has been committed under Section 154N (19) of the Act which is as follows: "*A person commits an offence against this Act who fails to comply with a rule in a regional pest management plan or a regional pathway management plan that specifies that a contravention of the rule creates an offence against this Act.*" It is specified for every rule or set of rules in Part 2 (Pest Management) of this Plan, that a contravention of the rule or rules, creates an offence under Section 154N(19) of the Act.

7.1. REGULATORY ACTION

Horizons is committed to working with land owners to address pest problems through implementation of the Plan. Equally, there will be times when the provisions of the Plan are not being complied with, and the enforcement provisions of the Act will be relied on by Horizons to ensure the integrity, purpose and objectives of the Plan are given effect to.

7.1.1. FAILURE TO COMPLY WITH A RULE

In the event that an occupier fails to comply with any requirement in any rule included in Part Two of the Plan, an authorised person will:

a. Advise that occupier of their non-compliance and direct them to take remedial actions; and
b. Follow up to confirm what remedial action has been taken and/or identify outstanding requirements;
c. Take any further action Horizons considers appropriate in accordance with the Act.

In circumstances of continued non-compliance, the 'general powers' under Section 114 of the Act may be used by an authorised person to eradicate or manage a pest on the place or prevent the spread of a pest from or to the place; and/or the administrative and enforcement provisions of the Act, may be invoked.

7.1.2. 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 the occupier has not complied with the requirements of the direction within the time specified, then under Section 128 of the Act, Horizons may enter onto the land and implement the Notice of Direction in a way that is reasonably necessary and appropriate to achieve its purpose.

7.1.3. OFFENCES

Horizons will, in appropriate cases, prosecute persons who fail to comply with any requirement under the Plan, including where a person fails to act on directions or requirements issued by authorised persons to give effect to this Plan.

7.1.4. RECOVERY OF COSTS INCURRED

Under Section 135 of the Act, Horizons may recover the costs and expenses reasonably incurred by it in carrying out the works and measures as a debt due from the occupier to whom the Notice of Direction was given.

7.1.5. PROVISION FOR EXEMPTION

Horizons may, upon the written request of an occupier, exempt any person from any requirement in any rule included in Part Two of this Plan. Before granting an exemption under Section 78 of the Act, Horizons must be satisfied that the exemption will not significantly prejudice the attainment of the Plan's objectives, and further that one or more of the following applies:

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

Process

On receipt of any request, Horizons will advise that person within ten (10) working days of the decision whether or not to exempt that person from any requirements of any plan rule included in Part Two of this Plan. In making this decision and considering whether or not Section 78 of the Act applies (as set out above), regard will be given to:

a. Positive soil conservation effects of pest plants in erosion prone sites;
b. Regeneration of indigenous habitat;
c. Prevention or mitigation of flood damage;
d. Effective suppression of the pest through alternative management methods;
e. The pest being used for valid scientific research;
f. The pest being used for approved herbal, medicinal, or commercial extractive or consumptive use; or
g. Where two occupiers with a common boundary agree that control of the pest using good neighbour rules is not necessary or is better managed through non-regulatory means.

Applications for exemption shall state the reason(s) why the exemption is being sought. In addition to setting out how the provisions of Section 78 have been met, the application should suggest conditions that might be imposed or alternative actions that might be undertaken that would result in meeting the objectives of the Plan.

Exemptions are considered on a case by case basis, so there are no fixed criteria other than those outlined above. Where an exemption is granted, any conditions that need to be met will be identified in writing. Conditions may relate to, without limitation, measures to be taken to ensure achievement of the Plan's objectives, position of monitoring requirements and recovery of costs, including bonds to ensure performance.

The exemption will also record the reason why the exemption was granted under the Act, and a timeframe for review and expiry.

A register of exemptions will be maintained for public inspection at Horizons.

8. FUNDING

Section 70 of the Act requires funding of the Plan to be addressed. For the purpose of identifying the most appropriate funding regime, the matters to be addressed as set out in the Act include:

- An analysis of the benefits and costs of the Plan and the cost of any reasonable alternative measures;
- The extent to which any person or persons of any class, kind or description are likely to benefit from the Plan (beneficiaries);
- The extent (if any) to which any persons or persons of any class, kind or description by their activities or inaction contribute to the creation, continuance or exacerbation of the problems proposed to be resolved by the Plan (exacerbators);
- The rationale for the allocation of costs; and
- Whether any unusual administrative problems or costs are expected in recovering the costs allocated to any of the persons who are required to pay.

8.1. ANALYSIS OF BENEFITS AND COSTS

The Act, and NPD, require an analysis of benefits and costs (ABC) as part of the development or review of a regional Pest Management Plan. The ABC analysis is provided in the supporting document *Horizons' Amended Proposed Regional Pest Management Plan 2017-2037: Analysis of benefits and costs following the National Policy Direction for Pest Management Section 6(2-4))* which is publically available on Horizons' website.

This report, which should be read in conjunction with the Plan, follows the NPD and guidance provided by MPI in the document called *Meeting the requirements of the National Policy Direction for Pest Management 2015* (Version 1.0) (MPI, 2015). The ABC analysis examines the assumptions on the costs imposed by the rules and actions posed in the Plan and finds that the benefits of the Plan (including these rules) outweigh the costs. Each section of the ABC report is led by the name of the pest or group of pests, as featured in Plan.

8.2. BENEFICIARIES AND EXACERBATORS

Beneficiaries are people, institutions or activities that, under the Plan, will experience lower costs, higher production or the benefits of a healthier natural environment. Beneficiaries include the "Regional Community" who benefit from non-financial gains from pest control such as protection of biodiversity, soil, recreational, and water quality values. Exacerbators are people, institutions or activities that, through their actions (or non-actions), contribute to the creation, continuance or worsening of a pest problem. Exacerbators may include public entities such as Crown agencies, Horizons, TLAs or private individuals or companies.

The underlying rationale for identifying beneficiaries and exacerbators is that they are expected to share the cost of implementing the Plan. By identifying the beneficiaries and exacerbators, an equitable funding policy can be formed for each pest. This is an expectation set out in Section 7 of the NPD. This analysis is provided in the supporting document *Horizons' Amended Proposed Regional Pest Management Plan 2017-2037: Allocation of costs following the National Policy Direction for Pest Management (Section 7)*, which is publically available on Horizons' website. This report, which should be read in conjunction with the Plan, follows the NPD and guidance provided by MPI in the document called *Meeting the requirements of the National Policy Direction for Pest Management 2015* (Version 1.0) (MPI, 2015). Each section of the report is led by the name of the pest or group of pests, as featured in the Plan. The report lists the beneficiaries and exacerbators for each group, and gives the rationale for the allocation of costs across excaerbators and beneficiaries.

8.3. FUNDING SOURCES AND RATIONALE

In giving effect to funding, both the Act and the Local Government (Rating) Act 2002 require that funding should be sought from:

- Those people who have an interest in the Plan;
- Those who benefit from the Plan;
- Those who contribute to the pest problem; and
- In a way which reflects economic efficiency, equity and the ability to target those funding the Plan and the costs of collecting the funding.

Information on the allocation of costs of the Plan is provided in the supporting document *Horizons' Amended Proposed Regional Pest Management Plan 2017-2037: Allocation of costs following the National Policy Direction for Pest Management (Section 7)*, which is publically available on Horizons' website.

This report, which should be read in conjunction with the Plan, follows the NPD and guidance provided by MPI in the document called *Meeting the requirements of the National Policy Direction for Pest Management 2015* (Version 1.0) (MPI, 2015). Each section of the report is led by the name of the pest or group of pests, as featured in the Plan. The report gives the specific rationale for the allocation of costs across excaerbators and beneficiaries, including the use of general and targeted rates as a means to share the cost with exacerbators and beneficiaries.

8.4. ANTICIPATED IMPLEMENTATION COSTS

The LTP details the prospective funding impact for the Biosecurity Activity projected over the 10-year life of the LTP (LTP pg. 228) and gives a reasonable estimate of the cost of the delivery of the Plan over time, for any given year. The 2017-2018 costs are represented in Table 8-1 and exclude GST. The annual operational budget for the Plan is revised every year as part of Horizons Annual Plan setting process (a public process).

Activity (by rating type)	Income ($000s)
Biosecurity general including Environmental and Amenity pests (all EQCVs and general UACs)	3,010
Production pest animals excluding rooks (targeted per ha)	1,420
Rooks (targeted per ha)	129
Production pest plants (targeted per ha)	122
Production pest plants (targeted UAC)	20

Table 8-1: 2017-2018 funding impact statement per Horizons 2015-2025 Long-term Plan (LTP pg. 228) out in Section 7.1 below.

8.5. FUNDING LIMITATIONS

There are no unusual administrative problems or administrative costs expected in recovering the funding from those required to pay. The Act provides Horizons with powers to recover costs for a particular function or service under Section 135 of the Act. For revenues that are identified as targeted rates, the rating mechanism imposes the limitation that the funds can only be used for the pest control activities that the rates are attributed to. Funding of Exclusion pests and Aquatic Pest Plants programmes is primarily on surveillance and advocacy. The ability to successfully manage large incursions of these pests may be limited by the funding available at the time the incursion is detected.

9. GLOSSARY

Term	Description
Active Management Zone	The defined area within the Region where a particular pest is to be eradicated or controlled to zero levels. Active Management Zones apply to species managed under a Progressive Containment objective.
Affected Occupier	The occupier of land adjacent to or nearby to land that is infested by a pest which is spreading beyond the boundaries of that property resulting in, or increasing infestations of the pest onto adjacent or nearby land. Where the occupiers' land is not adjacent to the infested land it must be within the 'nominal distance for land, for them to be an Affected Occupier managed boundary' set out in *Table 5-10* for pest plants, or within 200 m for possums or rabbits, of the infested
Animal	Means any mammal, insect, bird or fish, including invertebrates, and any living organism except a plant or human.
Appropriate	Means determined to be appropriate by the Council or its officers to be proper and suitable after the satisfied will meet the objectives for the pest in this Plan.
Approved Management Plan	A documented pest management plan that describes the levels of service for management of the pest in the place they occupy, by the agency required to have such a plan, that the Principal Officer or their delegate is satisfied will meet the objectives for the pest in this Plan.
Authorised Green Waste Dump	Land used for the disposal of green waste in accordance with a resource consent, licence or as otherwise authorised under statute or regulation.
Authorised Landfill	Land used for the disposal of waste in accordance with a resource consent, licence or as otherwise authorised under statute or regulation.
Authorised person	A person appointed an authorised person under Section 103 of the Act.
Beneficiary	A person or group of people who benefits from the implementation of the Plan.
Biological Control (Biocontrol)	The use of organisms that attack pests without harming other species.
Biological Diversity (Biodiversity)	The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species and of ecosystems.
Binomial name	The two-part scientific name given to an animal (i.e. Genus species).
Chief Technical Officer	A person appointed a chief technical officer under Section 101 of the Act.
Control	To reduce the incidence or severity of a pest to levels where they no longer have a negative effect.
Costs and Benefits	Costs and benefits of any kind whether monetary or non-monetary.
Crown land	Land vested in the Crown and administered by a Minister; includes all land forming part of any national park, any reserve within the meaning of the Reserves Act 1977, and all unoccupied lands of the Crown.
Destroy	To put out of existence.

Term	Description
Direct control	Means pest control undertaken by or funded by the Manawatu-Wanganui Regional Council – see also service delivery.
Distinctiveness	Refers to unusual or uncommon features, species or populations in a given location.
District Council	A district council constituted under Part 1A of the Local Government Act 2002.
Ecological context	The connectivity of a given site with the surrounding landscape and ecological processes.
Ecosystem	A defined community of all plants, animals and micro-organisms, the physical and climatic environment and the interactions and processes between them.
Effect	Includes any positive or adverse effect, temporary or permanent effect, past, present or future effect, cumulative effect which arises over time or in combination with other effects – regardless of the scale, intensity, duration or frequency of the effect, potential effect of high probability, potential effect of low probability which has a high potential impact.
Endemic	A species that is indigenous only to New Zealand.
Enforce	To compel observance of the law.
Environment	Includes: ecosystems and their constituent parts, including people and their communities, all natural and physical resources, amenity values, the aesthetic, cultural, economic and social conditions that affect or are affected by any of the above.
Eradication pest programme	Means those pests that are to be managed under an eradication programme. Eradication pest plants are of limited distribution or density in the region or part of the region, for which the eventual goal is eradication at known sites in the region.
Exacerbator	A person who, by their actions or inaction, contributes to the creation, continuance, or exacerbation of a particular pest management problem.
Exclusion pest programme	Where the outcome for the programme is to prevent the establishment of the subject that is present but not yet established in New Zealand or the region.
Exotic	A species, subspecies or lower taxon occurring outside its natural range (past or present) and dispersal potential.
Habitat	The place or type of place where an organism or population normally lives. A description for areas that are similar to each other but different from others.
Good Neighbour Process Zone	For mapped Progressive Containment plant programmes, is the zone of outside the active management zone where occupiers are bound by good neighbour rules.
Hapū	A social, political unit comprised of whanau (extended families) each recognising descent from a common ancestor.
Indigenous	A species, subspecies or lower taxon, occurring within its natural range (past or present) and dispersal potential.
Introduced	A species brought from its natural range to New Zealand by a human agency.

Term	Description
Iwi	A political grouping comprised of several hapū, each recognising descent from a common ancestor(s). The hapū not only recognise genealogical ties but geographical, political and social ties. Today iwi are represented by many organisations, including trust boards, runanga, iwi authorities etc., but only in specific areas where the mandate to do so has been given by the constituent hapū.
Kaitiaki	Spiritual or physical guardian, protector.
Kaitiakitanga	The exercise of guardianship by the tangata whenua of an area in accordance with tikanga Maori in relation to natural and physical resources; and includes the ethic of stewardship.
Karioi Forest	Means the area known as Karioi Forest and included under the following Certificates of Title WN1300/4, WN1300/16 and WN133/17.
Karioi Forest Balance Area	Means the Karioi Forest excluding those areas that fall within the definition of the Karioi Forest Seed Source Area or Karioi Forest Mixed Species Plantation Area.
Karioi Forest Mixed Species Plantation Area	Means the areas within Karioi Forest as identified on Map 5-1, comprising green contorta (*Pinus contorta var. contorta)* in association with Pinus radiata or Pinus nigra var. laricio.
Karioi Forest Seed Source Area	Means the areas within Karioi Forest comprising, mature stands of green contorta *(Pinus contorta var. contorta)*.
Mauri	Principle of life, life force.
Mustelid	Any member of the genus *Mustela* – specifically stoats, ferrets/polecats, and weasels.
Natural Area	An area of particular indigenous habitat type that naturally occurs at the given site.
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.
Organism	Does not include a human being or a genetic structure derived from a human being, includes a micro-organism, 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). 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. Includes a reproductive cell or developmental stage of an organism. Includes any particle that is a prion.
Palmate	In relation to the antlers of deer – having part of the antler spreading out from a central point like fingers from a hand.
Peri-urban	Properties on the urban fringe, such as life-style blocks, that are managed as rural properties but are constrained by urban rules or norms with regard to shooting, poisoning or trapping animals.
Person	Includes the Crown, a corporation sole, and a body of persons (whether corporate or unincorporated).
Pest	An organism specified as a pest in a pest management plan.
Pest Management Plan	A plan, made under Part V of the Act, for the management of a particular pest or pests.

Term	Description
Plant	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.
Possum Control Operation	Region wide possum control being undertaken on rateable land by Horizons under the auspices of this Plan.
Possum Management Area	The area of rateable land where possum control is to be undertaken either as part of Horizons' Possum Control Operation programme or under the OSPRI programme
Prehensile	In relation to possums, the ability to grasp things by wrapping the tail around them.
Principal Officer	a) in relation to a regional council, its chief executive; and b) in relation to a region, the chief executive of the region's regional council and includes an acting chief executive.
Progressive containment programme	Where the outcome for the programme is to contain and reduce the geographic distribution of the subject to an area over time.
Property Boundary	Legal boundary that divides one property from another (usually associated with different owners).
Reasonable Measures	Measures being undertaken by an Affected Occupier (or on behalf of an Affected Occupier) to manage the pest or it impacts, in accordance Section 4.7.1 of this Plan. Reasonable measures include participating in a Horizons- led management programme.
Region	The term Region (with a capital 'R') refers to the Manawatu-Wanganui Region over which Horizons has jurisdiction as determined in accordance with the Local Government Act 1974.
Regional Council	A regional council constituted under Part 1A of the Local Government Act 2002.
Residual Trap Catch (RTC)	(For possums). A measure of the relative abundance for possums based on the number of possums caught on a standard number of traps over a standard number of nights following the National Possum Control Agencies protocol for possum monitoring.
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.
Road	Means all formed roads (including road verges) from the centre of the road to an abutting property boundary and includes all bridges, culverts and fords forming part of any road, but does not include unformed (paper)roads.
RPAMS	Horizons' Regional Pest Animal Management Strategy 2009.
RPPMS	Horizons' Regional Pest Plant Management Strategy 2007.
Rule	Means a rule included in a pest management plan in accordance with Section 73(5) of the Act.
Service Delivery	Works conducted by Horizons with no direct cost to the property owner. See also direct control.
Stakeholders	The beneficiaries and exacerbators identified in this Plan as bound by and contributing to the Plan.

Term	Description
Strategy (the)	Horizons' draft Regional Biosecurity Strategy and Programmes (a document which attended the Proposed Regional Pest Plan 2015-2035)
Significant	In relation to indigenous biological diversity means areas of significant indigenous vegetation and significant habitats of indigenous fauna.
Site-led	A programme that focuses on protecting certain values at certain sites.
Species-led	A proactive programme, concentrating on a specific species throughout the Region.
Spread	To expand over a larger area.
Sustained control programme	Where the outcome for the programme is to provide for the sustained control of the subject in an area to a level where externality impacts are manageable
Surveillance	The active searching for new incursions of invasive pests.
Territorial Local Authority	A District or City Council.
Taonga	Treasures, entities (living and inanimate) with great value.
Transport corridor	Means local roads, state highways and railway lines as owned or occupied by district/city councils, NZ Transport Agency and KiwiRail.
Unwanted Organism (Unwanted Organism Register)	Organisms that have been determined unwanted by Chief Technical Officers of government departments with biosecurity interests. The Register also contains organisms declined importation by the Environmental Protection Authority (EPA) and organisms listed in the second schedule of the Hazardous Substances and New Organisms Act 1996.
Viability	Of sites – measure of ability to retain site values over time, either in terms of retaining soil (soil conservation) or maintaining genetic, species, or ecosystem diversity (biodiversity) or in terms of retaining natural processes, cycles or systems within an ecosystem.
Wilding	In relation to conifers, means any tree established by natural means, or any tree that has not been purposefully planted.
Working Day	Means any day except – a) a Saturday, a Sunday, Good Friday, Easter Monday, Anzac Day, Labour Day, the Sovereign's birthday, and Waitangi Day; and Wellington Anniversary Day; and b) a day in the period commencing on the 20th day of December in any year and ending with the 15th day of January in the following year.
Zero Levels	Where the pest is destroyed from that area but accepting that the pest may continue to appear in the area after destruction due to seed sources or migration from an unmanaged area.

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