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## 1. Purpose

The report on the performance of implementing the 2002/03 Operational Plan for the Regional Pest Management Strategy 2002-2022.

The 2002/03 year heralded the commencement of the new 20 year Strategy. Substantial changes were introduced in the Strategy, including the adoption of four management categories for pest plants, and termination of the long running Wellington City Pest Plant Eradication Programme. These changes have revitalised the management focus on key pest plants, providing an opportunity to review resource allocation and commitment.

## 2. Highlights

1. Infestations of boneseed were cleared from private and public land at several coastal settlements in the South Wairarapa and at Riversdale. This completed the second stage of a service delivery programme to eradicate this species from the Wairarapa.
2. Hornwort infestations in Forest Lake at Otaki were successfully controlled by an application of the herbicide, Diquat.
3. A co-operative programme involving Greater Wellington and all Territorial Authorities (TLA) in the Region was undertaken to discourage the illegal dumping of garden waste.
4. The Biosecurity Department continued to promote public interest in pest plants and pest animals with displays at several major public events. These included the Home and Garden Show at Westpac Stadium, Kapiti Garden Show at Paraparaumu, Carterton A and P Show, Pauatahanui Farm and Food Festival at Battle Hill, Otari Restoration Day and Otaki Field Day.
5. All initial clearance of Manchurian wild rice at Waikanae was completed. Future work will involve only maintenance control.
6. A region wide publicity campaign was undertaken to educate the public on identification and control requirements for banana passionfruit.

## 3. Achieving Objectives – Major Issues

### 3.1 Wellington City Programme

The Wellington City Programme was discontinued early in the financial year. This action was taken following a review of the viability of the scheme was completed during 2001.

Although there have been some minor public criticism, the decision has generally been accepted. Wellington City Council continues to control pest plants including old man's beard on their reserve and have maintained a close working relationship with Biosecurity staff.

During the year, 396 recorded sites were reinspected in a monitoring programme to determine the extent of old man's beard and wild ginger reinfestation. All sites were selected from the northern suburbs surveyed and cleared in the early stages of the Wellington City Programme.

Approximately 25 of the old man's beard sites reinspected had some plants growing. These varied from young plants to more established vines, with only five sites too large to be cleared by staff under existing service delivery guidelines.

Of the wild ginger sites, 24.7% had some regrowth or new plants. All reinfestations were of a minor nature and within service delivery guidelines.

The degree of reinfestation of both species was lower than had been expected. Occupiers had maintained a reasonable level of control. This is possibly due to the higher levels of owner occupancy associated with the northern suburbs.

### **3.2 Hornwort**

Following the discovery of extensive infestations of hornwort in Forest Lake at Otaki in 2001, NIWA were contracted to survey the lake and recommend a control programme. The survey indicated that the infestation was not as widespread through the lake as first thought, with the infestations mainly confined to shallow areas.

The water quality in the lake suggested that the herbicide Diquat might prove successful. This product is the only herbicide registered for application to water in New Zealand. It is only effective in fresh water with low levels of turbidity.

In conjunction with the owners of the lake and interest groups, Department of Conservation and NIWA, staff arranged for the infested areas to be sprayed with Diquat. This was carried out by a specialist operator from Rotorua. The cost of herbicide and application totalled \$13,820. This was funded by the lake owners, users and the Regional Council. The \$5,000 cost of NIWA's initial survey was funded by the Department of Conservation.

NIWA's final survey, carried out four weeks after the application, revealed a high control rate. Some infestations survived in areas protected by heavy stands of Raupo and reaches where water quality was poor. These may re-infest areas of the lake over the next one to two years necessitating further applications of Diquat, unless the more effective product Endothall becomes registered for use in New Zealand.

Field tests of Endothall were carried out by NIWA in South Wairarapa in 2001. The product produced a very high level of hornwort control in poor quality water and should be more effective against hornwort in all situations. The product is currently being assessed for registration in New Zealand by ERMA. It is hoped that it may be available for general use in 2004.

### 3.3 Garden Green Waste

There has been an increasing concern over the last few years about indiscriminate dumping of garden green waste. Staff from the Regional Council and various TLAs are continually finding green waste dumped on riverbanks, roadsides and along bush margins where this material can establish and spread into surrounding areas. Often this material has been transported some distance, bypassing controlled disposal sites to avoid fees. In other situations some occupiers adjoining bush or dune areas discard their cuttings and weeds into the reserves. In this situation the evidence of invasive spread is soon obvious.



**Infestations from Garden Waste**

In an effort to promote the disposal of garden waste at controlled disposal sites, a group representing all TLA's in the Region and Greater Wellington was established during the year. Public education has been the main focus of the group. A pamphlet has been produced promoting the correct disposal of green waste. This promotion is to continue and the representative group has agreed to remain active with the possibility of further co-operation on other weed control issues not covered by the Regional Pest Management Strategy 2002-2022.

#### **4. Biological Control**

Greater Wellington has contributed to the cost of Landcare Research Ltd as Biological Control of Weeds programme since 1990. In 2002/03 Greater Wellington contributed \$35,000 to the programme, with \$24,000 designated for research. Research funds supported the following projects:

- The safety testing of a fungus and two foliage feeding moths for the control of banana passionfruit.
- Application to ERMA for the release of a defoliating moth for boneseed. Liaison with Australian researchers to develop further agents for this plant.
- The testing in Australia of agents for the control of Chilean needle grass and nassella tussock.
- An international survey for new agents against gorse and broom.
- A New Zealand survey to determine pathogens and invertebrates occurring on moth plant.
- In collaboration with Hawaiian researchers, investigate the suitability of a pathogen for the control of wild ginger in New Zealand.
- The feasibility of biological control of wilding pines.
- Liaise with researchers in South Africa to develop agents for the control of woolly nightshade.

Greater Wellington also received:

- two consignments of mist flower gall fly;
- one consignment of old man's beard sawfly.

A total of four releases of mist flower gall fly have now been made in Eastbourne. There is evidence that the agent has established and damage to mist flower in the effected area should begin to become apparent over the next two years. Three releases of old man's beard sawfly are now established. Two in the Mangaroa area of Upper Hutt and the latest in Wellington City.

Although ragwort flea beetle is widely distributed through most of the Region, staff continue to collect insects for release in areas with no evidence of establishment, or where populations are low.



## 5. Notices of Direction

While notices of direction remain a method of helping to achieve objectives required by the RPMS, recent changes have brought about a marked decline in the number issued. The discontinuation of the Wellington City Programme and the introduction of service delivery for a greater range of pest plant species have reduced the level of enforcement required.

During the year only five notices were issued compared with 96 the previous year. All notices were cancelled due to occupiers undertaking the required work within the designated timeframe.

## **6. Key Native Ecosystems**

Pest plant control was again carried out as part of Greater Wellington's KNE programme to enhance biodiversity in the Region. While most of the work was a continuation of control programmes started over the last two years, some new work was also undertaken. In previous years the plants KNE programme focused on bush reserve. During 2002/03 a broader range of ecological habitat including wetlands and coastal escarpments were included.

Pest plants also assisted or contributed to the cost of surveys and biodiversity enhancement programmes carried out by other Council departments. Approximately \$15,800 was budgeted for this work, mainly involving wetland surveys.

Tenders were arranged for the following projects:

### **6.1 East Harbour Reserve - Eastbourne**

A further stage of establishing a buffer zone clear of designated pest plants between private land and the East Harbour Reserve was completed by contractors. This operation extends the buffer to the southern end of the bush area and included the length of approximately 4km from Days Bay to Muritai Road.

The contracted price for this work was \$13,770.

### **6.2 Otari/Wilton Reserve**

A contract was arranged to clear pest plants from areas of the Otari/Wilton Reserve in the vicinity of the Kaiwharawhara Stream in preparation for restoration planting by Wellington City Council. This was the third year of development at this reserve. Staff also carried out an aerial survey of the more difficult areas of the reserve to ascertain levels of Darwin's barberry infestation.

The cost of the contract and survey was \$3,200.

### **6.3 Trelissick Park**

The large areas of blackberry initially sprayed 12 months earlier were given a further herbicide application to control all regrowth prior to planting. Wellington City Council arranged and carried out the replanting as their contribution to this KNE restoration programme. A second infestation of blackberry received an initial herbicide application.

Due to the difficulty of accessing the areas to be sprayed, a specially equipped helicopter continues to be used for this work.

The cost of this contracted work was \$1,767.

#### **6.4 Te Harakeke Wetland**

The programme to eradicate Manchurian wild rice from the Te Harakeke wetland continued into the fourth year. Initial control of all infestations including those on adjacent KCDC land, was completed this year. Maintenance control will need to be continued for a few more years before this species is finally eradicated.

To further enhance the ecology of this wetland as a KNE, areas of pampas grass were also controlled.

The cost of control, excluding the work financed by KCDC, was \$10,096.

#### **6.5 O-Te-Pau Wetland**

This wetland KNE is situated 4 kms north of Otaki on the western side of the railway. As part of the first stage of a restorative programme, areas of predominantly old man's beard were sprayed adjacent to Tranzrail reserve.

The cost of this contracted work was \$7,000.

#### **6.6 Raroa Reserve**

In co-operation with Porirua City Council, additional pest plant control was completed in the bush and coastal escarpment portions of the Raroa Reserve at Pukarua Bay. In the bush area, work concentrated on the eastern side to protect earlier re-vegetation plantings and prepare further areas for planting.

Scattered plants of boneseed were cleared over several hectares of the coastal escarpment to prevent further spread. The very steep aspect of the area made this an extremely difficult operation. The cost of control was shared with Porirua City Council.

The cost to Greater Wellington for this contracted work was \$1,921.

### **7. Publicity**

Public education was again a major component of pest plant staff operations during the year. The requirements of the Strategy, plant identification, and pest plant control techniques, were brought to public attention at a range of events and venues. One on one dialogue with individual members of the public continues to be a major task.

Banana passionfruit is a new Suppression Plant included in the RPMS. As this species is widely grown as a garden plant, it was agreed that 12 months of public education would follow the Strategy's introduction, before clearance would be enforced. A considerable amount of the section's publicity was, therefore, focussed on this species. The new status of this pest plant featured in a range of publicity material including: displays at various events, roadside signs, radio promotions, newspaper articles and advertisements and the production of a pamphlet for distribution.

On average staff arrange and attend six major displays each year at relevant public events. Several minor displays at libraries, schools and public areas have also been completed. Many of these are in co-operation with the pest animal staff.

Most of the material used at displays and in educational situations are prepared by staff. Following the introduction of the new corporate brand, most of this material has been, or is in the process of, being updated.

Live samples of all pest plant species in the RPMS are now held in the nursery at Upper Hutt. Recent improvements to the structure management of the nursery has improved the quality of the samples, making them better for identification purposes at displays.

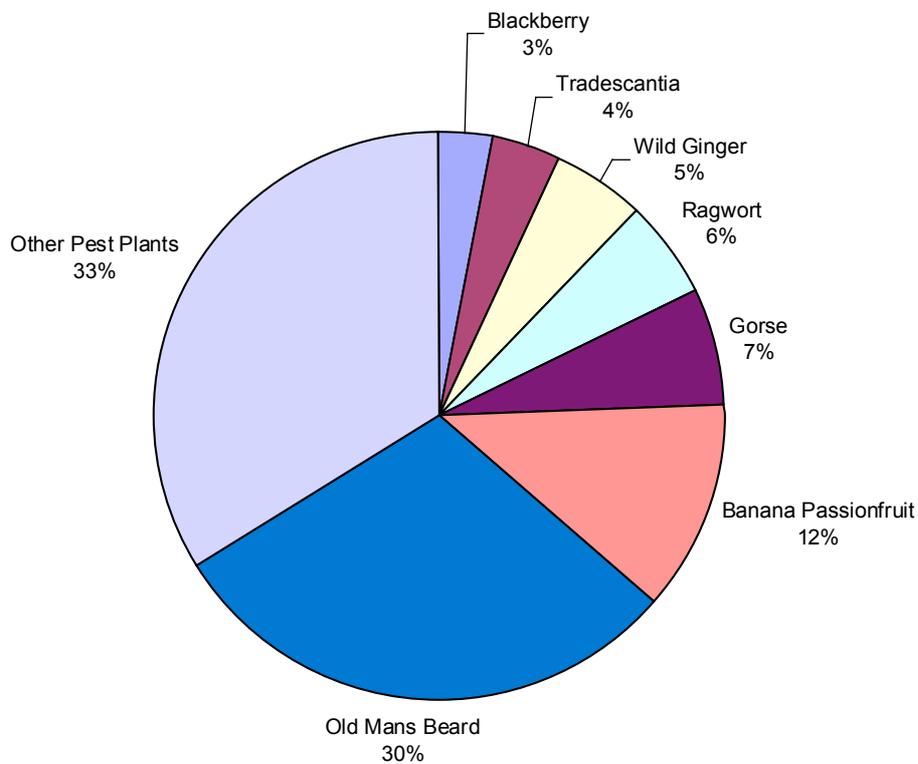


## 8. Client Response

The proficient servicing of clients is a major objective. A database is maintained to record the nature of enquires, trends and public perceptions evident from those enquires.

Most people make enquires by phone, seeking information on plant identification and control methods. These can generally be dealt with at the time and do not require a site inspection. Any site visits are carried out as soon as possible. These may involve an unusual plant species, requiring positive identification by botanists at Landcare Research. In all cases the person making the enquiry is kept fully advised.

**Pest Plants Client Enquires 2002/2003 Total Enquires: 663**



## 9. Performance Targets and Measures for Pest Plants

### 9.1 Eradication Pest Plants

<b>Aim:</b>	<b>To eradicate specific pest plants from the Region at a cost of \$40,000</b>
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<i>Annual cost:</i>	<i>The cost of managing Eradication Plants throughout the Region during 2002/03 was \$96,000</i>
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#### 9.1.1 Means of Achievement

All active sites of perennial nettle, African feathergrass, bathurst bur, eelgrass and saffron thistle will be inspected and controlled a minimum of two times per annum to prevent any seeding or further spread.

##### Actual performance

*All sites were regularly inspected and any plants destroyed. A total of 120 inspections were carried for these species.*

#### 9.1.2 Means of Achievement

All active sites of Manchurian wild rice in the Te Harakeke Wetland at Waikanae will be controlled by the 30 April 2003.

##### Actual Performance

*All regrowth plants through the wetland and adjacent Kapiti Coast District Council reserve were sprayed in March.*

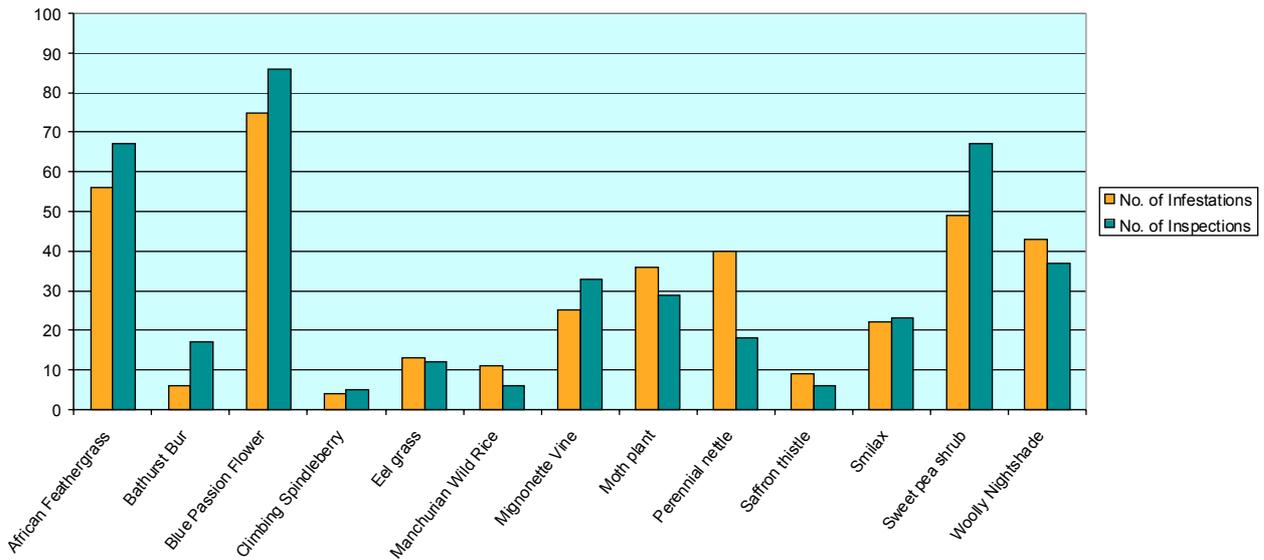
#### 9.1.3 Means of Achievement

Other Eradication Plant sites notified or located will be controlled where it is practical to do so.

##### Actual Performance

*Eradication pest plant inspections for the year totalled 400. Control work was carried out either by staff or a contractor.*

### Eradication Species



## 9.2 Containment Plants

**Aim:** To reduce the adverse environmental impacts of specific pest plants within defined areas of the Wellington region at a cost of \$55,000.

*Annual cost: The cost to manage Containment Plants throughout the Region during 2002/2003 was \$59,394.*

### 9.2.1 Means of Achievement

Provide information to enhance public awareness of all Containment species.

#### Actual Performance

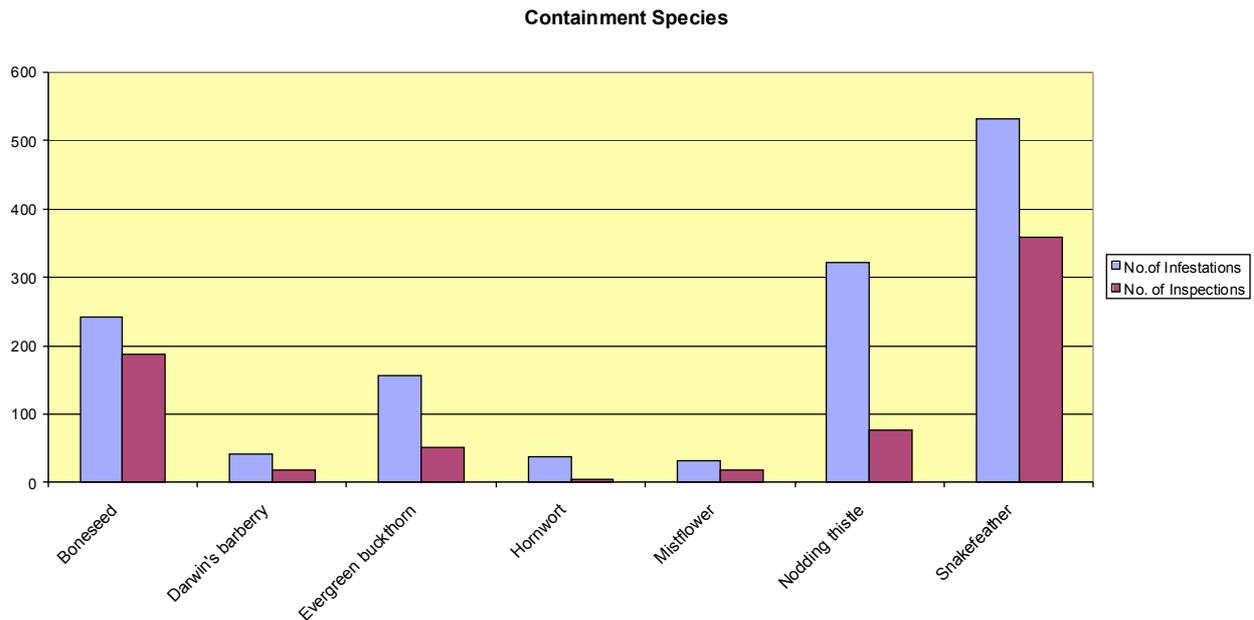
*Information on all Containment species was available at public displays arranged by staff. A revised pamphlet on all pest plant species including Containment Plants was designed and printed.*

### 9.2.2 Means of Achievement

Continue control programmes on recorded sites outside the containment zones.

#### Actual Performance

*The second year of boneseed clearance from the South Wairarapa coastal settlements was completed by a contractor. Further boneseed and evergreen buckthorn control was completed in the control zone north of Waikanae. Evergreen buckthorn was also cleared from other control areas in the Western Zone. . Boneseed was cleared through the dune reserve at Riversdale. Additional boneseed control is scheduled to commence at Riversdale in the spring of 2003.*



### 9.3 Suppression Pest Plants

**Aim:** To minimise the adverse impacts of these specific pest plants throughout the Wellington region at a cost of \$189,000

*Annual Cost: The cost to manage Suppression Pest Plants throughout the Region during 2002/03 was \$214,577.*

#### 9.3.1 Means of Achievement

Complete a public education programme on the identification and control requirements for banana passionfruit.

##### Actual Performance

*An extensive publicity programme was undertaken from December to April. Information on the species was available at all displays arranged by staff. Promotions included roadside signs, radio and newspaper advertising and press releases. The cost of the campaign excluding staff costs amounted to \$10,658.*

#### 9.3.2 Means of Achievement

Where practical require occupier control of located or notified sites of wild ginger, old man's beard and cathedral bells.

##### Actual Performance

*The total number of inspections carried out regionally for wild ginger, old man's beard and cathedral bells was 1,959. Approximately 50% of these required occupier control of the site.*

### 9.3.3 Means of Achievement

Ensure the completion of a range of contracts for the control of old man’s beard and banana passionfruit on river reserve.

Actual Performance

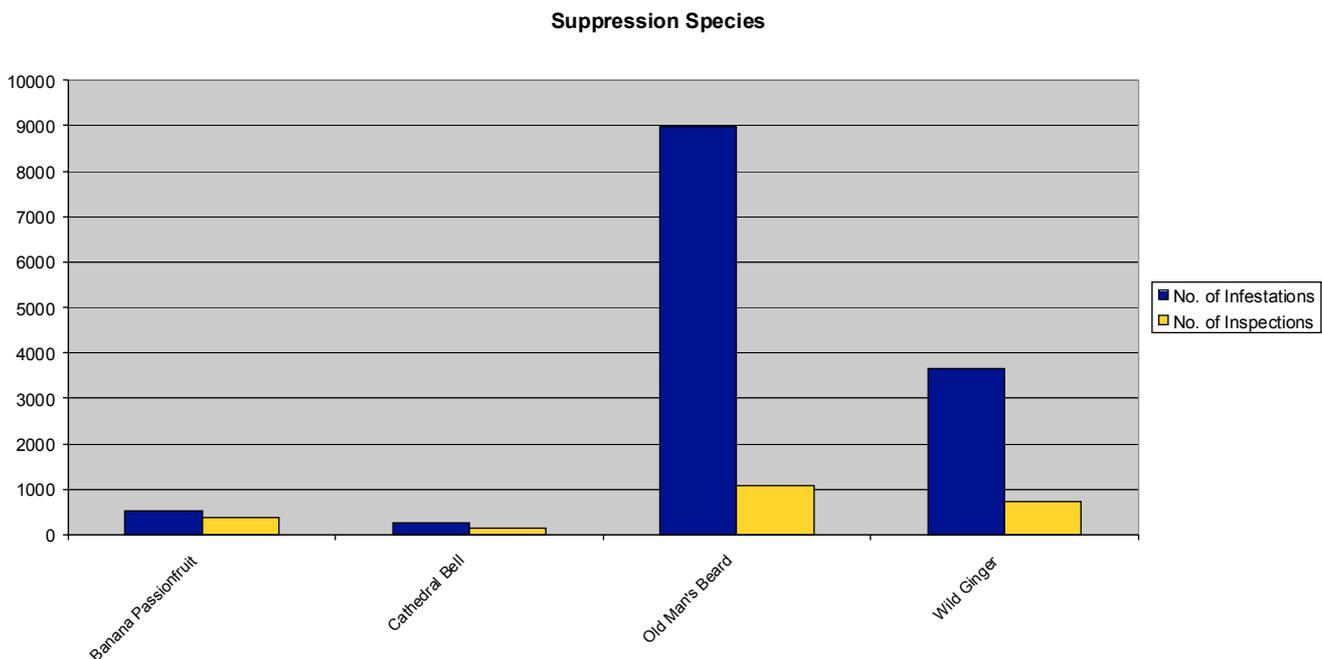
*A total of seven contracts for the control of old man’s beard on Wairarapa river reserves were arranged at a total cost of \$47,831. Three contracts were arranged for the control of banana passionfruit and some associated old man’s beard, on the banks of two rivers in the Kapiti District. The total cost was \$6,146.*

### 9.3.4 Means of Achievement

Other Suppression Plant sites notified or located will be controlled where it is practical to do so.

Actual Performance

*A total of 374 banana passionfruit sites were inspected and recorded. Until 1 July 2003 a public education period as defined in the RPMS was in place, excluding enforced control.*



## 9.4 Site-Led Plants

**Aim:** To minimise the externality impacts of specific pest plants on land that is clear or being cleared of the pest plant and to protect indigenous biodiversity in a comprehensive selection of Key Native Ecosystems at a cost of \$150,000.

*Annual cost: The cost to manage Site-Led pest plants throughout the Region during 2002/03 totalled \$151,034. This includes work on biological control, staff costs and KNE contracts and investigations.*

### 9.4.1 Means of Achievement

Respond to Boundary complaints involving gorse, ragwort and variegated thistle.

#### Actual Performance

*During the year, 30 gorse, 22 ragwort and 2 variegated thistle complaints were received and actioned.*

### 9.4.2 Means of Achievement

From established colonies distribute ragwort flea beetle to five new areas.

#### Actual Performance

*Because of the high number of ragwort flea beetle available at the main collection site west of Carterton, over 6,000 were collected for distribution. These were released in areas where this insect has not yet established. This included nine Wairarapa sites and 12 sites in rural areas of Kapiti, Porirua and Upper Hutt.*

### 9.4.3 Means of Achievement

KNE pest plant control contracts covering work at the East Harbour Reserve, Otari/Wilton Reserve and Trelissick Park will be completed by the 30 June 2003.

#### Actual Performance

*Contracts were arranged for work at each site and the work completed. (Refer to Section 6 for further detail).*

## 9.5 Wellington City Programme

<b>Aim:</b>	<b>To implement the Wellington City Programme for 2002/03 at a cost of \$190,000.</b>
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<i>Annual cost:</i>	<i>The actual cost to manage the Wellington City Programme until it was discontinued in January 2003 was \$103,377.</i>
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For further information on the former Wellington City Programme, refer to Section 3.1 of this report.

## 10. Financial Summary

The pest plant budget for 2002/03 totalled \$961,318. The actual expenditure for the year amounted to \$964, 700.

## 11. Conclusion

The 2002/03 year was the first for the new Regional Strategy. A number of major changes were introduced which resulted in new roles and responsibilities for staff. In particular, the closure of the Wellington City Eradication Programme, and the restructuring of the Strategy into four distinct categories;

- Eradication species
- Containment species
- Suppression species
- Site Led species (including Key Native Ecosystem)

has forced staff to review their modus operandi. The changes have been beneficial, resulting in a more focussed approach to pest plant management in the region.

The 20 year term of the new Strategy provides flexibility to amend or adjust resource allocation to maximise achievement of the objectives. We have already identified an increased prevalence of Eradication species. As these are the Council's top priority, increased resources will be allocated to their management. There is a danger, however, that in the long term some Suppression and or Containment pest plants may flourish due to insufficient management resources. This potential problem will be closely monitored.

Increasing public awareness and understanding remains a key objective of the Strategy. The number of public display events are steadily increasing. Staff have also taken the opportunity to utilise a variety of media techniques to publicise key messages to the public. Updating of publicity material, including posters, brochures and displays is steadily progressing.

Key Native Ecosystem management continues to generate considerable enthusiasm amongst conservation groups and participating TLA. This is an area of significant potential growth for the Council. Allocation of resources between the core management functions and KNE needs to be carefully monitored to ensure progress towards achieving key objectives remains.

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## 1. Purpose

To report on the performance of the 2002/03 Operational Plan for the Regional Pest Management Strategy (RPMS) for the Wellington Region. Under Section 85 of the Biosecurity Act 1993, the Regional Council is required to prepare and implement an Operational Plan for the Strategy and report on the performance of the Plan no later than five months after the close of each financial year.

## 2. Highlights

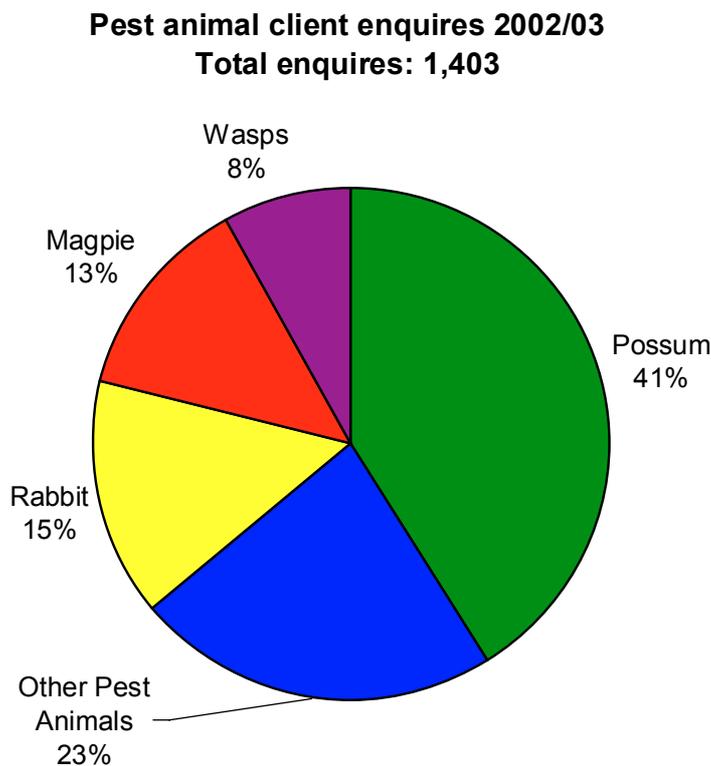
A sample of highlights for the 2002/03 financial year includes:

1. Successful possum eradication at Whitireia Park (243 hectares).
2. Comprehensive involvement with the final stages of the magpie research programme to determine impacts on native and introduced birds.
3. Undertook either initial or maintenance possum control in 51 Key Native Ecosystem management areas.
4. Adjoining Regional Councils have adopted Greater Wellington's method of rook nest baiting. This may slow re-infestation from the north.
5. Started updating and re-branding of brochures and publicity display material.
6. Two major projects:
  - Mt Bruce predator control - strengthening relationships with Department of Conservation, neighbouring Horizons Regional Council and private landowners.
  - Miramar possum eradication - strong community buy-in.
7. There have been reports of rare or unusual native flora and fauna in the Wellington region:
  - bellbirds have appeared in Porirua Scenic Reserve KNEMA
  - identified further sites of rare native mistletoe species
  - bitterns have been sighted in several Wairarapa wetlands
  - saddleback and kaka seen in Wrights Hill KNEMA
  - tui and kereru reported where they have not been seen for years.
8. Prepared comprehensive post-operational reports for prominent Key Native Ecosystem projects.
9. Continued involvement with the Upper Hutt Forest and Bird Society and Wairarapa YMCA Conservation Corps for voluntary possum control.
10. Attendance at six major venues and other forums throughout the region for public education purposes.

### 3. Client Response

The proficient servicing of clients is a significant theme throughout the plan. To enable this to be measured a client response database is maintained. The database supplies historical information on an area or pest. It enables us to manage efficiently, plan the level of control required and assess effectiveness of current control methods.

Although there were 300 more calls than last year, numbers of calls relating to possum's wasps, magpies or rabbits have stayed the same. The additional calls relate to other pest animals such as mustelids, rodents, insects and fish. This highlights the growing public awareness of pests in the environment.



### 4. Rooks

Aerial surveillance combined with aerial nest baiting, and some successful summer ground baiting programmes, further reduced the total rook population of the region this year. An advertising campaign through the local Midweek newspaper and Rural Services Newsletter was designed to encourage the public to come forward with any information leading to new rookeries. There was good response to this, with benefits to both Greater Wellington and Horizons Regional Council.

Aerial baiting of rook nests has been carried out over five consecutive years now and the benefits of this method are being realised as rookery populations decline or become extinct. All known breeding rookeries were treated in the region by applying the toxin directly to each nest via an applicator gun.

Excessively high winds over the breeding season can disrupt the aerial programme. If the first nesting attempts get blown from the trees, the rooks may rebuild nests and breed again, resulting in the breeding cycle becoming staggered with others in the region. Timing is critical to achieve the desired level of success, as ideally young chicks must be present in the nests. Treatment must occur before the young become mature enough to be frightened from the nests.

Aerial baiting was delayed this year due to a disruptive weather pattern. When baiting commenced, some chicks were well advanced and evacuated their nests upon the arrival of the helicopter and control opportunities were lost.

There were 179 nests baited at 14 breeding rookeries during October 2001, and five successful ground baiting operations were completed in the Wairarapa during the summer season. Two additional rookeries containing 44 nests were treated on the Horizons side of the regional boundary.

This was the third year that we have worked jointly with Horizons Regional Council to bait rookeries either side of the regional boundary. A good level of co-operation is being maintained between the two Councils. This year Horizons Regional Council undertook aerial nest baiting on a much larger scale than previous years.

## 5. Rabbit Management

There has been a noticeable increase in rabbits at various locations throughout the region. This situation is predicted to get worse over the next year or two.

A rabbit prone survey of the most historic problem areas of the Wairarapa and the Kapiti Coast was conducted. It disclosed significant rabbit increases over the past year at four properties in the Te Horo and Peka Peka area. The worst area was the Ames Street Reserve at Paekakariki. These areas will require close surveillance over the next year.

This year the Wairarapa rabbit proneness monitoring was undertaken on a reduced scale due to low rabbit numbers over recent years. Monitoring was concentrated in areas regarded as High Risk. It continued as normal in the Western Zone. Approximately 110 properties throughout the region were surveyed. No infestations above level 5 were recorded in the Wairarapa, but one property, Ames Street Reserve on the Kapiti Coast, scored at Level 5-6.

Last year an infestation level of 3 was the highest recorded other than one site, the Ames Street Reserve, which was scored at level 4. This year seven properties, in Kapiti, scored at 4-5. These properties have extreme grazing pressures, with short pasture and specific use such as horse grazing. The Kapiti Coast experienced a drought during summer and early winter. It is thought that with such dry conditions, the RHD virus has not cycled so well allowing mature rabbits to survive. This has created an increase in rabbit nuisance calls, which has not been experienced since pre RHD days.

The anticoagulant rabbit bait 'Pindone' remains a popular tool for control of nuisance rabbits responsible for damage to gardens in both urban and rural situations. These types of complaint are a frequent event, particularly during the breeding season and the drier months of summer.

## 6. Magpie Research Update

The three-year research programme measuring possible impacts magpies might be having on native and exotic birds has been completed. The trial was conducted with Landcare Research NZ Ltd. Four other Regional Councils replicated the trials to provide an outcome that will be relevant New Zealand wide.

### Summary

- Two rural Wairarapa blocks were used for the study, (Woodside and Waiorongomai).
- Magpies were controlled in one block and not in the other, approximately 2,307 magpies were removed.
- Native and exotic birds were counted in both sites at 36 pre-selected count sites at each of the study areas.
- The results were forwarded to Landcare Research who analysed the data.

The study found that while magpies do chase and sometimes kill other birds, they are less of a threat to native species than pest animals such as possums, stoats and rats. Magpies are still, however, a threat to human health.

## 7. Key Native Ecosystem Programme

### 7.1 Key Native Ecosystems

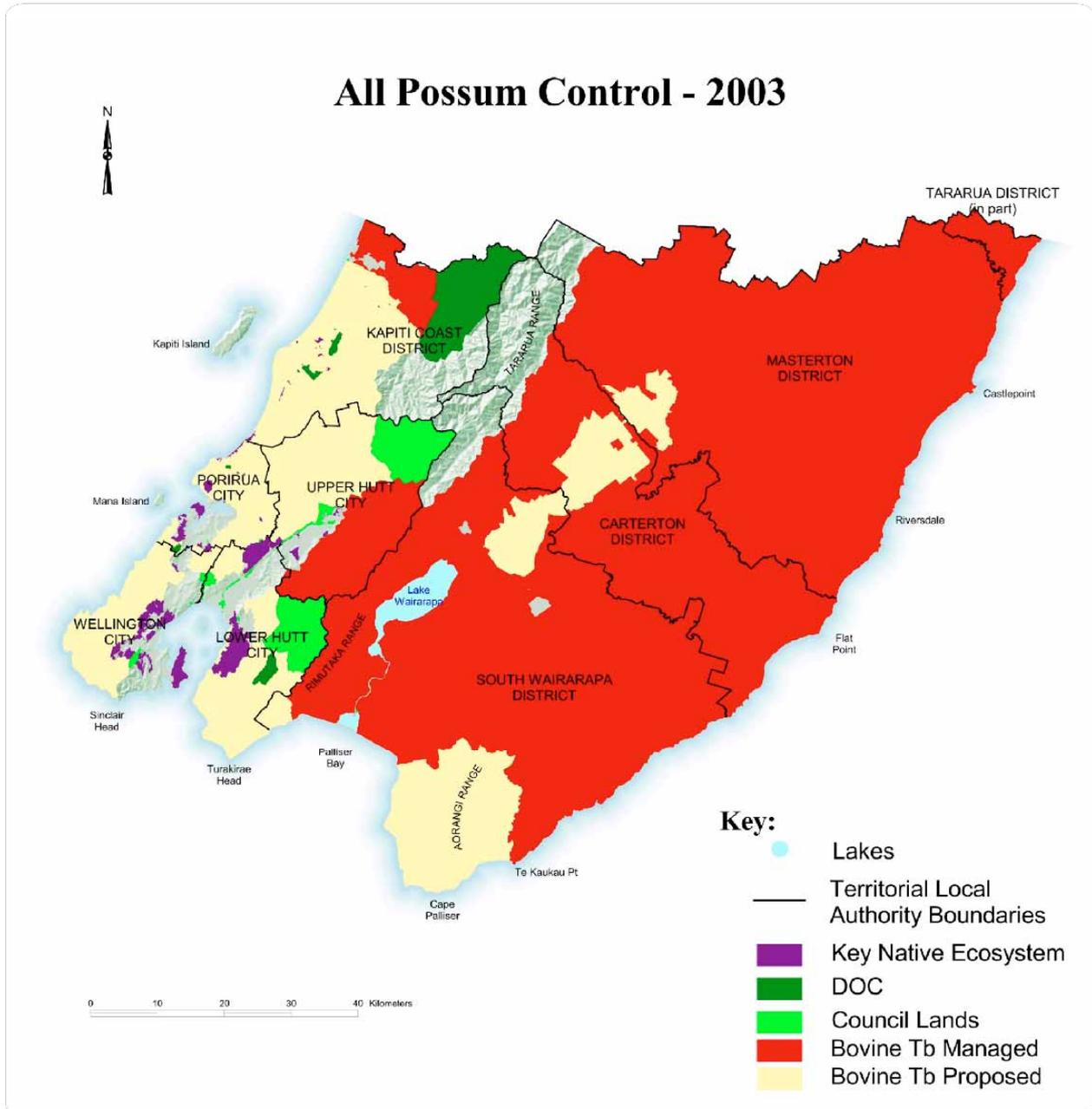
Reference in this report is made to Key Native Ecosystems (KNE's) or Key Native Ecosystem Management Areas (KNEMA's).

KNE's include native forest, wetlands, dunelands, coastal escarpments or other sites with regionally significant conservation value, but excludes areas administered by the Department of Conservation.

A large portion of the Region is the subject of ongoing possum control, principally for Bovine Tb purposes. The Parks and Forests Department of the Greater Wellington Regional Council and the Department of Conservation have also been proactive in carrying out possum control in a significant portion of their estates and have established cyclic maintenance programs.

Many of the known KNE sites subject to threat from possums are located within current Bovine Tb vector control areas. As such, possum densities are maintained to low levels. KNE sites within Bovine Tb control areas have not been prioritised for special works at this stage. If the situation arises that the intensity of Bovine Tb vector control is markedly reduced, then that will present an opportunity to increase biodiversity protection through the KNE programme. Bovine Tb vector control is expected to decrease with the decline in Tb infection in cattle and farmed deer.

## All Possum Control - 2003



## **7.2 Prioritisation of Key Native Ecosystem**

The Key Native Ecosystem programme contributes to New Zealand's commitments made under the International Convention of Biological diversity as outlined in the New Zealand Biodiversity Strategy 2000.

The forests of the Wellington region have been modelled using satellite imagery to create a relative ranking of potential biodiversity value. The model is based on:

- Size - a large site contributes more than small site;
- Natural character - a near pristine site is more valuable than a modified site because it sustains more vulnerable species;
- Distinctiveness - a distinctive site adds more to the variety of the total biodiversity programme than a common place site;
- Importance - sites nearest to being the best of what remains of their type are more important than smaller degraded examples (e.g. lowland forest is more important than upland forest because so much lowland forest has been lost).

Proposals for any new sites to be added to the regional KNE programme must be highly ranked and have some form of long term legal protection (e.g. QE II covenant). The allocation of resources will follow the principle of giving priority to the least modified indigenous habitats, where critical ecological processes can continue to function. The sites ranked highly in the prioritisation model will be field checked and assessed for KNE status over the coming years.

## **7.3 Advocacy Role**

Greater Wellington acts in an advocacy role to bring together the QE II National Trust and the landowner. Greater Wellington provides funding assistance to private landowners wishing to legally protect areas of indigenous vegetation in association with the QE II National Trust.

The indigenous vegetation has to be of a standard that meets QE II National Trust status. If the area qualifies for assistance, then Greater Wellington can fund up to 33.3% of fencing costs. Greater Wellington can also fund survey costs on a 50/50 share basis with the Trust.

The promotion of private land protection will be primarily by non-statutory means and may involve a range of awareness-raising techniques such as field days, demonstration areas, provision of information and examples of best practice, financial incentives and targeted advertising.

## **7.4 Land Protection Group**

Greater Wellington facilitates regular land protection group meetings with City and District Councils, Department of Conservation, Federated Farmers, Queen Elizabeth II Trust and iwi as partners with the vision to:

- promote a co-operative and collaborative approach to the management and protection of ecologically significant areas;
- bring about an awareness of ecologically significant areas;

- encourage the legal protection of such areas;
- encourage appropriate management of such areas.

## 7.5 Operations

During the 2002/03 year, 16,274 hectares of either possum and/or predator control was undertaken. This comprised 10 sites in the Wairarapa (8,792 hectares), and 42 sites (7,482 hectares) in the Western Zone. Of these 51 sites, care group volunteers and private landowners treated 18 (2,577 hectares) and external contractors treated 13 sites (1,184 hectares).

### 7.5.1 Maintenance Operations

Western Zone	Hectares
Amesbury Reserve	4.0
Bluff Hill	13
Burnard Gardens	5.0
Collyns	8.5
Denton Park/Polhill	76
East Harbour	2,375
Grays Bush	1.5
Huntleigh Park	205
Jacobsons	1.0
Johnsonville Park	120
Johnston Hill	81
Kaitawa Reserve	12
Kaiwharawhara/Ngauranga	307
Karehana Bay	170
Karori Park	51
Keith George Park	147
Kelson Bush	140
Khandallah Park	318
Maidstone Park	30
Makara Peak	252
Nga Manu	39
Otari/Wiltons Bush	85
Paekakariki Escarpment	110
Porirua Park	39
Porirua Scenic Reserve	298
Raroa	19
Redwood Bush	47
Te Rama	10
Tinakori Hill	112
Titahi Bay Reserves	63
Trelissick Park	99
Trentham Memorial Park	17
Waikanae Reserves	11
Witako	146
Wrights Hill	140
<b>Total</b>	<b>5,552</b>

<b>Wairarapa</b>	<b>Hectares</b>
Fensham Reserve	30
Lake Nganoke	6
Linkwood Bush	5
Morisons bush	2,700
Pounui	875
Tauherenikau	1,350
Tora Coast Bush	15
Waingawa Swamp	8
<b>Total</b>	<b>4,989</b>

### 7.5.2 Initial Operations

<b>Western Zone</b>	<b>Hectares</b>
Brooklyn/MtAlbert	167
Cannons Creek	95
Dry Creek	750
Emerald Hill Reserve	45
Miramar Peninsula	600
Raumatī Escarpment	25
Waimeha Lagoon	5
Whitireia Park	243
<b>Total</b>	<b>1,905</b>
<b>Wairarapa</b>	<b>Hectares</b>
Mount Bruce Restoration Buffer	2,223
Sulphur Wells	1,580
<b>Total</b>	<b>3,803</b>
<b>Grand Total:</b>	<b>16,274</b>
<b>51 KNEMA's</b>	

Past years operational hectares are:

<u>Years</u>		<u>Hectares</u>
2001/2002	-	10,840
2000/2001	-	16,012
1999/2000	-	15,681
1998/1999	-	9,390
1997/1998	-	18,000

## **7.6 Major Projects**

Two major projects were started during the 02/03 year.

- Mt Bruce predator control
- Miramar possum eradication

In the case of Mt Bruce, the operation has strengthened relationships with Department of Conservation, neighbouring Horizons Regional Council and private landowners.

### **7.6.1 Mt Bruce – Pukaha Project**

The aim is to ‘restore Mt Bruce to a thriving forest able to host a wide range of our native wildlife’. A joint effort is underway to eradicate pests from the Mt Bruce Reserve. Pests targeted include possums, rats, stoats, ferrets, weasels, hedgehogs, and feral cats.

Greater Wellington has been working in conjunction with neighbouring Horizons Regional Council and landowners to create a 3,000 hectare buffer around the Mt Bruce Wildlife Centre ‘Pukaha’ project. Reducing pests around the reserve lessens the threat to the native flora and fauna in the reserve and gives them a fighting chance. Kokako have been released into the reserve with kiwis planned for future release.

The support of the two councils has been paramount to the success of the project.

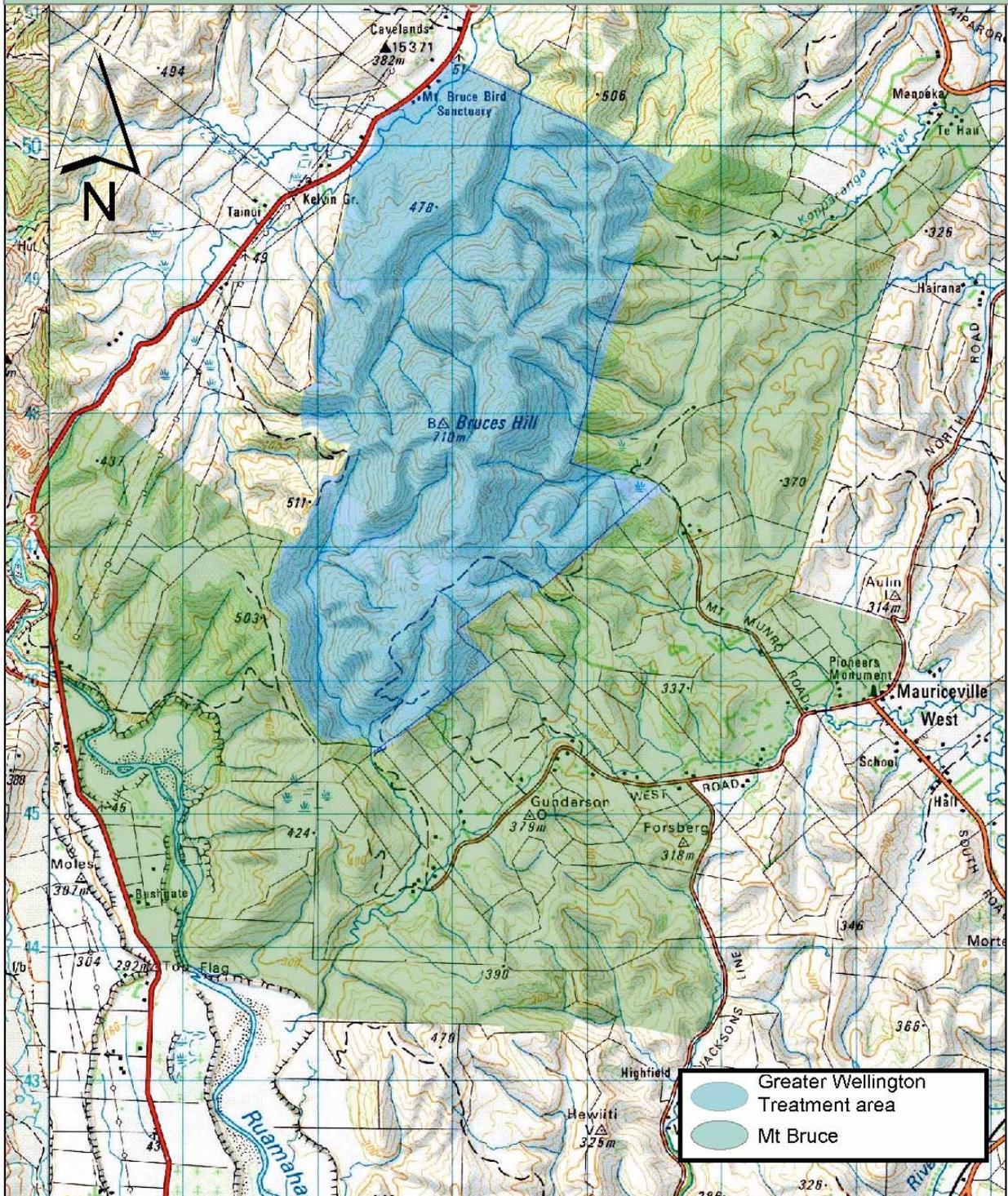
### **7.6.2 Miramar Peninsula – Possum Eradication Project**

Greater Wellington and the Wellington City Council have been working together to rid the Miramar Peninsula of possums. We have been working together since 1995 to create a continuous corridor of forest with low possum numbers, from Johnsonville through to Melrose. This project was initiated due to the successful possum eradication programme at Whitireia Park on the Titahi Bay Peninsula.

Miramar possum eradication started in February 2003. The pre-initial possum monitor illustrated very high possum numbers at the northern end of the peninsula graduating to low numbers in the south. The entire 600 hectare peninsula is being treated with three different toxins and traps.

This project has relied heavily on the support and co-operation of private landowners. A total of 647 bait stations have been installed, a number of which reside on private land.

# Mt Bruce - Pukaha project Greater Wellington predator control buffer



## Miramar Peninsula Possum eradication program - 650 Ha



## **7.7 Volunteer and Care Groups**

The pest animals section has been involved with community groups for many years. During the 2002/03 year, care group volunteers and private landowners treated 2,577 hectares.

There are presently 18 groups involved with the KNE programme, ranging from small groups of two to three volunteers, to large dedicated and well organised volunteers like the Upper Hutt Branch of Forest and Bird or the Mainland Island Restoration Organisation (MIRO), based at Eastbourne.

Sadly Roy Lynch, co-ordinator of the Upper Hutt Forest and Bird possum control volunteer group passed away this year.

There is a steady increase in the number of individuals and volunteer groups keen to preserve or regenerate areas of native bush or wetland. People want to work towards providing better care for our native plants and animals, and the places they live. Greater Wellington is currently working on a policy to be able to assist, involve and reward landowners and has a number of incentive programmes to assist volunteers. Funds are also available from the Crown via the Biodiversity Condition Fund.

## **8. Wetland surveys**

Greater Wellington has recognised the need to halt the continued loss of remnant species and ecosystems. Wetlands are one of the ecosystem types that are depleted and under threat in the region

Greater Wellington's Environment Division has internally contracted Biosecurity to assist with achieving the goals set out in the Wetland Action Plan.

The Wetland Action Plan 2002 – 2006 describes how Greater Wellington intends to address the significant problem of wetland decline in the region. The vision is to reverse the current decline in the number and condition of wetlands in the Wellington region, and that the region supports a full range of wetland types, in a healthy, functioning condition. Three goals were identified to make this vision a reality:

- wetlands in good condition are protected from damage;
- damaged wetlands are restored;
- wetlands are managed as part of a wider catchment and landscape.

The first step to achieve these goals was to develop an inventory of wetlands in the region. Information was gained from a number of sources on all known wetlands and mapped in GIS. Field checks were then made to determine whether the wetland still existed, boundaries were verified and basic information on their condition collected.

Biosecurity staff began field-checking wetlands in May 2003. Staff have also been involved with developing the field work forms and database, data entry and GIS mapping.

There will be future work for the Biosecurity department following the survey. Some key wetlands will achieve KNE status. Pest control work will be undertaken to protect and enhance these valuable areas.



## 9. Ecological Outcomes Monitoring

The ecological outcomes monitoring programme is designed to evaluate the success of browser and predator control under the Key Native Ecosystems programme. Presently, monitoring KNE pest animal management outcomes includes foliar browse assessments, invertebrate monitoring, and native bird monitoring. The bird and invertebrate monitoring programmes were conceived in 2001/02, and were designed to detect changes in the native species that fall victim to introduced predators. Pilot studies were implemented in 2001 and carried through the 2002/03 year to test the validity of the programmes.

The tui / bellbird monitoring programme was established in 12 KNEMA's (see Table 1). In addition to the 12 KNEMAs monitored by Greater Wellington, the MIRO group monitored sites in the East Harbour KNE. Point distance samples were collected during spring of 2001/02, and an attempt was made to generate further data 2002/03. Weather and resourcing problems lead to a programme shortfall in 2002/03. The programme was independently evaluated in December 2002 and we have been advised to include more sample points and perform the monitoring to late summer, when the weather is more stable. The programme will be re-instated in 2003/04 with changes in place.

The ground dwelling invertebrate programme was established in nine KNEMA's (see **Table 1**) using pit fall traps to collect samples. After reviewing the pilot study in 2001, formal data were collected for these sites from October 2002 to March 2003. The enormity of the number of samples collected has led to a backlog of sorting that was not completed in 2002/03. The data are still to be analysed.

**Table 1: Outcome monitoring sites within the KNE programme**

	Bird monitoring	Invert monitoring	Rat monitoring
<b>East Harbour</b>	(MIRO)	√	√
<b>Fensham Reserve</b>	√	√	√
<b>Haywards Reserve</b>	√	√	√
<b>Johnsonville Park</b>	√	√	√
<b>Karori Park</b>	√		
<b>Khandallah</b>	√		
<b>Keith George</b>	√	√	√
<b>Mapuia Park</b>	√		
<b>Pounui</b>	√	√	√
<b>Porirua Scenic Reserve</b>	√	√	√
<b>Tinakori Park</b>	√		
<b>Witako</b>	√	√	√
<b>Wrights Hill</b>	√	√	√

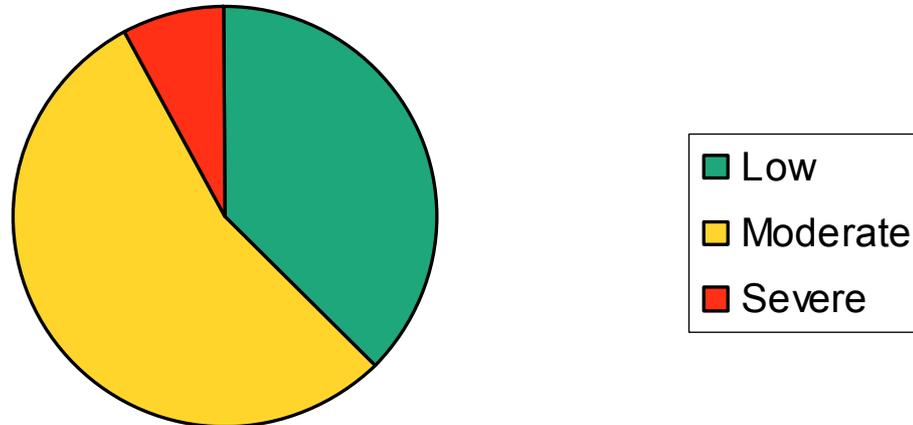
## 9.1 Foliar Browse Index

Foliar browse indices have been collected since 1993 and were put in place to detect changes in canopy condition post-possum control. The entire programme was reviewed 2002/03 and it was decided to scale back the frequency of re-visits to every four to five years, instead of every three to four years, as the degree of canopy recovery is slowing down now possums are at low numbers in the monitored KNEs.

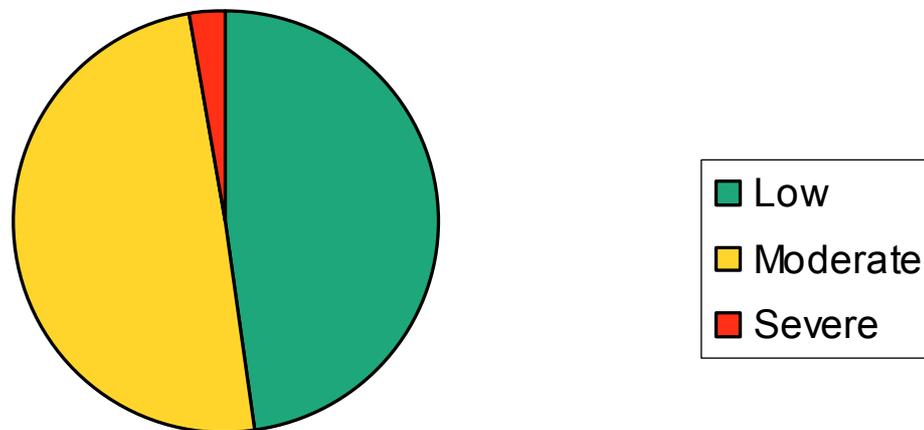
Foliar browse monitoring sites in Keith George Memorial Park and Ngakonui Bush were monitored during 2002/03. There were no big surprises at these sites, with trends being consistent with observations from other sites over the last three years. The trees generally had very little damage, however, some individual trees of palatable species have died since the previous visit. These trees generally had low scores on the last visit, indicating we still live with the legacy of past possum induced damage. The good news is that, during the foliar browse survey, the saplings of these species were observed at both sites and mistletoe was again observed at the Ngakonui site.

The Foliar browse data from every monitoring site has been aggregated regionally to get a general picture of the trends. Figures 1 and 2 compare the most recent data from and the first (pre-possum control) survey. The results show how much possum control improves the condition of the bush.

**Figure 1: Degree of Damage Before Possum Control**



**Figure 2: Present Degree of Possum Damage to Trees**



## 9.2 Performance Monitoring

The performance-monitoring programme evaluates predator levels within the KNEMA's. The rat/mustelid monitoring study was added to the programme 2001/02 and completion of the pilot study is expected in October 2003. The programme was established in the nine KNE's with the invertebrate monitoring. The method used is tracking tunnels monitored four times a year.

### 9.3 Monitoring of Possum Populations

Knowledge of the possum density is essential for deciding control techniques and programme timing. One index of possum density is the ‘Residual Trap Catch’ index (RTC). Monitoring results are reported as a percentage, which equates approximately to the number of possums caught per 100 trap nights. A trap night refers to one leghold trap set for one night. The RTC is one of the tools used to measure the effectiveness of possum control by comparing pre and post operational catch data. Possum RTC monitoring was performed in six pest animal operations during 2002/03 (see **Table 2**). All of the operations were located in the Western Zone. Dry Creek, Cannon’s Creek, and East Harbour were monitored at the request of Pest Animals, sub-contracted to Regional Parks. Stokes Valley was monitored at the request of Pest Animals, sub-contracted to Hutt City Council. Figures followed by a single asterisk (\*) are pre-control statistics.

**Table 2: RTC monitoring outcomes for Pest Animal programmes**

Operation	Previous RTC	Date (2001)	Current RTC	Date (2002)
East Harbour	1.9%	Sep	5.7%	Sep
Speedy’s Reserve	N/A	N/A	16.6% *	Oct
Haywards Reserve	2.8%	Jul	7.8% *	Nov
Dry Creek	29.6%	Nov	3.9%	Nov
Stokes Valley	N/A	N/A	12.1% *	Dec
Cannons Creek	N/A	N/A	16.7% *	Jul

Two shortfalls of RTC monitoring are some sites (less than 50 hectares) which are too small to achieve robust data, and it is untenable to use Leghold traps in the vicinity of urban areas. Toward the end of 2002/03 an alternative method using wax tags to detect possums was initiated. The technique is still being investigated with results pending 2003/04.



## **9.4 Trend Monitoring of Rabbits and Possums**

### **9.4.1 Introduction**

Permanent night count lines for rabbits and possums were introduced in 1994 to monitor the fluctuations of these feral animals in the absence of control. Originally, four count lines were established - two possum and two rabbit, with one each in the Wairarapa and Western Zone.

Sites were selected to the following criteria:

- No control of feral animals envisaged in the foreseeable future.
- Reasonably high and established population of the target animal.

Each count line consists of 25 individual and permanently marked sites, which is accessed by motorcycle and spotlight counted for three consecutive nights annually in May/June.

The Western Zone rabbit night count route had to be abandoned in 1996 due to pine plantings and subdivisions. A new site was selected in QE II Park, for which we now have eight years data.

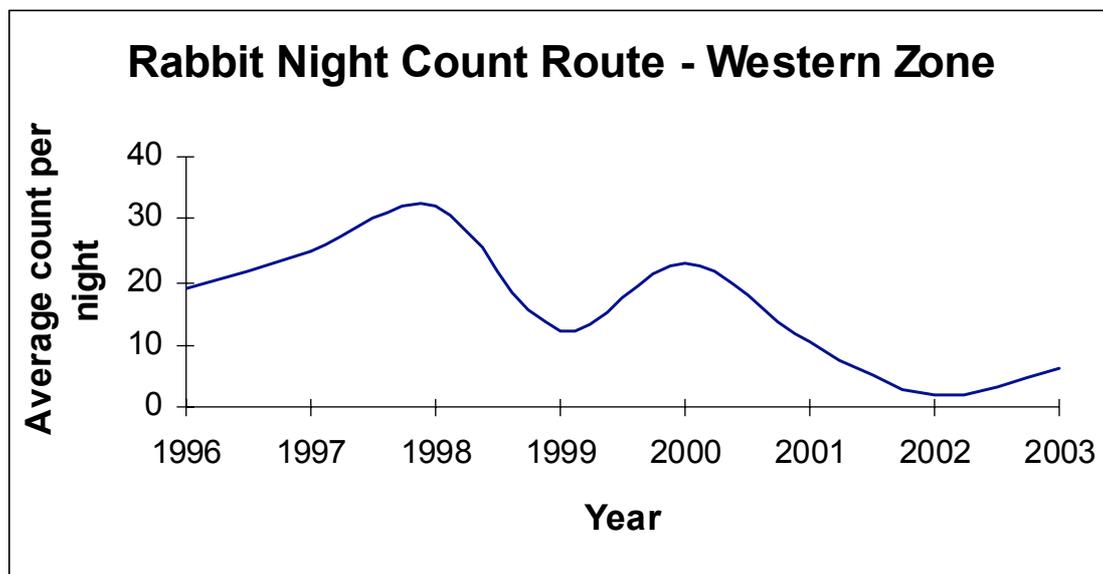
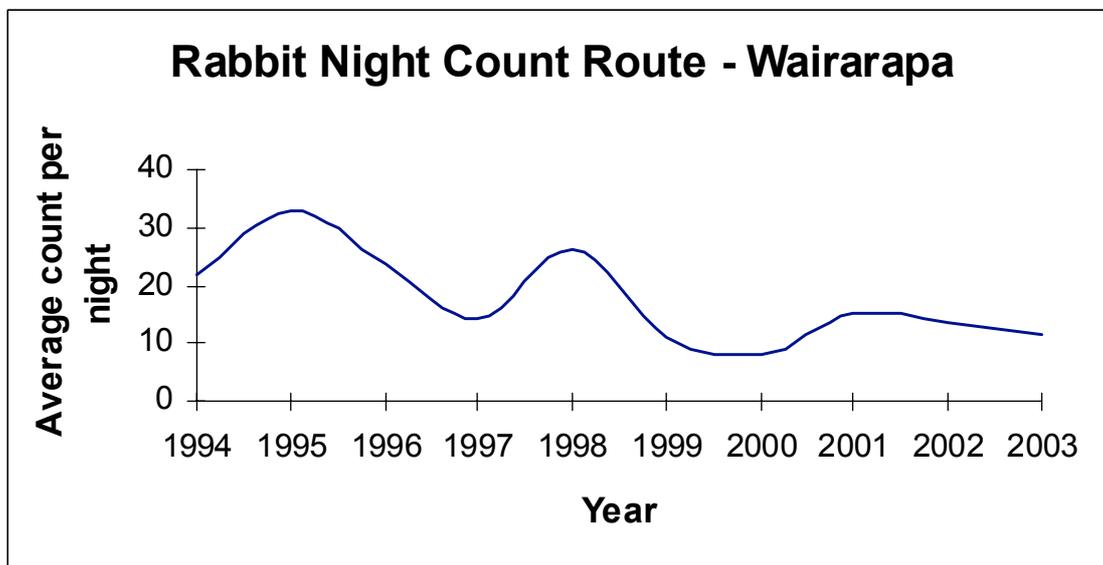
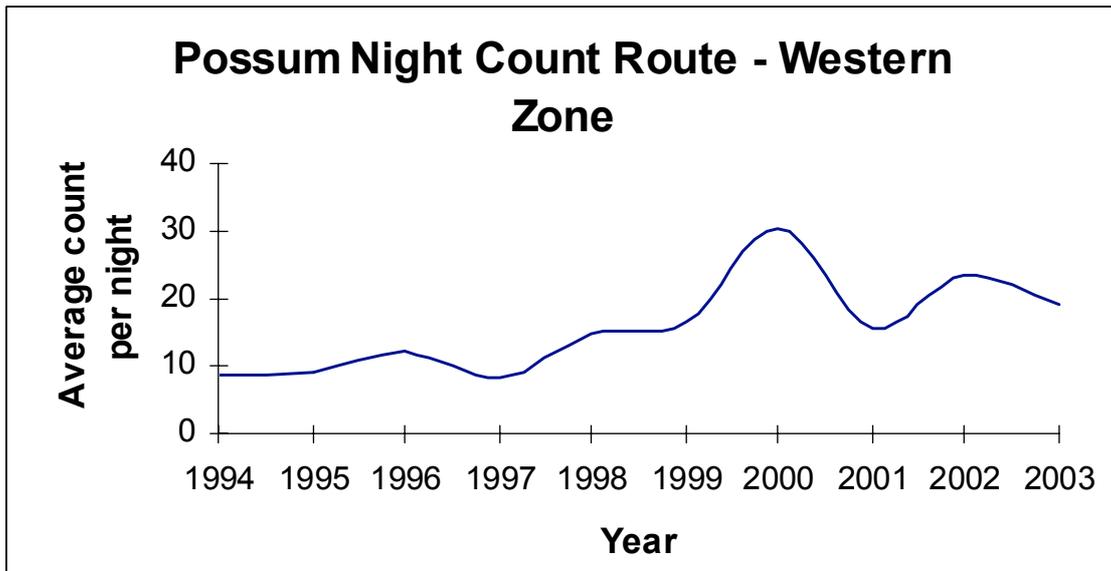
The possum night count route on Hikurangi (Wairarapa) was abandoned five years ago, as the area has been incorporated into a BvTb possum control operation. No new possum monitoring line was selected.

The Wairarapa rabbit line was not monitored 2001/02 year.

### **9.4.2 Results to 2003**

Graphs of the night count trends are shown below. There is nothing special about the possum trend. The rabbit trends indicate the cyclic “boom” and “bust” nature of rabbit populations, but with encouraging ever-decreasing maximums.

Note the tail end of the Wairarapa rabbit chart has been estimated based on the average of the 2000/01 and 2002/03 data.



## 10. Positive Ecological Observations

The benefits of local bird releases and the possum eradication programme are showing positive signs with species turning up in areas they have not previously been recorded.

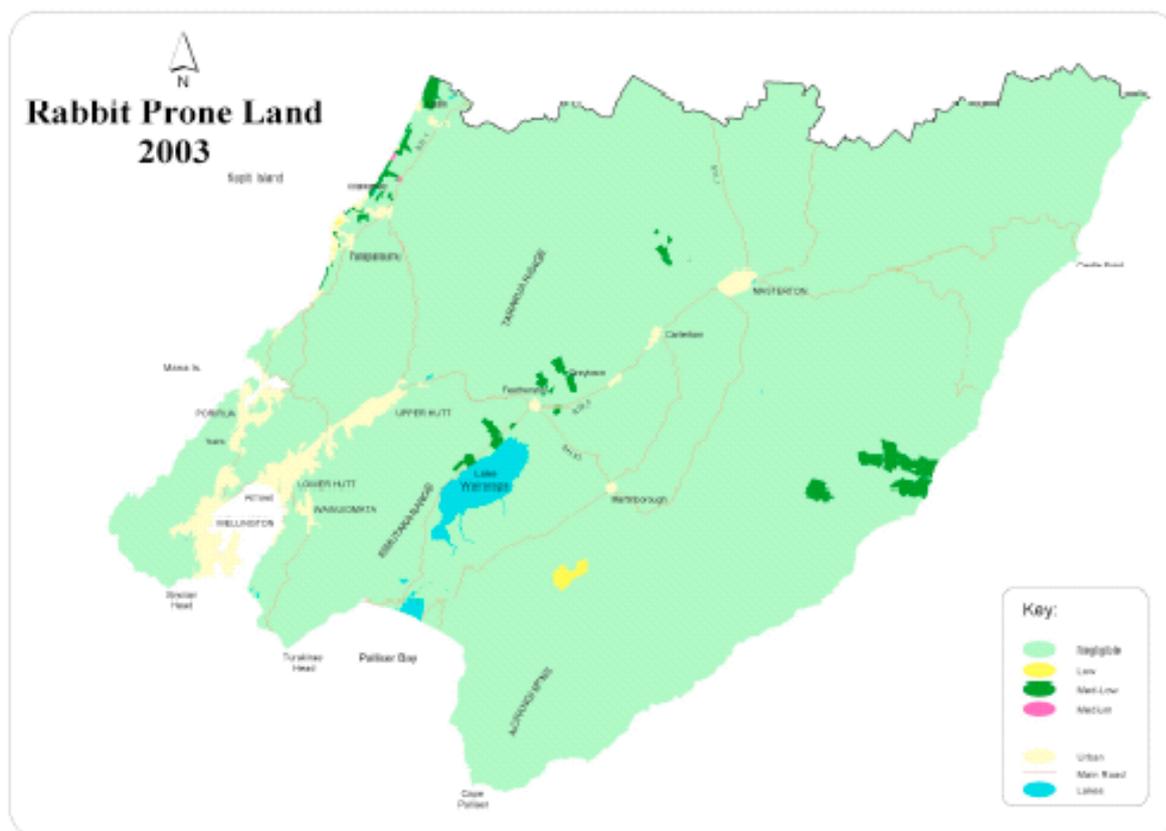
Bellbirds (korimako) have been noticeably absent from the urban areas of the region since the 1950s. They were recently released back into the Wellington region through the Karori Sanctuary program. Wellington City Councils' latest bird counts confirm that bellbirds have moved out of the sanctuary and into the surrounding reserves.

Unbanded bellbirds have been sighted in Porirua Scenic Reserve. These birds are unlikely to have come from the Sanctuary and a more likely scenario is they have originated in the recently poisoned Akatarawa Forest. The reappearance of bellbirds in the Porirua Scenic Reserve is thought to be a direct result of the effective possum and rat control.

Kaka and saddleback have been seen outside the Sanctuary. Tui and kereru are noticeably more abundant than before possum control started.

The native land snail *Urnuia wainuia* is appearing in numerous reserves. Removal of possums has led to an increase in the density of understorey plants creating a suitable climate for these regionally rare snails.

There have been a number of unusual sightings for the region as a result of staff surveying wetlands. The rare Australasian bittern and native mistletoe have been sighted in several wetlands in the Wairarapa.



## 11. Performance Targets and Measures for Pest Animals

### 11.1 Containment Pest – Rooks

<b>Aim:</b>	<b>To manage rooks as a Containment Category pest to levels that protect economic levels at a cost of \$35,000.</b>
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<i>Annual Cost: The cost of rook management (surveys, research, compliance, education) for the region was \$44,100 which was 26% over budget.</i>
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#### 11.1.1 Means of Achievement

Undertake direct control by service delivery where rooks are known to exist.

##### Actual Performance

*In the 2002/03 year, aerial nest baiting was carried out at 14 breeding rookeries within the region and at two rookeries on the Horizons side of the boundary. The 14 rookeries represented all known breeding rookeries that were on our database. A total of 179 nests were baited in our region and 44 nests were baited over the boundary. There was a further five ground baiting operations completed.*

#### 11.1.2 Means of Achievement

Survey rook populations annually in areas where they are known to exist, and where new infestations are reported.

##### Actual Performance

*In the 2002/03 year the annual nest count census was carried out at all known locations in the region, including old or historical sites. Both ground and aerial surveys were completed. All key areas of rook habitat were inspected by helicopter in an attempt to identify any unknown rookeries and assess the stage of nesting.*

*Staff contacted landowners in areas where rooks had previously been sighted.*

*A comprehensive rook awareness article was published in the Wairarapa Midweek newspaper and included in the Greater Wellingtons 'Rural Services Newsletter' (November 2002) to raise the profile of rooks as a pest. A plea was made for all rookeries or sightings of rooks to be reported to Greater Wellington.*

#### 11.1.3 Means of Achievement

Support appropriate research initiatives, including biological control should it become available.

##### Actual Performance

*There were no opportunities to be involved in meaningful research initiatives or biological control. Nor does there seem much likelihood of this occurring in the near future.*

#### **11.1.4 Means of Achievement**

Ensure compliance with the Strategy rules in order to achieve the Strategy objectives.

##### Actual Performance

*A display about rooks was presented at the Clareville agricultural field days and at libraries throughout the region. Information about rooks was freely available to the public.*

*The feature articles in the Rural Services Newsletter and Wairarapa Midweek newspaper made it plain that it is an offence under the Regional Pest Management Strategy for landowners to attempt any form of rook control, or to disturb rookeries in any way.*

*Landowners with rookeries are constantly reminded that rooks are both shy and cunning and that poorly conducted control attempts can lead to rookery fragmentation and dispersal over a wider area. Rooks may become bait shy as well. When gaining landowner permission to treat rook nests, landowners were reminded of the dangers of shooting or scaring rooks.*

#### **11.1.5 Means of Achievement**

Encourage Horizons Regional Council to actively pursue management of rooks within their region that complements Greater Wellington's Rook Containment programme.

##### Actual Performance

*Horizons Regional Council were actively involved with aerial nest baiting in the 2002/03 year. Both Greater Wellington and Horizons were involved in a joint nest baiting programme on either side of the regional boundary that was designed to stem the southward migration of rooks to the Wairarapa.*

*Greater Wellington staff meet annually with Horizons staff to discuss the forthcoming season's control and work jointly where possible.*

#### **11.1.6 Means of Achievement**

Annually inspect pet shops and rook keepers for the sale of rooks.

##### Actual Performance

*Inspections of pet shops were undertaken in conjunction with visits to plant nurseries, where checks were made for pest plants. There were no reports of rooks being available for sale.*

## 11.2 Suppression Pest - Rabbits

**Aim: To minimise the adverse impacts of feral rabbits throughout the Region at a cost of \$55,000.**

*Annual Cost: The cost of rabbit management (surveys, research, compliance, education) for the region was \$57,100 which was 4% over budget.*

### 11.2.1 Means of Achievement

Undertake **direct control by service delivery** to control rabbits on riverbeds, esplanades or similar public commons to ensure that rabbits do not exceed Level 5 of the Modified McLean Scale.

#### Actual Performance

*The Wairarapa monitoring did not disclose any areas at Level 5 or over. On the western side one property at the south end of Paekakariki scored 5-6 and eight properties on the Kapiti Coast scored 4-5 on the Modified Mclean Scale.*

*Annual monitoring is carried out on two key rivers in the Wairarapa, the Tauherenikau and the Waingawa, to assess rabbit densities and make recommendations as to whether Greater Wellington intervention is required. Intervention is required when levels are assessed at Level 5 and over.*

*Surveillance on both rivers was carried out with the highest recorded level being Level 3, therefore no Greater Wellington intervention was deemed necessary.*

*Small rabbit poisoning operations were carried out at Riversdale, Castlepoint and Whangaimoana beaches.*

### 11.2.2 Means of Achievement

**Ensure compliance** with the Strategy rules in order to achieve the Strategy objectives.

#### Actual Performance

*Monitoring of all the known rabbit prone areas of the region disclosed one property with a rabbit infestation of Level 5-6 on the Modified McLean Scale. The occupier was contacted and requested to take action.*

*There were no investigations required for breaches of other Strategy Rules for rabbits.*

### 11.2.3 Means of Achievement

**Survey** land in the high to extreme rabbit prone areas to determine the extent of rabbit infestation.

Actual Performance

Detailed surveys were carried out on approximately 110 High Risk properties over the region this year to assess rabbit densities and 'hot spots'. A large proportion of these properties were in the Kapiti coast. The results were higher than previous years with Level 4 being the highest infestation level other than one Level 5-6 recorded in Kapiti.

**Modified McLean Scale**

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

**11.2.4 Means of Achievement**

Make occupiers **aware** of their responsibilities for rabbit control.

Actual Performance

Due to the low overall rabbit densities recorded during surveillance of rabbit prone land in the region, there was only one reminder letter forwarded.

Greater Wellington has publications available to assist occupiers with self-help rabbit control. They are freely available from Biosecurity office display stands and other promotional forums.

Several public forums were attended during the year. These forums had displays with advice and educational material freely available on rabbit management techniques. Staff were present to provide technical support.

### 11.2.5 Means of Achievement

Provide **information and publicity** to enhance public awareness of the threat rabbits pose to the region.

#### Actual Performance

*Refer to Section 11.2.4 above. The Rural Services Newsletter also provided information on rabbit issues.*

### 11.2.6 Means of Achievement

Annually **inspect** pet shops for the sale of feral rabbits.

#### Actual Performance

*Inspections of pet shops were undertaken in conjunction with visits to plant shops and nurseries. There were no reports of feral rabbits being available for sale.*

**Note:** *There were no opportunities to be involved in rabbit bio-control research initiatives during 2002/03.*

## 11.3 Site Led Pest - Magpies

<b>Aim:</b>	<b>To manage magpies to minimise adverse environmental and human health impacts in the Wellington region at a cost of \$80,000.</b>
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<i>Annual Cost:</i>	<i>The cost of magpie management to minimise adverse environmental and health impacts for the Region was \$47,100. This was 58% of budget.</i>
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### 11.3.1 Means of Achievement

Undertake **direct control by service delivery** of magpies where there is known to be a threat of injury to members of the public or complaint(s) are made to that effect within 10 working days.

#### Actual Performance

*When calls from the public are logged with Greater Wellington about aggressive magpies, every endeavour is made to attend to the complaint(s) promptly. There are times when shooting of aggressive magpies is a difficult issue and alternative control options such as trapping need to be explored.*

*There were seven urgent complaints logged regarding attacking magpies with one attended to after the 10 day deadline.*

### 11.3.2 Means of Achievement

**Respond** to landowners wanting to undertake magpie control within 10 working days of receiving a request for information and/or assistance.

Actual Performance

*One hundred and eighty-six magpie nuisance calls were received. Seventy-three of these were to Wairarapa staff and 113 to the Upper Hutt office. Four percent of calls in the Wairarapa and 58% of calls in the Western Zone had response times of over 10 days. All requests for information or assistance from the public is entered onto Greater Wellington's database and every effort is made to attend to these within 10 working days. A phone call or personal visit is made to clients wanting information or assistance. When there are no traps in stock the client is entered onto a waiting list until a trap becomes available. We are always faced with trap shortages, as more and more people are becoming aware of the negative impacts that magpies are having on fauna in the environment.*

**11.3.3 Means of Achievement**

Provide **advice, education and assistance** to occupiers wanting to undertake magpie control.

Actual Performance

*There were a total of 186 enquiries from the public asking for advice / education or wanting assistance with magpie control.*

*Greater Wellington has educational information on magpies that explains successful methods of controlling them. This information is available from our offices. Staff attend field days and forums where advice and educational materials are also available.*

*As traps become available staff deliver these and demonstrate best practice trapping techniques to maximise results.*

**11.3.4 Means of Achievement**

Support appropriate **research initiatives** into magpie impact on conservation values.

Actual Performance

*The total expenditure for the year in this area was \$24,558.*

*This was the last year of control and monitoring completed for the Magpie Research programme.*

*Data gathered from the bird count monitoring suggests that where magpies are removed, other birds increase in density or become more conspicuous. These include exotic birds but also native kereru and tui. The study also suggests that New Zealand native fauna is more at threat from introduced mammals that they are from magpies. Magpies are still considered a threat to human health.*

### 11.3.5 Means of Achievement

Annually **inspect** pet shops for the sale of magpies.

#### Actual Performance

*Inspections of pet shops were undertaken in conjunction with visits to plant shops and nurseries. There were no reports of magpies being available for sale.*

### 11.4 Site Led – Key Native Ecosystem Management

<b>Aim:</b>	<b>To protect indigenous biodiversity in a comprehensive selection of Key Native Ecosystems at a cost of \$320,000.</b>
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<i>Annual Cost:</i>	<i>The cost to achieve a measurable improvement in the ecological health and diversity of Key Native Ecosystems was \$293,400. This is 92% of budget.</i>
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#### 11.4.1 Means of Achievement

Maintain holistic management in existing KNE areas.

#### Actual Performance

*All Key Native Ecosystem Management Areas (KNEMA's) that have had possum control undertaken by Greater Wellington are being maintained. Most are maintained on a three month cycle by Greater Wellington staff or service providers. A few areas in the Wellington City town belt are maintained on a two to three year cycle, as possum numbers are very low with minimal sign of reinvasion. A service provider has been contracted to maintain the Karehana Bay area (in conjunction with the Plimmerton ratepayers residents association).*

*Some KNEMA's in the Wairarapa are now having cyclic possum control undertaken by the Bovine Tb vector control programme as this programme expands.*

#### 11.4.2 Means of Achievement

Prioritise and select additional Key Native Ecosystems by July 2003.

#### Actual Performance

*Whilst a prioritisation process has been carried out some sites need to be ground truthed to better ascertain the intrinsic values such as the presence of rare or threatened species, community value or ecological benefits of linkage to other such sites.*

*The majority of new sites that will be accepted annually are expected to be remnant areas of native bush or wetlands that have been proposed or accepted for legal protection by covenant. Greater Wellington is working with dune and coastal escarpment care groups as part of the Take Care programme. It is envisaged a number of these will attain KNE status.*

### 11.4.3 Means of Achievement

Establish and implement integrated pest management plans for all Key Native Ecosystems.

#### Actual Performance

*This is a long term process. Fully integrated pest management is expensive. Funding availability is a significant issue.*

*All Wairarapa sites have integrated management regimes. All sites in the Western Zone are only focused on possum control. Over the next five years the top priority sites in the Western Zones will be selected for integrated management (plant and animal pests).*

### 11.4.4 Means of Achievement

Ensure Key Native Ecosystems are **legally protected** into perpetuity.

#### Actual Performance

*All of the KNEMA's treated during 2002/03 were legally protected (Territorial Authority Reserves, QE II Covenants, or at the very least, contained legally protected sites within the management area).*

### 11.4.5 Means of Achievement

Undertake **direct control by service delivery** of pests identified in integrated pest management plans.

#### Actual Performance

*Direct control means pest control undertaken by Greater Wellington at no direct cost to the occupier. The majority of this control occurs in the treatment of KNEMA's. Animal pests commonly targeted are possums, feral cats, stoats, weasels, ferrets, goats, rats, mice, hedgehogs and rabbits.*

*Greater Wellington controlled rooks at no cost to the occupier. It is an offence for anyone, other than Greater Wellington, to undertake control of rooks.*

*Magpies were destroyed as a free service when they were reported to be attacking people.*

### 11.4.6 Means of Achievement

**Monitor** site recovery using a range of ecological indicators.

### Actual Performance

*A wide range of ecological indicators are used to monitor the health of various sites. This is described in detail on page 15, **Section 9** and headed 'Ecological Outcomes monitoring'. This section covers both outcome and performance monitoring.*

#### **11.4.7 Means of Achievement**

Facilitate the involvement of **community groups** where appropriate.

### Actual Performance

*The Pest Animals Section has been involved with community groups for many years. This is described in detail on page 14, **Section 7.8** and headed 'Volunteer and Care Groups'*

#### **11.4.8 Means of Achievement**

Where Key Native Ecosystems are identified on Territorial Local Authority land, seek funding from the relevant authority to form **financial partnerships**.

### Actual Performance

*Greater Wellington has sought to develop an excellent rapport with all of the regional Territorial Authorities on matters concerning pest management.*

*A formal pest management programme has been agreed with Wellington, Lower Hutt, Upper Hutt and Porirua City Councils and with the Kapiti Coast District Council. The direct costs for works undertaken on their land are equally shared between Greater Wellington and the local authority.*

*The work programmes are agreed between the parties and regular liaison is maintained. The territorial authorities are invoiced monthly for their share of costs.*

*Formal programmes have not been agreed with the Wairarapa District Councils, mainly due to the fact they own minimal KNE land.*

*A Memorandum of Understanding (MOU) was prepared and agreed between Greater Wellington and the territorial authorities. The parties agree to support biodiversity and optimise ecological health within the relevant territories.*

#### **11.4.9 Means of Achievement**

Co-ordinate site management with other **biodiversity initiatives** where possible.

### Actual Performance

*Pest animal and pest plant control is being undertaken concurrently with the various ecological based objectives of a number of care groups. This has been implemented at several sites. For example:*

- *East Harbour KNEMA* - *MIRO group*
- *Waimeha lagoon KNEMA* - *Waimeha Restoration Trust*
- *Fensham Reserve KNEMA* - *Forest and Bird*

#### **11.4.10 Means of Achievement**

Manage **external pressures** that are inconsistent with Key Native Ecosystem Management objectives.

##### Actual Performance

*This is an area that relies, to a large extent on awareness, advice and education. Some examples are ensuring that livestock do not have an opportunity to enter special sites, that the sites do not become a repository for rubbish, that the likelihood of fire is nullified, and that the sampling of rare or threatened native species (without permission) does not occur.*

#### **11.4.11 Means of Achievement**

Liaise with the **Department of Conservation** to determine the distribution of, and appropriate control methods for, coarse fish, catfish and mosquito fish.

##### Actual Performance

*Some positive progress has been made towards this means of achievement. Greater Wellington staff have developed a good understanding of the distribution of pest fish from literature sourced from the Department of Conservation, National Institute of Water and Atmospheric Research (NIWA), Landcare Research NZ and from the internet.*

*A new member of the monitoring team has previously worked with the Department of Conservation on pest fish control techniques. This brings added strengths to the Department.*

#### **11.4.12 Means of Achievement**

Provide public **education and advice** to foster biodiversity management outside formal KNE program areas.

##### Actual Performance

*Landowners, both large and small, are often keen to preserve or regenerate areas of native bush or wetland on their properties. Greater Wellington provides a list of information literature, attends forums with ecological themes, and meets with groups or individuals to convey information. New and updated brochures from all divisions involved in biodiversity management are being produced.*

## **12. Future Pressures**

Greater Wellington Regional Council has accepted the long term responsibility to manage pest animals in the region and has established an infrastructure to manage that responsibility. The responsibility however extends much wider than just controlling pests. It includes helping landowners and care groups to deliver their goals in their quest to 'do their bit' to safeguard a part of the environment. It includes working in close liaison with territorial authorities, Department of Conservation, Queen Elizabeth II Trust, iwi and a host of others, which all share the same vision of collectively protecting and enhancing our region.

However, more may be expected of Regional Councils in maintaining internal biosecurity under the recently released national Biosecurity Strategy (August 2003).

The Biosecurity Strategy identifies that the pest management roles of central and local government are at times muddled, with a lack of communication and co-ordination. The areas of responsibility for local government need to be clarified but Regional Councils remain concerned that the Biosecurity Act is preventing effective pest management, including surveillance within the context of pest management.

Greater Wellington has not yet been requested to assist with the urgent mitigation of an unwanted organism in the region. However, Greater Wellington's involvement may well be required in the future. This potential change is in line with the expectation that New Zealand's biosecurity system will be integrated through central and local government and the private sector.

## **13. Financial Summary**

The year end result for the Pest Animals Section was a surplus of \$11,600 (1%). Revenue was up by \$4,900 (0.5%) and expenditure down by \$6,700 (0.6%).

Income from territorial authorities for joint venture Key Native Ecosystem management was \$71,900 against a budget of \$65,000.

Internal revenue of \$124,300 was received against a budget of \$112,300. Most of the internal revenue was for possum control works contracted to the Greater Wellington Parks and Forests Department.

<b>Financial Summary</b>	
	<b>\$ (000's)</b>
Rates and Levies	888.3
External Revenue	72.9
Internal Revenue	124.3
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<b>Total Operating Revenue</b>	<b>1,085.5</b>
<b>Total Direct Expenditure</b>	<b>926.7</b>
Divisional / Corporate Overheads	147.2
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<b>Total Operating Expenditure</b>	<b>1,073.9</b>
Operating surplus	11.6
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## 14. Conclusion

Significant progress has been made towards the overarching goals of supporting biodiversity, optimising ecological health and supporting agriculture through regionally co-ordinated pest management.

There were several significant events during the past financial year:

- Possums are believed to have been eradicated from an area on the mainland at Porirua;
- A second possum eradication attempt has commenced on the Mirimar Peninsula;
- Fully integrated predator control programmes were commenced in large areas where previously only possums were targeted.
- Predator control on private land adjacent to Mt Bruce provided confidence for kokako to be released into the wild on the mainland for the first time.
- Signed agreements with territorial authorities formally recognised joint ecological health ventures.
- Discovery of regionally rare native plants and birds in areas where they have not been seen for over 60 years.
- Important surveys completed of the ecological health of our diminishing wetlands.
- Completion of the nationally replicated magpie research programme.